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**COMMISSION STAFF WORKING DOCUMENT**

**Final report on the third round of the European Statistical System peer reviews**

## 1. Introduction

The European Statistical System (ESS) is the partnership between Eurostat, the national statistical institutes (NSIs) and other national authorities (ONAs) responsible for developing, producing and disseminating European statistics. Its mission is to provide independent, high-quality statistical information at European, national and regional level and to make this information available to everyone for decision-making, research and debate.

According to Article 338 of the Treaty on the Functioning of the European Union, ‘the production of European statistics shall conform to the principles of impartiality, reliability, objectivity, scientific independence, cost-effectiveness and statistical confidentiality; it shall not result in excessive burdens on economic operators’<sup>1</sup>. This legal framework is further developed in Regulation (EC) No 223/2009 on European statistics<sup>2</sup>. To supplement the legal framework, the ESS has developed a common quality framework, which comprises the European Statistics Code of Practice (ES CoP)<sup>3</sup>, the ESS Quality Assurance Framework (ESS QAF)<sup>4</sup> and general quality management principles, such as interaction with users, commitment, partnership, staff satisfaction and continuous improvement.

The ES CoP is the cornerstone of the ESS common quality framework. It is a self-regulatory instrument and is based on 16 principles covering the institutional environment, statistical processes and statistical outputs. A set of indicators of best practices and standards for each of the principles serves as a guidance and reference tool for reviewing the implementation of the ES CoP, thus increasing transparency within the ESS. The ESS QAF provides examples of good practice, methods and tools for the practical implementation of the ES CoP. In September 2016, the European Statistical System Committee (ESSC) adopted the Quality Declaration (integrated in the ES CoP) to clearly express its commitment to deliver high-quality European statistics in compliance with the ES CoP.

The ES CoP was developed in 2005 and has been revised twice – once in 2011 and again in 2017 – to reflect changes in society and innovations in producing European statistics, in particular the emergence of new data sources and the use of new technologies. The last revision also took into account the modernisation of the legal framework for European statistics and responded to the review of ESS members’ adherence to the ES CoP in a spirit of continuous improvement. Following each revision of the ES CoP, peer reviews were carried out to monitor the implementation of the ES CoP by all ESS members, including Eurostat. The first round of peer reviews was conducted in 2006-2008 and the second in 2013-2015. These two rounds focused mainly on NSI adherence to a subset of principles of the ES CoP, while the third round of ESS peer reviews (2021-2023) mainly monitored the implementation of all ES CoP principles and covered the entire national statistical system (NSS) – in addition to the NSI, selected ONAs were included in the peer-review process, undergoing similar review procedures to the reviewed NSI.

This document presents the final results of the third round of ESS peer reviews.

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<sup>1</sup> [https://eur-lex.europa.eu/eli/treaty/tfeu/2016/art\\_338/oj](https://eur-lex.europa.eu/eli/treaty/tfeu/2016/art_338/oj)

<sup>2</sup> Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics and repealing Regulation (EC, Euratom) No 1101/2008 of the European Parliament and of the Council on the transmission of data subject to statistical confidentiality to the Statistical Office of the European Communities, Council Regulation (EC) No 322/97 on Community Statistics, and Council Decision 89/382/EEC, Euratom establishing a Committee on the Statistical Programmes of the European Communities, OJ L 87, 31.3.2009, p. 164.

<sup>3</sup> [European Statistics Code of Practice - Quality - Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

<sup>4</sup> [Quality Assurance Framework - Quality - Eurostat \(europa.eu\)](https://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&plugin=1)

## 2. The ESS peer reviews 2021-2023

### 2.1. Objectives

The third round of the ESS peer reviews had the following two objectives:

- to review the ESS's adherence to the ES CoP and demonstrate that the ESS operates on the basis of the ES CoP principles;
- to help NSIs, ONAs and Eurostat further improve and develop the NSSs by setting out future-oriented recommendations that would also encourage government authorities to support their implementation.

The peer reviews were also intended to identify strengths and innovative practices in the NSSs, for the benefit of the whole ESS.

### 2.2. Methodology

The methodology, documentation and implementation arrangements for the third round of ESS peer reviews were developed in close collaboration with, and agreed on by, all ESS members, thus ensuring ownership of the process and results.

Work on developing the methodology began in 2018 and it was adopted by the ESSC in May 2020<sup>5</sup>. In total 32 peer reviews, covering all ESS members, were carried out over a period of 2 years. The first two – including Eurostat's – were conducted in June 2021, and the last in August 2023.

The third round of ESS peer reviews included an assessment of all 16 ES CoP principles and covered the entirety of each ESS member's NSS. This included the NSI as well as selected ONAs responsible for developing, producing and disseminating European statistics, with ONAs chosen on the basis of predefined criteria, such as their importance in the production of European statistics. The third round of ESS peer reviews also sought to assess ESS members' progress in adhering to the ES CoP principles and to identify areas for enhanced collaboration within the ESS. The peer reviews did not evaluate specific statistical products, as other mechanisms are in place for assessing their compliance with quality criteria, as defined in relevant EU legislation.

The peer review was carried out by combining an audit-like approach with a traditional peer-review approach to take advantage of the positive aspects of both approaches. In line with an audit-like approach, external experts were brought in to reinforce the credibility and objectivity of the peer reviews, evidence had to be submitted by the NSIs as proof, the peer-review expert team had ownership of the recommendations, the reviewed NSIs had the right to express diverging views on the recommendations from the expert team, and NSIs were responsible for designing improvement measures in response to the recommendations. In line with a peer-review approach, the methodology for the peer reviews was developed jointly and agreed by the ESS and NSI experts were included in the peer-review teams, so that they could benefit from peer learning and make sure ensure the peer reviews were results-driven. No NSI expert reviewed their own NSI.

### 2.3. The process

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<sup>5</sup> <https://ec.europa.eu/eurostat/web/quality/peer-reviews/current-round-2021-2023>

The third round of ESS peer reviews was carried out by eight teams, each consisting of four experts from ESS NSIs, external bodies and Eurostat. Collectively, the experts had statistical and auditing experience, knowledge of the functioning of the ESS and some statistical domains, and awareness of developments in statistics at European and international level.

The design of the peer review process covers five phases:

- i. self-assessment by the reviewed NSS;
- ii. a visit by the peer-review expert team;
- iii. a report with recommendations by the peer-review expert team;
- iv. an improvement action plan drafted by the reviewed NSS; and
- v. annual monitoring of the implementation of the improvement action plan by Eurostat.

i. Self-assessment

Two tailored self-assessment questionnaires (one for the NSI and one for the reviewed ONAs) were used, with quantitative and qualitative questions on each of the indicators (for the NSIs) and ES CoP principles (for the ONAs). Additional questions were asked on strengths, weaknesses, opportunities and threats in relation to implementation of each principle. There were also questions focusing on innovative practices applied by the reviewed NSI. The ESS QAF served as a reference document for answering each questionnaire, and evidence was required to support the answers, in line with the audit-like approach of the ESS peer reviews.

ii. Visit by the peer-review expert team

The peer-review expert team met with experts and managers from the NSI and selected ONAs, as well as with external stakeholders, including media representatives, business associations, members of the research community, government, and advisory bodies, to formulate recommendations for improvements, which were presented to the NSI and ONA senior management.

iii. Peer-review report

This report, drafted by the peer-review expert team, was structured as follows: an executive summary, a standard description of the peer-review process setting the context, a description of the NSS, a description of the progress made in the last five years, a description of the strengths of the NSS and, finally, a section on recommendations. These recommendations were either improvement-related (the NSI already adhered to the ES CoP but there was scope for improvement) or compliance-relevant (very few or no measures were in place to adhere to the ES CoP). The report also provided the NSIs with an opportunity to express diverging views on the recommendations issued by the peer-review expert team, for which no further action would be taken.

iv. Improvement action plan

Following publication of the peer review report on the websites of the reviewed NSI and Eurostat<sup>6</sup>, the NSI drafted an improvement action plan for the NSS outlining the measures to be taken to address the recommendations of the peer-review report, setting a deadline and identifying an institution responsible for implementing the actions. Once the improvement action plan was agreed on by the NSI and Eurostat, it was published on the websites of both Eurostat and the NSI along with the peer-review report.

v. Annual monitoring

Annual monitoring of the implementation of the improvement action plans by Eurostat will start in 2025 with the reference year 2024 and is scheduled to finish at the end of 2027. Each year, Eurostat

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<sup>6</sup> [Current round \(2021-2023\) - Quality - Eurostat \(europa.eu\)](https://europa.eu)

will compile a progress report, based on information from the ESS members, on how the improvement actions are being implemented across the ESS and present it to the relevant bodies.

Eurostat's peer review was carried out by the European Statistical Governance Advisory Board (ESGAB)<sup>7</sup>. ESGAB's aim is to give an independent view on how the ES CoP is implemented in the ESS. ESGAB advises the European Commission (Eurostat), on appropriate measures to facilitate ES CoP implementation, on ways to communicate the ES CoP to users and data providers, and on updates to the ES CoP. It may also provide advice on issues of user confidence in European statistics<sup>8</sup>.

Effective management of the process and appropriate governance played a vital role in the success of this round of ESS peer reviews. Well-defined mechanisms were put in place to develop the methodology and consult all the relevant stakeholders, including the ESSC and ESGAB. This broad consultation spectrum ensured that a diverse range of perspectives and expertise was considered during the process of developing the peer-review methodology. Additionally, clear ownership of the peer-review process by the NSIs was essential, ensuring that responsibility and accountability were well-defined. A dedicated ESS Task Force on Peer Reviews and an internal Eurostat Task Force were set up and instrumental to provide guidance and expertise in implementing this round of ESS peer reviews. Overall, the peer-review approach and the inclusive way the process was managed have gained strong support within the ESS and broad societal recognition in the countries covered by the peer reviews.

#### 2.4 Communication activities during the peer reviews

After the previous round of peer reviews, the lack of communication around the peer reviews was identified as one reason why several improvement actions could not be finalised, as the relevant authority had not been involved or informed about the results of the peer review process. Involving the relevant authorities earlier in the process and keeping them informed of its purpose and outcome was seen one of the learnings for the third round of ESS peer reviews. A communication strategy was therefore developed to accompany the peer reviews, but it was also decided that the process should be used to launch a wider communication campaign on the value of official statistics. This strategy was aimed at increasing trust in European statistics and helping the NSIs inform and reach out to key users of European statistics and other stakeholders.

To implement the communication strategy, a comprehensive set of communication materials was developed, comprising visuals, posters, infographics, a standard PowerPoint presentation, a roll-up, a leaflet, a generic website article, a comprehensive press kit for the media, social media posts, and videos. These materials were translated into all ESS languages and shared with the ESS members, who adapted the materials to their country context.

Many countries reported that the materials had been useful for supporting their communication campaigns and noted that the peer review had increased the quality and/or frequency of user engagement. They also noted greater awareness of and interest in European statistics among users, and increased accessibility of the ES CoP and its principles. In some countries, the relevant authorities were also involved in the peer-review process. As a result, they became more knowledgeable about the recommendations resulting from the peer review and gained a better understanding of the need to support the NSS in implementing these recommendations.

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<sup>7</sup> [ESGAB Annual report 2021 \(europa.eu\)](https://ec.europa.eu/eurostat/web/esgab/annual-report-2021)

<sup>8</sup> <https://ec.europa.eu/eurostat/web/esgab/introduction>

### 3. Results of the third round of ESS peer reviews

This chapter describes the results of the third round of ESS peer reviews. In particular, it includes information on the progress made by the NSIs since the previous peer-review round, information on the strengths of the NSSs, as identified by the peer-review experts, and a summary of the recommendations made. It also describes the most important innovative practices identified during the peer-review process in the ESS members, highlighting the fact that the ESS actively pursues innovation, including through collaboration mechanisms such as the ESS Innovation Network, to meet growing user demands in times of limited resources. Finally, the chapter summarises the main lessons learnt from the peer-review process and actions to be taken at ESS level.

For the sake of transparency, the peer-review reports for each ESS member and Eurostat, and the corresponding improvement action plans to address the recommendations, are publicly available on the websites of both the ESS member reviewed and Eurostat<sup>9</sup>.

Improvement actions were set out by the NSI – if relevant, in cooperation with the ONAs and in consultation with other stakeholders – on the basis of the recommendations made by the peer-review expert team. Improvement actions were designed to be measurable and were clearly linked to the recommendations contained in the peer-review report.

#### **3.1. Progress since the second round of ESS peer reviews**

The peer-review reports clearly show that impressive progress has been made in many aspects of **governance**. Some countries have revised their statistical laws to enhance professional independence, while others have either set up user and coordination bodies or revised their mandate and composition. Coordination of the NSS has also been strengthened by introducing comprehensive national statistical work programmes, setting up a coordination unit in the NSI, implementing training for ONAs and certifying them. Increased cooperation with other stakeholders, such as academia and international organisations, was sought to help develop new methodologies and improve the production processes.

In the field of **resource management**, significant progress has been made in developing human resource policies and competency models. While making further progress is highly challenging in many countries, the changes made so far have contributed to recruiting and retaining staff with new data science skills, attracting new and highly skilled staff through increased cooperation with universities, developing career packages and enhancing systematic training of staff. Considerable investments in IT infrastructure were used to develop integrated production systems and registers, integrated statistical information systems, and portals for dissemination and communication of statistical products and services.

In the field of **quality management**, significant progress was evident for many NSIs. Quality policies have been revised, and quality management systems, quality assurance frameworks and national quality guidelines have been developed with corresponding tools and procedures for implementation. Several NSIs embarked on ISO 9001 certification, which resulted in substantial improvements in documentation, standardisation of processes and increased quality awareness. Some NSIs set up dedicated quality units and committees or appointed quality managers to introduce and enhance a quality culture in the NSI and to increase quality awareness. In addition, progress has been made by introducing regular internal and external quality reviews.

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<sup>9</sup> <https://ec.europa.eu/eurostat/web/quality/peer-reviews/current-round-2021-2023>

In the field of **access to and use of administrative and other data sources**, several NSIs have made substantial progress by intensifying collaboration with data holders, establishing partnership agreements and identifying and applying mechanisms for staying informed when administrative data sources are created, modified or discontinued. Some progress has been reported on the use of privately held data, such as scanner data from retail chains and data from motorway tolls, mobile network operators and bank transactions, to produce experimental statistics or fully fledged European statistics. This was particularly visible during the COVID-19 pandemic, when traditional surveys were difficult to conduct.

In the field of **statistical production**, many NSIs have undertaken substantial modernisation, leading to standardised electronic portals for data collection, automated data processing, process standardisation and the use of web-based questionnaires and machine-learning applications to streamline the statistical production process. Many NSIs have also introduced modern statistical information systems that are partly metadata-driven (needed for standardisation across the production chain) and cover the entire production chain.

In the field of **user orientation and dissemination**, a significant number of NSIs have adopted a more user-centric approach, providing statistical information through different channels in accordance with the needs of specific user groups. For the research community, access to microdata has been facilitated and streamlined, for example by making remote access possible, and some NSIs are publishing an increasing volume of open data on their websites. Many NSIs have started and increased publication of experimental statistics (in particular during the COVID-19 pandemic), to quickly serve urgent user needs. The use of data visualisation through infographics and interactive figures and charts, has markedly increased throughout the ESS. Many NSIs invested substantial resources in promoting statistical literacy through cooperation with universities and research institutes and closer relationships with the media.

### **3.2. Strengths identified in the peer-review reports**

A unique strength mentioned in most of the peer review reports is that the NSIs have a very strong **legal framework** for the development, production and dissemination of official statistics. This includes strong provisions for the professional independence of the NSI, for the coordination of the NSS and – in many cases – for access to administrative data sources. For a few NSIs, access to other (privately held) data sources is also regulated. The professional independence of the NSIs and, in some cases the ONAs, is explicitly guaranteed by law. This, together with the expertise, professionalism and commitment of the NSI staff, means that NSIs are trusted institutions. This trust extends to their role as data handlers. In this context, for a few NSIs, this recognised role in society was mentioned as a factor in the decision to assign them a new role in data management and governance and to include that role in the legal framework, which is a strength for the NSIs concerned. The practice of widely consulting and serving users to meet their needs contributes to the reputation of the NSIs as relevant, trustworthy and credible.

Some NSIs have a **long-term strategy** in place, while some others have a long-term budget, providing stability of resources, combined with some flexibility. A robust planning and performance measurement process is also mentioned as a particular strength.

Several reports mention partnership-based governance structures and systems for **coordinating the NSS**, with the coordination role of the NSI being recognised and valued by the ONAs. Coordination mechanisms such as the statistical work programme, specific coordination bodies, memoranda of understanding and common training programmes are mentioned. Other governance bodies exist to certify ONAs, to ensure the confidentiality of statistical data and supervise adherence to the ES CoP. Alongside the governance bodies, some countries also have very strong certification mechanisms and procedures for designating ONAs as producers of official statistics.

**Cooperation and partnership** with the scientific community and access to microdata for that community are strengths reported for some NSIs. Particular mention is made of cooperation with universities and allowing staff to engage in academic work to improve the quality of data and ensure that data sets are fit for research work. This also includes cooperation with data science or innovation laboratories to set up infrastructure for research. For some NSIs, cooperation with international organisations and the implementation of collaborative projects with different types of institutions and bodies is also mentioned, all with the aim of developing new data and indicators to serve user needs.

A strength that is highlighted particularly often is the quality of the **human resources** in the NSIs. Here, strengths relate to the fact that staff are motivated, service-oriented and committed and excel in their expertise, skills and competence. The excellent cooperation with users and respondents and the responsiveness of staff to new needs and requirements are also often highlighted and became particularly visible during the COVID-19 pandemic. Some countries have internal NSI committees or self-developed applications for resource allocation and career planning. Staff flexibility, mobility, deep respect for statistical principles and the ability to innovate are other strengths described in many reports. Some NSIs were mentioned as having been able to attract younger staff with appropriate skills and retain them with incentivising career packages. Another strength or good practice mentioned in some of the reports is that staff training is held in schools/academies set up specifically for that purpose.

An overall strength in all countries is that the NSIs disseminate all available statistical information free of charge, accompanied by methodological explanations and metadata. Regular user consultations take place and users are treated equally. In addition to these basic principles of **dissemination and transparency** upheld in all countries, many reports highlight the NSIs' excellent services for users and their use of modern communication tools, which help to promote official statistics as a public good and bring value to society. This includes a well-designed communication approach, addressing different user groups through different and targeted communication channels, such as data portals and social media, and through tailored products, such as infographics, dashboards, interactive publications and analytical articles. Strengths also include an increased responsiveness to the need for statistical information during the COVID-19 pandemic, training programmes for users, data portals for all official statistics in a country and an attractive product portfolio. Promotion of statistical literacy, a newsroom and setting up the European Statistics Competition for secondary school students are some specific strengths mentioned for particular countries.

Systematic data protection and strong measures to guarantee the **confidentiality** of statistical data are mentioned as strengths in many peer-review reports. This includes a strong legal framework, appropriate technical safeguards, statistical disclosure control techniques and a strong culture of preserving data confidentiality.

Strengths relating to the right to **access to and use of other data sources** are also mentioned. This mainly concerns administrative data but also – in a few cases – privately held data. Some NSIs have set up specialised units responsible for administrative and other data sources, thereby allowing data linking and integration – using common identifiers across different data sources – and thus helping to lessen the response burden and improve cost-efficiency. NSIs also engage with data providers and provide specific feedback and mechanisms to identify potential for simplifying data collection. Those NSIs with the right to access privately held data use them to produce new indicators and/or experimental statistics and to produce statistics faster. Other NSIs have established a data scouting approach which allows them to examine potential sources of information and to collect information in a central source register.



As regards **quality**, many reports highlight the existence of comprehensive quality management systems and quality assurance frameworks for the NSI and often even for the NSS. This also includes ISO certification. Many NSIs demonstrate an impressive quality culture, including the existence of data quality sheets and product quality scoreboards, regular self-assessment by the ONAs, nationally binding quality guidelines, integrated quality and risk management, quality audits and dashboards of quality indicators. Furthermore, in many countries, dedicated IT-based systems are in place for producing quality reports based on the relevant ESS standards.

In terms of **standardisation**, the use of harmonised and standardised IT software for data collection and processing throughout the NSS is mentioned as a strength, as is the existence of metadata-driven Statistical Information Management Systems. A number of reports mentioned the process-orientation in organising the work of the NSI and the application of this process-orientation for rationalising production processes.

As regards **ONAs**, several strengths were reported in all reports, such as the high level of education and professionalism of their staff, the increasing use of administrative and other data sources, good quality reporting practices, a commitment to adhere to the ES CoP and good awareness of its requirements. Other strengths mentioned are a coordinated release calendar, coordinated revisions, integration of their products into statistical work programmes, common training, the implementation of electronic data collection and regular quality assessments, which also cover their adherence to the ES CoP.

### **3.3. Summary of peer-review recommendations**

The reports from the third round of the ESS peer reviews contain 581 recommendations. Table 1 below gives an overview of the number of recommendations for each ES CoP principle. Overall, the level of adherence to the ES CoP is very high among ESS members. As Table 1 shows, roughly 12% of recommendations are compliance-relevant meaning that national statistical authorities must take action to ensure that they fully adhere to the ES CoP. All other recommendations relate to possible improvements in implementation of the ES CoP, meaning that the national statistical authorities do adhere to the ES CoP but there is room for improvement.

**Table 1: Peer reviewers' recommendations by principle<sup>10</sup>**

<b>Principle</b>	<b>Total recommendations</b>	<b>To improve implementation of the ES CoP</b>	<b>To achieve adherence to the ES CoP</b>
<b>Total</b>	<b>581</b>	<b>513</b>	<b>68</b>
Principle 1 – Professional Independence	68	47	21
Principle 1bis – Coordination and cooperation	80	64	16
Principle 2 – Mandate for Data Collection and Access to Data	43	41	2
Principle 3 – Adequacy of Resources	59	59	0
Principle 4 – Commitment to Quality	33	28	5
Principle 5 – Statistical Confidentiality and Data Protection	17	12	5
Principle 6 – Impartiality and Objectivity	40	28	12
Principle 7 – Sound Methodology	45	45	0
Principle 8 – Appropriate Statistical Procedures	38	37	1
Principle 9 – Non-excessive Burden on Respondents	17	16	1
Principle 10 – Cost Effectiveness	29	29	0
Principle 11 – Relevance	35	35	0
Principle 12 – Accuracy and Reliability	5	5	0
Principle 13 – Timeliness and Punctuality	5	3	2

<sup>10</sup> Information in the table refers to the recommendations issued for 31 ESS Member States.

Principle 14 – Coherence and Comparability	1	1	0
Principle 15 – Accessibility and Clarity	66	63	3

Compliance-relevant recommendations mainly concern principles relating to professional independence, coordination and cooperation in the NSS, and impartiality and objectivity. Improvement-related recommendations are spread across the ES CoP principles. The principle of coordination and cooperation in the NSS and the principle of accessibility and clarity of statistics each account for 12% of the total number of recommendations, followed by the principle of adequacy of resources, with around 11%, and the principles of professional independence and sound methodology with around 9% each. A more detailed summary of the content of recommendations included in the peer-review reports is presented below, broken down by principle.

### 3.3.1. Governance and institutional aspects (principles 1-6 of the ES CoP)

#### *Professional Independence (principle 1 of the ES CoP)*

This heading covers peer-review recommendations on institutional and organisational factors that can impact the effectiveness and credibility of a statistical authority developing, producing and disseminating European statistics.

In several cases the peer-review expert teams recommended that, to adhere to the ES CoP, the countries concerned make the process for appointing the head of the NSI more transparent and specify grounds for dismissal in national statistical law. In a few other cases, the teams recommended publication of an accessible national statistical work programme and regular progress updates as a way of making the NSS more transparent.

The majority of compliance-relevant recommendations refer to strengthening legal and institutional frameworks to ensure that all ONAs adhere to the ES CoP in a sustainable manner. Most ONAs are relatively small bodies producing official statistics within a larger administration such as a ministry or governmental agency. To achieve professional independence as defined in the ES CoP, the heads of these statistical authorities should be professionally independent from policy, regulatory or other departments and bodies. It is therefore essential for the ONAs to clearly delineate their statistical functions in larger administrations and bodies, and to have transparent recruitment and dismissal procedures for their heads.

Legislative or institutional changes would be required to implement these recommendations. They therefore ultimately fall within the remit of the relevant government authorities rather than that of the NSIs and the ONAs.

Finally, a few recommendations refer to the way the NSS, the NSI and official statistics are branded, for instance through a logo. Their aim is to strengthen the visibility and recognisability of the NSS, the NSI and official statistics.

#### *Coordination and cooperation (principle 1bis of the ES CoP)*

Principle 1bis on Coordination and cooperation was introduced in the ES CoP in November 2017 and therefore, first reviewed in the third round of ESS peer reviews. The recommendations for this principle focus on strengthening coordination of the NSS. To comply with the ES CoP, several NSIs are called on to establish a clear mandate and procedures for coordinating the NSS and to officially designate the NSI, in national statistical law, as the national coordination body for European statistics within the meaning of Regulation (EC)No 223/2009. The majority of recommendations concern the production of quality guidelines for the entire NSS. Application of

the guidelines should be regularly reviewed and monitored. NSIs should also provide ONAs with methodological and quality management support and share relevant good practices and tools. Lastly, active cooperation with other stakeholders outside the NSS is recommended, mainly to boost innovation. Such cooperation should become an integral and significant element in the national data ecosystem.

#### *Mandate for Data Collection and Access to Data (principle 2 of the ES CoP)*

Access to primary data is essential for producing timely and relevant European statistics. If statistical organisations can access and use administrative and other data such as privately held data, this could greatly reduce the response burden on European businesses and individuals. In this regard, several recommendations refer to the need for measures to ensure that the NSI is involved from the outset in the design and development to make them suitable for statistical purposes and informed about the discontinuation of administrative registers. These measures include introducing legal provisions requiring European and national statistical classifications to be applied in administrative registers where appropriate. The provisions should also:

- clearly specify that the NSI has the right to access administrative registers;
- create a mechanism for providing feedback about data quality issues in administrative registers;
- set up systems for automatic data exchange.

In several cases it is recommended that the NSIs should explore further opportunities for an increased use of administrative data to reduce the response burden.

Other recommendations focus on the need to establish legal or other mechanisms, such as agreements and memoranda of understanding, to ensure sustainable access to privately held data for the purposes of developing and producing European statistics and for statistical innovation and reducing the burden on traditional providers of data.

#### *Adequacy of Resources (principle 3 of ES CoP)*

The third round of the ESS peer review revealed insufficient human and financial resources as a major issue for the ESS. So far, the ESS has managed to meet the ever-increasing demands for more detailed and timelier statistical information through modernisation and efficiency measures, but almost all peer-review reports identify a clear need for better resourcing for ESS members. Therefore, many recommendations are addressed to the relevant national authorities, urging them to secure sufficient human resources, with the right profiles, and financial resources for the NSIs – and sometimes, the entire NSS – to meet emerging needs for new statistics, to support innovation and technological developments, and to help statistical authorities prepare for future policy priorities.

Many NSSs struggle to attract and retain highly skilled staff. The situation may vary among NSSs, but NSIs and ONAs were encouraged to:

- address the general resource shortage with the relevant government authorities;
- identify internal solutions to the resource limitations; and
- ensure that the skills, competencies and expertise of their staff continue to meet their strategic and operational needs.

The use of human resources could be further improved through appropriate training plans, proper career management, skills transfer, internal mobility, knowledge sharing, increased training in ONAs and staff exchanges within the NSS. Other ways of attracting and retaining competent staff might include partnerships with the scientific community and academia, secondments, internal staff

mobility, promoting the attractiveness of the work environment, and offering a higher degree of flexibility, including modern working conditions.

#### *Commitment to Quality (principle 4 of the ES CoP)*

European statistics must be underpinned by a commitment to quality. Several recommendations focus on the need to draw up, formalise and publish a quality policy for the NSI and for the entire NSS, and on the need to set up or enhance the mechanisms for regular quality reviews of statistical processes and output. Many recommendations are addressed to ONAs, which are asked to set up quality management frameworks and quality assurance procedures.

#### *Impartiality and Objectivity (principle 6 of the ES CoP)*

The ES CoP states that all users should have equal access to statistical releases at the same time and that any privileged pre-release access to any outside user should be limited, well-justified, controlled, and publicised. Most of the recommendations on this principle focus on the need to either discontinue pre-release access arrangements for statistical releases or, where this is not possible, to review the arrangements and be more transparent about them, to restrict pre-release access, explain why it is granted, and manage it better.

Other recommendations focus on the need to develop and expand the use of release calendars throughout the entire NSS, and for ONAs to publish release calendars visibly on their websites. Furthermore, several NSIs and ONAs are recommended to increase transparency, accessibility and standardisation of statistical releases and to specify publicly the timing of statistical releases.

### 3.3.2. Statistical processes

European statistics must be underpinned by a commitment to sound methodology. Peer-review recommendations focus on the need to create centralised methodology structures inside NSIs and to ensure that processes are standardised and documented. Furthermore, a few reports recommend establishing closer cooperation on methodological work with the scientific community, implementing appropriate training of staff throughout the NSS and facilitating scientific exchanges, which could help attract students and graduates to the NSI.

### 3.3.3. Statistical output

#### *Relevance (principle 11 of the ES CoP)*

Many recommendations to both NSIs and ONAs refer to the need for enhanced user consultation and engagement and emphasise the need to reach out to a broader layer of society to understand the information needs of non-government users. Another recommendation is to undertake a wider consultation on the content of the European and national statistical work programmes and to design measures to obtain an early sense of upcoming data needs.

#### *Accessibility and Clarity (principle 15 of the ES CoP)*

A number of recommendations refer to the need to identify the best communication channels for targeting different types of users and reach a wider audience. Furthermore, some NSIs are recommended to continue to invest in the production and dissemination of more ‘experimental’ statistics, as a kind of innovative information to users. Users could also be better served if both NSIs and ONAs published official statistics and metadata on a unified official statistics portal, used

modern communication channels and made data more accessible. Finally, a number of recommendations concern improved access to microdata for researchers.

### **3.4. Summary of innovations identified in the third round of peer reviews**

In all countries, the peer reviews identified noteworthy innovative practices that could possibly be applied in other NSSs, facilitated by the existing collaborative networks in the ESS, such as the ESS Innovation Network. These innovative practices particularly concern new data sources and experimental statistics, IT advances and solutions, communication and dissemination tools, collaboration with the scientific community, national coordination and new roles for the NSI in the national data ecosystem. The COVID-19 pandemic prompted NSIs and ONAs to adopt new ways of developing, producing and disseminating official statistics, for example the increased use of administrative and privately held data and faster release of statistics. Digital technologies are now more frequently used to carry out surveys, replacing face-to-face interviews. Many of these changes have been maintained since the COVID-19 pandemic. In addition, like other employers, NSIs and ONAs responded to the pandemic by adopting more flexible working arrangements and digital management solutions. All of these innovative practices have made NSIs and ONAs more responsive to employee and user needs and are likely to boost their resilience in future crisis situations.

#### *New data sources and experimental statistics*

Innovative practices have been developed through the increasing use of new sources from administrative and privately held data. This has especially been seen in the use of credit/debit card transactions, smart meters for electricity, mortality data, register data, and satellite, scanner, tax, toll, transport or web-scraped data, as well as in data linking. NSIs have accordingly built more partnerships with private data holders such as credit card companies, mobile network operators and supermarkets. They have also set up internal frameworks and laboratories to advance the use of new data sources for official statistics. These advances have boosted production of experimental statistics and new indicators and led to faster responses to data needs. This was especially notable during the COVID-19 pandemic, when these kinds of statistics were used in place of traditional statistics, which could not be produced due to pandemic-related restrictions.

#### *Digital advances and solutions*

Digital advances have been another principal driver behind the development of innovative practices, such as increased use of artificial intelligence. Examples include automated systems and open-source digital solutions for implementing generic methods in statistical production processes, data processing platforms, internal metadata-driven statistical information systems, central platforms for quality indicators and reference metadata. Data lake and data warehouse approaches have been used, as well as national data infrastructure. Other innovative digital practices include an advanced statistical geoportals, automatic validation of register data, flash reports for data collection processes, geocoding, an integrated system for data submission, machine learning, interoperability platforms, online systems to deal with respondents, open-source code development and sharing, and robotic process automation.

#### *Communication and dissemination*

New dissemination products and services have developed considerably since the last round of peer reviews as NSIs and ONAs have embraced technological advances. A major change in the communication activities since the last round of peer reviews is the increased use of online channels to communicate with more varied user groups. Some NSSs have also developed a central portal for official statistics or a communication/information platform to coordinate activities, while others

have pursued innovative approaches in modernising their own portals, for example through an application programming interface. New dissemination products have been developed to address the needs of specific user groups, such as digital products for statistical literacy targeted at schoolchildren, interactive tools like dashboards and infographics focusing on timely statistical topics, and podcasts. The media engagement of NSIs and ONAs has also generated innovative practice.

### *Collaboration with the scientific community*

The peer-review reports noted innovative practices in the way NSIs and ONAs collaborate with the scientific community. These include the development of platforms for researcher access, including remote access, to microdata. There are also examples of the general sharing of expertise with universities, more specifically through study programmes and research and scientific projects. NSIs have, for example, hosted external academic researchers as resident researchers, or innovatively organised a statistics day focused on collaboration with researchers.

### *NSIs in the emerging national data ecosystems*

The role of NSIs in emerging national data ecosystems is developing. New practices include legal mandates for NSI involvement in the governance of public sector data, and involvement in coordination bodies in line with the Data Governance Act<sup>11</sup>. NSIs have also adopted consultative roles with owners of administrative data and been involved in digitalisation projects in public administrations. Some NSIs have sought to become the central point of access to public data held by various national authorities for analysts and researchers.

## **3.5. Lessons learnt from conducting the peer reviews**

While the methodology and implementation arrangements for this third round of ESS peer reviews worked well and created an appropriate environment in terms of governance bodies, guidance and support for conducting the peer reviews, some lessons can be learnt and borne in mind for future ESS peer reviews.

It is important to establish appropriate governance mechanisms and procedures to engage all relevant stakeholders in the setting-up of the peer-review process to ensure smooth implementation of the peer-review process and acceptance of its results.

External stakeholders, such as the media, users from the government, business associations, trade unions, researchers and others, have been involved in the peer-review process. This is valuable in providing an external perspective on the processes of developing, producing and disseminating European statistics. External stakeholders can also support findings and recommendations identified by the expert team in discussions with those inside the NSS.

The third round of ESS peer reviews included a strong focus on identifying innovative practices and future-oriented recommendations. It also reviewed adherence to the principle of coordination of the NSS, for the first time. This led to the identification of many good practices for coordinating an NSS and to a number of useful recommendations for the further development of individual NSIs, ONAs and of the ESS as a whole.

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<sup>11</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R0868>

The coordinated ESS communication strategy employed during the third round of ESS peer reviews has proven very useful. It increased both the quality and the frequency of communication with various stakeholders.

### **3.6. ESS-wide actions identified during the peer reviews**

In the methodology for the ESS peer reviews, the intention was to identify possible improvements that could be pursued at the level of the ESS rather than in each country. The following work streams for ESS common action and discussions have been identified based on peer-review reports, feedback from experts and other sources of information.

- Revise the legal framework that governs the development, production and dissemination of European statistics to make it fit for the future. It would be helpful for national statistical authorities to have a European-level legal framework reflecting the current environment and future developments, including provisions for: involvement in the set-up and design of and access to different data sources; enabling a wider role for the NSI in the national data ecosystems; and greater exchange of data within the ESS.
- Continue to foster innovation and collaboration with the research community in a coordinated way. As part of the process of delivering more up-to-date, reliable, trustworthy official statistics, the ESS should continue to jointly produce experimental statistics and prepare recommendations or guidelines for metadata reports to accompany them. It was noted that, for more efficient production of statistics throughout the ESS, it would be useful for members to share knowledge and practice as well as services and tools with each other.
- Continue to coordinate ESS measures to improve user engagement and improve dissemination and communication of European statistics. Work on developing dashboards and other publication products, such as for the European Green Deal, should be continued, to offer European data in a format that is both attractive to users and allows comparisons to be drawn between ESS members.

## **4. Outlook for the future**

Starting in 2024, Eurostat will monitor implementation of the improvement action plans drawn up by ESS members based on the recommendations from the peer-review reports. Eurostat will produce an annual progress report on implementation of these plans, based on information provided by ESS members, and report to the ESSC and ESGAB. The report will also include measures at ESS level. Furthermore, monitoring will continue on implementation of the Commitments on Confidence in accordance with Regulation (EC) No 223/2009 on European statistics. Both monitoring activities will be closely coordinated to avoid any duplication or overlap and to minimise the burden on ESS Member States.

Additionally, the results of the peer reviews will be used as the starting point for discussion on a possible revision of the ESS quality framework, including the ES CoP and the ESS QAF, in line with the principle of continuous improvement and the need for the national and European statistical systems to adjust and respond to changing user demands in order to stay relevant in fast-evolving data ecosystems.

## 5. Conclusions

The ultimate objective of the peer reviews is to strengthen statistical systems at national and European levels, thereby increasing the relevance, trustworthiness and credibility of European statistics and enabling the ESS to address future challenges.

The third round of the ESS peer reviews has demonstrated that, overall, adherence to the ES CoP is very high among ESS members. Only around 12% of recommendations are compliance-relevant, meaning that the relevant national statistical authority must take action to make themselves fully adhere to the ES CoP. All other recommendations relate to possible improvements in implementation of the ES CoP.

Statistical authorities operate on sound legal bases, their credibility and professional independence are widely recognised, and they enjoy a high level of public trust. Significant improvements have been achieved since the previous round of peer reviews, especially in the fields of governance, quality, methodology, coordination of the NSS, cooperation with the research community, user orientation and access to administrative data sources.

Many ONAs have become major players in the NSSs. The NSI's coordination role has been strengthened and recognised by all concerned in the NSS. It has been anchored in the legal framework in many countries. Still, further efforts will be needed to fully implement the NSIs' coordination role, and to ensure ONAs adhere to the ES CoP in a sustainable manner in terms of clearly delineating statistical functions in the ONA and separating them from other administrative tasks that form part of the core business of the administrative body they belong to.

The role of the NSIs in the new data ecosystem is changing and moving towards that of a data management agency in some countries, in the context of recent developments in European legislation such as the Governance Data Act.

The ESS peer reviews have identified possible improvements that could be pursued at ESS level rather than in each country, namely:

- revise the legal framework that governs the development, production and dissemination of European statistics to make it fit for the future;
- continue fostering ESS innovation and collaboration with the research community in a coordinated way;
- continue coordinating ESS actions to improve user engagement as well as dissemination and communication of European statistics.

The ESS peer reviews have demonstrated that ESS members are constantly innovating to address user needs and are striving for even more cost-efficiency but that there are limits to free resources for new tasks and needs. Hence, many peer-review reports mention the need for more resources for innovation projects and the need to embrace the benefits of technological advances – all with the aim of continuing to provide high-quality statistical information and services.

Finally, the ESS peer reviews have shown that the ESS takes a forward-looking approach and has embarked on assessing and evaluating its performance to identify further improvements in its functioning. To this end, all ESS members have developed improvement action plans to address the recommendations in the peer-review reports. The impact of these planned improvements will become visible in the coming years and will help the ESS to stay relevant in the new data ecosystem.



The peer-review process generated various recommendations that will help ESS members to improve their functioning and output. This demonstrates that ESS peer reviews, regularly implemented, are extremely useful for the further development of the ESS. While the specific arrangements for conducting them may change, peer reviews should remain on the ESS's agenda – as a way of demonstrating the relevance, trustworthiness and value of the ESS in providing European statistics.