



EUROPEAN
STATISTICAL
SYSTEM

PEER REVIEW REPORT

ON COMPLIANCE WITH THE EUROPEAN STATISTICS CODE OF
PRACTICE AND FURTHER IMPROVEMENT AND DEVELOPMENT OF THE
NATIONAL STATISTICAL SYSTEM

IRELAND

Jorgen Elmeskov

Hana Slegrova

Daniela Stefanescu

Frantisek Bernadic

March 2022

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1. EXECUTIVE SUMMARY

The Central Statistics Office and the Irish system of official statistics have been going through a period of transformational change since the previous peer review. A pronounced shift towards reliance on administrative data, made possible by a coordinated approach to the use of unique identifiers, and much greater coordination within the system have left a much stronger data ecosystem in place and have improved the foundations for future developments of statistics and data-driven policy analysis. This rapid change is set to continue, but the enviable point of departure should allow the Central Statistics Office to deal with future challenges.

Among the fundamental strengths of the Central Statistics Office is a committed workforce with a strong focus on innovation and cooperation, both inside and in relation to other statistics producers, and a deep respect for statistical principles. In a 2020 Survey of Civil Service Employee Engagement, the Central Statistics Office compared well with the civil service at large, which compared positively with similar surveys undertaken abroad.

Equally important, the Central Statistics Office is widely known and trusted in society as being an independent producer of high-quality official statistics. The latest user survey, which is a few years old, showed high user satisfaction even if it varied somewhat across different user segments. There is nothing to suggest that this should have changed, especially after the Central Statistics Office performed very strongly during the pandemic.

As a result of sustained efforts led by the Central Statistics Office and involving holders of administrative data throughout the public sector, a National Data Infrastructure is progressively taking hold. Administrative datasets are increasingly being equipped with unique identifiers for persons, enterprises and locations, and standards and classifications are being harmonised. As a result, the potential for data linkage and concomitant improvements in statistics and data-driven policy analysis is building, holding out promise for the years to come.

Increasingly, the Central Statistics Office is seen as the leader in the efforts to improve the public data ecosystem – effectively becoming a data steward. In this, the Central Statistics Office has been helped by a programme to second its staff across Public and Civil Service bodies¹. Moreover, the Central Statistics Office provides a range of services to other bodies, which directly or indirectly help to improve and standardise definitions, classifications, and procedures, while also providing training. At the same time, the Central Statistics Office is reviewing the performance of producers of official statistics against the European Statistics Code of Practice in the case of Other National Authorities producing European Statistics, and the corresponding, albeit somewhat narrower and less demanding, Irish Statistical System Code of Practice in the case of other producers of official statistics.

A strength underlying the above developments has been the ability to undertake profound and demanding reforms internally and in relations with other producers of official statistics and holders of

¹ The CSO engages with Public and Civil Service bodies within the State. This is referred to as the “broader system” and it includes central government departments, government offices, agencies and local authorities. Some of these bodies are Other National Authorities and others are not ONA’s. Some compile Official and/or European Statistics while others do not compile any statistics but may be the custodians of important administrative data sources that the CSO uses for the compilation of Official Statistics.

administrative data without losing sight of the long-term objectives. While undertaking these reforms – and indeed responding to the pandemic – has required substantial agility, the focus on pushing forward with the CSO’s overall strategy has not been lost.

Finally, the Central Statistics Office has been helped by a Statistics Act which, for its time – it dates from 1993 – has been particularly foresighted. In a few respects the Statistics Act may have some inadequacies, notably as regards access to privately held data and the need for political-level approval of mandatory data collection, but the peer review team views the balance of risks and rewards of attempting to reopen the Statistics Act as not promising, especially given its strong provisions as regards professional independence and coordination of official statistics and public sector data management.

Reflecting the basic strengths of the Central Statistics Office and the clear directions set for the future of both the Central Statistics Office and the Irish statistical system, none of the recommendations concern compliance with the European Statistics Code of Practice and a great many have the character of staying the course already set.

RECOMMENDATIONS

I. Further strengthening coordination of the statistical system

The Central Statistics Office has successfully established a certification system, with a substantial number of producers of official statistics now lined up to be approved against the benchmark of either the ES CoP, in the case of producers of European Statistics, or the Irish Statistical System Code of Practice. While it would be unreasonable to change the premises under which producers of official statistics have lined up for accreditation, the dual track process should be re-thought.

To improve beyond compliance with the ES CoP, the peer review team recommends:

1. In the monitoring of the statistical standards of Other National Authorities developing, producing and disseminating European statistics and other producers of Irish official statistics, the Central Statistics Office should consider moving to a unified benchmark by aligning the Irish Statistical System Code of Practice with the ES CoP, which would simplify communication, enhance understanding and send a signal of increased ambition. (Improvement-related: ES CoP, Indicator 1bis.2)

While certifying the respect of the relevant codes of practice by producers of official statistics is the current preoccupation, the Central Statistics Office should reflect on how continued monitoring of approved producers of official statistics will take place and whether, in that context, a process of domestic peer reviews, as in some other countries, could have a role to play.

To improve beyond compliance with the ES CoP, the peer review team recommends:

2. The Central Statistics Office should build on the present good progress in certification of producers of official statistics to clarify the future of the monitoring process in this area, including the potential use of a peer review mechanism, while working to obtain funding to support the necessary monitoring. (Improvement-related: ES CoP, Indicator 1bis.2)

The logic of increasingly moving towards operating as a national statistical system suggests that a consolidated work programme should also be produced, and the Central Statistics Office has indeed taken steps in that direction.

To improve beyond compliance with the ES CoP, the peer review team recommends:

3. To create greater transparency and a basis for system-wide prioritisation, the Central Statistics Office should pursue present efforts to create a consolidated work programme for the Irish statistical system, comprising both Other National Authorities developing, producing and disseminating European statistics and other producers of Irish official statistics. (Improvement-related: ES CoP, Indicator 1.5)

The three Other National Authorities reviewed (Department of Health, Department of Justice and the Environmental Protection Agency) have all recently taken steps in the appropriate direction in a number of areas where weak points had been observed, and it is important that these efforts lead to full implementation.

To improve beyond compliance with the ES CoP, the peer review team recommends:

4. The reviewed Other National Authorities (Department of Health, Department of Justice, Environmental Protection Agency) should build on and carry through current efforts to improve the provision of metadata, strengthen data access, document quality policies and publish European Statistics directly for an Irish audience. (Improvement-related: ES CoP, Indicators 8.4, 2.2, 4.1 and 15.1)

II. Assuming the role of steward of the Irish data ecosystem

The National Data Infrastructure is gradually taking shape and is leading towards high-quality administrative data equipped with unique identifiers so as to facilitate data linking and, hence, statistical development and data-driven policy analysis. While much has been achieved, quality still needs to be improved and possibilities for interoperability should be pursued.

To improve beyond compliance with the ES CoP, the peer review team recommends:

5. The Central Statistics Office should continue and step up the efforts towards creating a National Data Infrastructure, with greater use of the provisions in the Statistics Act that equip the Central Statistics Office with powers to coordinate and set standards for producers of official statistics and holders of administrative data, while maintaining a collegial approach. (Improvement-related: ES CoP, Indicators 1bis.1, 2.2 and 10.3)

The Central Statistics Office operates a network of statisticians seconded to Public and Civil Service bodies, called the Irish Government Statistical Service², where they help boost quality and alignment with the National Data Infrastructure, while at the same time providing the Central Statistics Office with an insight into potential data sources and scope for harmonisation of standards. At this moment, however, coverage by seconded statisticians is uneven across the Irish statistical system.

To improve beyond compliance with the ES CoP, the peer review team recommends:

² The Irish Government Statistical Service (IGSS) is the name given to the network of CSO seconded statisticians working in a mix of Public and /or Civil Service bodies (see footnote 1). The programme continues to grow and build a more coordinated analytical service across the public and civil service, centrally supported by the CSO.

6. The Central Statistics Office needs to expand the programme of seconded statisticians by convincing producers of official statistics to engage or engage more with the programme and, hence, spread its benefits. (Improvement-related: ES CoP, Indicators 8.7, 10.3 and 10.4)

In order to exhibit the potential gains from the National Data Infrastructure, the Central Statistics Office, in conjunction with the cadre of economists and analysts, which are spread through the public sector in much the same way as seconded statisticians, has undertaken and published a range of analyses known as Pathfinder projects. These analyses have been useful in their own right and, by illustrating the benefits of the National Data Infrastructure, they also help to create momentum in the pursuit of that endeavour and to overcome any resistance to moving further and, hence, facilitate the production of more and better statistics at lower costs.

To improve beyond compliance with the ES CoP, the peer review team recommends:

7. The Central Statistics Office should pursue the Pathfinder programme to continue providing insights into the potential use of integrated data for statistics and policy analysis and thereby convince public sector data holders of the benefits of a National Data Infrastructure with a view to maintaining momentum in this direction. (Improvement-related: ES CoP, Indicators 9.4, 9.5, 9.6 and 15.3)

Like other National Statistics Institutes, the Central Statistics Office can derive important benefits from access to privately held data in terms of new, innovative statistical products, reductions in the response burden on traditional data providers, lower costs and dealing with falling response rates. However, in practice and with a few exceptions, it has been difficult for the Central Statistics Office to gain access to such data and, therefore, the potential gains have not been reaped.

To improve beyond compliance with the ES CoP, the peer review team recommends:

8. The Central Statistics Office should consider ways to reach consensual agreements with holders of privately held data on access to such data in order to benefit from their potential for statistical innovation and to reduce the burden on traditional providers of information. (Improvement-related: ES CoP, Indicators 2.4 and 8.6)

III. Reforming to deliver even more

Based on the National Data Infrastructure in its present state, the Central Statistics Office has demonstrated that it is already capable of delivering important elements of a national population census based on administrative data. Given the substantial costs and known weaknesses of a traditional population census, this potential should be seized.

To improve beyond compliance with the ES CoP, the peer review team recommends:

9. Building on the progress in creating a National Data Infrastructure, the Central Statistics Office should move as soon as possible towards a population census based on administrative data, though likely supplemented by surveys in areas not covered by administrative data. (Improvement-related: ES CoP, Indicators 9.4, 9.5, 9.6 and 10.3)

The Central Statistics Office's seconded statistician programme is fully paid for by the hosting Public or Civil Service body³, whereas a range of other services provided to these and other public sector bodies, including process maps, quality guidance and various kinds of advice, is provided free of charge. While there is nothing inherently wrong with different pricing for different services, this should be the result of a coherent application of general principles.

To improve beyond compliance with the ES CoP, the peer review team recommends:

10. The Central Statistics Office should clarify the principles for pricing the increasing range of services provided to producers of official statistics, holders of administrative data and other public sector bodies. (Improvement-related: ES CoP, Indicator 10.4)

The Central Statistics Office takes part in a number of activities in the European Statistical System that are accompanied by European grants, but due to Irish administrative rules and procedures, grants accrue to the Irish exchequer rather than to the Central Statistics Office. Hence, the Central Statistics Office potentially misses out on interesting development opportunities and its European partners potentially miss out on the perspectives from the Irish experience, which is considerable in many fields of innovation.

The Department of Public Expenditure & Reform should explore mechanisms to accommodate funds deriving from European Statistical System Grants being credited to the Central Statistics Office's budget rather than paid into the broader Exchequer fund.

To improve beyond compliance with the ES CoP, the peer review team recommends:

11. The Department of Finance should consider changing the budgetary arrangements under which European Union grants for statistics development work do not reach the Central Statistics Office. (Improvement-related: ES CoP, Indicator 3.1)

The CSO does its cost accounting primarily along organisational lines and, in line with the recommendation of the previous peer review, should provide the perspective also from the output side.

To improve beyond compliance with the ES CoP, the peer review team recommends:

12. The Central Statistics Office needs to pursue efforts to create a comprehensive system of cost accounting by outputs to facilitate prioritisation and the full and fair pricing of services rendered. (Improvement-related: ES CoP, Indicators 3.2, 3.4 and 10.1)

The Central Statistics Office has put in place a system of annual self-assessment by statistical units, which is being complemented by a system of more in-depth Supported Quality Appraisals, engaging reviewers from outside the unit. So far, however, roll-out of the latter system has been limited and would, at the present pace, take decades to achieve full coverage.

To improve beyond compliance with the ES CoP, the peer review team recommends:

13. As the Central Statistics Office moves forward to undertake Supported Quality Appraisals, it should ensure that such appraisals will cover the entire Statistical Work Programme within a

³ Public Sector Bodies: <https://www.cso.ie/en/releasesandpublications/ep/rpbi/registerofpublicsectorbodies2021-provisional/publicsector/>

reasonable timeframe while also establishing criteria for the prioritisation of appraisals across statistics. (Improvement-related: ES CoP, Indicator 4.3).

The reform and modernisation of business sector data collection and processing began later than for household data and needs to be pursued against the background of falling response rates, dissatisfaction of data providers and the wish to gain efficiencies in the Central Statistics Office.

To improve beyond compliance with the ES CoP, the peer review team recommends:

14. The Central Statistics Office should push forward with reform efforts in business sector data collection and processing, in order to reduce response burdens, raise the efficiency of data collection and enhance data quality. (Improvement-related: ES CoP, Indicators 8.2, 9.3 and 10.4)

There is a concern in the Central Statistics Office that in a competitive labour market it could lose out to other employers in the hiring and retention of staff, especially in certain skill categories, due to an inability to compete on wages. However, surveys and direct evidence given to the peer review team suggest that there is wide satisfaction with working conditions in the Central Statistics Office, which could be a useful argument in recruitment drives, while improvements may still be possible at the margins.

To improve beyond compliance with the ES CoP, the peer review team recommends:

15. The Central Statistics Office in some respects offers an attractive “package” to new recruits, taking into account the non-monetary elements, which should be communicated effectively outside the Central Statistics Office while considering adjustments to further increase the attractiveness of the package. (Improvement-related: ES CoP, Indicators 7.5 and 7.6)

IV. Providing greater benefits for users

The Central Statistics Office operates a system of pre-release access to a number of releases, with transparency on who enjoys such rights and for which releases provided by a posting on the website. While transparency is important and could be increased, the practice itself may be seen as problematic because it could be interpreted as favouring the government in place. Public confidence in the impartiality of the Central Statistics Office is high, so there is no acute issue, but to minimise any risk it may be worth reflecting on this practice.

To improve beyond compliance with the ES CoP, the peer review team recommends:

16. The Central Statistics Office should consider ending the practice of pre-release access, which conflicts with the notion of equal access, or, if it is maintained, to increase transparency on the criteria behind individual decisions. (Improvement-related: ES CoP, Indicator 6.7)

The press releases issued by the Central Statistics Office are rather cautious and factual in nature, and media representatives suggested to the peer review team that this was an impediment to coverage. The peer review team also notes that drawing further on the deep knowledge of staff on relevant subject areas covered by statistics could provide useful perspectives on new releases.

To improve beyond compliance with the ES CoP, the peer review team recommends:

17. The Central Statistics Office should consider whether statistical releases could provide more analytical explanations of developments and more contextual material without compromising the need to be seen as impartial. (Improvement-related: ES CoP, Indicator 15.1)

The Central Statistics Office has a range of contacts with academia and research organisations in the course of developing, producing and communicating statistics as well as in the context of hiring staff. However, there are likely to be gains from setting such contacts within a wider strategy to ensure appropriate coverage and avoid overly person-bound structures.

To improve beyond compliance with the ES CoP, the peer review team recommends:

18. The Central Statistics Office should elaborate a strategy for relations with academia, which would cover inputs from academia to ongoing statistical production, inputs in the context of development activities as well as activities to raise the profile of the Central Statistics Office as a potential employer among students at universities and similar institutions. (Improvement-related: ES CoP, Indicators 7.5 and 7.7)

Access to microdata by researchers and analysts is likely to bring great benefits to society, provided that data protection is secured. The latter is presently no concern whereas the real risk may be that of access terms being overly strict.

To improve beyond compliance with the ES CoP, the peer review team recommends:

19. The Central Statistics Office should consider ways to reform the access to microdata for research and to facilitate such access for different categories of users without compromising data confidentiality. (Improvement-related: ES CoP, Indicator 15.4)

Like all National Statistical Institutes, the Central Statistics Office needs feedback from users on its performance in order to be able to make relevant improvements. Likewise, it needs information on new requirements so as to be able to make informed decisions on priorities. Both needs can be filled by user surveys, and similar needs may exist in other producers of official statistics. In addition, it is also important to know the views of non-users, who represent potential future users. To remain up-to-date on user and non-user assessments and needs it is therefore important to undertake surveys at regular intervals, whereas the Central Statistics Office's historical record leaves something to be desired.

To improve beyond compliance with the ES CoP, the peer review team recommends:

20. The Central Statistics Office should pursue user and non-user surveys at a frequency of not less than every third year. In this context, the Central Statistics Office may consider opening such surveys to cover other producers of official statistics as well. (Improvement-related: ES CoP, Indicator 11.3)

In the spirit of continuous improvement integral to the European Statistical System (ESS), the NSI will interpret the recommendations formulated in this report into improvement actions for implementation within the national statistical system (NSS).

2. INTRODUCTION

It is recognised that quality is one of the European Statistical System's (ESS) comparative advantages in a world experiencing a growing trend of instant information and new challenges, driven by exceptional circumstances or the continuous need for faster but quality-assured data. The European Statistics Code of Practice (ES CoP) is the cornerstone of the ESS common quality framework, and the ESS statistical authorities have committed themselves to adhere to it.

In this context, it is crucial for the ESS to be equipped with a review mechanism, the peer reviews, supporting with credible evidence this self-commitment to adhere to the ES CoP. The objective of this review mechanism is to enhance the integrity, professional independence and accountability of the ESS statistical authorities. The first round of peer reviews was carried out in 2006-2008, followed by a second round in 2013-2015.

In 2017, the ES CoP was reviewed and extended and now encompasses 16 principles. This revised version of the ES CoP triggered a third round of peer reviews, being carried out in the Member States of the European Union and of the European Free Trade Association (EFTA), and Eurostat from 2021 to mid-2023. This round of peer reviews aims at improving the quality and trust in European statistics by assessing the compliance of the ESS with the principles of the revised ES CoP. The peer reviews cover the ESS statistical authorities (Eurostat, the National Statistical Institutes (NSIs) and selected Other National Authorities (ONAs)) developing, producing and disseminating European statistics. The peer reviews will be followed by a period of annual monitoring of the implementation of the improvement actions developed by the NSIs to address the recommendations laid down in the peer review reports.

The third round of peer reviews has the following two objectives:

- To review the compliance/alignment of the ESS with the ES CoP, in order to demonstrate to the ESS and to external stakeholders that the ESS is a system based on the principles of the ES CoP;
- To help NSIs, ONAs and Eurostat in their further improvement and development by indicating future-oriented recommendations; at the same time they should stimulate government authorities to support the implementation of these recommendations.

Each peer review is conducted by a team of four statistical experts (both from inside and outside the ESS). The peer review has four phases: completion of the Self-Assessment Questionnaires (SAQs) by a country; analysis of these SAQs by the peer review team; a country visit by the peer review team; and the preparation of the final report and ensuing recommendations by the peer review team. These recommendations are of two types:

- Compliance-relevant (ensuring compliance/alignment with the ES CoP);
- Improvement-related (less critical/technical supporting improvements).

A combination of an audit-like and a peer review approach is used when assessing the national statistical systems (NSS) in the countries to benefit from the positive aspects of both approaches. The audit-like approach requires the provision of documents as evidence, the ownership of the recommendations by the peer review expert team, and the right for the NSIs to express diverging views on the recommendations and to formulate the corresponding improvement actions. Whereas the peer review approach allows for common agreement within the ESS on the methodology, the objectives, scope and implementation arrangements, the focus on improvements and a peer learning process.

Although all principles of the ES CoP will be reviewed for all countries through the SAQ, the peer review experts are free to customise the country visit to concentrate on those principles where more clarification/explanation is needed. However, certain principles such as those concerning professional independence and coordination and cooperation, as well as principles including elements of modernisation, will be assessed during the peer review visit for every member of the ESS.

In addition to the common principles to be addressed for every member of the ESS, the peer review team also placed an emphasis on aspects of coordination, data stewardship and data access. The background to this was the strong efforts pursued by the Central Statistics Office, other producers of official statistics (European or Irish), holders of administrative data and, indeed, the Irish Government to create a joined-up data infrastructure, with the Central Statistics Office acting as a data steward at its core. As a result of these efforts, reliance on administrative data in statistics production has increased significantly in recent years, while standards, classifications and aspects of quality have become more harmonised.

More generally, and reflecting the broad nature of the reforms undertaken by the CSO and within the Irish Statistical System in recent years, all principles of the ES CoP were touched on. The principles of Adequacy of Resources, Cost Effectiveness and Non-Excessive Burden on Respondents are closely related to the modernisation inside the Central Statistics Office and to relations with external stakeholders. The use of available resources, measures to increase efficiency, implementation of standardized solutions, and use of information and communication technologies were included among the issues assessed. The efforts of the Central Statistics Office to reduce the burden on respondents through extensive use of administrative and, in some cases, privately held data sources were also covered to learn about internal processes and cooperation with data holders, including in relation to the principle of Confidentiality and Data Protection. The selection of these principles also reflects the expanding activities of the Central Statistics Office to set out common data standards within the Irish Statistical System and among administrative data holders, enabling effective production of a broadening range of statistics with increased levels of granularity.

The Central Statistics Office's strong focus on data users has been explored through all the principles addressing Statistical Output as well as the principle on Impartiality and Objectivity. The impact of various tools and activities on statistical products and services, including e.g., the provision of microdata for scientific purposes and the role of analytical activities, could thus be better understood. Furthermore, methods and procedures applied in communication with users, in response to their current and anticipated needs, including new ways of presenting statistics, were also explored.

Also, although the reports should not be used to compare one country to another, much effort has been made to ensure the harmonisation of the reports and the ensuing recommendations across the countries so that all countries are treated equitably.

The peer review of Eurostat was conducted by the European Statistical Governance Advisory Board (ESGAB).

3. BRIEF DESCRIPTION OF THE NATIONAL STATISTICAL SYSTEM

Legislation and outline of the Irish Statistical System

The Irish Statistical System (ISS) consists of those parts of the public sector involved in the collection, processing, compilation and dissemination of official statistics. In Ireland, official statistics are produced by the Central Statistics Office (CSO), Other National Authorities (ONAs), which are responsible for European statistics, as well as a range of other compilers of official statistics not classified as ONAs (government departments, agencies and state bodies, and other public authorities). Nonetheless, statistics production in general, and production of European Statistics in particular, are highly centralised, with the CSO accounting for over 80% of European statistics.

The legal basis for official statistics in Ireland is the **Statistics Act, 1993**. The professional independence of the CSO is set out in this Act, which outlines the functions of the CSO as well as the authority to assess the statistical potential of the records maintained by public authorities and, with a few exceptions, to request access to these. The Statistics Act defines official statistics as those compiled by the CSO and any other public authority (defined as Department of State, local authority or other body established by an enactment).

The **National Statistics Board (NSB)** has been in existence since the mid-1980s and was established on a statutory basis by the Statistics Act, 1993. The Statistics act states that the functions of the NSB include guiding the strategic direction of the CSO, establishing priorities for the compilation and development of official statistics, assessing the resources of staff, equipment and finance which should be made available for the compilation of official statistics, and arbitrating, subject to the final decision of the Taoiseach (Ireland's Prime Minister), on any conflicts which may arise between the CSO and other public authorities relating to the extraction of statistics from records or to the coordination of statistical activities. The NSB membership is appointed by the Taoiseach and comprises the Director General of the CSO (ex officio), two high-level civil servants from the Department of Finance and the Taoiseach's Office, three representatives nominated by important user associations and two independent experts.

In 2017, the Government of Ireland adopted the **Commitment on Confidence in Statistics**, thus fulfilling obligations set out in Regulation (EU) 2015/759 of the European Parliament and of the Council amending Regulation (EC) No 223/ 2009 on European statistics.

The Data Sharing and Governance Act 2019 provides for the regulation of the sharing of information between public bodies and the regulation of the management of information by public bodies. It establishes the *Data Governance Board* to oversee rules, procedures and standards, guidelines and general compliance under the Act.

Organisation

The CSO is a professionally independent statutory body in the Irish Civil Service under the aegis of the Office of the Taoiseach. It has offices in Cork and Dublin.

The Office comprises six Directorates as follows: *Social and Demography Directorate; Economic Directorate; Business Statistics Directorate; Corporate Affairs Directorate; Technology and Statistical Services Directorate; Statistical System Coordination Directorate.*

The Management Board is the primary decision-making committee within the CSO and provides the leadership and management required at corporate level in the office. The Management Board comprises the Director General of the CSO (as Chair), five Assistant Director Generals and one Director.

Appointment procedure for the head of the CSO

The CSO is managed by a Director General (DG) appointed by the President, on the nomination of the Taoiseach. The post of Director General of the CSO is equivalent to the rank of Secretary General of a Government Department (i.e., the highest rank of permanent official). The Statistics Act establishes the DG's functions and authority. The competition process for the appointment of all senior positions in the Irish Civil Service is managed through the Top-Level Appointments Committee (TLAC). The post of DG is filled by means of an open competition.

Statistical Programmes

The CSO makes its annual Statistical Work Programme publicly available. It presents a list of all the statistical products (by theme, sub theme, product and description, including dissemination method) elaborated and disseminated by the CSO. Progress reports are published annually and present information on the number of products, which were produced in the year, including new products not listed in the Statistical Work Programme, statistical innovations during the year and products listed in the Statistical Work Programme, which were not produced. There is at present no consolidated work programme for the ISS as a whole, nor any consolidated reporting, though the CSO is taking steps to fill this void.

Resources

The CSO has close to 800 full-time equivalent (FTE) staff located in its Cork and Dublin offices. In addition, about 85 FTE field staff are deployed throughout the country to conduct the continuous household surveys and passenger inquiries at airports and seaports.

The CSO has a comprehensive budgeting and expenditure management system which is managed and monitored by the Finance Section, the Management Board and the DG. The CSO applies for an annual budget allocation from Central Government in September each year and the final allocation is awarded in October. The CSO's gross budget allocation for 2021 was approximately 65m Euro, a figure which was significantly boosted by preparations for the Population Census in April 2022. As an indication of resource trends outside census periods, the number of full-time equivalent staff increased from 749 to 832 between 2009 and 2019.

Coordination of the Irish Statistical System

As mentioned, the production of official and European statistics is relatively centralised. Even so, there are 13 Other National Authorities (ONAs), which produce specific European statistics. Judging by the number of datasets submitted to Eurostat, the Department of Justice (migration) and the Sustainable Energy Authority of Ireland (energy) account for more than half.

The CSO has a formal coordination role to play across the public service in relation to official statistics set out both in the national legal context and in EU legislation.

Key practical features in implementing the CSO's coordination role under the Statistics Act are the following:

- The Irish Government Statistical Service (IGSS) is a network of CSO seconded statisticians working in a mix of Public and/or Civil Service bodies. As of 2021, there are 34 seconded statisticians in 16 public sector bodies.
- The Irish Statistical System Code of Practice (ISSCoP) was introduced in 2013 as a national code of practice and standards (a less detailed subset of 5 principles of the European Statistics Code of Practice) for the gathering and use of data for statistical purposes in the Public Service. As of 2021, 15 organisations⁴ have engaged in the ISSCoP accreditation process, three of which have official statistics certified as ISSCoP compliant.
- The CSO contributes to the Government's public service reform strategies and related legislation (*Our Public Service 2020; Civil Service Renewal Plan 2030; Data Sharing and Governance Act 2019*) to support the development of a more integrated National Data Infrastructure. All these initiatives share the common vision of data being an important resource to be managed and exploited.
- The CSO and, indeed, its seconded statisticians work closely with the Irish Government Economic and Evaluation Service (IGEES) to draw statistical and analytical inferences from a more integrated data ecosystem and, hence, to illustrate the benefits thereof. IGEES is a cross-government service that helps provide policy evaluation and economic analysis to individual public sector bodies and is staffed by economists and analysts.
- The CSO's Administrative Data Centre is a single-entry point to the CSO for administrative data through which it keeps regular contact with other public sector bodies - both data providers and producers of official statistics.
- Memoranda of understanding (MoUs) with key partner organisations of the ISS.
- A specific directorate (the *Statistical System Coordination Directorate*) has been established in the CSO to help manage and develop the CSO's coordination role in the ISS, including the IGSS programme. Moreover, the responsibility for ISS coordination has been assigned to an Assistant DG in the CSO.
- Different fora to share and promote good practices and collaborative work on finding practical solutions (such as the *Quality Leaders Network*, for seconded statisticians on quality matters; *liaison groups*, to manage relationships with other public sector bodies and to work with users of statistics; *the Formal Statisticians Liaison Group*, for seconded statisticians and professionals compiling European statistics in other agencies to discuss statistical technical issues).

Three of the 16 Public and Civil Service bodies that host CSO secondments, as part of the IGSS, were nominated to be reviewed in the ESS Peer Review, namely: Department of Health, Department of Justice and the Environmental Protection Agency.

ONAs involved in the peer review process

Department of Health (DoH)

⁴ Of the 15 organisations, all of which are producers of statistics and holders of administrative data, 11 are ONAs while four are not. ONA's are a mix of Public and Civil Service bodies (see footnote 1). <https://www.cso.ie/en/aboutus/pagesforfoi/europeanstatisticalsystem/>

The Department of Health's mission is to improve the health and well-being of people in Ireland by delivering high-quality health services and getting best value from health system resources. Among the functions of the DoH is the production of European statistics on health, including staff and patient numbers. The CSO and the Department have been cooperating and closely coordinating from a data perspective during the COVID-19 crisis. The DoH is a particularly heavy user of seconded statisticians. The European Statistics compiled by the DoH are at present not published directly for an Irish audience.

Department of Justice (DoJ)

The Department of Justice works to advance community and national security, promote justice and equality, safeguard human rights and achieve the vision of a safe, fair and inclusive Ireland. European statistical products by the DoJ are migratory themed (e.g., asylum, migration, transfer of migrants under the Dublin Convention, residency permits, etc.) and, hence, highly topical. The European Statistics compiled by the DoJ are at present not published directly for an Irish audience.

Environmental Protection Agency (EPA)

The Environmental Protection Agency is responsible for protecting and improving the environment as an asset for the people of Ireland. The EPA plays key roles in environment regulation, provision of knowledge and advocacy for the environment. The Agency provides environmental data, assessments and evidence to inform decision-making and implements effective regulation and environmental compliance systems.

The EPA's European statistics are environmentally themed (notably waste statistics covering, e.g., municipal waste and household/municipal waste recycling).

Data access

The Statistics Act defines the legal mandate of the CSO to cover the collection of data, including data to produce European Statistics. In this regard, the CSO has the right to assess the statistical potential of data compiled by public authorities, the right to request such data for statistical purposes and the right to make proposals for changes in data collection to improve the value of data for statistical purposes.

Public trust is an important factor in maintaining the right to access data. It is nationally recognised and widely accepted that the CSO performs this function in an objective, professional and independent manner.

Relations with users/dissemination of statistical products and services

The CSO Dissemination Policy is available on the CSO website and covers releases, open data, code of practice and disclosure controls. All releases are listed on the CSO Release Calendar. The website and statistical database (PxStat) are the main means for the dissemination of CSO statistical products. The statistical dissemination database is a modern, open-source web app built on the principles of open data. Various other modern channels used by the CSO dissemination services are as follows: electronic reports; bulletins; infographics; social media platforms (Twitter, Facebook, Instagram, YouTube, etc.); Soundbites; Podcasts; COVID-19 Information Hub; Well-being dashboards; CSO Maps, etc.

The CSO has moved in line with the general international trend towards greater focus on users and their satisfaction. Hence, the CSO has been communicating on the benefits of official statistics and, supported by the NSB, has undertaken surveys of users and non-users (who are potential future users), albeit at low frequency until now. Within statistical subject areas, liaison groups serve as vehicles for

continuous engagement with users and specific project groups have been established for various development activities. At the same time, the CSO liaises with specific user groups in different formats.

4. PROGRESS/ADVANCEMENT IN THE LAST FIVE YEARS

Strengthened coordination of statistical activities, statistical infrastructure and professional independence

The Central Statistics Office (CSO) reviewed its organisational structure in light of the findings of the previous peer review and the implications of the Regulation on European statistics of 2009, as revised in 2015. A new Directorate was established with responsibility for the coordination of the producers of European statistics as well as the wider Irish Statistical System (ISS). Budgetary approval to resource this new directorate was sanctioned by the Department of Public Expenditure and Reform in October 2015.

A Data Sharing and Governance Bill was adopted in 2019 and, while obviously outside the control of the CSO, the CSO and the National Statistics Board (NSB) advocated in favour of the Bill at the most senior level.

The CSO continues to actively engage with other public bodies to advocate for the development of a National Data Infrastructure (NDI). In 2016, CSO organised a data analytics workshop for public bodies to support the establishment of analytics centres with these bodies and to promote the use of a common suite of tools for data analysis.

Coordination across the ISS is now a continuous activity for the CSO's Statistical System Coordination Directorate. The directorate has led the programme of increasing statistical expertise in government departments through the placement of statisticians and senior statisticians on secondment from the CSO (IGSS). This programme has grown from 9 staff on secondment at the start of 2017 to 34 at present.

The CSO Management Board assigned a subgroup to review the legal recommendations made by the previous peer review and to report on the actions to be taken on each recommendation. The group was led by an Assistant DG. It held a number of consultative meetings with the Office of the Attorney General. The review was completed with no amendments proposed and was agreed by the Management Board, a decision noted by the peer review team.

In this context, it is noted that the role of the Director General (DG) is set out in law, which also guarantees the professional independence of the Director General. The DG of the CSO is appointed by the Irish President. The competition booklet for the last open competition for the post of DG of the CSO, albeit not legally binding on future appointments, sets a standard by spelling out clearly the professional competencies and qualifications required, while also referencing the Statistics Act.

Strengthened quality management

Implementation of the Quality Management Framework (QMF) has progressed well. A self-assessment programme has been rolled out across the CSO. Some improvements have been made in quality reporting. This element of the QMF was part of a separate development project on SIMS (ESS standard for metadata) implementation in 2019/2020. The QMF was completed and new Quality management guidelines were developed in 2019. Quality checklists for all producers of statistics were rolled out in 2019. This was supported by relevant quality policies and guidelines to strengthen the embedding of the QMF in the CSO.

The CSO has developed a system to monitor implementation of the guidelines. The project began in 2017 with the scoping out of the introduction of a self-assessment maturity model based on the Checklist for Survey Managers (DESAP, self-assessment tool). This new initiative was then piloted in the CSO in 2017 and broadly introduced at the beginning of 2018. The programme of annual self-assessments by those responsible for particular statistics was piloted in the Cork Office and involves completion of an online form, which is reviewed by the Quality unit in conjunction with the statistics area. A first annual report was published towards the end of 2018 based on the completion of the first round of self-assessments. Following the publication of the guidelines on statistical quality management, the first supported quality assurance reviews, which involve the business area as well as the Methodology and Quality units, took place towards end-2019, though these in-depth reviews have since proceeded at a fairly slow pace.

Strengthened user orientation

The CSO has continued to interact with its users through various channels including liaison groups and the organisation of seminars. For example, a seminar focussing on the use of administrative data for statistical purposes and the opportunities and challenges with respect to the modernisation of the Irish Statistical System took place in April 2016. A seminar on Health Accounts took place in November 2016.

The CSO plans to follow up on the recommendation to undertake regular customer satisfaction surveys were slightly delayed by the request from the NSB to have further input into the survey prior to it being issued. This led to the scope of the survey being broadened to include non-users (and, hence, potential new users) and it was issued in January 2017. A new iteration of the customer satisfaction survey was launched in 2022.

Use of resources

A recommendation from the previous peer review was that the CSO should improve its cost accounting system by introducing a systematic product-based and process-based accounting approach. It should also develop and introduce internal measurement and benchmarking of cost-effectiveness. However, the improvement of the cost accounting system has not yet been completed.

Staff resources were assigned to the Methodology Unit in 2016 and 2017. Current staffing levels are seen as adequate to meet present requirements. Staffing requirements are monitored as part of the organisation-wide workforce planning process.

5. COMPLIANCE WITH THE CODE OF PRACTICE AND FUTURE ORIENTATION

5.1 STRENGTHS OF THE NSI AND THE PARTICIPATING ONAs IN RELATION TO THEIR COMPLIANCE WITH THE CODE OF PRACTICE

A committed workforce with a strong focus on cooperation and innovation and deep respect for statistical principles

The culture of performance, professionalism, integrity and commitment to official statistics, as well as a deep respect for statistical principles, appear to be deeply embedded in the Central Statistics Office (CSO) workforce. Furthermore, in recent years the CSO workforce has demonstrated a strong ability to innovate and adapt to change, helped also by its continuous efforts to invest in people through training and other aspects of skills development. Against this background, CSO staff are respected throughout not only the public sector but society at large, helping the CSO carry out its tasks. Reflecting these strong points, the 2020 Civil Service Employee Engagement Survey showed CSO staff at least at par with the civil service in general across the full range of indicators examined, and strikingly above on commitment, performance standards, innovative climate and perceptions of public respect.

In recent years, it has become clear that other public sector bodies are increasingly looking for CSO expertise on data-related issues as well as statistical/analytical matters. Moreover, the competencies available in the CSO have led several of those to fund a range of major surveys and analytical projects. In the Statement of Strategy 2020-23, it is envisaged that the *“CSO will continue to deliver leadership involvement and innovation from staff at all levels”*.

Strong trust and credibility as an independent producer of high-quality official statistics

The CSO has an excellent reputation in Ireland, where it is widely regarded as an independent producer of high-quality official statistics. Professional independence is a central pillar of confidence in the CSO, reinforced by strong legal support.

Beyond legislation, there is a culture of valuing professional independence, as can be seen in various reference papers, such as CSO 2030 and Statement of Strategy 2020-2023. Professional independence and impartiality are also stressed in the CSO Vision (*“Independent insight for all”*) and in the Mission statement (*“to describe Ireland, its people, economy, society and environment, through verifiable data and accurate information while providing impartial insight”*).

In addition to legislative and cultural support, in 2017 Ireland introduced a Commitment on Confidence in Statistics, in which the Government acknowledged the importance of independent, objective and reliable statistics as a public good and recognised the role of official statistics in informing effective debate and decision-making. The Government in this context reaffirmed its guarantee of the independence of the CSO and the NSB.

The 2017 Customer Satisfaction survey showed high user satisfaction as concerns independent, objective and trustworthy official statistics produced by the CSO, even if it varied somewhat across different user segments.

A new Customer Satisfaction survey was launched in 2022 and will present an updated picture. However, the views heard by the peer review team from outside interlocutors do not suggest any negative change in the trust and credibility enjoyed by the CSO. Indeed, the active role and the insights

generated by the CSO, helping both decision-makers and the general public through the COVID-19 period, could possibly even have strengthened perceptions of the CSO.

The emerging National Data Infrastructure (NDI) creating potential for future developments

As a result of sustained efforts led by the CSO and involving holders of administrative data throughout the public sector, a National Data Infrastructure (NDI) has been gradually taking shape. An important aspect of the NDI is the collection and storage of relevant unique identifiers with all data items in administrative registers, created by interactions between different public service providers on the one hand, and citizens and enterprises on the other hand. The three unique identifiers needed for the NDI to be effective are:

- The Personal Public Service Number (PPSN), used for many interactions between the individual and the public sector.
- The Eircode postal code to identify the precise geographical location of the respective individual/enterprise.
- The business identifier, developed by the Revenue Commissioner to enable improvements in service delivery and analysis for businesses when interacting with the public sector.

Additionally, steps are being taken to align standards, classifications and quality of information in administrative, statistical and other databases.

Based on the generalised availability of the unique identifiers together with high-quality data, it is possible to link data, hence allowing for data integration, producing much deeper and more granular statistical insights while reducing costs and supporting data-driven policy analysis.

An NDI Champions Group has been set up, chaired by the CSO, and comprising representatives from departments and agencies with high-value data (it currently comprises 46 public sector bodies). The aim of the Group is to monitor and promote the coverage of unique identifiers while also promoting the value of the NDI in meeting known and emerging data needs in the public service.

An increasingly recognised role as a national data steward

The concept of Data Steward is not new in Ireland, but it is evolving. The following provides a summary of the services already provided by the CSO to support the coordination, oversight and governance of data consistent with the role of Data Steward:

- The CSO has been active for many years in providing the standards and guidelines required to maximise the quality of administrative, statistical and other data holdings and to support the implementation of the NDI.
- The CSO has played, and continues to play, a central role in helping to shape the data and statistical elements of a number of Civil and Public Service strategies.
- CSO statistical staff have been seconded to Government departments on request for more than 20 years, and the number of staff involved has been increasing significantly in recent years, with prospects of further increases in demand.
- In collaboration with government departments and agencies responsible for policy, the CSO develops *Pathfinder* projects (policy-relevant research projects based on integrated data), whose aim is to deliver insight to policymakers while highlighting the value and importance of the NDI.

- With the growing use of administrative data in the statistical production processes, the CSO uses a Quality Management Framework consistent with European standards as a basis to ensure a consistent quality approach across the Irish statistical system. Building awareness of nationally and internationally agreed principles, and monitoring compliance with these principles, embodied in the Irish Statistical System Code of Practice (ISSCoP) and the European Statistics Code of Practice (ES CoP), is an ongoing activity for the CSO.

Among other key functions for the CSO, the CSO 2030 Long Term Vision foresees the function related to the provision of stewardship for the NDI across the Civil and Public Service. The role of a Data Steward in the Irish context is envisaged to include driving the management of data as a strategic asset for Ireland; working with others to ensure that the data ecosystem is fit for purpose by setting standards/classifications; supporting public sector bodies in achieving well-structured and integrated administrative data and in having access to the skills required to embed data analytics into the policy development and evaluation process.

Agility and ability to undertake multiple changes combined with a discipline to maintain focus on long-term objectives

The development of the Irish data ecosystem in general, and the increased reliance on administrative data in particular, have led to very substantial changes in how the CSO operates over the past decade. Individually, the changes have been sizeable, but more impressive is perhaps the ability to maintain progress over such a wide-ranging agenda over an extended period while preserving focus on final objectives.

Indeed, progress on the strategic agenda continued during COVID-19. In addition, the CSO reacted in an agile, adaptive and innovative manner to the statistical challenges created by COVID-19. Besides dealing with internal challenges such as remote working, staff well-being and internal communications, the CSO pushed the agenda forward and introduced: new surveys (e.g. business impact COVID-19 survey, social impact COVID-19 survey); new survey formats (such as the Pulse surveys); new output formats (the Frontier Series for experimental statistics, the COVID-19 information hub); use of new administrative data sources (Debit and credit card, RIP.ie, traffic counter data, the Road Safety Authority, etc.); new collection methods (multi-mode collection); new data services (Data Research Hub, a real-time information dashboard for the department of the Taoiseach; a national COVID-19 Data Hub to allow for geospatial visualisation during COVID-19).

A statistics law which respects the general spirit of the ES CoP

Despite its age, the Statistics Act, 1993 provides a modern legislative basis for the compilation and dissemination of official statistics in Ireland. It incorporates, inter alia, strong provisions as regards professional independence and coordination:

- The establishment on a statutory basis of the CSO as an independent Office under the aegis of the Taoiseach.
- The explicit mandate to co-ordinate official statistics, the right to assess the statistical potential of the records maintained by public authorities, the right to request such records for statistical purposes, and the right to make proposals to the data-compiling authority for changes in data collection to improve the value of data for statistics purposes.

- the appointment on a formal basis of the DG of the CSO who, in addition to being responsible for the management of the CSO, shall also be independent on statistical matters.

The Act reflects the Fundamental Principles of Official Statistics adopted by the UN Economic Commission for Europe in 1992 and the ES CoP and, arguably, also enabled the CSO to take on its Data Stewardship role. In a few aspects the Act may have some inadequacies, notably as regards access to privately held data and the need for political level approval of mandatory data collection. However, the latter has never been a hindrance in practice.

Innovative Practices

The peer review team identified innovative activities that are noteworthy and possibly applicable in some way in other national settings, and would like to highlight the following initiatives:

- The seconded statisticians programme places CSO statisticians in Public and Civil Service bodies, which pay the associated costs. They benefit from the statistical knowledge embodied in the seconded statisticians and their role in acting as conduits for CSO knowledge on standards, quality and data management. One benefit for the CSO is a greater awareness of potential data sources and opportunities in addition to the opportunity to pursue “soft coordination” on data management.
- The emerging NDI allows for data linking and, hence, new and more granular statistics, and reduces the need for surveys with associated costs and response burden. Likewise, the linking of data expands the scope for data-driven policy analysis. These developments have been particularly challenging and important in a country like Ireland, which does not have a system of official unique identifiers.
- Pathfinder projects using linked data have been undertaken, often jointly with policy-setting bodies, illustrating the potential for policy analysis created by the NDI and data linking and they can therefore act as a spur for data holders to engage with the NDI. The projects are often undertaken by multi-skill work teams, combining members of the Irish Government Statistical Service and the Government Economic and Evaluation Service, and thereby also illustrate the potential for this way of working.
- Work that illustrates the scope for moving towards a population census based on administrative data (the 2021 administrative census pilot and the 2021 production of initial experimental estimates of the population). A full switch away from manual data gathering in the context of the census may not be realistic in the near future, but the Office is exploring a mixed approach whereby a census anchored on administrative data is complemented by survey evidence in areas not well covered by administrative data. This will allow for census results at low costs, with less delay and at higher frequency.
- A host of innovative initiatives taken during COVID-19 including remote working by CSO staff; new services to support the central government response to COVID-19; new surveys, including shorter and more frequent ones to take the country's pulse on different issues; an accelerated focus on reusing and repurposing data to meet data demands; the move towards more multi-mode collection mechanisms; and new COVID-19 related outputs including an expansion in frontier statistics (a term which the CSO prefers to experimental).

- Services put at the disposal of other producers of official statistics, including process maps, quality guides, courses, data collection platforms, statistics dissemination channels, etc., to build a more coordinated data service and provide a foundation for further progress on quality aspects of the NDI.

5.2 ISSUES AND RECOMMENDATIONS

5.2.1 FURTHER STRENGTHENING COORDINATION OF THE STATISTICAL SYSTEM

The European Statistics Code of Practice (ES CoP) is the basis of the quality framework for European statistics, which sets the standards for developing, producing and disseminating European statistics (*16 principles, 84 indicators*). While compilers of European statistics adhere to the ES CoP, in 2013 the CSO developed the Irish Statistical System Code of Practice (ISSCoP, which is a subset of ES CoP, based on *5 principles and 12 indicators*), to introduce standards for the compilation of official statistics by other producers of official statistics.

To date, three producers of official statistics have successfully completed the process of ISSCoP accreditation, while an additional 12 are engaged in the process, with the aim of reaching a stage of compliance with the ISSCoP which would see their outputs branded with the ISSCoP quality assurance mark.

In its 2020 Annual Report, the European Statistics Governance Advisory Board (ESGAB) recommended that a strong emphasis should be placed on the compliance by Other National Authorities (ONAs) with the ES CoP in the coming years. The Irish National Statistical Board (NSB), whose role is to guide the strategic direction of the CSO and to establish the priorities for the development of official statistics in Ireland, meanwhile recommends *“to advance the adoption of the ISSCoP across public sector data, with a particular focus on the largest data holdings, and that public sector bodies producing official statistics should aspire to the ISSCoP”*.

While it would be unreasonable to change the premises under which producers of official statistics have lined up for accreditation under ISSCoP, the dual track process, a possible source of confusion and difference in quality standards between European and other Irish statistics, should be re-thought by the CSO in the future.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R1. In the monitoring of the statistical standards of Other National Authorities developing, producing and disseminating European statistics and other producers of Irish official statistics, the Central Statistics Office should consider moving to a unified benchmark by aligning the Irish Statistical System Code of Practice with the ES CoP, which would simplify communication, enhance understanding and send a signal of increased ambition. (Improvement-related: ES CoP, Indicator 1bis.2)

The CSO’s current preoccupation is the entry of producers of official statistics in the certification process, involving several stages: identification of the relevant products and scope of the audit for certification by the producer in question; filling in the self-assessment questionnaire; examination by the CSO internal peer review group of the documentation supplied by the producer and the on-site

visit; production of the final audit report and certification (or recommendations to meet criteria, if not certified).

In the context of delivering a more integrated and consistent approach in quality management across the Irish Statistical System, and because statistical needs and challenges evolve over time, the CSO should reflect on how continued monitoring of approved institutions will take place subsequent to the initial accreditation and whether, in that context, a process of domestic peer reviews, as in some other countries, could have a role to play in identifying any future weaknesses and needs for adaptation by producers of official statistics (including ONAs). A set of recommended actions could be drawn up as a result of the domestic peer review.

Running the accreditation process and a subsequent monitoring process is demanding in terms of resources. Hence, the CSO may wish to approach relevant authorities with a corresponding demand for funding, based on the premise that operating such a process is akin to providing a public good.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R2. The Central Statistics Office should build on the present good progress in certification of producers of official statistics to clarify the future of the monitoring process in this area, including the potential use of a peer review mechanism, while working to obtain funding to support the necessary monitoring. (Improvement-related: ES CoP, Indicator 1bis.2)

The CSO has published its Statistical Work Programme annually since 2016. The Statistical Work Programme outlines the statistical outputs for the year ahead and the legislative underpinning for each output, distinguishing between Irish official (national) and European statistics. A follow-up report on the Programme, detailing its progress, has been published annually since 2017.

The logic of moving towards increasingly operating as a coherent and cohesive national statistical system suggests that a consolidated Statistical Work Programme providing the overall picture of national statistical activities should also be produced. This would present official statistical activity in a transparent way and could underpin accountability and a more transversal approach to priority setting. Indeed, the CSO has taken some initial steps to provide such a consolidated Statistical Work Programme.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R3. To create greater transparency and a basis for system-wide prioritisation, the Central Statistics Office should pursue present efforts to create a consolidated work programme for the Irish statistical system, comprising both Other National Authorities developing, producing and disseminating European statistics and other producers of Irish official statistics. (Improvement-related: ES CoP, Indicator 1.5)

The three ONAs reviewed (Department of Health, Department of Justice and the Environmental Protection Agency) have all recently taken steps to address previously observed weaknesses in various areas:

- Documentation of quality processes (including the standardisation of process-mapping approaches, the production and use of quality reports, and the use of metadata templates provided by the CSO).
- The filling-in of the self-assessment questionnaires issued by the CSO to ONAs, in order to certify the quality of their processes and outputs.

- Hosting seconded statisticians to help boost data quality and statistical processes, drawing on CSO knowledge and experience.
- Participation in different working groups initiated by the CSO (NDI Champions Group, CSO liaison and steering groups, the Formal Statisticians Liaison Group) and maintaining informal contacts with the CSO, to promote the wider use of information and, in particular, the exploitation of administrative data to inform policy.
- Increasingly accompanying data sent to Eurostat with comprehensive metadata. This action is supported by the CSO's plan to capture all information required nationally in a central repository using the Collectica software package and to reuse this information for multiple outputs. By inputting the information once and reusing it many times, the tool is making it easier for the statistical producer to keep user-oriented information up to date.
- Increasingly publishing European Statistics in an Irish context and making increasingly systematic use of statistical release calendars.

It is important that all these efforts lead to full implementation. Indeed, it is hoped that similar efforts are undertaken beyond the three ONAs reviewed.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R4. The reviewed Other National Authorities (Department of Health, Department of Justice, Environmental Protection Agency) should build on and carry through current efforts to improve the provision of metadata, strengthen data access, document quality policies and publish European Statistics directly for an Irish audience. (Improvement-related: ES CoP, Indicators 8.4, 2.2, 4.1 and 15.1)

5.2.2 ASSUMING THE ROLE AS STEWARD OF THE IRISH DATA ECOSYSTEM

Creating a public sector data system based on high-quality, linkable data using common standards and data management structures is an objective with a long history in Ireland. The term National Data Infrastructure (NDI) was already used in the 2015 Strategic Priorities for Official Statistics by the NSB. For the producers of official statistics, notably the CSO, this allows new and more granular high-quality statistics to be produced at low cost, based on administrative data, while at the same time the scope for data-driven policy analysis is vastly expanded.

Key to creating such a system is the use of unique identifiers across all relevant administrative datasets. At the level of persons, the Irish public services personal identifier (PPSN) provides such a code, and coverage is expected to be extended to the health system, which currently has its own identifier. At the level of location, the very detailed Irish post code (Eircode) introduced in 2015 provides a similar identifier and public sector bodies are currently encouraged to collect this information in their contacts with citizens and enterprises. Finally, a business identifier (UBI) has been developed by the Revenue Commissioner and is being increasingly applied. Ireland is, accordingly, well under way to creating a system of linkable administrative data similar to those that can be found in a number of other European countries.

The ability to link data is in itself a major step forward, but the CSO has also taken a number of other steps to enhance the quality of administrative data. The system of seconded statisticians provides people on the ground who can guide other producers of official statistics, holders of administrative

data and other data holding institutions as to how best to set up data systems. Furthermore, any institution can also seek guidance from the CSO not only on the production of statistics but also on the collection of data and what data to collect. A number of additional measures and services have been introduced (see chapter 3 and section 5.1).

Views expressed to the peer review team suggest that there has generally been a welcoming attitude across public sector bodies towards the creation of an NDI. Many administrative data holders have begun collecting relevant IDs and have availed themselves of the various support services provided by the CSO to lift quality. In this regard, it may have helped that the Statistics Act equips the CSO with considerable powers to coordinate, access and to be informed on and demand changes to administrative datasets. Nonetheless, the CSO has so far preferred to rely on the power of arguments in its dealings with holders of administrative data.

Despite the soft approach by the CSO, progress towards an NDI has clearly been substantial. This is witnessed, for example, by the share of CSO statistical products, which are fully based on administrative data. This share increased from 13% to 25% between 2016 and 2020, while the share of products combining administrative and survey data rose from 49% to 53%. Concomitantly, the share of pure survey-based statistics plummeted from 38% to 22% over the period.

Nonetheless, progress has remained somewhat uneven across administrative datasets and, given all the benefits expected from a fully-fledged NDI, any undue delays are costly. Hence, in view of its considerable legislated powers, the CSO may wish to take a more assertive position. At the same time, however, it is important to avoid turning a process, which has so far been very consensual into an adversarial one, so there is a balance to be struck.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R5. The Central Statistics Office should continue and step up the efforts towards creating a National Data Infrastructure, with greater use of the provisions in the Statistics Act that equip the Central Statistics Office with powers to coordinate and set standards for producers of official statistics and holders of administrative data, while maintaining a collegial approach. (Improvement-related: ES CoP, Indicators 1bis.1, 2.2 and 10.3)

The system of seconded statisticians, formally known as the Irish Government Statistical Service (IGSS), currently comprises 34 statisticians distributed across 16 host Public and Civil Service bodies. The seconded statisticians work in their host institutions but retain strong links to the CSO through regular meetings and participation in CSO training activities. They act as a bridge between the CSO and the host institution, drawing on CSO knowledge and experience to provide advice on data access, standards, methodology, quality, etc., while at the same time making the CSO aware of challenges, for example in the application of standards, and opportunities, such as the availability of datasets that can be used for statistical purposes. The seconded statisticians often work in conjunction with members of the Irish Government Economic and Evaluation Service (IGEES), comprising economists and analysts, to conduct multi-disciplinary analysis and provide new insights, with the seconded statisticians concentrating on data issues. The fact that the host institutions fund the IGSS programme is indicative of the value attributed to it.

The CSO has expressed the wish to expand the programme in its strategy, not least because of its role in boosting the NDI. In this regard, it is noticeable that the programme currently has somewhat uneven coverage across the hosting institutions. Some have embraced it to an extent where almost all persons

working on statistics in the system⁵ (Irish Statistical System (ISS) are seconded statisticians. Other Public and Civil Service bodies have not really engaged with the programme. There are undoubtedly a number of reasons for these divergences, stretching from financial constraints to a more general reluctance to engage. Uncertainty about the implications of the General Data Protection Regulation (GDPR) for how to engage may also play a role in some cases. In addition, the peer review team heard evidence to the effect that engagement, and perhaps especially initial engagement, with the programme was more difficult for small producers, for whom a full-time statistician represents a considerable investment in capacity.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R6. The Central Statistics Office needs to expand the programme of seconded statisticians⁶ by convincing producers of official statistics to engage or engage more with the programme and, hence, spread its benefits. (Improvement-related: ES CoP, Indicators 8.7, 10.3 and 10.4)

One of the challenges in pursuing the objective of establishing a fully-fledged NDI is to convince relevant public sector bodies of the benefits of such an infrastructure and, hence, of the need to make the necessary investments. For many such bodies, an important part of the benefits is the ability to undertake policy-relevant analysis based on linked data. Against this background, the CSO has engaged in a number of such analyses – under the heading of Pathfinder projects and often undertaken in conjunction with IGEES members and with relevant public sector bodies – to illustrate the potential benefits of the NDI. In such collaborative efforts, the CSO has typically published findings of a more statistical nature but steered clear of more policy-oriented outputs, which have been published by the public sector body involved.

A range of different topics has been covered in Pathfinder projects, including outcomes in higher education and further education; earnings and continued education outcomes following primary education; new dwelling completions, based on data on new connections and meters together with building energy rating data; and geographical profiles of income across Ireland. Pathfinder projects have not yet been involved in the CSO's follow-up on COVID-19, but it is expected that such projects could be undertaken in the health area.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R7. The Central Statistics Office should pursue the Pathfinder programme to continue providing insights into the potential use of integrated data for statistics and policy analysis and thereby convince public sector data holders of the benefits of a National Data Infrastructure with a view to

⁵ The ISS comprises those parts of the public and civil service sector involved (whether directly or indirectly) in the collection, processing, compilation, or dissemination of Official Statistics. In Ireland, Official Statistics are produced by the CSO, as well as a range of other Public and Civil Service bodies. This includes ONAs but also other compilers of Official Statistics in Ireland which are not classified as an ONA. Others may not be compilers of any statistics but are important partners as they are the custodians of important administrative data holdings. The Statistics Act defines Official Statistics as statistics which are compiled by the CSO or any other public authority, while a public authority is defined as any government department, local authority, health board or other body established by any enactment.

⁶ Generally, business cases are submitted by Public and/or Civil Service bodies seeking to have seconded CSO statistical staff embedded in their organisation. Such business cases need to demonstrate the role/function to be filled. Business cases generally are submitted by existing compilers of Official Statistics but an organisation that is a holder of administrative data, not yet producing statistics, can also submit a request for consideration by the CSO.

maintaining momentum in this direction. (Improvement-related: ES CoP, Indicators 9.4, 9.5, 9.6 and 15.3)

Across European NSIs there is great interest in accessing the expanding sets of privately held data, usually based on the digital footprints of individuals and enterprises. This interest reflects the fact that these datasets can be sources of statistical information on new and important societal phenomena, that they can replace traditional and burdensome statistical reporting on a number of activities and that they can alleviate the problem of falling statistical survey response rates. However, because the emergence of such datasets is recent, in many cases statistical institutes do not have legal rights of access. Whether in fact §25 of the Irish Statistics Act could provide access rights is not clear, but it would in any case require political-level approval to invoke the paragraph to make data access mandatory. In practice, the relevant datasets are often hard to exploit without the consensual cooperation of the owner. Given the high value of some of the data in a competitive environment, such consensual cooperation may not be readily forthcoming.

There seems nonetheless to be some remarkable differences across countries in the ability to gain access. For example, while NSIs in many countries use supermarket scanner data, the CSO has had difficulties in gaining access to such data. By contrast, because providers of certain network services are publicly owned in Ireland, the CSO has been able to gain access to their data.

If the CSO is unable to invoke a national legal mandate, with a European mandate for rights of access at best becoming a reality sometime in the future, and with the knowledge that exploitation of the data often requires cooperation from the data owner, a path forward for the CSO seems to be through convincing private sector data owners that access rights can be safely given to the CSO. Here, the strong record on data protection and the ability of NSIs in other countries to gain access may be some of the arguments that could accompany appeals to the social mindedness of enterprises.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R8. The Central Statistics Office should consider ways to reach consensual agreements with holders of privately held data on access to such data in order to benefit from their potential for statistical innovation and to reduce the burden on traditional providers of information. (Improvement-related: ES CoP, Indicators 2.4 and 8.6)

5.2.3 REFORMING TO DELIVER EVEN MORE

The Census of Population - held every five years in Ireland – is an essential source of data which is widely used in statistical analysis and the assessment of various aspects of social development and, at the same time, it provides the necessary primary source for CSO's sampling frames for household surveys, as there is no population or household register in Ireland. The Census of Population has been using a survey method of data collection, also driven by public perception that a traditional census is needed.

The progress in building and using the NDI opens up the opportunity that a population census based on administrative data might, in the near future, replace the traditional collection of data from households, which is demanding in terms of capacity and related costs, and carries certain risks. Acquisition of core administrative datasets for the population census could substantially decrease the burden on respondents, increase the quality of the data collected and enhance the effectiveness of data collection. However, as some areas are usually not included in administrative sources, supplementary surveys collecting data on variables not covered by administrative data might be

needed.

The CSO sees a population census based on administrative data as the way forward and has already started to test various aspects of this fundamental change. Continuation of these efforts is important for ensuring success in this endeavour, which would demonstrate the value of administrative data sources for a wide spectrum of users. An occasion for launching this change may come with the expected requirement in an EU regulation to provide annual submissions of demographic variables as from 2025.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R9. Building on the progress in creating a National Data Infrastructure, the Central Statistics Office should move as soon as possible towards a population census based on administrative data, though likely supplemented by surveys in areas not covered by administrative data. (Improvement-related: ES CoP, Indicators 9.4, 9.5, 9.6 and 10.3)

The CSO is active in providing services to producers of official statistics, administrative data holders and other bodies. While the secondments by the CSO of professional statisticians into other public sector bodies producing official statistics (including ONAs) is fully paid for by the receiving departments or agencies, the same approach has not been applied to other services provided by the CSO. Various services, such as custom-designed analysis, process maps, quality guidance, various kinds of advice, etc., are provided free of charge.

Given the proliferation of services provided, the time seems ripe to clarify the principles guiding the degree of cost recovery for providing such services. Outlining such principles might also be helpful for any future decisions on the scope and options for a possible extension of this type of activity.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R10. The Central Statistics Office should clarify the principles for pricing the increasing range of services provided to producers of official statistics, data holders and other public sector bodies. (Improvement-related: ES CoP, Indicator 10.4)

The CSO only uses the grants offered by the EC/Eurostat to a limited extent, to partially cover the expenses related to the preparation or implementation of new EU legislation. Due to Irish administrative rules and procedures, the CSO only rarely receives such grants, which are instead paid into the exchequer account and not forwarded to the CSO. Apart from missing out on a source of potential financing, any induced reticence by the CSO to engage in grant-financed activities deprives such joint EU activities of the contributions that the CSO could have made based on the Irish experience.

According to Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics, *“the Community shall, in accordance with Regulation (EC, Euratom) No 1605/2002 make financial contributions to the NSIs and other national authorities to cover the incremental costs incurred by them”*. The grants financing preparation for new statistical requirements

are thus considered an important source of funding for NSIs or, in a broader context, for national statistical systems.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R11. The Department of Finance should consider changing the budgetary arrangements under which European Union grants for statistics development work do not reach the Central Statistics Office. (Improvement-related: ES CoP, Indicator 3.1)

The CSO's Financial Management System is based on a Cost Centre structure. Staff are allocated to a cost centre according to the section they work in, and their payroll, travel, subsistence and other costs are allocated to their cost centre. In case of projects receiving dedicated outside funding, staff working on them record their time on the Work Support System to be costed to the project in addition to any other identified project costs, e.g., travel and subsistence, technology, consultancy.

The present cost accounting system does not allow calculations of costs for individual products and services with these, at least partial, exceptions. If available, such cost measures by output could be used for a variety of purposes. They could serve as input to the preparation of the Statistical Work Programme including prioritisation, because they provide arguments for augmenting or reducing the provision of specific data products or services whose costs can be compared with benefits, with such comparisons possible across products. When the CSO provides services to other public sector bodies, the costs of specific products and services based on the accounting system could be used for their pricing, also taking overhead costs into account.

The first steps for the introduction of a comprehensive system of cost accounting have already been launched. The system should be based on the experience gained so far, mainly with project applied procedures, and on the analysis of all costs entering statistical production, including overheads.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R12. The Central Statistics Office needs to pursue efforts to create a comprehensive system of cost accounting by outputs to facilitate prioritisation and the full and fair pricing of services rendered. (Improvement-related: ES CoP, Indicators 3.2, 3.4 and 10.1)

The quality of statistical production in the CSO is assessed by means of Quality Reviews, in which the owners of statistical products self-assess the quality of their processes and identify areas for improvement. This practice is meant to be complemented by Supported Quality Appraisals with the objective of providing an in-depth review of statistical production, taking into account national and European quality standards and giving rise to recommendations for quality improvements. In these Supported Quality Appraisals, the implementation of ES CoP principles on statistical processes and products are to be assessed by independent multi-disciplinary teams of specialists from Quality, Methodology and Technology divisions and subject matter experts from other parts of the CSO. The process in principle benefits not only the individual statistics reviewed but also allows for the mutual transfer of knowledge and experience, hence supporting further improvements and progress.

Full coverage across statistical activities by regular evaluations is ensured only by self-assessments in the form of Quality Reviews. Supported Quality Appraisals, carried out by inside external experts, allow broader examination of processes and products and are much more demanding and time consuming, therefore limiting the number of such reviews that can be carried out each year. However, at the present pace of three Supported Quality Appraisals per year, it would take 30-40 years to cover the

entire statistics production, which seems insufficient. The Supported Quality Appraisals represent an important component in the overall quality framework of the CSO, and therefore the benefits of such type of assessments should be extended to all statistical products within a reasonable period of time. In addition to raising the frequency of Supported Quality Appraisals, thought should be given to the prioritisation of reviews to ensure that needs are taken into account as well as the prominence of statistical products. The expansion of review teams with experts from outside the CSO, possibly drawing on other NSIs, should also be considered. As experience is gained, the methodology for this type of review might be re-assessed and adjustments made to strike the right balance between the costs and expected outputs of the exercise.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R13. As the Central Statistics Office moves forward to undertake Supported Quality Appraisals, it should ensure that such appraisals will cover the entire Statistical Work Programme within a reasonable timeframe while also establishing criteria for prioritisation of appraisals across statistics. (Improvement-related: ES CoP, Indicator 4.3)

Despite the CSO's increased reliance on the secondary use of administrative data from other parts of the public service, statistical surveys are still necessary and data collection from respondents remains an important activity for the CSO. As mentioned above, according to the overall summary for 2020, approximately 25% of statistical products were based exclusively on administrative data sources, others largely use both administrative and survey data (the share of mixed activities reached almost 53%), while the exclusive use of surveys occurs in about 22%.

Improvements in survey data collection and processing are therefore a crucial part of the modernisation initiatives, driven by efforts to reduce the burden on respondents, increase the response rate and enhance the effectiveness of statistical production by the CSO. Reform of business sector data collection and processing began later than for household data (where significant improvements have been made also thanks to the concentration of selected activities in specialised units). According to the CSO's Response Burden Barometer, the response burden on businesses declined significantly (by almost 40%) over the period 2010-12 but has shown no clear trend since then.

Business Statistics still need to start coordinated data collection driven by a new tool - a Business Respondent Portal supported by related Survey Management Systems (SMS) to offer respondents an integrated base across individual business surveys. Further investments in the SMS and related processes leading to better conditions for respondents are very important, not least considering the decreasing response rates in recent years. The design of statistical questionnaires respecting requirements for easy orientation in the forms, the use of dynamic forms that respond to the answers provided by respondents, prior consultations with respondents on questionnaires to ensure their understanding of statistical needs and pre-filling of statistical forms with data already available from other data sources are among the avenues to reduce the burden on respondents and improve positive perceptions of the questionnaires by data providers and their willingness to fill in the required data.

Selected checks incorporated in the data collection tool helping respondents to immediately detect and avoid unnecessary errors as well as electronic reminders should be integral parts of the portal, also in order to increase the data quality and the effectiveness of statistical production. The same reasons are valid for selective editing in data processing, where the distinction between the need for

manual checking and corrections on one side and the possibilities of imputations in obvious cases could lead to a more efficient use of manpower and improvements in the timeliness of statistical production.

Similar benefits could be achieved by the extended use of reporting facilities built into business accounting software, replacing manual work on the respondents' side. The savings in time would likely induce enterprises to choose software packages prepared for the extraction of data for statistical needs.

These progressive methods and tools could also have a positive impact on the sample size used in statistical surveys, as all measures contributing to the highest possible response rate can help reduce the response burden by limiting the number of enterprises in samples.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R14. The Central Statistics Office should push forward with reform efforts in business sector data collection and processing, in order to reduce response burdens, raise the efficiency of data collection and enhance data quality. (Improvement-related: ES CoP, Indicators 8.2, 9.3 and 10.4)

In the CSO, considerable attention is paid to the staff's personal development, training, support and motivation. Regular attitudinal surveys are conducted, the latest two during COVID-19 in the form of Remote Working Staff Surveys, with the aim of getting opinions on the specific working environment for further potential adjustments. In addition, the 2020 Civil Service Employee Engagement Survey reported high and rising levels of job satisfaction among CSO staff.

The surveys showed a high level of satisfaction with working conditions in the CSO, which was also expressed by the participants during the peer review visit. Flexibility in working conditions including working hours, opportunities for personal development, autonomy to influence one's job, support from the office during COVID-19, training possibilities, internal communication and involvement in international cooperation are several examples appreciated by the staff. Hence, while salaries may not always be competitive – particularly for categories of staff with specific skills – the working environment combined with the meaningful nature of work may still make the CSO an attractive employer. Being able to attract new recruits is particularly important to the CSO in a context where job turnover is rising everywhere in society. Hence, it is important that the CSO spreads the message as widely as possible that non-wage aspects of CSO jobs are attractive.

The introductory period for newcomers to the CSO brings many challenges and various methods have been used to support their adaptation, including documentation and internal metadata tools, training schemes, collaboration with colleagues, participation in working groups, etc. Smoother incorporation into new conditions might be further supported by extending in some form the mentorships available under the graduate programme to new recruits more generally. Such an extension has, of course, to take into account what is practically feasible.

The internal mobility scheme ensures that staff move to another working position every 3-5 years, which is a way of gaining experience and transferring expertise, and an opportunity for further personal development. Hence, the scheme clearly adds an attractive element to the work environment in the CSO. However, there may be a need to review the implementation of the policy, with some concerns being expressed that the quality of matches was not always given priority over sticking to

timetables for rotation. Set against this, there are of course limits to how much individual wishes can be accommodated.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R15. The Central Statistics Office in some respects offers an attractive “package” to new recruits, taking into account the non-monetary elements, which should be communicated effectively outside the Central Statistics Office while considering adjustments to further increase the attractiveness of the package. (Improvement-related: ES CoP, Indicators 7.5 and 7.6)

5.2.4 PROVIDING GREATER BENEFITS FOR USERS

The CSO operates a system of pre-release access to a number of releases. The list of authorised persons having access in advance is available on the CSO website. An indication of the products for each person is incorporated in the list. The rules governing pre-release access are also published, including the policy applied in relation to this practice, procedures for three types of pre-access (advance notification to named officials, official briefings and press conferences), description of an application procedure, the instructions and forms used for this purpose. The CSO’s practice is clearly in conformity with the wording of the ES CoP.

Nonetheless, selected pre-release access is at odds with the principle of equal access. The practice also risks tilting the political playing field to the extent that civil servants preparing briefs for their ministers on new releases have access before advisors to the opposition. Given the high level of trust generally enjoyed by the CSO, any risks to its reputation for impartiality are probably minor. Nonetheless, if the practice is continued, the CSO may wish to ‘take out some insurance’ by increasing transparency still further. Hence, the Office could provide further evidence that access is limited, well-justified, controlled and publicised by explaining on what grounds access has been granted for each individual decision.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R16. The Central Statistics Office should consider ending the practice of pre-release access, which conflicts with the notion of equal access, or, if it is maintained, to increase transparency on the criteria behind individual decisions. (Improvement-related: ES CoP, Indicator 6.7)

The CSO press releases are among the products most watched by a variety of users. Nonetheless, the current form and content of these products are rather brief, factual and cautious.

When presenting statistical data for their audience, the media needs to explain and interpret the numbers. Hence, the media representatives stressed that they would appreciate more explanatory texts in press releases which can be easily understood and provide background for the preparation of their media products. While the CSO should take care not to be seen to engage in political commentary, such explanations and clarifications based on statistical data might lead to a better understanding of the developments and trends in society. In this context, the potential of different readerships to absorb statistics should be taken into account. Such explanatory texts might be of more interest for non-specialist users and may enhance the understanding not only of the factors driving the statistical results but also their implications for society.

The knowledge and experience of the CSO staff in the presentation of a wide range of statistical products might contribute to further improvements of press releases, based on a more analytical and

explanatory approach and providing more “*story telling*”. Nevertheless, the analytical content of releases evidently must respect the principle of impartiality and objectivity.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R17. The Central Statistics Office should consider whether statistical releases could provide more analytical explanations of developments and more contextual material without compromising the need to be seen as impartial. (Improvement-related: ES CoP, Indicator 15.1)

The CSO’s contacts with academia and research institutions cover activities in the process of developing, producing and communicating statistics. Experts from these organisations participate in some liaison groups – one example of such successful cooperation comes from the field of macroeconomic statistics (the report of the Economic Statistics Review Group is presented on the web). Another form of collaboration is the involvement of research specialists in specific projects such as the visualisation of population census outputs.

The CSO also relies on academic institutions to produce candidates for recruitment and to provide training. A cooperative approach has been developed in some cases: the CSO has worked with University College Dublin (UCD) and University College Cork (UCC) to develop their European Master of Official Statistics (EMOS) programmes; in the framework of the Foundations of Data Science Programme, CSO staff benefit from specialised training in new and emerging areas of Data Science, while a number of opportunities are available for engaging in online learning, etc.

The benefits resulting from these mutual relations and activities are obvious and could even be developed further. Inspired by the experience of successful regular cooperation, the involvement of experts from universities and research institutes could be deepened e.g., in methodological developments and reviews, and in innovative projects and plans. Actors from the scientific environment may provide new views and new suggestions on CSO activities. As users of statistics and microdata, they may provide insights on where the CSO could further improve its services. At the same time, CSO statisticians who teach at academic institutions may bring back useful feedback from the academic world and may raise the visibility of the CSO as a potential employer. Such activities already take place, but could be strengthened.

The overall orientation of such cooperation, including its forms and methods, should be based on a wider strategy to ensure appropriate coverage and prioritisation, and to identify effective ways of implementation.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R18. The Central Statistics Office should elaborate a strategy for relations with academia, which would cover inputs from academia to ongoing statistical production, inputs in the context of development activities as well as activities to raise the profile of the Central Statistics Office as a potential employer among students at universities and similar institutions. (Improvement-related: ES CoP, Indicators 7.5 and 7.7)

The CSO provides access to microdata for research purposes with the aim of making full usage of the data collected in the statistics production process. Research is an engine of growth and development, and providing access to microdata raises the social return on the investment in statistics – provided, of course, that data and privacy are adequately protected.

To ensure data protection, specific rules governing access to data have been elaborated and published on the website. Anonymised public-use data files are made available and are relatively safe, but since they cater mainly for educational purposes, they are often inadequate as a basis for true research, which instead relies on access to de-identified data in Research Microdata Files (RMF). Access to the latter relies on strict procedures, detailed criteria for access, prescribed forms, standard agreements and certificates. Some of these conditions seem rather strict and may unduly impair research activity. For example, researchers cannot bring their own datasets to be combined with CSO data behind the CSO's firewall, approval processes are seen by researchers as lacking transparency and predictability as regards timelines, and procedures to check on output retrieval could possibly make greater use of AI software checks combined with random controls to speed up the process. A positive development bears mention, however: as a result of COVID-19, remote access via the Researcher Data Portal is now generally used by authorised researchers.

With the development of the NDI, the range of data usable for research purposes is set to expand. Unless coordinated, this could lead to a balkanisation of research access across data-holding institutions, with little scope for linking with data from other institutions or with data travelling in all directions to be linked. Either way, such a scenario would be unfortunate from both the perspective of research and of data protection. The CSO is well placed to ensure a coordinated solution based on its own data access facility, provided that it is administered in a way that is neither overly restrictive on research nor jeopardises data protection.

It also needs to be recognised that microdata access serves different purposes. While so far thinking has mainly been oriented towards traditional project-based research, the needs of the official sector to be able to undertake data-based policy research at short notice or on a continuous basis to produce their own breakdowns of statistical aggregates are set to rise. This calls for thinking about different models of access, including some that cater for these users and provide for quick and continuous access.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R19. The Central Statistics Office should consider ways to reform the access to microdata for research and to facilitate such access for different categories of users without compromising data confidentiality. (Improvement-related: ES CoP, Indicator 15.4)

In 2017, the CSO undertook a comprehensive survey of its customers and of non-users (who may in the future become users). The findings of these surveys led to innovations in outputs, in channels for their presentation and in related services. At the time of writing, a follow-up survey has been launched. In addition to these surveys, there are other channels for the CSO to receive feedback from its customers in reaction e.g., to new needs and new products. Ongoing liaison groups for specific statistical areas and temporary project groups organised by the CSO also act as fora for consulting users and obtaining their opinions and ideas. Press conferences are also used to understand participants' views on the CSO's presentation of statistics.

These latter ways of communication allow the CSO to receive opinions on its products and services from the very important group of main customers – however, for a comprehensive assessment of the CSO's dissemination activities and subsequent improvements, large-scale customer surveys may be more useful. However, these need to be undertaken regularly so that developments can be traced over time - a frequency not exceeding 3 years, as has been proposed by the National Statistics Board, may be desirable. The survey of non-users confirmed that it is a suitable additional tool for gathering

the views of potential users, which usually have less experience in statistics and may demand a somewhat different type of products and services.

The coordination role of the CSO in the field of dissemination might be extended by the possibility of including other producers of European and Irish official statistics in this type of survey. Small producers of official statistics do not usually have the necessary capacities and experience for the preparation and conduct of such surveys. This effective and economic solution would help other producers to get feedback from the users of their data and services. At the same time, of course, overburdening surveys need to be guarded against.

To improve beyond compliance with the ES CoP, the peer review team recommends:

R20. The Central Statistics Office should pursue user and non-user surveys at a frequency of not less than every third year. In this context, the Central Statistics Office may consider opening such surveys to cover other producers of official statistics as well. (Improvement-related: ES CoP, Indicator 11.3)

5.3 VIEWS OF THE NSI, AS THE NATIONAL COORDINATOR OF THE NSS AND THE PEER REVIEW, ON THOSE RECOMMENDATIONS WHERE THEY DIVERGE FROM THE PEER REVIEW EXPERTS' ASSESSMENT

None

ANNEX A – AGENDA OF THE VISIT

Timing	Topic	Participants
Day 1		
09.00-09:30	Preparatory meeting with the national coordination desk	<p>The peer review expert team: All</p> <p>The NSI: National Coordination Team: Patrick Kelleher, Caitriona Power Pádraig Dalton, Ciaran Dooly</p>
09:30-09:45	Welcome and introduction to the programme, adopting the agenda and organisational matters	<p>The peer review expert team: All</p> <p>The NSI: Management Board: Padraig Dalton Maria Hurley Frankie Kay Richie McMahon Joe Treacy Paul Morrin Jennifer Banim</p> <p>Ciaran Dooly</p>
09:45-10.45	Presentation of the National Statistical System and NSI	<p>The peer review expert team: All</p> <p>The NSI: Management Board: Padraig Dalton Maria Hurley Frankie Kay Richie McMahon Joe Treacy Paul Morrin Jennifer Banim</p> <p>Declan Smyth Orla O’Gorman Ciaran Dooly</p>
10.45-11.00	Coffee break	

11.00-12.30	Professional independence and statistical law on Official Statistics and related legislation (ES CoP principles 1 and 1bis)	<p>The peer review expert team: All</p> <p>The NSI: Adrienne Harrington Declan Smyth Paul Morrin Pádraig Dalton Maria Hurley Joe Treacy</p>
12:30-13:30	Lunch	
13:30-15.30	Coordination and cooperation (ES CoP principle 1bis)	<p>The peer review expert team: All</p> <p>The NSI: Frankie Kay Paul Morrin Declan Smyth Ken Moore Brian Ring Patrick Quill Kieran Culhane</p>
15:30-15:45	Coffee break	
15:45-17:15	Past progress; plans for the future; COVID	<p>The peer review expert team: All</p> <p>The NSI: Management Board: Padraig Dalton Maria Hurley Frankie Kay Richie McMahon Joe Treacy Paul Morrin Jennifer Banim</p> <p>Ciaran Dooly Orla O’Gorman</p> <p>National Coordination Team: Patrick Kelleher, Caitriona Power</p>
17:15-18:15	Peer review expert team discussion	

Timing	Topic	Participants
Day 2		
09:00-10:00	Resources and effectiveness (ES CoP principles 3, 10)	<p>The peer review expert team: All</p> <p>The NSI: Maria Hurley Frankie Kay John O’Leary Mark Lyons Joe Treacy Elaine O’Mahoney</p> <p>Note Takers: Orla O Gorman Ken Moore</p>
10:00-11:30	Data and data governance (ES CoP principle 2)	<p>The peer review expert team: All</p> <p>The NSI: Adrienne Harrington Brian Ring Jennifer Banim Maria Hurley Paul Morrin Frankie Kay</p> <p>Note Takers: Ciaran Dooly Jennifer Grimes</p>
11.30-11.45	Coffee Break	
11:45-12:45	Processing, quality, methodology, confidentiality (ES CoP principles 4, 5, 7, 8, 9)	<p>The peer review expert team: All</p> <p>The NSI: Ken Moore Frankie Kay Richie McMahon Paul Morrin Fiona O’Riordan Jennifer Banim Paul M Crowley</p> <p>Note Takers: Yvonne Hayden Annette Hayes</p>
12:45-13:45	Lunch	

13:45-14:45	Contd. Processing, quality, methodology, confidentiality (ES CoP principles 4, 5, 7, 8, 9)	The peer review expert team: All The NSI: Ken Moore Frankie Kay Richie McMahon Paul Morrin Fiona O’Riordan Jennifer Banim Paul M Crowley Note Takers: Yvonne Hayden Annette Hayes
14:45-15:00	Coffee break	
15.00-17:00	Dissemination, relations with users and other externals (ES CoP principles 6, 11-15)	The peer review expert team: All The NSI: Elaine O’Mahoney Elaine Lucey Chris Sibley Jennifer Banim John Dunne Pamela Lafferty Note Takers James Barrett Orla O’Gorman
17:00-18:00	Peer review expert team discussion	
Timing	Topic	Participants
Day 3		
09:00-10:00	Meeting with junior staff (staff with 2-5 years’ experience in the NSI)	The peer review expert team: All Junior staff: Sylvie Clappe Nele van der Wielen Karola Graupner Sorcha O’Callaghan Eva O’Regan Colette Keane Tom Fitzgerald Conor Crowley Niall Munroe Colin Hanley

10:00-11:30	Meeting with 1 st other national authority (ONA) producing European statistics	The peer review expert team: All 1st ONA: Department of Health (DoH) Alan Cahill John Heslin
11:30-11:45	Coffee Break	
11:45-13:15	Meeting with 2 nd other national authority (ONA) producing European statistics	The peer review expert team: All 2nd ONA: Department of Justice (DoJ) Gurchand Singh Richard Dixon David Egan Sinead O’Neill
13:15-14:15	Lunch	
14:15-15:45	Meeting with 3 rd other national authority (ONA) producing European statistics	The peer review expert team: All 3rd ONA: Environmental Protection Agency (EPA) Stephen Fennell Sharon Finegan Tara Higgins Tomás Murray
15:45-16:00	Coffee Break	
16:00-17:00	Meeting with National Statistics Board	The peer review expert team: All National Statistics Board (NSB): Anne Vaughan Eimear Cotter Eithne Fitzgerald John Martin John McCarthy John Shaw Note Taker Claire Hanley
17:00-18:00	Peer review expert team discussion	

Timing	Topic	Participants
Day 4		
09:00-09:45	General closing session with the other national authorities (ONAs) taking part in the peer review visit	<p>The peer review expert team: All</p> <p>The NSI: Declan Smyth</p> <p>1st ONA: Department of Health Alan Cahill John Heslin</p> <p>2nd ONA: Department of Justice Gurchand Singh Richard Dixon David Egan Sinead O’Neill</p> <p>3rd ONA: EPA Stephen Fennell Sharon Finegan Tara Higgins Tomás Murray</p>
09.45-10:45	Meeting with main data providers and providers of new data sources	<p>The peer review expert team: All</p> <p>Data providers: Keith Walsh (Revenue) Brian Boyle (Revenue) Rory McElligott (CBI) John Condon (Department of Social Protection) Charlie Brophy (DAFM)</p>
10:45-11.00	Coffee break	

11:00-12:00	Meeting with main users – official sector (Ministries/departments and other public/private institution)	<p>The peer review expert team: All</p> <p>Ministries/departments and other public/private institution: Martin O’Brien (CBI) Bertrand Maître (ESRI) Karl Gardner (DFA) Shawn Britton (NTMA) Charlie Brophy (DAFM) Brendan O’Connor (DoF) Dermot Corcoran (DSP) Cairen Power (DETE)</p>
12:00-13:00	Meeting with main users – media/financials	<p>The peer review expert team: All</p> <p>The NSI: Elaine O’Mahoney</p> <p>Media/financials: Dr. Loretta O’Sullivan (BoI) Austin Hughes (KBC Bank) Will Goodbody (RTE) Pádraig Hoare (Irish Examiner)</p>
13:00-14:00	Lunch	
14:00-15:00	Meeting with main users – business associations and federations and trade unions, parliament	<p>The peer review expert team: All</p> <p>Main users: Barry Comerford (Houses of the Oireachtas) Liam Berney (ICTU) Breda O’Sullivan (IDA Ireland) Thomas McHugh (Cork Chamber of Commerce)</p>
15:00-15:15	Coffee break	
15:15-16:45	Meeting with academia	<p>The peer review expert team: All</p> <p>Academic community: Seamus Coffey (UCC) Michael Cronin (UCC) Micheál Collins (UCD) Dr. Helen Russell (ESRI) Dr. Aedin Doris (NUI, Maynooth) Prof. Helena Lenihan (UL) Dr. Tom McDonnell (NERI)</p>

16:45-17:45	Peer review expert team discussion	
Timing	Topic	Participants
Day 5		
10.00-12.45	Peer review expert team discussion	
12.45-13.45	Lunch	
13.45-15.45	Final meeting with the senior management	The peer review expert team: All The NSI: Management Board: Padraig Dalton Maria Hurley Frankie Kay Richie McMahon Joe Treacy Paul Morrin Jennifer Banim Orla O’Gorman Ciaran Dooly Patrick Kelleher

ANNEX B – LIST OF PARTICIPANTS

<p>CSO</p>	<p><i>CSO Management Board</i></p> <p>Pádraig Dalton, Director General</p> <p>Maria Hurley, Assistant DG, Corporate Affairs</p> <p>Frankie Kay, Assistant DG, Technology & Statistical Services</p> <p>Richie McMahon, Assistant DG, Social & Demography</p> <p>Joe Treacy, Director, Business Statistics</p> <p>Paul Morrin, Assistant DG, Statistical Systems Coordination Unit</p> <p>Jennifer Banim, Assistant DG – Economic Statistics</p> <p><i>National Coordination Team</i></p> <p>Patrick Kelleher, Head of International Relations</p> <p>Caitriona Power, HEO, International, Policy & Planning</p> <p><i>The NSI</i></p> <p>Ciaran Dooly, PO, International, Policy & Planning</p> <p>Declan Smyth, Senior Statistician, SSCU</p> <p>Orla O’Gorman, AP, International, Policy & Planning</p> <p>Adrienne Harrington, PO, Enforcement, Legal and Governance</p> <p>Ken Moore, Senior Statistician, Quality Management Support and Assurance</p> <p>Brian Ring, Senior Statistician, Administrative Data Governance & Analysis</p> <p>Patrick Quill, Senior Statistician, Balance of Payments and Financial Sector</p> <p>Kieran Culhane, Senior Statistician, Statistical System Coordination Unit</p> <p>John O’Leary, PO, Finance and Facilities Management</p> <p>Mark Lyons, AP, Human Resources</p> <p>Elaine O’Mahoney, PO, Communications & Dissemination</p> <p>Fiona O’Riordan, Senior Statistician, Social Data Collection</p> <p>Paul M Crowley, Senior Statistician, Methodology</p> <p>Elaine Lucey, Senior Statistician, Technology Applications</p> <p>Chris Sibley, Senior Statistician, National Accounts - Integration and LCU</p>
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	<p>John Dunne, Senior Statistician, Secondary Data Sources, and Innovation</p> <p>Pamela Lafferty, Statistician, HR Learning & Development</p> <p>Jennifer Grimes, Statistician, Quality, Management Support & Assurance</p> <p>Yvonne Hayden, Statistician, National Accounts Analysis & Globalisation</p> <p>Annette Hayes, Statistician, Balance of Payments-Analysis & Dissemination</p> <p>James Barrett, HEO, International Policy & Planning</p> <p>Junior staff</p> <p>Sylvie Clappe, Statistician, Ecosystem Accounts</p> <p>Nele van der Wielen, Statistician, Transport</p> <p>Karola Graupner, Statistician, Statistical System Coordination Unit/Horizontal Reports</p> <p>Sorcha O'Callaghan, Statistician, Business Statistics - Data Linkage</p> <p>Eva O'Regan, Statistician, Income Consumption Wealth</p> <p>Colette Keane, Press Officer (Editor in Chief)</p> <p>Tom Fitzgerald, Statistician, Government Accounts, Compilation & Outputs</p> <p>Conor Crowley, Statistician, Methodology</p> <p>Niall Munroe, Statistician, National Accounts IT Project</p> <p>Colin Hanley, Statistician, Business Statistics - Data Linkage</p>
Department of Health	<p>Alan Cahill, Senior Statistician</p> <p>John Heslin, Statistician</p>
Department of Justice	<p>Gurchand Singh, Principal Officer</p> <p>Richard Dixon, Principal Officer</p> <p>David Egan, Higher Executive Officer</p> <p>Sinead O'Neill, Statistician</p>
Environmental Protection Agency (EPA)	<p>Stephen Fennell, EPA Programme Manager, ICT & Communications</p> <p>Sharon Finegan, EPA Director of Office of Environmental Sustainability</p> <p>Tara Higgins, Senior Manager, Waste Statistics Team</p> <p>Tomás Murray, Statistician</p>

National Statistics Board (NSB)	Anne Vaughan, Chairperson, NSB Eimear Cotter, Director, Office of Evidence and Assessment Eithne Fitzgerald, Economist, Social Policy Analyst John Martin, Consultant John McCarthy, Chief Economist, Economic Policy Division John Shaw, Assistant Secretary, Economic Policy Division Claire Hanley, Statistician, CSO and Secretary to NSB
Data Providers	Keith Walsh, Principal Officer, Accountant General's Strategic Planning Division, Revenue Commissioners Brian Boyle, Assistant Secretary, Accountant General's Strategic Planning Division, Revenue Commissioners Rory McElligott, Head of Statistics, Central Bank of Ireland John Condon, Assistant Secretary, Operations Control, Dept. of Social Protection Charlie Brophy, Assistant Principal, Economics & Planning, Dept. of Agriculture, Food and the Marine
Ministries/departments and other public/private institutions	Martin O'Brien, Head of Economic Analysis, Central Bank of Ireland Bertrand Maître, Senior Research Officer (ESRI) Karl Gardner, Counsellor, European Division, (Director for Brexit Readiness, Department of Foreign Affairs) Shawn Britton, Senior Economist, National Treasury Management Agency Charlie Brophy, Assistant Principal, Economics and Planning Division, Department. of Agriculture, Food and the Marine Brendan O'Connor, Principal Officer, Head of Macroeconomics Analysis and Forecasting, Economics Division, Department of Finance Dermot Corcoran, Senior Statistician, Department. of Social Protection Cairen Power, Principal Officer, Enterprise Strategy, Competitiveness and Evaluation Division, Department of Enterprise, Trade and Employment
Media/Financials	Dr. Loretta O'Sullivan, Group Chief Economist, Bank of Ireland Austin Hughes, Chief Economist, KBC Bank Will Goodbody, Business Editor, RTE News Pádraig Hoare, Environmental and Sustainability Correspondent, Irish Examiner
Main users	Barry Comerford, Committees – International, Climate Action and Justice Group, Houses of the Oireachtas

	<p>Liam Berney, Industrial Officer, Irish Congress of Trade Unions</p> <p>Breda O’Sullivan, Head of Strategic Planning, IDA Ireland</p> <p>Thomas McHugh, Dir. Public Affairs, Cork Chamber of Commerce</p>
Academic community	<p>Seamus Coffey, Dept of Economics, University College Cork</p> <p>Michael Cronin, School of Mathematics Sciences, University College Cork</p> <p>Micheál Collins, School of Social Policy, Social Work and Social Justice, University College Dublin</p> <p>Dr. Helen Russell, Head of Social Research Division, Economic and Social Research Institute</p> <p>Dr. Aedin Doris, Labour Economist, NUI, Maynooth</p> <p>Prof. Helena Lenihan, Professor of Economics, Univ. College Limerick</p> <p>Dr. Tom McDonnell, Co-Director, Nevin Economic Research Institute</p>