



# Report on the quality of official statistics, 2023

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## **Preface**

Section 6 of the Act relating to official statistics and Statistics Norway (the Statistics Act) of 2019 (SSB, 2019a) states that Statistics Norway shall submit an annual report to the Ministry of Finance on the quality of official statistics. The Ministry's letter of allocation for 2023 to Statistics Norway states as a priority that Statistics Norway shall ensure cooperation, coherence and quality in the Norwegian statistical system. This is the second report on the quality of all official Norwegian statistics.

This report is based on the information and quality assurance systems that are available at the time of reporting. In the assessments and recommendations, all production of official statistics is viewed as a whole, to the greatest extent possible.

The report has been discussed by the Committee for Official Statistics and the Council for Statistics Norway.

Statistics Norway, 15 June 2023

Geir Axelsen  
Director General

## Summary

The quality requirements for official statistics are described in Section 5 of the Statistics Act and the European Statistics Code of Practice (Eurostat, 2017).

This report shows that compliance with the quality requirements has improved since last year's report. All producers of official statistics have worked on improvement measures based on the recommendations in last year's report. A number of measures are planned, in progress or already implemented. This has led to improvements in several of the areas highlighted in last year's report. The written documentation of the statistics has seen a particular improvement and is more accessible.

The quality report's most important source of information is the annual quality evaluation of all producers of statistics. This is documented in a separate report: Quality evaluation of official statistics, 2023 (SSB, 2023b). The quality evaluation process, including a questionnaire and follow-up interview at institutional level about compliance with the quality requirements has helped raise awareness of the quality principles. This in itself is positive.

More information was collected in the quality evaluation this year in order to provide a better basis for assessing compliance with key quality principles. This applies to, inter alia, information about user contact and the use of indicators to measure quality in the production of official statistics.

The quality evaluation shows that the producers at institutional level largely meet the quality requirements. In order to provide a better picture of the quality at statistical level, additional information is needed from the producers of official statistics. Collecting and documenting quality information at statistical level will be an area of development in the Norwegian statistical system going forward.

## Recommendations

The most important recommendations for ensuring compliance with the quality principles in the Statistics Act and European Statistics Code of Practice are described below.

The quality evaluation shows that there is room for improvement in relation to the quality principle pertaining to relevance. Statistics that do not meet users' needs are not relevant. In order to quickly capture new and changed user needs, it is recommended that both formal and informal user contact is given a higher priority. Statistics producers who do not have established forums for contact with key users, such as a user council or similar, should consider establishing such. In order to identify the needs and satisfaction of other users, regular user surveys and systematic follow-up of the results are recommended.

The area that has improved the most since last year is 'improved and more accessible documentation'. However, the improvement efforts in this area need to continue. Some statistics producers still need better and more accessible documentation of their statistics. In addition, Eurostat adopted a recommendation in February 2023 to implement the Single Integrated Metadata Structure (SIMS) (Eurostat 2023b) for the documentation of statistics. SIMS is Eurostat's framework for organising statistical documentation and is closely linked to the quality principles in the European Statistics Code of Practice. One of the applications of SIMS is to report statistical documentation to Eurostat for statistics mandated in the EEA Agreement. Such documentation is also referred to as reference metadata. Documenting statistics in accordance with SIMS has a number of advantages. It leads to uniform documentation of statistics, both nationally and internationally, making it easier to compare statistics. The quality and accessibility of the documentation will also improve. All producers should therefore document their statistics in

accordance with SIMS, in line with Eurostat's recommendation. In the longer term, this will enable reuse of documentation and facilitate more automated reporting to Eurostat for EEA-mandated statistics.

Use of quality indicators to measure quality in the production of official statistics is generally limited. Quality indicators provide objective information for assessing quality in statistical processes or output. It is therefore recommended that producers of official statistics initiate efforts to assess relevant quality indicators for selected statistics. Some indicators, such as timeliness, should be measured by all producers. Quality indicators will enable producers to measure and follow up the quality aspect over time, and to document the effectiveness of improvement measures. The use of quality indicators will be an area of development in the production of official statistics going forward. Statistics Norway is preparing a report on recommended quality indicators, which will be shared with all producers of official statistics.

The development of competence and the sharing of experiences among producers of official statistics are important for the success of the improvement efforts. Statistics Norway offers an extensive range of courses that are relevant to the quality assurance work. These are open to all producers of official statistics. An arena for exchanging experience among all producers of official statistics has been established in the form of the methodology network. The topics are largely guided by recommendations and documented needs in the annual report on the quality of official statistics. All producers are encouraged to participate in relevant courses and actively contribute to activities in the methodology network.

Statistics Norway has agreements on the supply of data and cooperation on quality with the owners of administrative information systems. An important part of these agreements is the quality reports, which provide knowledge about the quality of data received. The experiences with these agreements and quality reports are positive. They have helped improve data quality in the information systems. More producers who use data from administrative information systems are encouraged to consider the benefits of entering into similar agreements.

Several recommendations have been carried over from last year's report because the associated improvement actions are still ongoing, or because the producers have not yet implemented the recommended improvement measures. Some measures are more challenging than others and will take longer to implement, sometimes several years.

## **Further development of the quality system**

In order to improve the quality assurance system, there is a need to both further develop existing methods and establish new methods for measuring quality in the production of official statistics.

The quality evaluation is the most important source for documenting the quality of official statistics. The evaluation has so far been carried out at institutional level. To provide a more detailed picture of the quality of official statistics, additional information is needed at statistical level. Statistics Norway plans to devise a questionnaire that can be used at this level for the next quality evaluation. Statistics Norway believes that more information is needed on the estimation and dissemination of uncertainty in official statistics. The next quality evaluation will be designed to provide a basis for further follow-up of this. In the long term, it will also be possible to use reference metadata and quality indicators as a source of information at statistical level.

Quality reviews are an established and systematic method for improving the quality of individual statistics. In 2022, Statistics Norway, in consultation with the Committee for Official Statistics, established a systematic procedure for selecting statistics for quality reviews. The selection is made from all statistics in the national programme for official statistics and is based on criteria such as

risk, results from previous reviews, identified errors and areas with a strong focus. In 2023, three quality reviews are planned in Statistics Norway and one with another producer. Other producers have been invited to be part of the quality review team. In the next statistical programme period (2024–2027), Statistics Norway aims to further increase the number of annual quality reviews.

**Figure 0.1 Methods and tools for measuring the quality of official statistics. Current and future statistical programme period. A summary of the various methods and tools for measuring quality that exist today, and how these can be further developed and supplemented**

Methods, tools and frequency for measuring quality		Programme period 2021 - 2023			Programme period 2024 - 2027	2028 –
Quality indicators, continuous measurement		Awareness and development			Development and introduction	Evaluate and assess any changes for the new statistics program period
User contact, frequent		Different forms of user contact			Advisory committee, user surveys, feedback function	
Quality in administrative data sources		Frequent meetings, annual reports			Frequent meetings, annual reports	
Quality evaluation based on Section 5 of the Statistics Act and on the principles in the European Statistics Code of Practice , annually		2021 and 2022: Institutional level. Questionnaire + interview			2024 – 2027 Annually at statistical level	
Self-evaluation questionnaire and follow-up interview		2023: Statistical level Questionnaire + interview per area			Questionnaire + interview per area	
Quality review of selected statistics/areas. • Systematic review - maps strengths and weaknesses	SSB per year:	2021 1	2022 1	2023 3	2024 - 2027 4 per year	
	Other producers per year:	2021 0	2022 0	2023 1	2024 - 2027 4 per year	
Peer review, every 7 years		Completed in 2021			From 2024: Annual reporting on implementation of measures	

Source: Statistics Norway

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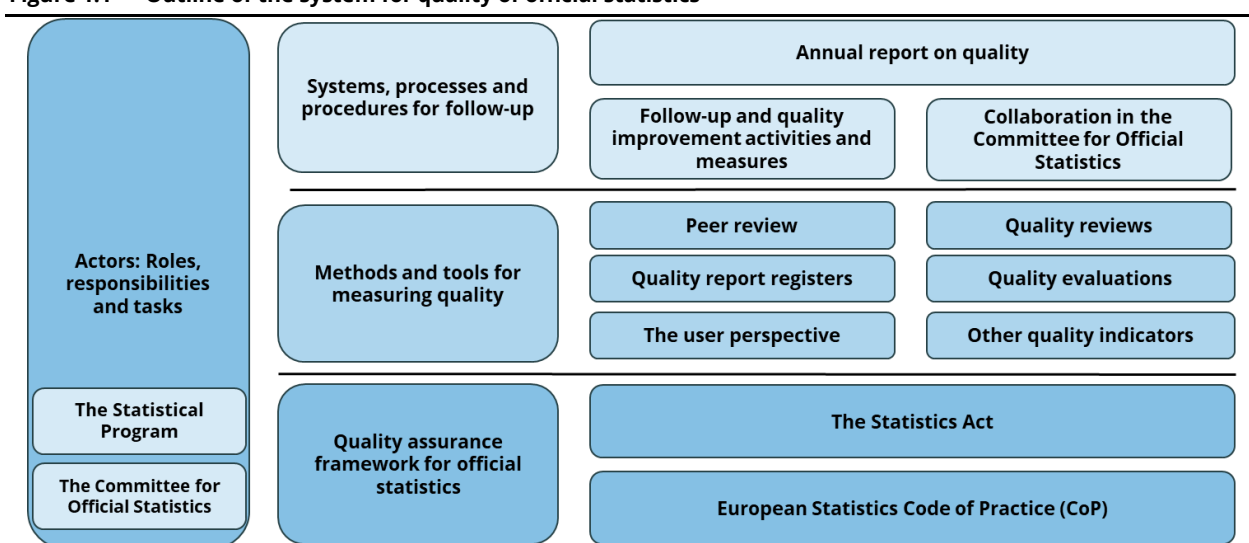
# 1. Introduction

Section 6 subsection 1 of the Statistics Act states that Statistics Norway shall coordinate all development, production and dissemination of official statistics in Norway and submit an annual public report to the Ministry of Finance on the quality of official statistics.

The quality system for official statistics consists of several elements:

- A framework for the quality of official statistics based on the Statistics Act and the European Statistics Code of Practice
- Methods and tools for measuring the quality of official statistics
- Systems and processes for following up quality
- Actors and their roles. The members of the Committee for Official Statistics, see Chapter 2.1, are the key actors in the cooperation on quality

**Figure 1.1 Outline of the system for quality of official statistics**



Source: Statistics Norway

One of the elements of the quality assurance system is methods and tools for measuring quality. This report is based on the information and data from these sources. The methods and tools include peer reviews (commissioned by Eurostat, see Chapter 3.3), reports on quality in administrative information systems, user contact, quality reviews, quality evaluations and quality indicators. Appendix A gives an overview of methods and tools that generate information on quality.

In the second half of 2021, Statistics Norway devised a questionnaire and undertook its first evaluation of quality in all producers of official statistics at institutional level. Statistics Norway participates in the evaluation in the same way as the other producers of official statistics. The survey is based on Section 5 of the Statistics Act and most of the quality principles in the European Statistics Code of Practice. The results of the survey were described in the report *Quality evaluation of official statistics, 2022* (SSB, 2022b). The report included recommendations on quality improvement measures, and every producer of statistics was encouraged to design measures based on the recommendations. A new quality evaluation of all the producers of official statistics has been carried out and is discussed in more detail in the interim report *Quality evaluation of official statistics, 2023* (SSB, 2023b). The report from 2023 includes new recommendations on quality improvement measures as well as some of the previous recommendations.

Chapters 3, 4 and 6 of this report summarise the results, assessments, recommendations and improvement actions from the quality evaluation.



Eurostat's peer review in Norway in November 2021 covered all quality principles in the European Statistics Code of Practice. The peer review is therefore an important source of information, but it is limited to the Norwegian contribution to the European Statistical System. The peer review included Statistics Norway, the Norwegian Institute of Public Health, the Norwegian Directorate of Immigration, the Norwegian Directorate of Fisheries and the Norwegian Institute of Bioeconomy Research. The follow-up of recommendations in the peer review are presented in Chapter 3.3.

Information on the quality of register data in Chapter 5 has been collected through Statistics Norway's cooperation on quality with owners of administrative information systems. The chapter notes that Statistics Norway's experience may have a transfer value for other statistics producers.

The report also includes information on how the quality assurance system and the collection of information on the quality of official statistics can be developed, see Chapter 7.

The recommendations from this report and from the interim report Quality evaluation of official statistics, 2023 (SSB, 2023b) will be followed up in the subsequent annual quality reports to the Ministry of Finance.

## 2. Coordination of official statistics

### 2.1. The Committee for Official Statistics

Statistics Norway chairs the Committee for Official Statistics (SSB, 2019b), which aims to help ensure coordination of an appropriate and effective national statistical system, including lending support to the work on the annual quality report. At the end of 2022, the committee had 27 members, 11 of whom are producers of official statistics. The other members are owners of administrative information systems that serve as sources of statistics, or authorities involved in cooperation related to official statistics. In 2022, the committee worked on identifying and describing areas requiring development and evaluated proposals for the national programme for official statistics 2024–2027 (see Chapter 2.2). The committee discusses various overarching topics for the development of official statistics. The sharing of knowledge and discussions at the technical and operational level take place in the methodology network (see Chapter 2.5).

To foster a shared understanding of key issues and explore potential solutions, active involvement of all producers and committee members is crucial through transparent information sharing and open dialogue. This establishes a basis for broad ownership and commitment.

### 2.2. The statistical programme

The quality assurance system shall safeguard the quality of official statistics, which is defined and delimited in the national programme for official statistics (SSB, 2021b). The first programme covers the period 2021–2023, and Statistics Norway has drafted a proposed programme for 2024–2027. The programme proposal aims to fulfil international statistics obligations that will apply in the forthcoming programme period. In the process, Statistics Norway has gathered input on future statistical needs from committee members and other users of statistics. Following public consultation, the programme proposal was amended in certain areas. The programme will be approved by the King in Council during the course of 2023.

The proposal mainly builds on the statistics and priorities from the first programme and includes the development of both existing and new statistics. Statistics Norway proposes that statistics from six new producers be incorporated into the programme. Like the current programme, the proposed new programme's recommendations are at an overarching level and the same statistical domains have been retained.

The overview of statistics included in the current programme, along with the associated metadata, will be updated annually and published on [ssb.no](https://ssb.no) along with the statistical programme.

### 2.3. Producers of official statistics

In 2023, there are 11 producers of official statistics:

- Norwegian Directorate of Fisheries
- Norwegian Institute of Public Health (NIPH)
- Norwegian Agriculture Agency
- Norwegian Environment Agency
- Norwegian Labour and Welfare Administration (NAV)
- Norwegian Institute of Bioeconomy Research (NIBIO)
- Norwegian Communications Authority (Nkom)
- Norwegian Water Resources and Energy Directorate (NVE)
- Norwegian Petroleum Directorate
- Norwegian Directorate of Immigration (UDI)

- Statistics Norway

The statistical programme is divided into 21 statistical domains and includes approximately 350 statistics. Statistics Norway produces around 85 per cent of the official statistics. Appendix B shows the number of statistics in the national programme for official statistics 2021–2023, by statistical domain and statistics producer.

## 2.4. Resources for the production of official statistics

There is a wide variation between producers in terms of resource use for the production of official statistics. If we exclude Statistics Norway,<sup>1</sup> resource use varies from 0.2 to 30 full-time equivalents (FTEs) among the producers. Resource use for the individual statistics is 1.7 FTEs on average, and varies according to how extensive the statistics in question are. The FTEs<sup>2</sup> used for the production of official statistics account for less than one per cent of the total number of FTEs in these organisations.

With the exception of Statistics Norway, the production of statistics is not the main task of any of the producers. All of them collect data for administrative purposes (administrative data) within their areas of responsibility. These administrative data form the basis for the producers' official statistics, as well as statistics that are not included in the statistical programme. Some producers collect data directly for statistical purposes via their own surveys. The resource estimates do not include the collection and processing of data for administrative purposes. Resource use for the actual production of official statistics is shown in Table 2.4.1 below. The figures are based on estimates provided by each producer, but there is some uncertainty attached to these.

**Table 2.4.1 Resource use for the production of official statistics among the ten producers excluding Statistics Norway**

Statistical measurement	FTEs	FTEs/per individual statistics
Median	3.5	1.7
Mean	8.0	2.0
Total	82.0	.

Source: Quality evaluation of official statistics, 2023 (SSB, 2023b)

Some of the statistics producers plan to increase the resource allocation for the production of official statistics.

The producers of official statistics are a heterogeneous group, and the major variation in resource use has implications for the design of the quality system for official statistics. It is important that the quality follow-up supports all producers, including those who have few official statistics and use few resources on statistics production and development.

## 2.5. Methodology network

As part of the efforts to coordinate, strengthen and quality-assure official statistics, a methodology network has been established for the authorities that are members of the Committee for Official Statistics. All producers of official statistics are part of the network, as well as five institutions that do not produce official statistics. The network is intended to facilitate cooperation on statistical methods and serve as a forum for professional development, discussion, information and the sharing of expertise.

<sup>1</sup> Statistics Norway's resource allocation is documented in its annual report for 2022 (SSB, 2023a)

<sup>2</sup> FTEs 2021. Source: Annual reports of the statistics producers.

### 3. Follow-up of quality reporting

#### 3.1. Process

The results from the first quality evaluation are described in the Report on the quality of official statistics, 2022 (SSB, 2022a) and the Quality evaluation of official statistics, 2022 (SSB, 2022b). Both reports set out recommendations on how to improve the quality of statistics, and the statistics producers were encouraged to devise measures based on the recommendations. They were asked to conduct independent cost-benefit assessments, and to devise measures and prioritise them. The action plans indicating the timeframe, parties responsible and status, are to be submitted to Statistics Norway. The planned measures are also subject to follow-up in the quality evaluations.

The results from the second quality evaluation are discussed in the Quality evaluation of official statistics, 2023 (SSB, 2023b). This evaluation assesses whether any of the previous recommendations are considered fulfilled, whether some recommendations should be continued and whether new recommendations are necessary.

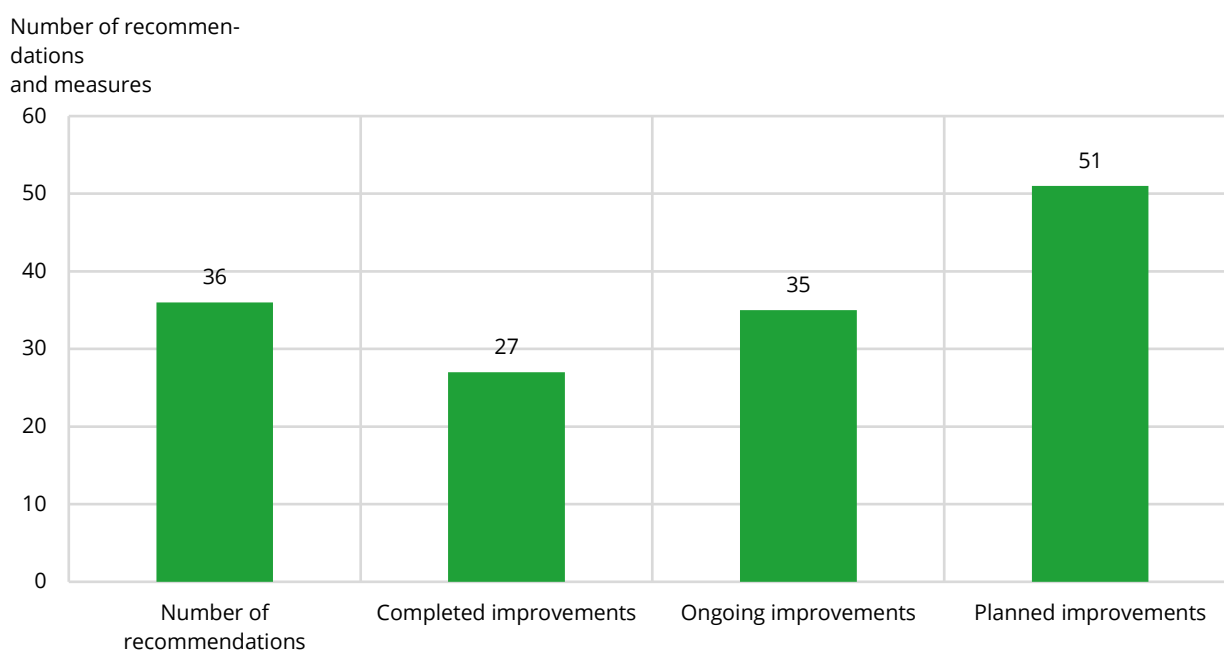
Any new measures and the status of ongoing and planned measures are reported annually to Statistics Norway.

#### 3.2. Measures

The interim report Quality evaluation of official statistics, 2022 contained 36 recommendations on how to improve the quality of official statistics. In the Report on the quality of official statistics, 2022, five main recommendations were outlined, summarising the most important of the 36 recommendations.

All producers have drawn up proposals for measures, and many of them have already implemented measures. This applies, for example, to areas related to documentation and transparency. A total of 113 measures are planned, and as of March 2023, 27 of these measures have been implemented. See Figure 3.2.1.

**Figure 3.2.1 Number of recommendations and improvement actions from the evaluation of official statistics, 2022**



Source: Quality evaluation of official statistics, 2023 (SSB, 2023b)

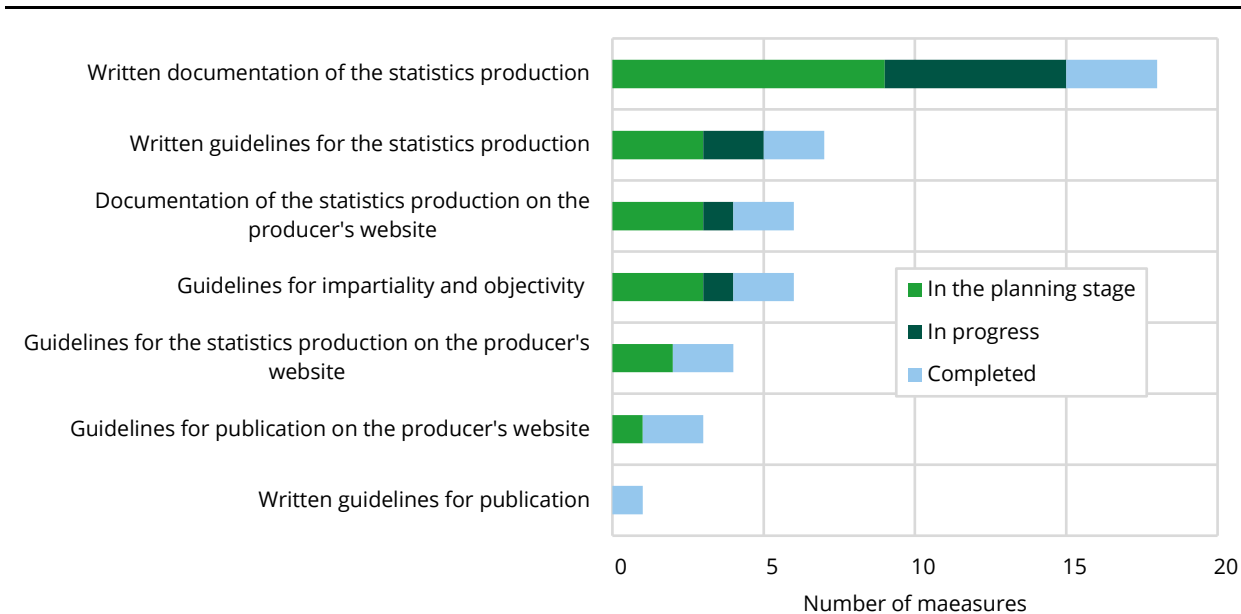
As a result of the quality evaluation in 2023, nine new recommendations have been made. Five recommendations from 2022 are considered fulfilled and have been removed from the list of recommendations that need further follow-up. The rest of the recommendations from 2022 are carried forward into 2023.

### Priority areas

The recommendation that has been followed up with the most measures is 'All producers should prepare written documentation of how the statistics are produced and keep the documentation up to date'. A total of 18 measures have been proposed to follow up on this recommendation.

Out of the 113 measures, 45 pertain to written documentation, written guidelines and publication on the producers' websites. See Figure 3.2.2.

**Figure 3.2.2 Recommendations and improvement measures for written documentation**



Source: Quality evaluation of official statistics, 2023 (SSB, 2023b)

The recommendations from 2022 include several proposals for competence-enhancing measures. These have been followed up in various areas, and in different forms.

Two meetings were held in the methodology network in 2022. The topics of these meetings – dissemination of official statistics and confidentiality – were closely related to the recommendations from 2022. In the autumn of 2022, employees in the institutions that are part of the network were offered the opportunity to participate in Statistics Norway's internal courses on methodology and quality. Network members could also take part in specialist seminars on topics such as pseudonymisation, machine learning and data minimisation.<sup>3</sup> The experiences with opening up the internal courses and seminars to external participants have been positive.

Producers who have statistics mandated in the EEA agreement, and who report to Eurostat, can participate in ESTP courses.<sup>4</sup>

<sup>3</sup> The principle of data minimisation entails limiting the amount of personal information that is collected and processed to only that which is necessary for the intended purpose.

<sup>4</sup> ESTP – European Statistical Training Programme

Statistics Norway has established an internal confidentiality committee to propose general guidelines, give practical recommendations and address individual cases pertaining to principles of statistical confidentiality. The work is in the early stages, but it is expected that the committee's efforts will be beneficial to and shared with other statistics producers in the longer term. Statistics Norway is in the process of developing a course on confidentiality, which will be offered to producers and other members of the committee.

Producers have been invited to participate in quality reviews at other organisations with a view to increasing competence in conducting quality reviews.

The efforts to enhance competence will continue, and the members of the Committee for Official Statistics will be invited to participate and to contribute by sharing their expertise. The producers of official statistics are encouraged to participate in courses, seminars and meetings held by Statistics Norway or other facilitators that address quality in statistics.

### **3.3. Follow-up of peer review**

During the period 2021–2023, Eurostat itself and all member states of the European Statistical System were subject to an external peer review. In 2021, Norway was among the first countries to undergo this process. The expert team evaluating Norway's statistical system did not find any violations of the European Statistics Code of Practice, but identified 15 areas where the Norwegian producers of official statistics could improve. Many of these recommendations focussed on more detailed planning of ongoing initiatives, improved visibility of quality work and closer cooperation between Norwegian statistics producers.

In response to the recommendations from the expert team, Statistics Norway, the Norwegian Institute of Public Health, the Norwegian Directorate of Immigration, the Norwegian Directorate of Fisheries and the Norwegian Institute of Bioeconomy Research have devised 39 improvement actions. Statistics Norway has the primary responsibility for following up 23 of these actions, while the other four authorities involved in the peer review are responsible for 16.

In addition to the actions relating to Statistics Norway's role as a producer of statistics, Statistics Norway is also responsible for actions aimed at coordinating the development, production and dissemination of official statistics in Norway. This includes developing a plan for quality cooperation within the Norwegian statistical system in consultation with the Committee for Official Statistics and assisting other producers of official statistics in implementing the recommendations from the quality evaluations.

The action plan following up the peer review has been published on the websites of Statistics Norway and Eurostat under the title 'Improvement actions Norway' (Eurostat 2023a). Progress on implementing the actions will be reported annually to Eurostat during the period 2024–2027.

## 4. Quality evaluation of official statistics

The quality evaluation is described in more detail in the interim report Quality evaluation of official statistics, 2023. The three statistical divisions in Statistics Norway and the ten other authorities that produce official statistics completed the self-assessment questionnaire, see Chapter 2.3. One producer submitted two questionnaires because they have two distinct production processes for their statistics. The report is based on 14 completed questionnaires.

### 4.1. Background

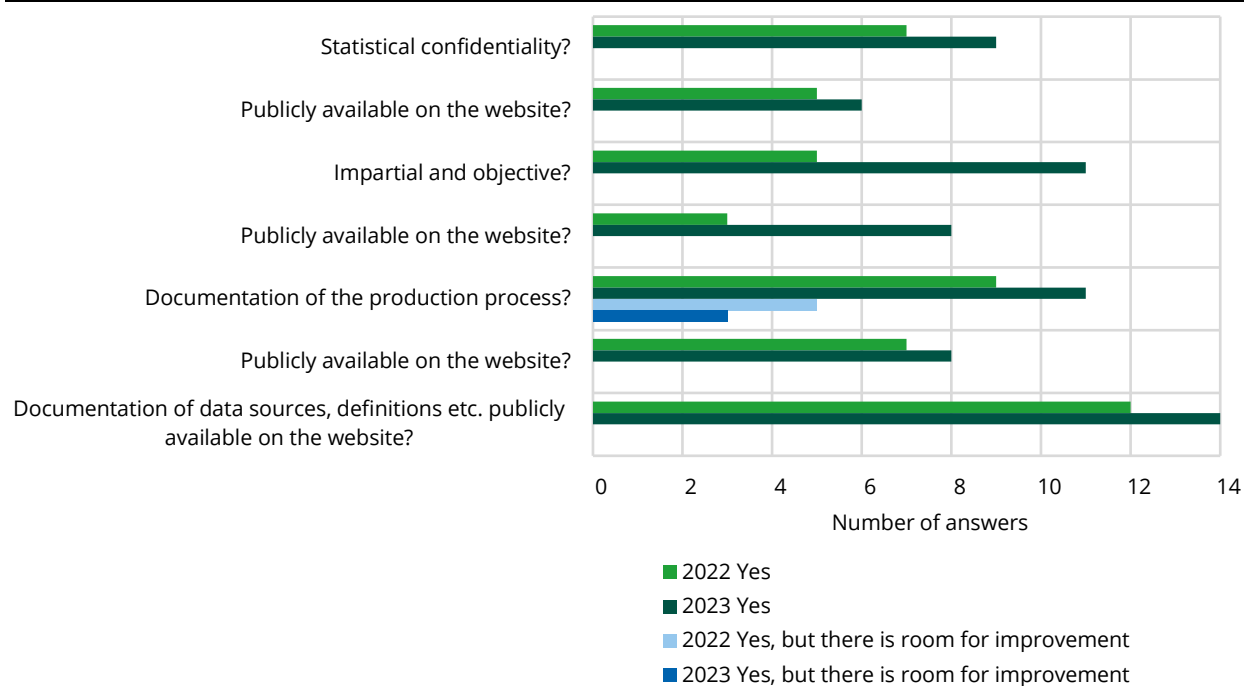
The first quality evaluation of official statistics was reported to the Ministry of Finance in the Report on the quality of official statistics, 2022 and the interim report Quality evaluation of official statistics, 2022. This first evaluation has now been followed up with a new corresponding survey and data collection.

In this quality evaluation, a questionnaire-based survey was combined with interviews. The quality evaluation was based on the quality requirements in the Statistics Act and the quality principles in the European Statistics Code of Practice. All quality requirements in Section 5 of the Statistics Act were included in the survey, as were the requirements for statistical confidentiality, duty of non-disclosure and information security (Sections 7–9). Some principles for quality in the European Statistics Code of Practice were considered less relevant to the Norwegian context and were therefore excluded.

In the quality evaluation, information was also obtained on the use of resources in the production of official statistics, the use of indicators to measure quality, various forms of user contact and whether there are other quality controls.

### 4.2. Status

The main impression is that the statistics producers have effectively implemented some of the measures recommended in the previous quality report. One area where the measures have been effective and led to improvements is 'improved and more accessible documentation'. Figure 4.2.1 shows that several producers have improved their written documentation and website publishing in relation to statistical confidentiality, impartial and objective statistics, descriptions of data sources and definitions, and statistics production processes.

**Figure 4.2.1 Do you have written guidelines and documentation, and are they publicly accessible?**

Source: Quality evaluation of official statistics, 2023 (SSB, 2023b)

### Institutional environment

Professional independence is mentioned in Section 5 of the Statistics Act and is the first quality principle in the European Statistics Code of Practice. Safeguarding professional independence partly entails appointing someone in the institution who has overarching responsibility for ensuring that the statistics are being produced and disseminated in an independent manner. All producers have appointed someone to this role, with the exception of one producer, who is in the process of clarifying their role as a statistics producer.

Almost all producers engage in at least one form of cooperation with scientific or international organisations, or they are involved in collaborative projects that promote innovation. Considerable efforts within innovation in the production of official statistics are currently underway, both nationally and internationally.

All producers, except those for whom it is not applicable, have procedures in place to safeguard privacy and confidentiality prior to publication. The number of producers with written guidelines aimed at ensuring statistical confidentiality has increased. Now more than half have such guidelines, and in most cases, these are available on the producer's website.

All producers of official statistics require their employees and external parties with access to data to sign a confidentiality agreement. This helps to ensure trust among data providers and is in line with the European Statistics Code of Practice.

Information security is crucial for producers of official statistics. For information collected solely for the development, production and dissemination of official statistics, Section 9 of the Statistics Act stipulates that producers must 'implement technological and organisational measures in order to achieve an adequate level of security'. This includes providing adequate access control, logging and subsequent controls. Directly identifiable information must be processed and stored separately from other data, unless this is inconsistent with the purpose of the processing or it is clearly unnecessary. For many of the producers, Section 9 of the Statistics Act does not apply, as they



collect and process data under a different legal basis than the Statistics Act and/or primarily for purposes other than official statistics.

The quality evaluation shows that all producers prioritise information security. All reported having implemented organisational and technological measures to safeguard information security, but several producers have identified areas for improvement. All have systems to manage data access, but some provide access to databases that may contain more information than the individual employee needs. Few producers log traffic to confidential data as a means of identifying unauthorised access. With smaller statistics producers, statistics production is often an integral part of other business activities, meaning that the same personnel who use data for administrative purposes also produce official statistics based on the same data.

As regards impartiality and objectivity, several producers have made improvements, particularly in terms of written documentation and its publication. Most producers now have written guidelines, and more than half have published these guidelines on their website. One producer devised a new release calendar, so most producers now have a release calendar on their website, where the release date is set at least three months in advance. When selecting data sources, all producers conduct an assessment of the statistics, and all announce corrections of published statistics.

The principle of equal treatment is well understood and is taken seriously by producers. However, one producer reported continued pressure from a government ministry to release official statistics before they are made public.

### **Statistical processes**

Awareness of the need for written and public documentation has increased, and most producers have now drawn up written documentation and guidelines. However, many still see room for improvement. The majority have published their documentation and guidelines on their website. Written documentation of production methods is important both for safeguarding internal procedures and maintaining transparency, which allows users of official statistics to assess the data and discuss the background for published figures.

Several producers outside of Statistics Norway could benefit from cooperation on quality and clear agreements with data owners who provide administrative data. The recommendation to enter into agreements with register owners is still being followed up. Several authorities collect data that are primarily used for administrative purposes. In large organisations, the lines of communication can be long between those managing the administrative information systems and those producing official statistics based on data from such systems.

All producers adhere to European or other international definitions of units and variables included in the statistics, where these are relevant.

When statistical units collect data themselves, the statistics producers assess whether there is a need for all the information that is collected.

The quality evaluation does not provide enough detail to give specific insights into statistical authorities' innovation and productivity development. However, there is a strong focus on utilising new technology and new data sources among the producers of official statistics. All producers plan to adopt new technology and methods to streamline statistical production processes.

### **Statistical output**

According to Section 5 of the Statistics Act, official statistics shall be 'relevant, accurate, timely, punctual, accessible and clear, comparable and coherent'.

Statistics should be relevant to and tailored to the users' needs. Much of the user contact takes place in connection with the publication of new figures. A few of the producers have established forums for contact with the most important users. Few of the producers actively follow up on the user perspective by measuring user satisfaction. More information on relevance and user orientation is provided in Chapter 6.

With one exception, all producers have set targets for how long it should take to produce statistics. Since the previous quality evaluation, slightly fewer producers have been publishing preliminary statistics. This is partly due to improved access to data and the possibility to publish final figures earlier. Releasing both preliminary and final statistics can be resource-intensive for producers. The different reasons for and practices relating to preliminary statistics can be confusing for users. When users request prompt publication for use in, for example, studies or press conferences, releasing preliminary figures can be a good solution for adhering to the principle of equal treatment, whereby everyone has access to the same information simultaneously.

Statistics Norway has devised an indicator for timeliness, i.e. the number of days between the end of the statistics' reference period and publication of the statistics, and a method for calculating this. Information about the indicator and its calculation will be presented to the Committee for Official Statistics. In future, Statistics Norway will collect information on timeliness from the other producers of official statistics and compare the figures with the timeliness requirements set by the Ministry of Finance.

All producers have now confirmed that their statistics are suitable for international comparison.

The majority of producers have drawn up written guidelines for publishing statistics. With one exception, all producers use visual tools such as figures, graphs and maps to present statistics. All producers believe that users have easy access to definitions, variables and classifications (metadata) used in the statistics. All producers use tools that support the dissemination of statistics, such as downloading tables in Excel format or creating defined datasets with APIs. Several producers feel there is room for improvement in the dissemination of statistics.

The number of producers documenting quality and methods according to the principles in the European Statistics Code of Practice has increased, and most producers publish such documentation on their website.

### **Quality indicators**

Collecting information on the use of indicators to measure quality in the production of official statistics is a new element in the quality evaluation. The quality evaluation shows that the use of quality indicators varies and is generally not widespread among the producers. The most commonly used indicators in the production of official statistics are measures of timeliness, response burden and response rate. There are exceptional cases where producers have adopted quality indicators more systematically, and actively use them to identify possible errors and areas for improvement, as well as to measure the effect of measures. Quality indicators are discussed in more detail in Chapter 7.2.

### **4.3. Assessments**

The main impression from the quality evaluations is that the producers are working purposefully to achieve high quality in official statistics. Although not all producers comply with the full range of requirements in the Act, there is an increasing awareness of quality in official statistics, and improvement efforts are underway. The quality evaluation has in itself helped raise awareness and yielded positive effects.

#### 4.4. Recommendations

The interim report for the quality evaluation for 2022 included 36 recommendations. In the interim report for 2023, nine new recommendations have been added, five previous recommendations have been assessed as fulfilled, and one previous recommendation has been clarified. The producers have established measures for the recommendations from 2022 and will be asked to do the same for new recommendations from 2023. See Chapter 3 on measures and the follow-up of these.

Below is a summary of the most important recommendations from the quality evaluation.

- In order to raise awareness of the quality assurance work, it is recommended that the producers of official statistics initiate an assessment of relevant quality indicators. See Chapter 7.2 for a more detailed discussion of this recommendation.
- All producers have user contact and thus meet the requirement of relevance. However, more systematic and regular follow-up of users is recommended in order to identify new and changing user needs. See Chapter 6.3 for a more detailed discussion of this recommendation.
- There is still a need to raise awareness and improve the written documentation of guidelines and procedures among some producers. This will help to make official statistics clearer and improve access to them.
- To further raise awareness of the quality assurance work, producers are encouraged to actively participate in the methodology network. This gives them the opportunity to suggest topics, and statistics producers can learn from the quality assurance work of other producers. Producers are also encouraged to stay up-to-date with what courses are offered by Statistics Norway and ESTP and to take relevant courses. Carrying out quality reviews of all producers of official statistics will help raise awareness and enhance competence in quality assurance work.

## 5. Quality in administrative information systems

### 5.1. Background

Since 2012, Statistics Norway has had a formal cooperation with owners of administrative information systems. Whether other producers of official statistics have similar arrangements with data owners is unclear. This chapter examines the status of Statistics Norway's cooperation with data owners.

Agreements entered into between Statistics Norway and data owners form the basis for the cooperation. These agreements regulate the ordering of annual data deliveries, the frequency of meetings at management level and the provision of structured feedback on quality by Statistics Norway. Statistics Norway sends annual reports on the quality of the data they receive (known as quality reports) to the data owners.

The aim of the cooperation is to improve the quality of administrative information systems by enhancing the quality in the first stage of the process.

### 5.2. Status

A total of 29 agreements have now been signed, and 23 of these have been renewed in connection with the new Statistics Act. Six agreements still need to be renewed or terminated. In addition, efforts are currently underway to establish one new agreement.

The agreements encompass over 180 different data deliveries to Statistics Norway with varying frequencies, ranging from daily streamed data to monthly, quarterly or annual data deliveries. Based on these data deliveries, Statistics Norway is contractually obliged to produce approximately 100 quality reports annually. The actual number of quality reports produced is lower, primarily due to capacity constraints and prioritisation of other tasks. In 2022, 76 quality reports were produced. The quality reports assess aspects related to the transfer of data and quality of units and values, and can include suggestions for quality improvement measures.

For some data deliveries, numerical quality indicators are developed in addition to the quality reports. Both the quality reports and the numerical quality indicators provide feedback on invalid, missing, suspicious or inconsistent values, or instances where there are duplicate units or units that should have been deleted. The quality reports are designed to provide descriptive assessments and feedback on quality, supplemented by numerical quality indicators that quantify the number of observations with missing values or highlight other anomalies. Regular follow-up meetings are held at varying levels, from senior executive to statistics manager or executive officer level. Annual 'summits' are held with the largest data owners.

The experiences from agency/follow-up meetings as well as the structured cooperation on quality have been positive. One consequence of the cooperation agreements has been an increased focus on quality by the data owners. Statistics Norway draws up various overviews/lists, which are sent to the individual data owners and used to improve quality in their data systems. The contact between Statistics Norway and data owners is now more frequent and systematic.

### 5.3. Assessments

In the peer review report (see Chapter 3.3), the cooperation agreements with owners of administrative information systems are cited as an example of effective and innovative initiatives in

Statistics Norway that should inspire the statistical authorities in other European countries (Eurostat, 2022).

On the whole, the quality of data from administrative information systems is considered to be very good, and extremely helpful in the production of statistics. Using data from such systems also helps to minimise the overall response burden to society. In addition, the agreements give both Statistics Norway and the data owners a good overview of annual data deliveries, updated contact points and thus better predictability and a better basis for cooperation on improving quality.

Below follows a summary of the findings in the quality reports from 2022.

### **Transfer of data**

For the most part, data are received on time and according to the agreed specifications. In 2022, there were a few instances where data deliveries were delayed or not delivered. In a couple of cases, the agreed data deliveries were significantly delayed, resulting in statistics not being published at the scheduled time.

### **Assessments of quality in terms of units**

Units can refer to individuals or businesses.

The identifiability of units is generally very good. This means that units can be unambiguously identified in the system from an identification number, such as individuals with a personal identification number and businesses with an organisation number. Good identifiability is crucial as it makes it possible to link multiple data sources and produce statistics with pseudonymous identification numbers. However, there are some cases where certain units cannot be identified by the system. A common challenge is identifying foreign nationals without a personal identification number.

Some quality reports provide feedback on challenges related to undercoverage, which is when units that should have been included in the data source are missing. Duplicates in the data sources are also identified sometimes. These challenges in the production of statistics are, however, manageable.

### **Assessments of quality in terms of values**

Values are understood as information relating to the units. These can be numerical values, attributes or data states.

In general, feedback is more often received on challenges in values than in units. Measurement errors, inconsistencies and suspicious values are reported. The most frequent feedback relates to missing values. However, these shortcomings are limited and can be corrected in the data in the statistics.

### **Suggestions for improving quality**

In many quality reports, Statistics Norway provides feedback with suggestions for new controls to identify and correct shortcomings in the data sources, as well as suggestions for how the data sources can be further developed to provide even greater value in the statistics. In several areas, it is emphasised that a strong and close cooperation, with frequent meetings and strong lines of communication between the data owner and Statistics Norway are essential for enhancing the quality of administrative data. Non-conformity or problems in deliveries are mostly resolved in a dialogue between the data owner and Statistics Norway.

## 5.4. Recommendations

Despite the positive experiences with Statistics Norway's system and good feedback from the peer review, there is still room for improvement, including the continuation of uniform follow-up of data owners and the completion of quality reports. Improving the feedback form and devising guidelines on completing the form would foster more uniform practice for writing reports on quality in administrative information systems. Workshops on quality indicators are also recommended. Greater use of numerical quality indicators in the feedback to data owners is also desirable.

Furthermore, it is recommended that Statistics Norway follows up the data owners more systematically, based on the feedback provided in the quality reports regarding suggestions for controls and further development of the data sources. All automated controls that data owners can implement in the data source can have a major impact on the quality of the data received by Statistics Norway.

Statistics Norway has had positive experiences with the cooperation on quality in administrative information systems. The Committee for Official Statistics has been briefed on the arrangements. Although the quality evaluation does not shed much light on whether the other statistics producers cooperate on quality in administrative data systems, the producers are encouraged to consider the benefits of entering into such agreements. This can also be relevant internally in the organisations if data produced in one part of the organisation is used as a basis for statistics in another. Each producer must assess whether it would be expedient for their needs to establish such quality agreements, either internally or externally.

## 6. User orientation

### 6.1. Background

Relevance is one of the quality requirements for official statistics in Section 5 of the Statistics Act, and is Principle 11 in the European Statistics Code of Practice. Statistics that do not meet the users' needs are not relevant. The user perspective is therefore pivotal in the system for quality assurance and encompasses all types of users of statistics. Users can include clients such as public authorities and the social partners, as well as other types of users, such as the media, students and private individuals. Relevant statistics are used both as a basis for public debate and for political decision-making.

This chapter mainly focuses on information from the quality evaluation regarding relevance and user contact. The user perspective received extra attention in the 2023 quality evaluation, and the basis for assessing the status and recommendations in this area is stronger than in 2022.

### 6.2. Status

All producers of official statistics have contact with users in connection with the publication of new figures and in response to other enquiries about the statistics from various user groups, such as the media, students and other public authorities. Some producers also carry out customised analyses/commissioned assignments based on specific requests from users.

A few producers have formalised, regular user contact in the form of user councils or reference groups consisting of the most important users.

A few producers have a feedback function on their website, where users can quickly and easily give feedback on the published statistics.

A few of the producers conduct user satisfaction surveys.

### 6.3. Assessments

User contact is important for all producers of official statistics, and there is a need to raise awareness of Principle 11 in the European Statistics Code of Practice pertaining to relevance.

Regular user contact, in the form of established forums such as user councils, reference groups or such like, is important for ensuring that the statistics are relevant and for identifying new and changing user needs that can help improve the statistics. In a user council or a reference group, the most important users, such as clients, public authorities and the social partners, are usually represented.

Not all users of statistics can be reached through user councils and reference groups. Informal user contact should also be facilitated in order to capture feedback on the statistics from other users, such as private individuals, students and journalists. Providing a feedback function on their websites is a more informal, simple and effective method of contact that enables users to provide feedback on the statistics.

Another way to get feedback directly from users is to conduct regular user surveys. These can be used to identify areas for improvement, measure the effectiveness of measures and track changes in user satisfaction over time.

## **6.4. Recommendations**

Producers of official statistics who do not have regular user contact should consider establishing user councils, reference groups or similar. In order to identify and systematise user and stakeholder groups, it is recommended that a user and stakeholder analysis is conducted. In such an analysis, users and stakeholders are grouped based on the impact they have on user needs and how they are impacted by the statistics. It is emphasised that the degree of impact is related to the actual user needs, not how the statistics are developed and disseminated. In that regard, the producers have full professional independence, see Section 5 of the Statistics Act. A user and stakeholder analysis will provide valuable input for the establishment and maintenance of forums for contact with key users.

Producers of official statistics should also facilitate more informal user contact. It is recommended that user satisfaction surveys be conducted on a regular basis and the results systematically followed up. It is also recommended that the producers' websites include a feedback function.



## 7. Developing the system for quality assurance in official statistics

The collection and analysis of data for this report and the cooperation in the Committee for Official Statistics provide important experience and insight into how the quality assurance system should be improved. Some areas that need to be developed pertain to established methods and tools, but there is also a need for new methods and tools in connection with future measurements, follow-up and reporting of quality, see Appendix A, Table A1. There are three areas in particular that need to be developed: quality indicators, quality reviews and quality evaluations.

Figure 7.1 summarises the various methods and tools for measuring quality that are in use today and how they are intended to be further developed and supplemented.

**Figure 7.1 Methods and tools for measuring the quality of official statistics. Current and future statistical programme period. A summary of the various methods and tools for measuring quality that exist today, and how these can be further developed and supplemented (corresponds to Figure 0.1)**

Methods, tools and frequency for measuring quality		Programme period 2021 - 2023			Programme period 2024 - 2027	2028 –
Quality indicators, continuous measurement		Awareness and development			Development and introduction	Evaluate and assess any changes for the new statistics program period
User contact, frequent		Different forms of user contact			Advisory committee, user surveys, feedback function	
Quality in administrative data sources		Frequent meetings, annual reports			Frequent meetings, annual reports	
Quality evaluation based on Section 5 of the Statistics Act and on the principles in the European Statistics Code of Practice , annually		2021 and 2022: Institutional level. Questionnaire + interview			2024 – 2027 Annually at statistical level	
Self-evaluation questionnaire and follow-up interview		2023: Statistical level Questionnaire + interview per area			Questionnaire + interview per area	
Quality review of selected statistics/areas. • Systematic review - maps strengths and weaknesses	SSB per year:	2021 1	2022 1	2023 3	2024 - 2027 4 per year	
	Other producers per year:	2021 0	2022 0	2023 1	2024 - 2027 4 per year	
Peer review, every 7 years		Completed in 2021			From 2024: Annual reporting on implementation of measures	

Source: Statistics Norway

### 7.1. Further development of established measurement of quality

#### Quality evaluation

The quality evaluations to date have been carried out at the institutional level and have proven to be a valuable tool. All producers find the evaluations a useful tool for initiating quality improvement measures.

The first questionnaire was sent out in autumn 2021, and following a review, it was decided to use the same questionnaire in 2022. In the interviews conducted in 2022, emphasis was placed on the changes since the previous evaluation. Additional questions were added regarding:

- Resources for the production of official statistics
- Various forms of user contact
- Use of indicators to monitor the quality of official statistics

- The statistics production is subject to other 'quality reviews' or quality reporting

There is a need to gather information about the quality of official statistics at statistical level. The aim is therefore to develop a questionnaire that can be used to collect information at this level in the next quality evaluation, scheduled for autumn 2023. This data collection will involve the self-assessment of statisticians in a questionnaire, based on quality principles and indicators from the European Statistics Code of Practice specific to their statistics/domain. This measuring instrument must be designed for use as a standalone tool, including in the initial phase of a quality review. Producers will be involved in the planning process to identify an appropriate framework for quality evaluation at the statistical level, where both the scope of statistics and the prioritisation of the need for information are clarified.

Communicating uncertainty is important for enabling users of the statistics to interpret and understand them correctly. Statistics Norway believes that there is a need to gather more information about the extent to which the statistics assess, estimate, document and communicate uncertainty. The next quality evaluation will be designed to provide a basis for further follow-up in this regard.

It is planned that the self-assessment will be supplemented with interviews held retrospectively, at the division level in Statistics Norway and at the institutional level for other producers.

### **Quality reviews**

Quality reviews are an established method for improving the quality of statistics. Such reviews are based on the quality principles in the European Statistics Code of Practice and follow the Generic Statistical Business Process Model (GSBPM) (UNECE 2019). See Figure A1 in Appendix A for more information.

In 2022, Statistics Norway, in consultation with the Committee for Official Statistics, established a systematic procedure for selecting statistics for quality reviews. The selection is made from all statistics in the national programme for official statistics and is based on criteria such as risk, results from previous reviews, identified errors and areas with a strong focus etc. Statistics that are not prioritised for quality reviews can be followed up through other measurements of quality, such as self-assessments and the use of quality indicators.

Quality reviews are resource-intensive. In recent years, the lack of resources has limited the number of quality reviews carried out. In 2023, three quality reviews are planned in Statistics Norway and one with another producer.

In the next statistical programme period (2024–2027), Statistics Norway's ambition is to streamline the quality review system and increase the number per year. Statistics Norway and the Committee for Official Statistics have agreed that there will be four quality reviews per year at Statistics Norway and four per year with other producers.

In the proposal for the next statistical programme period, the number of producers of official statistics, excluding Statistics Norway, has increased to 16. Based on the plan outlined above, all of them will be covered during the programme period. With a corresponding number of reviews per year in Statistics Norway, more domains/statistics in Statistics Norway will be covered than has previously been the case.

A new element in the quality reviews is the use of a total error framework (Zhang, 2012) to assess uncertainty and sources of error in the statistics. This framework assesses the population and data, and quality in all data states.

As new methods for gathering information on quality are developed, the need for quality reviews may eventually be reduced. The plans set out may therefore be subject to change during the programme period.

## 7.2. New measurements of quality – quality indicators

A quality indicator is a measure, often numerical, that provides information about a dimension of quality in statistics. Quality indicators can measure statistical processes or statistical output.

Quality indicators have various applications:

- Operational: used in the production of statistics, for example to measure whether the scope of received data is correct.
- Tactical: used to identify areas for improvement and measure the effectiveness of improvement measures for individual statistics. For example, to measure quality challenges with specific variables or assess the extent of manual editing.
- Strategic: aggregation of indicators across statistics for use in reporting or in change processes at organisational level. For example, to report indicators related to timeliness and response burden.

The use of quality indicators is important from both a user and producer perspective. From a user perspective, quality indicators can provide information on aspects such as timeliness and uncertainty in published statistics. From a producer perspective, quality indicators can measure and document factors such as the extent of editing and data completeness.

Examples of quality indicators include:

- Timeliness: the number of days between the end of the statistics' reference period and publication of the statistics
- Response rate: the percentage of respondents who answer a questionnaire survey
- Uncertainty – overcoverage rate: the number or percentage of units that are included in the source data but should not be included in the statistics.

### **Use of quality indicators in the production of official statistics**

The quality evaluation shows that the use of indicators to measure quality in the production of official statistics varies and is generally not widespread among producers. The most commonly used indicators in the production of official statistics are measures of timeliness, response burden and response rate. However, there are exceptional cases where producers have adopted quality indicators in a more systematic fashion and used them to identify potential errors, areas for improvement and measure the effectiveness of measures. It is important to share experiences from these statistics with other producers, both for inspiration and reuse.

In 2022, Statistics Norway developed a list of 26 recommended quality indicators in the production of statistics. This list has been shared internally in Statistics Norway and will be communicated to other producers through the methodology network. The list is intended as a tool for statistics producers to assess relevant quality indicators in their production processes. Which quality indicators are most relevant will vary across the different statistics, and it is the responsibility of the statistics producers to identify those that are most relevant and to use them actively to measure the quality in the production of official statistics.

## **SIMS – European framework for reporting statistics**

Statistics<sup>5</sup> mandated in the EEA Agreement are subject to reporting requirements determined by Eurostat. Both the statistics themselves and the associated documentation must meet specific quality requirements. Documentation of the statistics is based on the Single Integrated Metadata Structure (SIMS) (Eurostat 2023b), which is the European Statistics System's (ESS) quality and reference metadata reporting standards.<sup>6</sup>

On 17 February 2023, the European Commission adopted a recommendation to implement SIMS in member states of the European statistical cooperation. As part of the recommendation, member states are encouraged to inform Eurostat about the measures that have been implemented to adopt SIMS and the degree of implementation by 1 January 2024, and subsequently provide regular updates.

Some producers are already familiar with SIMS as they report statistics to Eurostat. However, adopting SIMS entails more than just reporting to Eurostat; it involves structuring documentation of the statistics in accordance with the SIMS framework and making this documentation available to users of the statistics on the producers' websites.

It would be beneficial for more producers to adopt SIMS. Documentation of statistics will improve, and the structure of the documentation will be standardised for all producers. Implementing SIMS will also provide opportunities for reusing documentation available on producers' websites for reporting to Eurostat, which will further automate the reporting process to Eurostat. In the slightly longer term, SIMS-based documentation could partly cancel out the need to collect data through questionnaires in the quality evaluation.

Work is underway at Statistics Norway to assess how the Eurostat recommendation on SIMS can be incorporated into 'About the statistics', which is documentation about the individual statistics published by Statistics Norway on [ssb.no](https://www.ssb.no). 'About the statistics' already largely follows SIMS, but is less detailed. An example of this is the documentation and measurement of uncertainty in the statistics, where SIMS allows for better and more detailed documentation than that currently provided for in 'About the statistics'. The intention is to harmonise 'About the statistics' with SIMS by incorporating more elements from SIMS and excluding elements that are not relevant from a user perspective. Elements that would require significant resources to document must be evaluated from a cost-benefit perspective.

## **Recommendations**

It is recommended that all producers of official statistics use quality indicators to measure quality in their production. The process of adopting quality indicators will be threefold:

1. *Assess* which quality indicators will be relevant
2. *Implement* the quality indicators in the production process
3. *Use* indicators actively to measure quality

As a starting point, it is recommended that all producers implement an indicator for timeliness. This means measuring the number of days between the end of the statistics' reference period and

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<sup>5</sup> Five Norwegian producers have statistics that are covered by EEA regulations: the Norwegian Institute of Public Health, the Norwegian Directorate of Fisheries, the Norwegian Institute of Bioeconomy Research, Statistics Norway and the Norwegian Directorate of Immigration.

<sup>6</sup> Reference metadata describes the content and quality of the statistical data and documents how the principles in the European Statistics Code of Conduct, such as accuracy and reliability, are fulfilled for the individual statistics.

publication of the statistics. It is also recommended that producers start by assessing which other quality indicators are relevant for selected production processes.

Sharing experiences with the use of quality indicators among producers of official statistics is recommended, including through the methodology network.

All producers should consider documenting statistics in accordance with SIMS. The following approach is recommended:

- Statistics Norway devises templates and guidelines for SIMS-based documentation of statistics. Initially, the focus is on the user-oriented part of SIMS in 'About the statistics'. The templates and guidelines are endorsed and shared with the producers of official statistics.
- All producers begin the process of adapting their documentation according to the aforementioned templates and guidelines. Producers will have autonomy in managing the pace and schedule of this work.

The success of this requires building competence in SIMS and exchanging plans and experiences among producers.

### **7.3. Developing common solutions**

In order to make official statistics more visible, Statistics Norway will continue to be a driving force for making all official statistics easily accessible to users in the most comprehensive way possible. This includes considering solutions where other producers give access to their available data via Statistics Norway's Statbank and solutions for automated data extraction from other statistical databases. Statistics Norway will continue to work on establishing a common release calendar for all official statistics.

The aim is to provide users with easy access to all official statistics on a common platform, without having to consider who produces the statistics. The platform will clearly indicate which producer is responsible for the statistics, and there will be links to the producers' own websites. Statistics Norway will develop solutions for comprehensive dissemination of official statistics in close cooperation with the other producers of official statistics.

### **7.4. Developments that impact on the quality assurance system**

Key future developments in the production of official statistics will be the use of new data sources, new methods and new technology. New data sources can include transactional data or positional data, often referred to as big data, which are characterised by their large volume and potential lack of structure compared to traditional data sources. These data sources are not specifically created for the production of official statistics. Utilising such data sources for the production of official statistics will require new methods and new technology. Machine learning and artificial intelligence are often highlighted in relation to the production of official statistics based on big data.

These developments will have implications for the quality assurance system and also the European Statistics Code of Practice, which underpin the production of official statistics. Eurostat is in the process of awarding a project to assess methods for producing official statistics based on new data sources. Part of this project focuses on quality, and by the end of 2024, the project will assess and propose adaptations to the European Statistics Code of Practice with a view to producing official statistics based on new data sources and new methods.

## **7.5. New statistical programme and new producers**

The proposal for a national programme for official statistics for the next programme period, as outlined in Chapter 2.2, includes six new producers of official statistics. All producers of official statistics must familiarise themselves with and work towards fulfilling the quality principles and indicators from the European Statistics Code of Practice and the Norwegian quality assurance system. The quality of new producers' statistics production will be assessed with a view to including them in the source data in the quality report for 2025.

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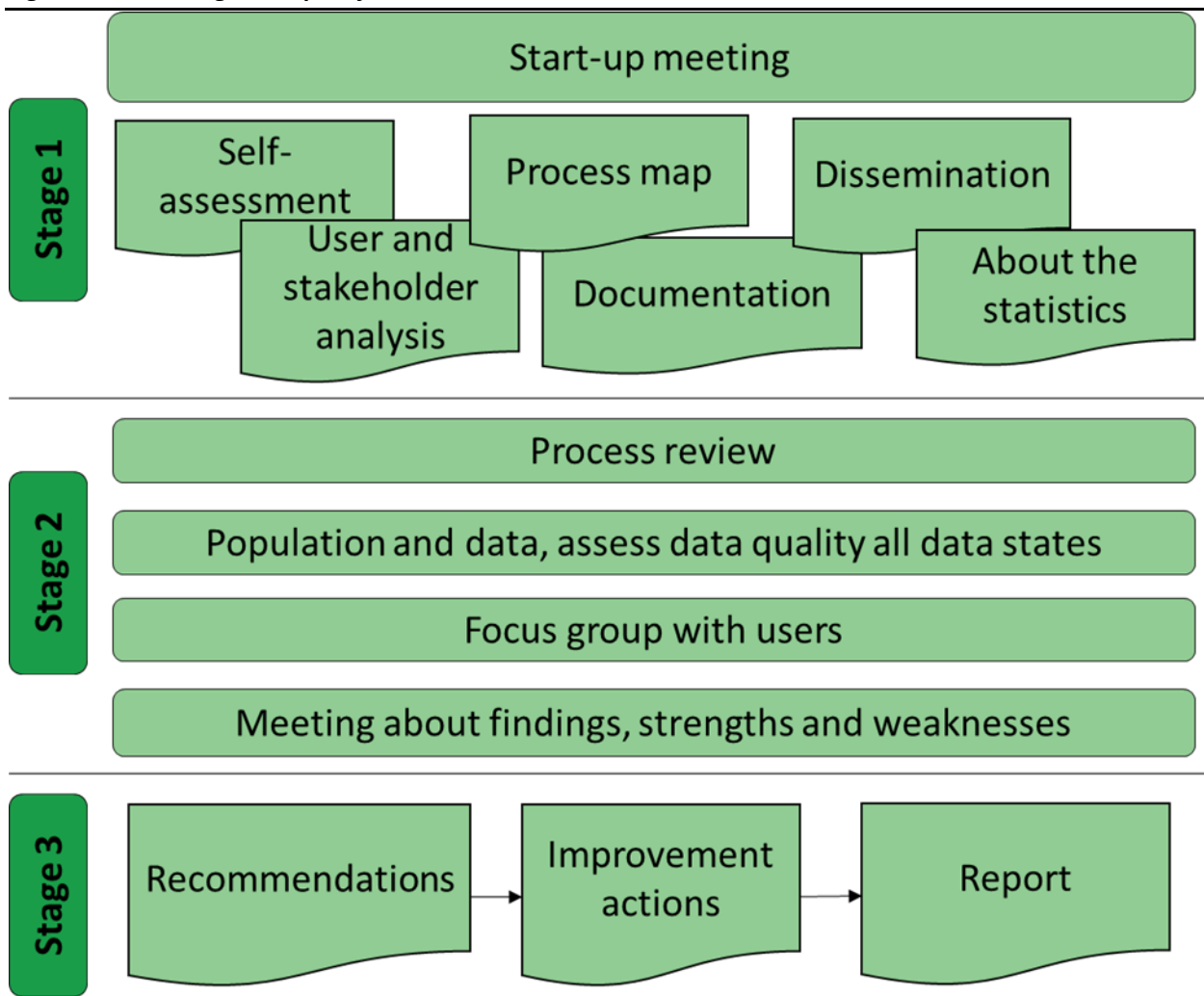
## Appendix A: Overview of methods and tools that generate information on quality in statistics

**Table A1** Established methods and tools that generate information on quality in statistics. Status and need for development

Methods, tools and frequency	Statistics Norway		Other statistics producers	
	Status	Need	Status	Need
Quality evaluations, annually	Evaluation at institutional level performed twice. Two reports with recommendations on quality improvement measures.  Follow-up of recommendations and associated measures.	Assess needs and propose a system for future quality evaluations at statistical/domain level.  Follow-up of recommendations and associated measures at statistical/domain level.	As for Statistics Norway	As for Statistics Norway
Peer review, every 7 years	Completed. Improvement actions devised and sent to Eurostat.	Implement improvement actions and report status.	As for Statistics Norway, but only relevant for the four producers who contribute to the European Statistical System	As for Statistics Norway
Reports on quality in administrative information systems, annually	System established.	Recently revised, but improvement efforts are ongoing.	Scope of collection of administrative data is not currently known to Statistics Norway.	Consider entering into agreements with data owners on the supply of data and cooperation on quality.
Quality reviews, selected statistics/domains each year	Established as a tool in Statistics Norway. System for selecting statistics and plans for 2023 and the next statistical programme period considered and adopted in Statistics Norway.	Less resource-intensive methods and several reviews conducted annually.	Plan for implementation in 2023 and in the next statistical programme period. The Committee for Official Statistics has approved the plan. Participation in the quality review team.	As for Statistics Norway
User orientation, regularly	Statistics Norway conducts regular surveys, has contact forums etc.	Must consider whether the current arrangement is sufficient and if there is a need for improvement/change.	All producers have various forms of user contact, but only a few of them have formalised and regular contact.	Consider established forums for contact with key users. Regular user satisfaction surveys. Feedback function on the producers' websites.
Quality indicators, continuous measurement	List of recommended indicators has been established. Three pilot projects for the implementation of quality indicators are underway.	All the statistics use quality indicators in the production process.	Generally not widespread	Adopt quality indicators. As a starting point, it is recommended that indicators for timeliness be adopted.

Source: Statistics Norway

**Figure A1** The stages in a quality review



Source: Statistics Norway

Figure A1 shows the three stages of a quality review. In the first stage, the statistics producer conducts a self-assessment which, along with other relevant information, is sent to the quality review team. Stage 2 consists of a process review, assessment of populations and data, user focus group and a concluding meeting to discuss identified strengths and weaknesses. In stage 3, a report is prepared with recommendations and planned quality improvement measures.

## Appendix B: Overview of the producers of official statistics

**Table B1** Number of statistics in the statistical programme 2021–2023, by domain and statistics producer

Thematic area	Responsible authority, according to the National programme for official statistics 2021–2023												
	The Norwegian Institute of Public Health	The Norwegian Directorate of Fisheries	The Research Council of Norway (Statistics Norway from 1.1.2022)	Norwegian Agriculture Agency	The Norwegian Environment Agency	The Norwegian Labour and Welfare Administration	The Norwegian Institute of Bioeconomy Research	The Norwegian Communications Authority	The Norwegian Water Resources and Energy Directorate	The Norwegian Petroleum Directorate	The Norwegian Directorate of Immigration	Statistics Norway	Total
Labour market and earning	.	.	.	.	.	5	.	.	.	.	.	16	21
Banking and financial markets	.	.	.	.	.	.	.	.	.	.	.	11	11
Population	.	.	.	.	.	.	.	.	.	.	7	20	27
Construction, housing and property	.	.	.	.	.	.	.	.	.	.	.	11	11
Energy and manufacturing	.	.	.	.	.	.	.	.	4	1	.	14	19
R&D, technology and innovation	.	.	1	.	.	.	.	1	.	.	.	7	9
Health and social care	6	.	.	.	.	.	.	.	.	.	.	11	17
Income and consumption	.	.	.	.	.	.	.	.	.	.	.	4	4
Culture and recreation	.	.	.	.	.	.	.	.	.	.	.	10	10
Agriculture, fisheries and aquaculture	.	6	.	5	.	.	2	.	.	.	.	29	42
National accounts	.	.	.	.	.	.	.	.	.	.	.	9	9
Nature, climate and environment	.	.	.	.	2	.	.	.	.	.	.	25	27
Public finance	.	.	.	.	.	.	.	.	.	.	.	11	11
Prices and price indices	.	.	.	.	.	.	.	.	.	.	.	14	14
Social conditions and crime	.	.	.	.	.	12	.	.	.	.	.	15	27
Transport and tourism	.	.	.	.	.	.	.	.	.	.	.	19	19
Education	.	.	1	.	.	.	.	.	.	.	.	21	22
International economic relationships	.	.	.	.	.	.	.	.	.	.	.	12	12
Elections	.	.	.	.	.	.	.	.	.	.	.	12	12
Wholesale and retail trade and service activities	.	.	.	.	.	.	.	.	.	.	.	9	9
Establishments, enterprises, and accounts	.	.	.	.	.	.	.	.	.	.	.	13	13

Thematic area	Responsible authority, according to the National programme for official statistics 2021–2023												
	The Norwegian Institute of Public Health	The Norwegian Directorate of Fisheries	The Research Council of Norway (Statistics Norway from 1.1.2022)	Norwegian Agriculture Agency	The Norwegian Environment Agency	The Norwegian Labour and Welfare Administration	The Norwegian Institute of Bioeconomy Research	The Norwegian Communications Authority	The Norwegian Water Resources and Energy Directorate	The Norwegian Petroleum Directorate	The Norwegian Directorate of Immigration	Statistics Norway	Total
The total number of statistics	6	6	2	5	2	17	2	1	4	1	7	293	346

Source: Statistics Norway

## Appendix C: Recommendations and improvement actions

**Table C1 Recommendations and associated improvement actions<sup>7</sup>**

Recommendation no.	Recommendation given, year	Recommendation	No. of measures	In the planning stage	In progress	Completed	Status
K1	2022	Producers with no manager with overall responsibility for the production of statistics ensure that such a position is established and made visible on the producer's organisation chart.	3	2	0	1	
K2	2022	Producers of official statistics engage in cooperation that develops and promotes innovation in statistics production.	0	0	0	0	
K3	2022	Carry out quality reviews among the smaller producers and invite employees from small-scale production processes to participate in quality reviews at other producers.	3	2	1	0	
K4	2022	Offer staff working with the production of official statistics training in statistical confidentiality.	8	7	1	0	
K5	2022	Statistics Norway develops courses on statistical confidentiality for all producers of official statistics.	1	1	0	0	
K6	2022	Establish a routine for external parties who carry out commissioned assignments for producers of official statistics to sign a confidentiality agreement.	1	0	0	1	Met
K7	2022	The results of the ongoing work at Statistics Norway to introduce guarantees in accordance with the GDPR and the provisions of the Statistics Act on information security should be documented and made available to other producers of official statistics through the Committee for Official Statistics and the methodology network.	2	0	2	0	
K8	2022	All producers should have written guidelines for impartiality and objectivity in the production and presentation of statistics, and publish them on their website. They can refer to or reuse guidelines available on ssb.no.	6	3	1	2	
K9	2022	All producers should prepare written documentation on how the statistics are produced and keep the documentation up to date.	18	5	10	3	
K10	2022	Documentation of the statistical production is published on the statistical authority's website.	6	4	0	2	
K11	2022	All producers should announce the date and time for the release of statistics at least three months in advance and adhere to the announced date and time for all users.	6	1	1	4	
K12	2022	All producers should announce corrections to published statistics.	0	0	0	0	Met
K13	2022	Statistics Norway should prioritise the development of a common release calendar for all official statistics on ssb.no. Other producers are encouraged to actively work towards announcing the publication of their statistics on ssb.no.	2	0	1	1	
K14	2022	We recommend that producers familiarise themselves with the principles of revision developed by Statistics Norway and make them known to their users, for example by referring to Statistics Norway's website.	2	1	0	1	
K15	2022	When someone outside the statistics production team has access to statistical output prior to publication, this deviation must be justified and made known to users in connection with publication.	1	0	1	0	
K16	2022	Producers of official statistics who use data from administrative data systems (registers) should enter into agreements with data owners regarding the supply of data and cooperation on quality, for example according to a template from Statistics Norway.	5	3	1	1	

<sup>7</sup> The five main recommendations, R1-R5, from the Report on the quality of official statistics, 2022 (SSB, 2022a) summarise the most important of the 36 recommendations (K1-K36) from the interim report Quality evaluation of official statistics, 2022 (SSB, 2022b). To simplify reporting and follow-up, the measures corresponding to the five main recommendations in this table have been incorporated into the respective recommendations from the interim report.

Recommendation no.	Recommendation given, year	Recommendation	No. of measures	In the planning stage	In progress	Completed	Status
K17	2022	Ensure that user testing of questionnaires is carried out systematically.	1	0	1	0	
K18	2022	Consider offering training courses in using plain language.	7	1	6	0	
K19	2022	Prepare written guidelines for how the production of statistics should be carried out.	7	3	2	2	
K20	2022	Guidelines for how statistics should be produced are published on the statistics authorities' websites, or links provided to guidelines on ssb.no.	4	2	0	2	
K21	2022	Where applicable, discontinue data capture by email and replace it with a secure solution, such as file transfer.	4	1	3	0	
K22	2022	Collect and share best practices in new technologies and new data sources among producers of official statistics.	4	2	2	0	
K23	2022	Producers who do not have established forums for contact with users should consider establishing user councils or something similar. Conducting a user and stakeholder analysis can be a useful tool in this work. <sup>8</sup>	1	0	1	0	
K24	2022	Producers who collect data for official statistics voluntarily, and who have experienced non-response leading to reduced accuracy, should explore the possibility of making participation in the survey mandatory.	0	0	0	0	
K25	2022	Producers should review the process for publishing preliminary statistics, for all official statistics. The review should aim to establish common guidelines for all official statistics.	3	2	1	0	
K26	2022	Some producers should analyse the difference between preliminary and final statistics. Based on the analysis, the need for preliminary statistics can be evaluated.	4	2	2	0	
K27	2022	Statistics Norway should develop a quality indicator for timeliness in official statistics.	3	0	2	1	
K28	2022	Producers whose statistics include variables that are not comparable with corresponding variables in other Norwegian statistics or who are unsure whether they are comparable with similar statistics in other countries, should investigate whether they can improve comparability, or possibly explain to users why comparison is difficult.	0	0	0	0	
K29	2022	All producers should draw up written guidelines for publishing statistics.	1	0	0	1	
K30	2022	All producers must ensure that the guidelines for publishing statistics are accessible on their websites. These may be guidelines drawn up by the producers themselves or the principles in the European Statistics Code of Practice, available on ssb.no.	3	1	0	2	
K31	2022	Statistics Norway holds a themed meeting in the methodology network on the dissemination of official statistics and graphics as a tool.	1	0	0	1	Met
K32	2022	Producers who do not offer customised analyses for clients are encouraged to consider doing so.	0	0	0	0	
K33	2022	Customised analyses that may be relevant to the general public should be published on the producer's website.	2	1	1	0	
K34	2022	Statistics Norway should offer a course in quality work that covers the European Statistics Code of Practice and the Generic Statistical Business Process Model (GSBPM).	2	0	0	2	Met
K35	2022	Statistics Norway should devise a plan for quality reviews of official statistics which ensures that all producers can participate in a quality review during a programme period. All producers are encouraged to participate in a quality review at another producer.	1	0	0	1	Met
K36	2022	Statistics Norway should compile a collection of best practices with guidelines and make it available to the Committee for Official Statistics.	1	0	1	0	

<sup>8</sup> The recommendation from 2022 has been clarified.

Recommendation no.	Recommendation given, year	Recommendation	No. of measures	In the planning stage	In progress	Completed	Status
K37	2023	All producers of official statistics are encouraged to participate in courses, seminars and meetings on quality in statistics held by Statistics Norway or others.	.	.	.	.	.
K38	2023	Statistics Norway raises the topic of professional independence in the Committee for Official Statistics.	.	.	.	.	.
K39	2023	The issue of assigning responsibility for quality work is discussed in the Committee for Official Statistics.	.	.	.	.	.
K40	2023	When the efforts in information security are discussed in the Committee for Official Statistics, the producers of official statistics are invited to present their experiences.	.	.	.	.	.
K41	2023	All producers adopt Statistics Norway's timeliness indicator: the number of days between the end of the statistics' reference period and publication of the statistics.	.	.	.	.	.
K42	2023	All the producers of official statistics initiate work on assessing relevant quality indicators for selected statistics.	.	.	.	.	.
K43	2023	Producers should conduct regular surveys to measure user satisfaction with the statistics.	.	.	.	.	.
K44	2023	Producers should introduce a feedback function for the statistics on their websites.	.	.	.	.	.
K45	2023	All producers are recommended to document statistics in line with SIMS, following Eurostat's recommendation.	.	.	.	.	.
Total number of measures			113	44	41	28	

Source: Statistics Norway