



الهيئة العامة للإحصاء  
General Authority for Statistics

# Statistical Quality Assurance Framework 2024

Quality Managment - Version 1.0



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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## Introduction

The General Authority for Statistics' (GASTAT) statistical Quality Assurance Framework (QAF) presents Principles and Standards for the collection, processing and publication of official statistics in the Kingdom of Saudi Arabia. Based on the United Nations Fundamental Principles of Official Statistics 2013. It is entirely consistent with the UN Quality Assurance Framework while reflecting the unique nature of official statistics in the Kingdom of Saudi Arabia.

The Statistical Quality Assurance Framework (QAF) serves as the highest-level governance tool for the quality management of the Statistical System of the Kingdom of Saudi Arabia (SS KSA) and gives an overview of the quality management and risk mitigation strategies already in place or planned.

This document represents the first version of this corporate document and makes a statement about our commitment to best international statistical practice.

Enquiries about the Quality Assurance Framework should be addressed to our web site: <https://www.stats.gov.sa>-

# Executive Summary



This Statistical Quality Assurance Framework (QAF) sets out GASTAT's approach to quality to produce information of the highest standard to support decision-makers across SS KSA. It can be seen as a set of processes that are put in place with one goal, to produce quality outputs to better inform all users of Official Statistics.

This framework sets standards for carrying out statistical activities at the national level. It includes, professional rules and technical dimensions related to all stages of statistical work from collection, through the processing analysis and dissemination of statistical data. These principles also represent basic rules to assure the quality of statistical work in its various stages and to ensure the quality of the resulting statistics.

The implementation of the QAF and the achievement of its objectives are based on the adoption of its principles and rules by GASTAT at the national and regional levels. The application of the guidance in this framework is an essential element in building and developing an integrated statistical system that is consistent with international standards. Adherence to these guidelines will raise the ability to meet the requirements of planning, development, and economic, social, and environmental cooperation across the Kingdom, and in the international context..

The respect for the principles of the QAF by those who work within it is the guarantee for building a statistical system that adheres to the foundations and professional standards and keeps abreast of updates and developments in the statistical field. The cooperation of all parties and their joint efforts in applying the principles of the statistical quality assurance framework is an important factor in the development of the KSA national statistical culture, the advancement of statistical information, and the dissemination of high quality statistical information to all categories of users.

The implementation of the QAF will be monitored periodically through the development of a mechanism managed by GASTAT. This monitoring will determine the effectiveness of the QAF itself as well as the progress in its application, what improvements have been achieved and identify where further improvement is needed.

## Comparison with other international quality assessment frameworks

The KSA QAF is entirely comparable and consistent with the international models of best practice widely used across the statistical world. In our case, we have paid particular focus on the United Nations National QAF Manual and the European Statistical System's QAF, in the creation of this QAF. We have also drawn on the experience of other National Statistical Offices in the adoption and development of their QAFs, for example, Canada, France and the UK. This gives us confidence that our framework is sufficient to assess the quality of statistics in the KSA.

In reviewing these international frameworks, we have, following the lead of the **Regulation of the General Authority for Statistics Issued by the Council of Ministers' Resolution No. (11) dated 13/1/1437**, adopted a QAF suited to a statistical system led by a central organisation.

While GASTAT is the only entity undertaking official statistical surveys in the Kingdom, a number of ministries and entities supply highly important register and other administrative information to GASTAT, and publish official statistics. The quality principles relating to this part-decentralised structure are included under Element 1 Managing the Statistical System.

## The Quality Levels

### Level 1: Managing the Statistical System

A national statistical system comprises the statistical agencies or units within a country that develop, produce and disseminate official statistics on behalf of the national Government, normally with the national statistical office as the leading agency. Coordination of this system and managing relations with all stakeholders is a precondition for the quality and efficient production of official statistics. Ensuring the use of common and professional statistical standards throughout the system is an important part of this management.

GASTAT undertakes this role under the authority of the **Regulation of the General Authority for Statistics Issued by the Council of Ministers' Resolution No. (11) dated 13/1/1437 and the amendments issued in this regard.**

#### Specifically:

##### Article three:

The regulation process aims at organizing and activating the Kingdom's statistical work through the creation and implementation of comprehensive, accurate and unified statistical system, as well as development of necessary plans and programs to meet statistical needs, and elaborate development plans, scientific research and various activities.

##### Article four:

The General Authority for Statistics shall be the entity in charge of statistical affairs, the only official reference to implement statistical work, and technical supervisor and regulator thereto. Therefore, in order to achieve its desired objectives, it shall:

1. Prepare and follow up on the implementation of a national strategy for statistical work in coordination with relevant public entities once approved and suggest periodical amendments thereto.

### Principle 1: Coordinating the national statistical system

As the entity in charge, GASTAT establishes mechanisms to fully coordinate the producers of official statistics regards the activities of the SS KSA and in the creation of a national plan for the development and production of official statistics. GASTAT coordinate all statistical activities. Legislation and well defined and established procedures are in place for implementing the coordination role at both national and international levels.

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

GASTAT's strategy ensures the identification of, and will enhance good relationships with, all their key stakeholders: users and providers of data, funding agencies, senior government officials, other relevant organizations, academia and the media.

## **Principle 3: Managing statistical standards**

GASTAT will consult internationally, regionally and nationally to develop best practices across the SS KSA to provide statistical concepts, definitions, classifications and models, methods and procedures to achieve a high quality and consistency across processes and across time and space.

## **Level 2: Managing the Institutional Environment**

The quality of the institutional environment is one of the prerequisites to ensuring the quality of statistics. GASTAT will work to improve and enhance a culture of quality. Principles to be assured are professional independence, impartiality and objectivity, transparency, statistical confidentiality, quality commitment and the adequacy of resources.

## **Principle 4: Assuring professional independence**

GASTAT and the SS KSA work in an environment of professional independence and freedom from inappropriate influence to ensure the credibility of the official statistics produced. This commitment to independence from political and other external interference in developing, producing and disseminating statistics is specified in law. Art 4 item 10 of the Regulation.

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

Regulation demands that GSTAT develops, produces and disseminates its' statistics professionally, impartially and unbiased, and that users are treated equitably.

Statistical releases and their dates are published in a Release Calendar published on the website – if errors are detected, they are corrected as soon as possible.

## **Principle 6: Assuring transparency**

Policies and practices, and full information regarding our products (metadata) are published as are the revisions policy and quality reports outlining methodological practices





### Principle 7: Assuring statistical confidentiality and data security

We guarantee that the privacy of data providers (persons, households, enterprises and other data providers) are protected through the Regulation of the General Authority for Statistics in law and in the principles we instill in our staff.

We ensure data confidentiality through signed agreement if access to microdata is allowed for research or statistical purposes. Technical solutions are also in place to ensure that no confidential data leaves our premises.

### Principle 8: Assuring commitment to quality

A culture of quality is promoted in daily practices, published and followed up to improve statistical products and processes.

### Principle 9: Assuring adequacy of resources

Our resources are reviewed on a systematic basis to ensure that the financial, human, and technological are adequate both in magnitude and quality.

The development of new outputs and known and an assessment of potential demands on production and dissemination of statistics include effective resource planning covering human, technological and facilities management.

Our expenditures and financial plans are regularly reviewed under the Council of Ministers Regulation.

## Level 3: Statistical Processes:

### Principle 10: Sound Methodologies

GASTAT's bedrock is built on robust statistical methodologies and procedures. Professional independence is paramount, ensuring impartiality in data collection and analysis. This principle serves as the cornerstone of GASTAT's commitment to credible statistics.

### Principle 11: Appropriate Statistical Procedures

GASTAT is dedicated to employing the most suitable statistical methods, resulting in relevant and high statistical data quality. Stringent data collection, processing, and validation procedures underpin GASTAT's pursuit of excellence.

### **Principle 12: Non-Excessive Burden on Respondents**

GASTAT minimizes the burden on data providers by leveraging advanced technologies and efficient data collection mechanisms. This approach maintains respondent confidentiality while enhancing data acquisition efficiency.

### **Principle 13: Cost Control**

GASTAT's resource management embodies efficiency. The authority optimizes resource allocation to meet critical statistical needs. By harnessing innovative methodologies and administrative records, GASTAT enhances cost-effectiveness while preserving statistical data quality.

## **Level 4: Statistical Products**

### **Principle 14: Relevance**

GASTAT tailors its statistical products to meet the specific requirements of a diverse user base, which includes government entities, the private sector, and society. Active consultation with users ensures that GASTAT's outputs remain relevant and beneficial.

### **Principle 15: Accuracy and Reliability**

GASTAT places a premium on data accuracy and reliability. Rigorous assessment systems address both sampling and nonsampling errors, ensuring data of impeccable quality and solid credibility.

### **Principle 16: Timeliness and Punctuality**

Adhering to international standards, GASTAT ensures the timely production and dissemination of statistics. the GASTAT's commitment to delivering statistical releases in a punctual manner.

### **Principle 17: Coherence and Comparability**

GASTAT actively maintains internal consistency in its statistical products, facilitating comparability over time and across countries. Transparent documentation of changes in concepts and methodologies simplifies the reconciliation process.



### Principle 18: Accessibility and Clarity

GASTAT ensures equitable access to statistical information for all user categories. The authority provides data in clear and understandable formats, accompanied by comprehensive metadata that enhances transparency and enables optimal data utilization.

GASTAT's Quality Assurance Framework is a reference of its dedication to delivering high quality official statistics. Rooted in both international and regional standards, this framework places transparency, user engagement, and data integrity at its core. By upholding these principles, GASTAT ensures the continued reliability, accessibility, and relevance of its statistical products, meeting the diverse needs of its users. As GASTAT advances its statistical capabilities, the QAF remains a cornerstone reference document, solidifying the authority's position as a trusted source of official statistics in Saudi Arabia and on the global stage.



First Level

# Managing the Statistical System



## Fundamental Principles:

### Level 1: Managing the Statistical System

#### Principle 1: Coordinating the national statistical system

##### Compliance standards:

Coordination of the work of the members of the SS KSA is essential for improving and maintaining the quality of official statistics across all producers.

##### Methods:

**The Regulation of the General Authority for Statistics Issued by the Council of Ministers' Resolution No. (11) dated 13/1/1437 and the amendments issued in this regard** states clearly the responsibilities of GASTAT to coordinate the SS KSA.

**GASTAT establishes mechanisms to coordinate** the producers of official statistics and established procedures are in place for implementing the coordination role at both national and international level.

Staff of are made aware of their code of professional ethics for official statistics.

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

##### Compliance standards:

The formulation of a strategy to ensure strong relationships with all key stakeholders: users and data providers, government entities, the private sector, academia, the media, and relevant organizations. GASTAT will discuss data access issues with stakeholders to ensure that necessary information is accessible to meet the needs of society in an effective and efficient way.

##### Methods:

GASTAT formulates a strategy to ensure the identification all of their key stakeholders and enhances good relationships with users, providers of data, funding agencies, senior government officials, other relevant organizations, academia and the media.

The stakeholder strategy includes specific arrangements to ensure ongoing engagement with stakeholders.

GASTAT discuss data access issues with stakeholders to ensure that necessary information is accessible to meet the needs of society in an effective and efficient way.

GASTAT will use their legal authority to collect data for the development, production and dissemination of official statistics in an effectively managed way, balancing the need for information against the burdens of its provision.

GASTAT manages its relationships to allow access to tested-as-suitable administrative data from other entities, government and non-government, for statistical purposes. GASTAT will guide and support all data providers.

### Principle 3: Managing statistical standards

#### Compliance standards:

Identify, develop and maintain best practices in statistical methods and procedures to achieve high quality and consistent outputs across the statistical system.

#### Methods:

GASTAT will consult internationally, regionally and nationally to develop best practices across the SS KSA to provide statistical concepts, definitions, classifications and models, methods and procedures to achieve a high quality outputs that are consistent across time and space.

A cooperative approach is adopted that will include support and guidance to all data providers and producers of official statistics

Exception-reporting and documentation will be produced by GASTAT to inform all stakeholders.

Second Level

# Managing the institutional environment



## Level 2: Managing the institutional environment

The quality of the institutional environment is one of the prerequisites to ensuring the quality of statistics. GASTAT will work to improve and enhance a culture of quality. Principles to be assured are professional independence, impartiality and objectivity, transparency, statistical confidentiality, quality commitment and the adequacy of resources.

### Principle 4: Assuring professional independence

#### Compliance standards:

The professional independence of GASTAT from other policy, regulatory or administrative departments and bodies.

#### Methods:

The procedures for recruiting a head of GASTAT of the highest calibre are transparent and based on professional criteria only. The reasons for terminancy are specified in the legal framework and cannot include reasons compromising professional or scientific independence.

The independence of GASTAT from political and other external interference in developing, producing and disseminating statistics is specified in law.

The head of GASTAT has responsibility to decide statistical methods, standards and procedures, and on the content and timing of statistical releases and for ensuring that statistics are developed, produced and disseminated in an independent manner.

The statistical work programmes are published and periodic reports describe progress made. Statistical releases are clearly distinguished and issued separately from political/policy statements.

GASTAT comment publicly on statistical issues, including criticisms and misuses of statistics as far as considered suitable.

GASTAT manages its relationships to allow access to tested-as-suitable administrative data from other entities, government and non-government, for statistical purposes. GASTAT will guide and support all data providers.

### Principle 5: Assuring impartiality and objectivity

#### Compliance standards:

The development of a system that produces and disseminates its statistics professionally, impartially and unbiased, and that users are treated equitably.



### Methods:

Guidelines for assuring the impartiality and objectivity of the General Authority for Statistics are in place, made known to staff and publicly available. The implementation of the guidelines is monitored.

Choices of data sources and statistical methods are based on generally agreed methodology and best practices.

The replacement of existing data sources with new ones and/or the integration of new data sources in statistical processes is carefully and objectively evaluated against quality and possible trade-offs.

The General Authority for Statistics have a clear policy as to how to deal with errors, how to react when they are discovered and how they are corrected. An error treatment policy is in place.

Rules and procedures are in place in the General Authority for Statistics to safeguard equal access of all users to disseminated statistics at the same time.

## Principle 6: Assuring transparency

### Compliance standards:

Policies and practices that provide full information regarding the products and processes that are published including quality reports and reports outlining methodological practices.

### Methods:

Relevant legislation regarding the mandate to collect data and access information is available through the General Authority for Statistics web page.

All statistical outputs are accompanied by the relevant metadata and methodological notes, (focused on data sources, methods and procedures).

A publicly available and easily accessible release calendar containing information on the date and time of future releases is issued and made known to users in advance.

Statistical releases issued and statements made by the General Authority for Statistics are based solely on statistical findings and results.

## Principle 7. Assuring statistical confidentiality and data security

### Compliance standards:

To guarantee that the privacy of data providers (persons, households, enterprises and other data providers) are protected in law and through the principles instilled in staff. Data is used for statistical purposes only and unconditionally confidential.

### Methods:

Clear provisions are stated in the statistical law, guaranteeing statistical confidentiality and data protection. Standards; written, unwritten and technological, are in place to ensure our commitment to statistical confidentiality.

Respondents contacted during any kind of data collection are systematically informed that the General Authority for Statistics fully commit themselves to data protection and statistical confidentiality, that the data are used for statistical purposes only and that individual data are not disclosed under any circumstances.

Provisions are in place to ensure that prior to the release of statistical information (aggregate data and microdata), statistical disclosure control methods are applied in order to secure statistical confidentiality.

All statistical data is stored in secured environments that prevent access by unauthorised persons in accordance with confidentiality protocols, existing standards and best practices.

Clear conditions for granting researchers access to microdata for scientific purposes are stated in the statistical law and/or other relevant legislation. These conditions are publicly available.

A statistical confidentiality policy is publicly available. It sets out principles and commitments focused on statistical confidentiality that reinforce the trust of respondents, the general public and other stakeholders.

## Principle 8. Assuring commitment to quality

### Compliance standards:

Processes are in place through assessment and reporting of outputs within the statistical agency to assure quality that systematically and regularly identify strengths and weaknesses to continuously improve process and product quality.

### Methods:

Guidelines are defined on how to implement elements of quality assurance related to the statistical production process, comprising:

- A. description of the different phases of the statistical production process and links to relevant reference documentation for each phase, following the Generic Statistical Business Process Model (GSBPM) or any other equivalent process representation;
- A. description of the methods to assure the quality of each phase of the statistical production process.

GASTAT quality framework is prominently displayed on websites.

Methodological and technical support and general tools are provided by specialised/dedicated units for implementing process quality monitoring, quality assurance and improvement plans.

Processes such as quality audits, quality reviews or quality assessments are in place to evaluate the quality of the different phases of the statistical production process in accordance with the quality assurance and improvement plan.

Procedures based on quality reporting are in place to internally monitor output quality. Results are analysed regularly and assessed with regard to possible trade-offs. Senior management is informed in order to decide on improvement actions.

External experts are deployed to review key statistical domains as appropriate.  
 Benchmarking on key statistical processes is carried out to identify good practices.

Principle 9. Assuring adequacy of resources

Compliance standards:

That resources are reviewed on a systemetic basis to ensure that the financial, human, and technological are adequate both in magnitude and quality. The development of new outputs and an assessment of potential demands on production and dissemination of statistics include effectice resource planning covering human, technological and facilities management.

Methods:

The resources available to GASTAT are sufficient to meet statistical requirements.
A strategic planning process is in place and takes into account needs for human, financial and IT resources.
The General Authority for Statistics have procedures in place to ensure that demands for new statistics are accurately identified and analysed, including an evaluation of costs.
A process is in place to define priorities among new demands on the basis of user needs.
Procedures are in place to regularly evaluate the adequacy of human, financial and IT resources.
User needs and feedback are monitored and taken into account in the statistical planning process.

Third Level

# Statistical Processes



## Third Level: Statistical Processes

GASTAT produces official statistics based on methodologies and procedures consistent with standards and best practices recognized in the statistical field nationally and internationally, taking into account the privacy of data, which ensures the effectiveness and quality of the statistics it provides.

### Principle 10: Sound methodologies

For the production of statistics, GASTAT relies on scientific and documented statistical methodologies, tools, procedures, and sound experiences, that ensure the quality.

#### Compliance standards:

1. Adopt statistical methodologies that are compliant with national and international standards while striving for innovation.

#### Methods:

**A summary methodological document:** The methodological framework and the procedures for implementing statistical processes are integrated into a summary methodological document and periodically reviewed. The methodological document explains and details how GASTAT and other international standards are applied.

**Availability of methodological guidelines, and handbooks:** Methodological guidelines are made publicly available if appropriate.

**Explanation of divergence from international recommendations:** Divergence from existing GASTAT and international methodological recommendations are documented (explained and justified).

**A methodological organisational structure:** An organisational structure (e.g. a unit, net, committee) responsible for methodology is in place. Its tasks could include the design of statistical methods, the monitoring of implementation, the validation of results, and making available standard tools for the phases of the Generic Statistical Business Process Model (GSBPM).

**Views of experts and users:** Statistical processes take into account the views of experts and users where appropriate.

**Methodological documentation:** Methodological documentation is elaborated for each statistical process including all pertinent information on concepts, methods, classifications, and other types of standards, and is publicly available at least in a summary form.

**Innovative methods for collecting and processing data:** GASTAT takes initiative and participates in the development of innovative methods for collecting and processing data including the integration of new and/or alternative data sources and geospatial data.

**Statistical Services:** a promotes the adoption of statistical services under a common statistical reference architecture.

**Adoption of innovative methods:** The impact on quality through the adoption of innovative methods are assessed in advance.

2. Regularly evaluate and, if necessary, amend the statistical business register, sampling frames of surveys, and other registers to ensure the quality of the statistical work.

#### Methods:

**Update of registers and frames:** For registers and frames used, the owners is responsible for the updating of all relevant changes in the population, for example, businesses or individuals. These updates are performed continuously for registers and periodically for frames as appropriate.

**Quality assessment of registers and frames:** The quality of registers and frames used is assessed regularly. Adequate quality indicators are calculated in accordance with guidelines in order to assess frame errors.

**Feedback from surveys:** Information gathered during the conduct of surveys is used to assess, update, and improve the quality of registers and frames, especially their coverage. Respondents are properly informed about this usage of their data.

**Changes in administrative data sources:** GASTAT is informed about changes in relevant administrative sources and uses this information to investigate consequences for registers and frames.

**Update of privately held data:** For privately held data, the responsible data provider should inform GASTAT about changes to the structure of the content which will have an impact on the quality or interpretation of raw data.

3. Develop procedures to ensure the application of approved concepts, definitions, and classifications.

#### Methods:

**Concepts, definitions, classifications, and other types of standards:** Concepts, definitions, classifications, and other types of standards are applied consistently in accordance with national legislation and are documented.

**Consistency of national classifications:** National classifications are consistent with the corresponding international classification systems.

**Correspondence tables:** Correspondence tables are documented and kept up-to-date. Explanatory notes or comments are publicly available.

**Update of classifications:** Procedures for the updating of national classification systems are in place.

4. Periodically evaluate survey methodologies and use of administrative records and other sources in statistical programs to ensure the quality of statistical results.

#### Methods:

**Methodological and technical support and general tools:** Methodological and technical support and general tools are provided by specialized/dedicated units for implementing process quality monitoring, quality assurance, and improvement plans.

**A culture of continuous improvement. A culture of continuous improvement is promoted and implemented, including:**

- Raising awareness of staff about the importance and need to continuously improve the quality of statistical processes through training, seminars, communication, etc.
- Systematic review and documentation of methodology and processes leading to improvement actions.
- Systematic identification and exchange of good statistical practices.
- Systematic monitoring, assessment, and improvement of the quality of statistical processes, including integration of data from multiple data sources.

**Evaluating process quality:** Processes such as quality audits, quality reviews, or quality assessments are in place to evaluate the quality of the different phases of the statistical production process in accordance with the quality assurance and improvement plan.



**A quality assurance and improvement plan:** A quality assurance and improvement plan or any other similar scheme is in place. It describes the working standards, formal obligations (such as laws and internal rules), and the set of quality control and improvement actions to prevent and monitor errors, evaluate quality indicators, and control as well as improve quality at each phase of the statistical production process, including the integration of data from multiple data sources. The quality assurance and improvement plan are based on the quality guidelines or both documents are mutually consistent (depending on national circumstances).

The quality assurance and improvement plan or any other similar scheme Takes user needs into account and checks the relevance of the statistical process;

- Ensures effective technical and organisational design of the statistical production process.
- Assures the quality of data collection, including the use of administrative data and other data sources.
- Assures the quality of the integration of data from multiple data sources.
- Assures the quality of data processing (coding, editing, imputation, and estimation).
- Ensures that the information described above is accessible, for example in the quality reports, and comprehensible to users.
- Ensures that reactions/feedback from users are regularly collected, assessed, and acted upon where necessary.
- Ensures the provision of suitable metadata to users to aid their understanding of quality.
- Comprises any further quality assurance and improvement actions for different phases of the statistical process.

**Improve process quality:** The results of quality evaluations are used at the process level to improve processes and output quality. Monitoring the implementation of the improvement actions is regularly performed. Senior management is informed of the progress in order to decide on further actions.

5. Cooperate with universities and research institutions in order to develop and improve methodologies and effectiveness of implemented statistical methods.

#### Methods:

**Collaboration with the scientific community:** Collaboration is in place, for example through conferences, workshops, task forces, and training courses, with the scientific community to discuss methodological, IT, and innovation developments.

**Comparative methodological studies:** Comparative methodological studies are carried out with the scientific community to identify good practices.

**Collaboration with colleagues at the international level:** Staff collaborate on methodological issues with colleagues at the international level.

**Participation and presentations at conferences:** Regular participation and presentations at relevant national and international conferences (i.e. with attendance of academics/scientists and other professional experts) are encouraged for the exchange of knowledge and experiences.

**Organization of conferences:** National and international conferences, seminars, workshops, or similar events with the participation of the scientific community and other professional experts are organized. Participation is encouraged.

**External evaluation of methodology:** Evaluations/assessments/audits of the methodologies used are requested from external experts (such as the scientific community) as appropriate.

### Principle 11: Appropriate statistical procedures

GASTAT's statistical work is based on appropriate procedures and tools at every stage to ensure the quality of official statistics.

#### Compliance standards:

1. Test methodologies, questionnaires, manuals, computer-based applications and other tools to verify their validity before starting the data collection process.

#### Methods:

**Procedures for the development of questionnaires:** Procedures are in place to create, assess, validate, and update questionnaires and involve all relevant experts (i.e. in the statistical domain, in questionnaire design, language, from the scientific community).

**Testing of questionnaires:** Prior to data collection, survey questionnaires are tested by appropriate methods (questionnaire pre-test, pilot in real situations, in-depth interviews, focus groups, interviewer support, etc.).

**Use of test results:** The test results are taken into account in the process of designing the final questionnaire and documented in a report.

2. Regularly monitor the stages of statistical work and update or revise them as needed.

### Methods:

**Renewal of sample designs:** Sample designs are periodically renewed for recurrent surveys according to precision requirements.

**Measurement of non-sampling errors:** Non-sampling errors (coverage, measurement, processing, non-response errors as well as selection bias for administrative and other data sources and model assumption errors) are routinely monitored and the results are used for process improvement.

**Assessment of sampling and estimation methods:** Sampling errors are routinely measured to assess sampling and estimation methods.

**Assessment of data collection methods:** Data collection methods and data collection designs are assessed regularly.

**Provision of documents to respondents:** Respondents are provided with all the necessary documents (i.e. letters, questionnaires, leaflets, especially in the case of self-administrated questionnaires and feedback if possible). These documents are reviewed regularly.

**Support to respondents:** Respondents are supported in filling in the questionnaires. Procedures are in place to answer respondents' requests and complaints and are easy to access.

**Training of interviewers:** Training courses and workshops (including interviewing techniques) are provided for interviewers. For each survey, an interviewer manual/handbook exists and the accompanying interviewer procedures are implemented.

**A procedure to monitor data collection:** Data collection is regularly monitored and optimized. This includes, among other elements, monitoring the mode of data collection, survey length, response rate, interviewer performance, and administrative or other data transmissions.

**Procedures to follow-up non-response:** Procedures are in place to follow-up non-response in order to improve response rates and manage non-response bias.

**Documentation and sharing of data coding methods:** The data coding methods are documented and stored. These methods are shared with the relevant staff.

**Use of statistical models:** When using statistical modelling, for example, seasonal adjustment, the extent to which the assumptions are valid is assessed, as well as the impact on estimates.

**Automated methods:** Automated methods are promoted, monitored, and revised if necessary.

**Process quality indicators:** Process quality indicators are routinely calculated and monitored. Processes are revised accordingly.

**Process descriptions:** Process descriptions are in place to document processes in accordance with the Generic Statistical Business Process Model (GSBPM) or other relevant models in order to ensure the replicability of the process, the traceability of the data, and the identification of improvement actions.

### 3. Track revisions and apply clear and transparent standard procedures.

#### Methods:

**Revision policy:** A revision policy stating principles and standard and transparent procedures is set up and is publicly available.

**Guidelines and tools related to revisions:** Guidelines and tools relating to the revision of published statistics are in place. They are routinely applied and publicly available.

**Calendar of revisions:** A calendar of revisions is compiled and publicly available.

**Explanation of revisions and their publication:** Revisions of the published data are accompanied by the relevant metadata that provides the necessary explanations. The metadata are publicly available.

### 4. Administrative records and other sources used to produce statistics are of good quality and consistent with the statistical concepts, definitions, and classifications.

#### Methods:

**Responsible for statistical processing of administrative and other data:** GASTAT is responsible for the statistical processing of administrative and other data used for the development, production, and dissemination

**The distinction between statistical data, administrative data, and other data processing:** The processing of administrative or other data is clearly distinguished from statistical processing. The processing includes appropriate validation rules and specific procedures for controlling and assuring the quality of the data.

**Approximations of definitions and concepts:** Definitions and concepts of administrative or other data are a good approximation to those required for statistical purposes. Administrative or other data owners are formally consulted about definitions and concepts.

**Processing of administrative or other data for statistical purposes:** When administrative or other data are used for statistical purposes, data are processed specifically for their statistical use. This might imply deriving new variables such as:

- Applying different validation and imputation rules.
- Creating new data files.
- Integrating data sources.
- Calculating weights and new aggregates.
- Calculating specific quality checks.

**Documentation of statistical, administrative, and other data production processes:** Appropriate documentation is in place describing the production processes for all types of data sources (statistical, administrative, or other), taking into account their differences in terms of definitions, concepts, coverage, etc.

**Differences in concepts:** Differences in concepts between statistical and other types of data (administrative and other data) used for statistical purposes are thoroughly studied, described, and documented.

**Measures to deal with differences in concepts:** Measures are taken to deal with differences in concepts between statistical and other types of data (administrative and other data) and described in quality reports as appropriate.

**5.** Cooperate with other entities responsible for administrative data and other data, in order to ensure input data quality.

#### Methods:

**Agreements with owners of administrative and other data:** Agreements between GASTAT and owners of administrative and other data are in place. When administrative and other data systems are developed or reviewed, such agreements help ensure that statistical needs are taken into account.

**Guidance on new data sources:** Guidance on how to identify and exploit the statistical potential of new data sources is provided to staff.

**Capabilities:** GASTAT has the necessary capabilities and IT infrastructure to guarantee safe storage and use of administrative and other data.

**Documentation of administrative and other data:** The data owners systematically provides GASTAT with documentation/metadata about the content of administrative and other data as well as the production process of the data (e.g. a methodological document, concepts and definitions, and populations).

**Informing the administrative or other data owners :** Procedures are in place to ensure that the owners of administrative or other data are kept informed about how their data are used for statistical purposes and that they receive feedback on the quality of the data provided in view of further improvements. Staff in GASTAT are aware of these procedures.

**Quality requirements:** GASTAT ensures that owners of administrative and other data are aware of the quality considerations and requirements for statistical production.

**Data correction policy:** When detecting incorrect data or quality problems in administrative or other data, inform the owners of these data about incorrect data or problems detected without violating statistical confidentiality rules, with a view to improving future data sets. The data correction policy is made known to staff.

**Cooperation:** GASTAT offers training courses and tools, such as guidelines, on quality control and quality assurance to the owners of administrative and other data.

**Continuous improvement:** Procedures are in place to inform data owners of the incorrect data and quality issues that have been detected, without violating the statistical confidentiality rules. Staff are aware of the procedures.

**6.** GASTAT organizes its procedures and operations in accordance with international best practices.

#### Methods:

**Design of statistical processes:** The design of statistical processes based on data from surveys, administrative, multiple, or other sources is in compliance with good practices and standards.

**Procedures for designing, testing, and updating questionnaires:** Procedures for designing, testing, and updating questionnaires are in place and in accordance with good practice and standards.

**Compliance of editing, imputation, and statistical disclosure control techniques with standards:** Editing, imputation and statistical disclosure control techniques follow methodological rules and good practices and are documented.

**Data integration:** Procedures for data integration in the case of multisource statistics are in compliance with good practices and standards.

## Principle 12: Non-excessive burden on respondents

GASTAT sets its goals within the framework of ensuring that the burden is gradually reduced on respondents and that requests for information are in line with the needs of users and are not exaggerated

### Compliance standards:

1. Limit data requests regarding coverage and details to specific and necessary information.

### Methods

**Priorities for GASTAT's statistics:** Response burden is taken into account when defining priorities for GASTAT's statistics.

**Analysis of the need for statistical information:** The needs for statistical information and level of detail by domain are analysed, documented and defined. Requests to respondents are adjusted accordingly in order to reduce the response burden.

2. Continuously use advanced technologies in order to reduce the burden on respondents.

### Methods:

**Procedures and technical tools:** Procedures and technical tools (e.g. software) are developed to increase the use of electronic means for data collection from target population: (Households, Individuals and Establishments).

**Data extraction from business accounting systems:** Software methods and tools to directly extract data from business accounting systems are available and used.

**IT tools for the collection of administrative and other data:** IT tools for the collection of administrative and other data to be used for statistical purposes are developed and implemented.

3. Promote the sharing and exchange of data on institutions, companies, and individuals between members of the national statistical system, while adhering to confidentiality and data protection requirements.

**Methods:**

**Agreements and tools for data sharing:** Formal agreements and tools are in place for data sharing.

**Methods and tools for data integration:** IT tools for the collection of administrative and other data to be used for statistical purposes are developed and implemented.

**Sharing of data archives:** When useful, data archives are shared in compliance with confidentiality policies.

**Promoting register-based statistical system:** The construction of a register-based statistical system, making use of all available data, is promoted.

**Key variables to be shared:** In accordance with confidentiality rules, GASTAT defines the key variables that need to be shared between statistical processes.

4. Enhance data linkage from different sources in order to reduce the burden on respondents.

**Methods:**

**Guidelines, methods, and tools for linking data:** Guidelines, methods, and tools are available in order to support the linking of data.

**Key variables to be linked:** GASTAT defines the key variables that need to be linked between statistical processes.

**Assessment of quality of the linkage:** When variables coming from different data sources are linked, an assessment is made of the quality of the data linkage.



### Principle 13: Cost Control

When carrying out its tasks, GASTAT strives to efficiently use available resources in statistical works to ensure the feasibility of these works, the quality of official statistics, and the satisfaction of priority statistical needs.

#### Compliance standards:

1. Adopt procedures that guarantee the effective utilization of available resources through programming statistical works, avoiding duplication and matching them with user's needs. Continuous monitoring of the use of these resources.

#### Methods:

**Policy on adjustment of scope, detail, and cost of statistics to needs:** A policy is in place establishing cause-effect relationships and evaluating the extent to which statistical needs are met in statistical work programmes.

**Cooperation with stakeholders:** Cooperation with stakeholders is in place to discuss the scope of statistics, costs and benefits.

**Planning procedures:** Procedures are in place to analyse, determine and estimate the scope and detail of statistics taking into account costs, opportunities and needs.

**Cost awareness:** Staff is made aware of the costs of official statistics in relation to content and quality of output and possible trade-offs.

**Scope, detail and costs of statistics:** The scope, detail and costs of statistics are defined in statistical work programmes and/or other documents.

**Monitoring of user needs and feedback:** User needs and feedback are monitored and taken into account as far as possible in the statistical planning process.

**Cost accounting:** Systematic process-based and output-based cost accounting supports management cost reporting and cost-benefit analysis.

**Assessment of new demands against costs:** GASTAT has procedures in place to ensure that demands for new statistics are accurately identified and analysed, including an evaluation of costs.

**Definition of priorities:** A process is in place to define priorities among new demands on the basis of user needs.

**Costing of statistical output:** A procedure is in place to ensure that new statistical output for all domains is costed within the statistical work programme.

**Review procedures:** Regular review procedures for all statistics are in place to support decision-making regarding statistics that could be discontinued or curtailed to free up resources.

**User consultations:** User consultations are in place to discuss and agree upon the results of the regular review procedure.

**Planning and priority setting process:** Procedures are in place for planning and implementing discontinuation or curtailing of statistics.

2. Make proactive efforts to introduce and strengthen the use of administrative records for statistical purposes and reduce reliance on direct and costly surveys.

#### Methods:

**Meetings with owners of administrative and other data:** Periodic meetings with owners of administrative and other data are held in order to discuss how to improve and increase the use of their data.

**Assessment of possible administrative and other data sources:** An assessment of possible administrative and other data sources is carried out prior to launching a survey, in particular, a newly designed one.

**Investigating the statistical potential of new data sources:** Mechanisms are in place to investigate the availability of new data sources to enhance already existing statistical outputs.

**Data linking and integration methods:** Data linking and integration methods are proactively pursued subject to data confidentiality and security considerations.

**Quality indicators:** Quality indicators are used to improve the methods for using administrative and other data for statistical purposes.

3. Enhance the exchange of data between producers of statistics in order to avoid duplication of statistical products.

#### Methods:

**Assessment of the statistical work programme:** GASTAT assesses the content of the statistical work programme to eliminate duplication or redundancy across data-producing agencies and ministries.

**Domain coordination:** GASTAT sets up working groups/task forces/other types of meetings between the National Statistical Institute and other General Authority for Statistics to coordinate statistical tasks and quality issues in specific statistical domains and between statistical domains and to avoid duplication of work.

4. GCC statistical offices strive to promote, exchange and implement unified solutions that increase the effectiveness and efficiency of statistical work.

#### Methods:

**Standardisation programmes and procedures for statistical processes:** Standardisation programmes and procedures are defined and implemented in the main phases of the statistical processes.

**Strategy to adopt or develop standards:** A strategy is in place to adopt or develop standards in various fields such as quality management, process modelling, software development, software tools, project management and document management.

**Sharing standardised solutions:** Share and re-use existing standardised solutions (tools and methods) that increase the effectiveness and efficiency of statistical processes. participate in joint projects, working groups or training courses on the development of such tools and methods to share the development burden.

**Standardisation:** Actions are taken, based on an implementation plan, to move gradually towards or to comply with standardisation and are described in quality reports or other documentation.

## 5. Effectively use information and communications technology in all stages of statistical work.

### Methods:

**Pooling of resources, investments and identification of innovation/modernisation potential:** Centralised IT and methodological units provide for the pooling of resources and investments and the identification of innovation/modernisation potential to optimise statistical processes.

**IT architecture and strategy:** An IT architecture and strategy are in place and regularly updated.

**Promote automated techniques:** Policies, procedures and tools are in place to promote automated techniques for statistical processes, based on common standards (e.g. data capture, coding, validation, reporting etc.) and sharing of common statistical services.

**Automated processing techniques:** Automated processing techniques are regularly reviewed and modernised.

Fourth Level

# Statistical Products



## Fourth Level: Statistical Products

GASTAT continuously improves the quality of statistical products, in accordance with national and international standards, by adopting and adhering to quality criteria, including relevance, accuracy, reliability, timeliness and punctuality in publishing statistics, Coherence, comparability, accessibility, clarity..

### Principle 14: Relevance

Statistical products must meet the needs of users and have beneficial uses. Consultation with users is a way to determine real and priority needs and to check satisfaction with the available statistical information.

#### Compliance standards:

1. Produce national and regional statistics according to mechanisms and strategies to determine the priority information needs of users like government entities, the private sector and society.

#### Methods:

**Statistical work programme priorities:** Procedures are implemented to prioritise different user needs in the statistical work programme.

**Strategic goals and programmes:** Strategic goals and programmes are elaborated and published regularly. User needs are taken into account following cost/benefit considerations.

**Agreements with key users:** Cooperation Agreements, Service Level Agreements or similar arrangements are established with the key users in order to define and document priority needs.

**Evaluation of the statistical work programme:** Periodic evaluation of the statistical work programme is carried out to identify new priorities, negative priorities and emerging needs.

2. Implement procedures to consult users, to identify their needs and to monitor the relevance and value of existing statistics in meeting their needs.

### Methods:

**Legislation on user consultation:** The statistical laws include an obligation to consult users on their needs for official statistics.

**Aim of user consultation:** Feedback from user consultations is used to provide input for the preparation of the statistical work programme, identify emerging needs and priorities, improve the quality of statistical outputs, and monitor the value of statistics.

**Analysis of the use of statistics:** Data on the use of statistics (for example, evaluation of downloads, subscribers of reports, web analytics, web scraping results) are analysed (for example, by statistical domain and by type of user) to improve statistical outputs.

**Relevance of statistical output:** Procedures are in place to review statistical output on its relevance for users, including its use as a source for other processes.

**Key users:** A list of key users covering all relevant interest groups, their use of data and their unmet needs is regularly updated.

**Classification and user profiling:** Classification and profiles of users for a given output are regularly updated and used for consultation purposes and to improve products and services.

**Quality indicator(s):** Quality indicator(s) on relevance are regularly monitored and published in quality reports.

**Analysis and assessment of relevance:** Quality indicator(s) on relevance are regularly analysed and assessed to improve the statistical process.

**User satisfaction measurement:** User satisfaction is measured through surveys, similar studies, feedback forms on websites, usability testing of products etc., and results are assessed regularly. They include, for example, a compilation of quality indicators on user satisfaction.

**Dissemination of user satisfaction measurement:** The main results of user satisfaction measurement are publicly available.

**Follow-up of user satisfaction measurement:** The results of user satisfaction measurement are taken into account when defining priorities and are reflected in the statistical work programme. Improvement actions arising from the results of user satisfaction measurement are defined, prioritised, scheduled for implementation and followed up.

**Satisfaction of key users with specific outputs:** Measures to assess the satisfaction of key users with specific outputs are in place (e.g. detailed user satisfaction surveys/indicators at the output level). The results of this assessment are publicly available, for example in quality reports, and dedicated websites.

3. Involve users and producers of official statistics in the processes of identifying, analyzing and evaluating information needs through academic, institutional and sectoral committees.

#### Methods:

**User consultation procedures:** Procedures and activities for the consultation of users on their needs are in place. For example, they consist of setting up user committees, holding regular meetings between key users and GASTAT, consulting key users or other relevant stakeholders, calling on the skills of experts on specific issues or processing individual user requests and responses.

4. Establish a unit for statistical innovation with the aim of organisational and administrative innovation and developing and innovating new statistical products and services that meet the needs of users in cooperation with the relevant statistical departments and according to the stages of statistical work.

#### Methods:

**Striving for innovation:** GASTAT actively encourages the exploration of new and innovative methods for statistics. GASTAT develops methodological work and supports IT solutions to ensure the quality of statistics, especially when new and alternative data collection modes and sources are used as input.

**Innovation:** Innovative statistical methods and tools are developed and used to improve the relevance and value of statistical outputs.



### Principle 15: Accuracy and Reliability

The available statistics reflect reality correctly and reliably. In this context, GASTAT regularly evaluates statistical products.

#### Compliance standards:

1. Evaluate and validate original data, intermediate results and statistical products by comparing them where appropriate with other statistical information.

#### Methods:

**Assessment and validation systems:** Systems for assessing and validating source data, integrated data, intermediate results and statistical outputs are in place.

**Assessment and validation guidelines:** Guidelines for data quality assessment and validation are in place. They address accuracy and reliability issues.

**Assessment and validation procedures:** Procedures to systematically assess data quality and validate data are in place.

**Comparisotn of intermediate results and outputs:** Intermediate results and outputs are compared with other relevant sources of information in order to ensure validity.

2. Assess and document sampling and non-sampling errors.

#### Methods:

**Guidelines and methods to measure and reduce errors:** Guidelines on how to measure and reduce errors to an acceptable level are in place and known to staff.

**Quality indicator(s):** Quality indicators (s) on accuracy and reliability are regularly monitored and published in quality reports.

**Analysis and assessment of accuracy and reliability:** Quality indicator(s) on accuracy and reliability are regularly analysed and assessed to improve the statistical process.

**Procedures for preventing and reducing errors:** Procedures for preventing and reducing sampling and non-sampling errors to an acceptable level are in place:

- The identification of the main sources of sampling and non-sampling errors (coverage, sample variability and selection bias, measurement, processing, non-response and model assumption errors) in statistical processes;
- The quantification of sampling errors for key variables; the identification and evaluation, in quantitative or qualitative terms, of the potential bias and additional variance due to non-sampling errors;
- The methods for the correction and adjustment of errors as well as the analysis of differences between preliminary and revised estimates.

**Methods for improving accuracy:** Methods for improving the accuracy of statistical data are developed according to methodological and precision requirements.

**3.** Analyse revisions on a regular basis in order to improve source data, statistical processes and outputs.

#### Methods:

**Procedures on analysis of revisions:** Procedures are in place on how to analyse the effects of revisions on the accuracy and reliability of outputs. The results of the analysis are used to improve the quality of source data, processes and outputs.

**Analysis of revisions:** Revisions are analysed. This serves to improve source data, the statistical process and outputs. Lessons learnt are used to adjust the production cycle.

**Quality indicators on revisions:** Quality indicators on the revisions (e.g. size and direction of revisions and their means) are regularly calculated in accordance with the current standards and are publicly available.

## Principle 16: Timeliness and Punctuality

GASTAT produces and publishes official statistics in a timely and punctual manner.

### Compliance standards:

1. Produce statistics in a timely manner and continuously improve the timeliness of data dissemination in accordance with international standards.

### Methods:

**Compliance with international standards:** GASTAT complies with international standards on timeliness.

**Publication of a release calendar:** A release calendar is published covering all statistics for which timeliness standards are established and within international regulations and agreements.

**Divergences from timeliness targets:** Divergences from GASTAT and international timeliness targets are regularly monitored and an action plan is developed if these targets are not met.

**Quality indicator(s):** Quality indicator(s) on timeliness are regularly monitored and published in quality reports.

**Analysis and assessment of timeliness:** Quality indicator(s) on timeliness are regularly analysed and assessed to improve the statistical process.

2. Correct errors in published statistics and re-publish them after correction without delay.

### Methods:

**Error treatment policy:** GASTAT has a clear policy as to how to deal with errors, how to react when they are discovered and how they are corrected. The error treatment policy is publicly available.

**Error declaration:** Procedures are in place to declare an error when found in published statistics.

**Announcement and correction of substantial errors:** Procedures are in place for announcing and informing users promptly on substantial errors identified in published statistics and on when and how they will be/have been corrected. Errors are corrected as soon as possible.

3. Disseminate statistics according to a previously announced publication calendar. If this is not done, a new publication date must be announced in advance and an explanation must be provided for non-compliance with the previous date.

#### Methods:

**Publication of a release calendar:** A release calendar is published and regularly updated.

**Monitor and assess punctuality:** The punctuality of each release is monitored and assessed.

**Divergences from the pre-announced release time:** Divergences from the pre-announced release time are published in advance, the reasons are explained, and a new release time is announced.

**Quality indicator(s):** Quality indicator(s) on punctuality for preliminary and final results are regularly monitored and published in quality reports.

**Analysis and assessment of punctuality:** Quality indicator(s) on punctuality for preliminary and final results are regularly analysed and assessed to improve the statistical process.

4. Determine the periodicity of the publication of statistics according to the requirements of their use and in accordance with national and international standards.

#### Methods:

**Consultation of users on periodicity:** Regularly consult users on periodicity and take into account their requirements as far as possible.

## Principle 17: Coherence and Comparability

It is necessary to ensure internal consistency of official statistics and comparability over time and between countries and to ensure coherence with similar data from other domains (if any).

### Compliance standards:

1. Verify internal consistency of statistical product.

### Methods:

**Procedures and guidelines to monitor internal coherence:** Procedures and guidelines to monitor internal coherence are developed and monitoring is carried out in a systematic way. Where appropriate, guidelines should deal with consistency between microdata and aggregated data, between annual, quarterly and monthly data or other periodicity, between national and regional data, between domain statistics and National Accounts and within National Accounts, and with consistency in terms of relationships between related phenomena.

**Procedures and guidelines to combine outputs from complementary data sources:** Process-specific procedures and guidelines ensure that outputs obtained from complementary data sources are combined so as to ensure internal coherence and consistency.

**Quality indicator(s):** Quality indicators (s) on coherence are regularly monitored and published in quality reports.

**Analysis and assessment of coherence:** Quality indicator(s) on coherence are regularly analysed and assessed to improve the statistical process.

2. Ensure comparability of official statistics for a given period of time.

### Methods:

**Identification of changes to concepts:** Changes in concepts (classifications, definitions and target populations) in response to significant changes in reality, as well as their impact, are clearly identified/made visible, for example, to facilitate the reconciliation of different statistical series.

**Identification and measurement of changes in methods:** Changes in methods are clearly identified and their impact is measured to facilitate reconciliation.

**Publication and explanation of breaks in time series:** Any breaks occurring in statistical series are highlighted together with their reasons, consequences and the methods for ensuring reconciliation over time. The explanations are publicly available. These methods can range from the most complete procedures (e.g. providing old series data linked to the new one) to the simplest (e.g., user's guidelines or recommendations for linking the different series).

**Quality indicator(s):** Quality indicator(s) on comparability are regularly monitored and published in quality reports.

**Analysis and assessment of comparability:** Quality indicator(s) on comparability are regularly analysed and assessed to improve the statistical process.

3. Use national and international standards for concepts, classifications, procedures, indicators and methodologies in the production of official statistics in order to enhance their geographical comparability and their coherence with data from other domains.

#### Methods:

**Institutionalisation of assessments of comparability:** Standard procedures agreed upon between GASTAT, GCCSTAT and other international organizations are in place for the regular assessment of comparability.

**Collaboration in methodological studies:** Methodological studies are conducted in collaboration among international statistical offices.

**Assessment by GCC STAT on the comparability of data:** GCC STAT assesses the comparability of national data using the relevant metadata and quality reports that are requested from the national statistical offices.

**Analysis of asymmetries:** An analysis of asymmetries is carried out where possible, and reports on mirror statistics among statistical offices are publicly available.

**Analysis of mirror statistics:** Discrepancies in mirror statistics are identified and corrected or described whenever possible.

**A mechanism to promote coherence and consistency:** A common repository of concepts or a mechanism to promote coherence and consistency is in place.

**Assessment of compliance with standards:** Periodic assessments of compliance with standards on definitions, units and classifications are carried out and reflected in quality reporting.

**Explanation of deviations from standards:** Deviations from standards on definitions, units or classifications are made public and the reasons for the deviations are explained, particularly in reference to international standards.

## Principle 18: Accessibility and Clarity

GASTAT guarantees access to available statistical information for the various categories of its users. Data are made available to all users at the same time, in clear and understandable formats, along with the metadata of these statistics to facilitate their optimal use.

### Compliance standards:

1. Provide statistics in clear and understandable formats and disseminate them in practical and appropriate ways to facilitate their use by users.

### Methods:

**Dissemination policy:** A dissemination policy is in place. The policy covers relevant dissemination aspects, such as principles and subjects of dissemination, format and layout, handling of provisional and final data, metadata, and release and documented pre-release arrangements.

**Policy for archiving statistics and metadata:** A policy for archiving statistics and metadata is in place.

**Availability of policies:** The dissemination and archiving policies are publicly available.

**Dissemination and archiving guidelines:** Guidelines on the dissemination and archiving of statistical information are in place. They contain the procedures and standards for the preparation of statistical outputs and their dissemination and archiving.

**Training courses:** GASTAT offers training courses to staff on how to explain, communicate and publish statistical outputs and write press releases.

**Review of practices:** Dissemination and archiving practices are reviewed periodically by a working group or similar structure

**User consultation on dissemination:** Users are consulted about the most appropriate forms of dissemination.

**Comparisons in publications:** Meaningful comparisons are clearly included in publications as appropriate.

2. Ensure that statistics are made available at the same time for all users. Exceptions that allow some official authorities to have early access to these statistics.

### Methods:

**Equal access:** Rules and procedures are in place in the General Authority for Statistics to safeguard equal access of all users to disseminated statistics at the same time.

**Pre-release accesses:** Pre-release access, if it exists, is tightly controlled, documented in detail and well-justified. The documentation is available. Procedures are transparent and include safeguards that prevent any possible misuse of the

**Procedures to prevent and handle leaks:** Procedures are in place to prevent leaks from happening and to deal with them if they occur.

**Procedures to prevent the misuse of data under embargo:** Procedures and measures are in place to react to any misuse of data under embargo and to review pre-release arrangements.

3. Provide metadata related to the characteristics of published statistics and methodologies for their preparation, in order to facilitate their use and analysis, and to increase their transparency and credibility.

#### Methods:

**Accordance of metadata with GASTAT Standards:** The content, structure and dissemination of metadata are aligned with the GASTAT and international standards.

**Procedures to update and publish metadata:** Metadata is regularly updated. The updating procedures are clear and well-known to staff.

**Quality assurance for metadata:** A procedure for the quality assurance of metadata is in place and communicated to staff.

**Training courses for staff on metadata:** GASTAT offers training on metadata for their staff.

**Dissemination of metadata:** All statistical outputs are disseminated together with the relevant metadata to enable a better understanding of the outputs. If metadata are disseminated separately from the statistical outputs, clear links are provided.

**Methodological notes and metadata:** All statistical outputs are accompanied by the relevant metadata and methodological notes, (focused on data sources, methods and procedures), according to GASTAT standards.

**Transparency of processes:** The General Authority for Statistics document their production processes. Documentation on these processes is available to staff. A condensed/summary version is made available to users.

**Management of metadata:** An organisational structure is in place to ensure that metadata is an integral part of all statistical processes. The management of metadata is effective at all phases of the process. The metadata includes reference metadata, structural metadata (concepts, classifications, structure of data etc.) and process metadata.



**Procedures to disseminate metadata:** Clear, complete and up-to-date metadata are disseminated in accordance with GASTAT and other international standards, e.g. the Single Integrated Metadata Structure (SIMS).

**Training courses for staff on metadata standards and quality reports:** Training courses on the use of the metadata standards and quality reports are provided for the relevant staff.

**Metadata on statistical processes:** Clear, standardised and complete metadata is compiled and updated on the statistical processes in accordance with GASTAT standards

#### 4. Prepare quality reports for statistical outputs and make them available to users.

##### Methods:

**Use of standards on quality reporting:** Quality reporting is based on international standards and guidelines, e.g. Single Integrated Metadata Structure (SIMS).

**Central monitoring of publication of quality reports:** The publication of quality reports is monitored centrally by a quality management unit.

**Availability of quality reports:** Quality reports are available on the website.

**Publication of quality reports:** Staff responsible for statistical processes regularly prepare and make publicly available user-oriented quality reports on the website.

#### 5. Document the methodologies used in statistical production and make them available to users.

##### Methods:

**Planning of the production of quality reports and methodological documents:** A strategy for regular production of standardised up-to-date user-oriented quality reports and methodological documents is defined and implemented.

**Methodology of statistical processes:** The description of the methodology of statistical processes is available for users in user-oriented quality reports and other methodological documents).

**Publication of methodology:** Staff responsible for statistical processes prepare relevant methodology documents and help to make them publicly available.

6. Define and implement rules and procedures to allow users from outside GASTAT to access microdata for research purposes while adhering to confidentiality and data protection requirements.

Methods:

<b>Rules or protocols to access microdata:</b> Rules or protocols to access microdata are in place. The rules or protocols clearly set out all access conditions.
<b>Availability of rules or protocols:</b> The rules or protocols are available on the website.
<b>Access conditions to micro-data:</b> GASTAT ensures that the conditions governing access to micro-data are clear and well understood both internally and externally.
<b>Individual approach:</b> Each request for microdata is processed individually following the access conditions set out in the rules or protocols.
<b>Scope and appropriateness of accessible microdata:</b> The scope and appropriateness of each request for microdata are checked and approved according to internal rules.
<b>Protection of confidentiality:</b> The anonymity of individuals or businesses is protected (e.g. by the use of Scientific Use Files and Public Use Files).
<b>Secure environment:</b> Provide researchers with a secure environment (e.g. Safe Centres) to access microdata in accordance with relevant legislation.
<b>Remote access facilities:</b> Remote access facilities are available with appropriate controls.
<b>Consultation of researchers:</b> Researchers are regularly consulted about the suitability and effectiveness of rules or protocols to access microdata.

7. Announce any major update in methodology, procedures or statistical techniques prior to the final publication of the results.

Methods:

<b>Communication of information on revisions:</b> Information on major revisions or changes in statistical methodologies is communicated in advance by the GASTAT using various channels (e.g. in a calendar of revisions, in the statistical work programme, on a webpage and/or social media, by a letter to specific users and/or in a user meeting).
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