

SET OF GOOD STATISTICAL PRACTICES¹

In the table below, each of the twelve recommendations included in the Recommendation is accompanied by a set of good practices. They were developed on the basis of existing international and national guidelines and based on the OECD's experience in accession reviews. None of these good practices are by and in themselves necessary or sufficient to consider a particular recommendation as fulfilled. The set of good practices should rather be considered as indicative. However, if a sizable part of these or similar practices have been put in place, this provides a good indication that country practice lives up to the recommendation in question.

Good practices directly adopted from the *European Statistics Code of Practice* are signalled by "ECoP".

1. Put in place a clear legal and institutional framework for official statistics.	1.1. Existence of a comprehensive and coherent statistical legislation periodically revised and amended. The statistical legislation defines the nature of official statistics; the legal framework for the compilation, production and dissemination of official statistics; the legal status, role in the system, functions, relationship, rights and responsibilities of institutions within the NSS; the mandate for data collection; the coverage of statistical activities; and the role, functions and composition of the Statistical Council. The statistical legislation also regulates the organisation of the NSS; the independence of the NSO and its head; the relationship between the producers of statistics and respondents; the access to administrative records and their use for statistical purposes; the dissemination policy; the legal infrastructure for ensuring the confidentiality and the penalties in case of breach of confidentiality; budget issues; the availability of sufficient resources for financing statistical programmes, the international statistical co-operation, and the co-ordination of statistical activities within the country's statistical system. 1.2. Laws and regulations governing the collection, compilation and production of official statistics are consistent with the UN Fundamental Principles of Official Statistics. 1.3. Statistical authorities have a clear mandate for data collection and the authority to compel respondents to comply with data requests (e.g. the Population and Housing Census, Agricultural Census, surveys, administrative sources, etc.). In the case of Population and Housing Census, obligation for citizens to participate and to respond to the questionnaires is legally binding and established by law. 1.4. Statistical Authorities are required by law to conduct a Census of Population and Housing and a Census of Agriculture at least every ten years. 1.5. Statistical laws and regulations are publicly available.
2. Ensure professional independence of National Statistical Authorities.	2.1. The professional independence of the Statistical Authorities from other policy, regulatory or administrative departments and bodies, as well as from private sector operators in compiling and disseminating

¹ The list of Good Practices for Statistics was approved by the CSSP on 31 July 2015 by written procedure [STD/CSSP(2015)4/REV1].

	official statistics is explicitly guaranteed by law and ensured in practice by all entities of the NSS. 2.2. The Head of the NSO, and where appropriate, the heads of other National Statistical Authorities, have responsibility for ensuring that statistics are developed, produced and disseminated in an independent manner. (ECoP) 2.3. The Head of the NSO, and where appropriate, the Heads of other National Statistical Authorities, have the sole responsibility for deciding on statistical methods, standard and procedures, and on content and timing of statistical releases. (ECoP) This is explicitly provided by law. 2.4. The Head of the NSO, and where appropriate, the Heads of other National Statistical Authorities, have sufficiently high hierarchical standing to ensure senior level access to policy authorities and administrative public bodies. They are of the highest professional calibre. (ECoP) 2.5. The appointment of the Heads of the NSO and, where appropriate, the Heads of other National Statistical Authorities, is based on professional competence only. The reasons on the basis of which the incumbency can be terminated are specified in the legal framework. These cannot include reasons compromising professional or scientific independence. (ECoP) 2.6. National legislation provides clear and detailed description of the procedure for appointment and dismissal of the Head of the NSO. A list of conditions under which the Head of the NSO can be dismissed is provided for by law. 2.7. A clear reporting system for the Head of the NSO is provided for by law in order to ensure and reinforce its technical independence. 2.8. The statistical work programmes are published and periodic reports describe progress made (ECoP). 2.9. Statistical releases are clearly distinguished and issued separately from political/policy statements (ECoP). 2.10. The NSO and where appropriate, other National Statistical Authorities, comment publicly on statistical issues, including criticisms and misuses of statistics as far as considered suitable (ECoP). 2.11. Data collection, data production and release of information are ensured without formal approval from third parties. 2.12. A Statistical Council including external experts advises the Heads of the National Statistical Authorities on strategic statistical issues. The nature of the Statistical Council and the reporting arrangements to government are provided for by law.
3. Ensure adequacy of human financial and technical resources available to the National	3.1. National Statistical Authorities have sufficient funding for statistical production and dissemination, to support staff training, to develop computing resources, and to implement innovation.

Statistical Authorities for the production and dissemination of official statistics.	Resources are adequate in magnitude and in quality to meet statistical needs. 3.2. The adequacy of resources is regularly monitored. 3.3. The scope, detail and costs of statistics are commensurate with needs (ECoP). 3.4. Procedures exist to assess and justify demands for new statistics against their cost (ECoP). 3.5. Procedures exist to assess the continuing need for all statistics, to see if any can be discontinued or curtailed to free up resources (ECoP). 3.6. National Statistical Authorities implement a policy of continuous vocational training for their staff (ECoP).
4. Protect the privacy of data providers (including individuals, households, enterprises, administrations, and all level of government), and guarantee by law the confidentiality of the individual information provided and its use for statistical purposes only.	4.1. Statistical confidentiality is guaranteed by law (ECoP). 4.2. Specific measures are in place to ensure the full protection of individual data from any potential disclosure without consent, with the aim to ensure the confidence of data providers in participating in statistical surveys: written instructions and internal guidelines are provided to statistical authority staff on the full protection of statistical confidentiality in the production and dissemination processes; appropriate penalties are prescribed for wilful breach of confidentiality and for any disclosure of individual data of a private nature that could infringe upon private life. These penalties are well-known to statistical staff and new employees sign legal confidentiality commitment upon appointment. 4.3. The confidentiality policy is made known to the public (ECoP). 4.4. Physical, technological, administrative and organisational provisions are in place to protect the security and integrity of statistical databases (ECoP). 4.5. Provisions are in place and internal guidelines are available to allow external user access to micro-data for statistical research purposes under strict protocols and only after anonymisation of the data. 4.6. Privacy issues as regards the use of new data sources (e.g. social network data) are identified and procedures are implemented to guarantee statistical confidentiality.
5. Ensure the right to access administrative sources to produce official statistics.	5.1. The Statistical Authorities are authorised by law to use administrative records for the regular production of official statistics. 5.2. Administrative sources are used whenever possible and cost-effective to avoid duplicating requests for information and reduce reliance on direct surveys.

	5.3. National Statistical Authorities are involved in the design of administrative data in order to make administrative data more suitable for statistical purposes. (ECoP) 5.4. National Statistical Authorities co-operate with owners of administrative data in assuring data quality (ECoP). 5.5. Agreements are made with owners of administrative records which set out their shared commitment to the use of these data for statistical purposes (ECoP). 5.6. Recommended practices are available for the reporting and presentation of administrative data. 5.7. Linking administrative data with survey data is encouraged by National Statistical Authorities with the aim of reducing the burden on respondents, reducing the costs in producing official statistics, and increasing the analytical value of official statistics.
6. Ensure impartiality, objectivity and transparency of official statistics, through the development, production and dissemination by the National Statistical Authorities of statistics respecting scientific independence put in place in an objective, professional and transparent manner in which all users are treated equitably. Equitable treatment implies in particular equal access to data by all users.	6.1. Official statistics are collected, compiled and disseminated on an impartial and objective basis and determined by statistical considerations only. 6.2. Equal access to official statistics for all users at the same time is guaranteed by law. If a public or private body has access to official statistics prior to their public release, this fact and subsequent arrangements are publicised and controlled. In the event that a leak occurs, pre-release arrangements are revised so as to ensure impartiality. 6.3. Choices of sources and statistical methods as well as decisions about the dissemination of statistics are informed by statistical considerations (ECoP). 6.4. Errors discovered in published statistics are corrected at the earliest possible date and publicised (ECoP). 6.5. Information on the methods and procedures used is publicly available (ECoP). 6.6. Statistical release and statements made in press conferences are objective and non-partisan (ECoP). 6.7. Statistical release dates and times are announced in advance. A twelve-month-ahead advance release calendar is provided. Official statistics are released according a standard daily time. Any divergence from the dissemination time schedule is publicised in advance, explained, and a new date is set. 6.8. Any major revisions or changes in methodologies are announced in advance. 6.9. Internal guidelines are made available by statistical authorities to respond to erroneous interpretation and misuse of statistics. These are well-known by staff.

	6.10. Statistical plans and programmes, methodologies, processes and procedures, quality assessments are made publicly available by the statistical authorities. 6.11. Guidelines exist for the presentation of data, including the treatment of time series breaks, and seasonally adjusted data, with the aim to ensure that official statistical data and metadata are presented in a way that facilitates proper interpretation and meaningful comparisons.
7. Employ sound methodology and commit to professional standards used in the production of official statistics.	7.1. Official statistics are produced according to strictly professional considerations, including scientific principles and professional ethics with regards to methods and procedures used for the collection, processing, storage and dissemination of statistical data. 7.2. Sound statistical methodology requiring adequate tools and procedures and expertise is implemented and guaranteed by the national statistics law (ECoP). 7.3. International statistical standards, guidelines and good practices are applied in the NSS as appropriate. 7.4. National statistical classifications developed by statistical authorities are consistent with international classifications. Detailed concordance exists between national classifications and the corresponding international classifications. 7.5. Procedures are in place to ensure that standard concepts, definitions and classifications are consistently applied throughout the National Statistical Authorities (ECoP). 7.6. Subject matter advisory committees made up of external experts advise on relevant statistical matters. 7.7. Graduates in the relevant academic disciplines are recruited (ECoP). 7.8. Co-operation with the scientific community, academic institutions and international organisations is organised to improve methodology and the effectiveness of the methods implemented, and to improve methodological and technical skills of staff. 7.9. Strategies for recruitment, as well as processes for technical and managerial development and training of existing staff, are established, implemented and revised as required. 7.10. In the case of statistical surveys, questionnaires and systems for production are systematically tested prior to the data collection. 7.11. Parallel runs are undertaken when systems or questionnaires are redesigned in any significant way. 7.12. Survey designs, sample selections and estimation methods are well based and regularly reviewed and revised as required (ECoP).

	7.13. The business register and the frame for population surveys are regularly evaluated and adjusted if necessary in order to ensure high quality. (ECop) 7.14. Data collection, data entry, and coding are routinely monitored and revised as required. (ECop) 7.15. Appropriate editing and imputation methods are used and regularly reviewed, revised or updated as required. (ECop) 7.16. Revisions follow standard, well-established and transparent procedures. (ECop) 7.17. A revision schedule is published by the producers of official statistics. 7.18. The design of statistical questionnaires used in survey-based data collection processes is regularly reviewed.
8. Commit to the quality of statistical outputs and processes, in particular with key quality dimensions as defined in national and international quality assessment frameworks, for instance in the <i>Quality Framework and Guidelines for OECD Statistical Activities</i>: timeliness and punctuality (statistics are released in a timely and punctual manner), relevance (statistics meet the needs of users), accuracy (statistics accurately and reliably portray reality), credibility (confidence placed by users in statistical products), coherence and comparability (statistics are consistent internally, over time and in space and it is possible to combine and make joint use of related data from different sources), and interpretability and accessibility (see Recommendation 9).	<u>Quality management, monitoring, evaluation plans and reports</u> 8.1. A quality policy ensures that the producers of official statistics systematically assess the quality of official statistics. Quality policy is publicly available through guidelines, framework, reports, etc. and staff members receive appropriate training for their application. 8.2. An efficient, and possibly independent, quality management system exists. It includes an appropriate organisational structure; quality indicators and other tools and processes for the planning, implementation, and monitoring of the quality of source data; and the collection, processing, and dissemination of official statistics. 8.3. The national quality management systems are based on recognised models for quality frameworks, such as the IMF Data Quality Assessment Framework (DQAF), the European Foundation for Quality Management, European Code of Practice, the European Statistical System Quality Assurance Framework, Total Quality Management and ISO EN 9001, etc. 8.4. There are regular and thorough reviews of key statistical outputs involving external experts where appropriate (ECop). 8.5. Quality assessment and certification processes guarantee the official nature of statistics produced in various parts of the NSS. 8.6. The organisational structure of the entities belonging to the NSS and governance arrangements are appropriate and regularly reviewed to assess and justify new statistical demands and related costs. 8.7. Information and communication technologies are regularly monitored and assessed for use in data collection, data processing and data dissemination. <u>Accuracy</u>

	8.8. Source data, intermediate results and statistical outputs are regularly assessed and validated (ECOP). 8.9. National Statistical Authorities put in place processes to ensure that sampling and non-sampling errors are measured, systematically documented, and that information is made available to users. 8.10. Studies and analysis of revisions are regularly conducted according to transparent procedures and the results are made available to users. <u>Timeliness and punctuality</u> 8.11. Timeliness meets international statistical release standards. 8.12. The periodicity of statistics takes into account user requirements as much as possible (ECOP). 8.13. A standard day time for the release of statistics is made public. (ECOP) 8.14. Preliminary results of acceptable aggregate accuracy are released when considered useful. (ECOP) <u>Coherence and comparability</u> 8.15. Official statistics are consistent within datasets (i.e. elementary data are based on comparable concepts, definitions and classifications and can be meaningfully combined), across datasets (i.e. data are based on common concepts, units, definitions and classifications, or that any differences are explained and can be allowed for) and over time (i.e. data are based on common concepts, definitions, units, classifications, and methodology over time, or that any differences are explained and can be allowed for). 8.16. Statistics from the different sources and of different periodicity are compared and reconciled (ECOP). 8.17. Statistics are compiled according to common standards with respect to scope, definitions, classifications, and units in the different surveys and sources. (ECOP) <u>Relevance</u> 8.18. Processes are in place to consult users, monitor the relevance and utility of existing statistics in meeting their needs, and consider their emerging needs and priorities. (ECOP) 8.19. User satisfaction surveys are undertaken on a regular basis. The results are publicly released and considered as an input for decisions about plans and priorities and they are reflected in the statistical work programmes.
9. Ensure user-friendly data access and dissemination, so that statistics are presented in a clear and	9.1. Statistical information is available through different dissemination tools, including media channels, Internet, online database and paper publications and easily downloadable in different formats.

understandable form, released in a suitable and convenient manner, including in machine-readable form ('open data'), can be found easily, and are available and accessible on an impartial basis with supporting metadata and guidance This also entails a commitment to respond to major misinterpretations of data by users.	9.2. A dissemination policy ensures the free dissemination of official statistics. 9.3. In order to ensure equal access to national statistics for international users, English-language statistical information (data and metadata) is available on websites of National Statistical Authorities. 9.4. A corporate strategy and appropriate guidelines are in place for the preparation of statistical publications (paper and electronic). 9.5. A corporate database and glossaries promote the use of standard statistical concepts and definitions. 9.6. Users are kept informed about the methodology of statistical processes including the use of administrative data (ECoP). 9.7. Metadata are documented according to standardised metadata systems (ECoP). 9.8. A corporate strategy and appropriate guidelines are in place for the preparation and dissemination of metadata on concepts, scope, classifications, basis of recording, data sources, statistical techniques, differences from internationally accepted standards, annotation of good practices, geographical coverage, etc. 9.9. Processes ensure that sampling and non-sampling errors are measured and systematically documented and that information is made available to users for all key statistical outputs. 9.10. Internal guidelines are available in statistical agencies on responding to erroneous comments. These guidelines are well known by staff. 9.11. Access to micro-data is allowed for research purposes and is subject to specific rules or protocols (ECoP). 9.12. Where a pricing policy exists for specific services or custom-designed products, conditions of sale are clearly communicated. 9.13. Educational material is developed with the aim to enhance the use of official statistics and to avoid their misuse and misinterpretation. 9.14. Official statistics are released in machine-readable form ('open data') that encourage reuse and analyses.
10. Establish responsibilities for co-ordination of statistical activities within the NSS.	10.1. The role and responsibilities of all producers of statistics are clearly determined by law. A co-ordinator of the NSS, such as the NSO, is also designated by law. 10.2. The designated co-ordinator has responsibility to co-ordinate the statistical activities of official producers in the NSS and to represent the NSS as a whole. This concerns in particular the use of appropriate statistical concepts and procedures, the implementation of international standards and efforts to minimise duplications in data collection, production and dissemination of official statistics.

	10.3. Procedures, mechanisms, tools, guidelines, or agreements are in place to ensure effective co-ordination within the NSS. Procedures include: • Establishment of a national statistics plan; • Co-ordinated data dissemination, e.g. through a single data portal; • Assistance with implementation of international standards and classification; and • Common quality management processes. 10.4. Exchange of statistical information between statistical agencies is actively undertaken.
11. Commit to international cooperation.	11.1. National statisticians participate actively and regularly in international expert groups, conferences and workshops. 11.2. National Statistical Authorities participate in joint projects with other countries to share development burden. 11.3. Heads of NSOs or their staff chair international statistical bodies. 11.4. National Statistical Authorities participate in the main international statistical fora to exchange on their statistical practices, to participate in research and conceptual work and to contribute actively to the definition and design of international norms and statistical standards. 11.5. Access to micro-data by international organisations is explored as a means to reduce the burden of countries responding to questionnaires. 11.6. National Statistical Authorities provide complete and timely answers to the questionnaires of international organisations. 11.7. Producers of official statistics use modern statistical and IT tools, such as SDMX for the regular transmission of data and metadata to international organisations, notably the OECD.
12. Encourage exploring innovative methods and new and alternative data sources as inputs for official statistics, and in particular, encourage statistical agencies to actively explore possibilities to use new data sources (including large datasets owned by the private sector) or to combine existing and new data sources as input for official statistics. At the	12.1. National Statistical Authorities actively encourage and undertake research on new sources and new methods for official statistics, including in the private sector and through combination of existing sources. 12.2. National Statistical Authorities develop methodological work and IT structure to ensure the quality of official statistics when new and alternative data sources are used as input.

same time, these opportunities are weighted against the limits of using modern information technologies and the need to maintain the quality of official statistics.	12.3. An explicit policy is formulated towards the use of “Big Data²” and private data that considers legal, technical and methodological implications. 12.4. Implications for statistical infrastructure, statistical methods, and analytical tools are systematically assessed. 12.5. There are explicit agreements between producers of official statistics and owners of private data; and legislation which regulate access to this information and deal with privacy issues. 12.6. National Statistical Authorities participate in the development of capabilities to process geospatial data.
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² **Big data** refer to data sources that can be generally described as high volume, velocity, and variety of data that demand cost-effective, innovative forms of processing for enhanced insight and decision making.