

THE NATIONAL STATISTICAL SYSTEM

The National Statistical System

Chapter **04**






4.1 Introduction

The composition, structure, and governance modalities of a national statistical system (NSS) vary widely between countries. In many cases, this reflects the history of a specific country; how official statistics have become a regular function of the various parts of a national administration; how national statistical offices (NSOs), that have official statistics as their core function have been established; and how the various organizations engaged in the official statistics of a country have evolved to respond to user needs, technological changes, as well as to institutional changes.

For this reason, international standards leave the decision on how to organize official statistics to each country, and rather concentrate on standards for outputs, methods, definitions and terminology, and on the principles that govern all activities of official statistics (see [Chapter 3 - The Basis of Official Statistics](#)). This chapter examines those organizational issues for NSSs that can be derived from the principles and the definition of official statistics and how these principles are translated into institutional safeguards for the various actors in official statistics. In addition, cumulative experience in countries has allowed the international community of professional statisticians to derive lessons on both efficiency and credibility of the various organizational arrangements. These are presented in this chapter, along with their respective advantages and disadvantages.

This chapter aims to provide indications rather than recommendations, unless there is a clear basis such as The Generic Law on Official Statistics (GLOS) adopted in 2016 by the Conference of European Statisticians^[^footnote1], the Generic Law on Official Statistics for Latin America (GLOS-LA) adopted in 2019 by the Statistical Conference of the Americas, and the Guidance on modernising statistical legislation, UNECE 2018 .

The title of this chapter includes the term “system”. In the context of this handbook, a national statistical system is composed of all public institutions that work on official statistics, entirely as is the case for most NSOs or partly as applies to many ministries or government departments. Ideally, the NSS should meet the following criteria:



Common legal base It has a common legal base: This would be the national law on official statistics (the statistical law), which applies to the NSO and all public institutions that are part of the NSS.



Common implementation framework The statistical law and lower-level legislation based on this law (together referred to as statistical legislation) are based on the UN Fundamental Principles of Official Statistics (UNFPOS) and contain the rules and modalities on how this system is operated in accordance with the UNFPOS and how it is governed. Because of the principle on professional independence, the rules of governance have to be specific for official statistics, and to a certain extent different from the rules of decision-making and governance that are generally applicable to the wider administration to which the statistical.



Based on UNFPOS The statistical law should oblige all producers of official statistics to apply the same set of standards, methods, and definitions based on international recommendations.



Defined function of leader As part of the rules of governance, the function of a leader of the entire NSS (hereafter called chief statistician) should be defined. The rules need to include provisions for appointment and termination of appointment specific to this role and necessary to ensure the chief statistician's professional independence. The explicit legal basis for a leader of the entire NSS is necessary because, in a hierarchically organized set-up such as a national administration, it is the only way to confer professional authority to the chief statistician that stretches beyond the organizational units of which he or she is the superior. Across countries, there are various titles for characterising this position, which is suited to the respective official language and national administrative structure.

Most countries have one organization for which the development, production and dissemination of official statistics is the core function. The names of this organization differ among countries; in this handbook and in many countries, it is termed the national statistical office (NSO).¹ In general, the NSO is the main producer of official statistics (in reality, the share varies between almost 100% and less than 40%) and is responsible for major data collection and data processing activities for official statistics, including the population census.

Countries have found different ways of placing the NSO within their administrative structure and in a few cases as an autonomous agency outside the main branch of the executive. In most cases, the function of chief statistician is assigned to the head of the NSO. This chapter outlines the obligations and restrictions for the NSO and other producers in terms of institutional safeguards needed to meet the requirements of official statistics as laid down in UNFPOS. Other models of NSSs are also articulated in *Chapter 4.3 – Organization of national statistical systems*.

4.2 Structure of the national statistical system

4.2.1 Delimitation of the national statistical system

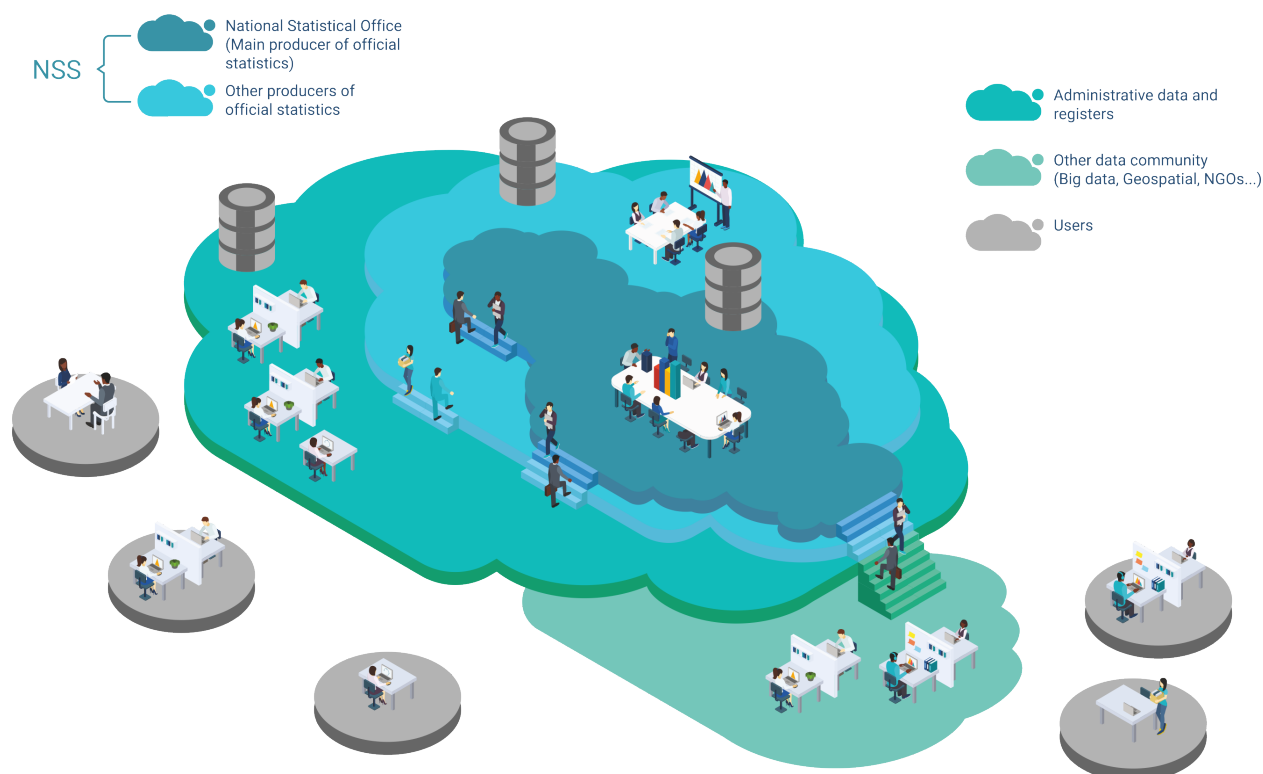
The NSS is composed of all organizations which produce official statistics and are a part of the public administration in a country. These are:

- the NSO as core producer;
- other national producers. These are statistical departments¹ or units of other organizations such as government departments/ministries or special agencies.² In this handbook, the term parent body is used to designate the organization such as ministry or agency to which the statistical department or unit belongs.

¹ Very large countries may feel the necessity to designate more than one organization for which official statistics is the core function. For example, this is the case with the US.

¹ The term “department” is used here in a generic way as an organizational unit within a larger organization and does not imply a specific level of hierarchy.

² There are cases where even organizations that have a basis in private rather than public law can be declared responsible for producing official statistics in a given subject area, if this is foreseen in the national statistical law. The condition is, however, that this organization is already existing, entrusted by law with a public function other than statistics (e.g. research) and receives public funds for this purpose, and can take over, based on the statistical legislation, the responsibility of producing official statistics in an area related to its main function.



Many countries lack a clear delimitation of the NSS. The NSS is often assumed to consist of those producers that are included in the annual or multi-annual statistical programmes. In some cases, there is an explicit enumeration of producers of official statistics in the statistical legislation. However, explicit criteria for being one of the other producers of official statistics and therefore being a member of the NSS are seldom defined.

The clear delimitation in terms of organizational units is recommended for the following reasons:



Confidentiality: The confidentiality provisions of the statistical legislation should apply to all activities of official statistical and hence to all units that produce them. These provisions need to be strictly followed and cover the exclusive use for statistical purposes of individual data, whatever their origin, including data that were originally collected for administrative purposes. There is also a need to include the restriction on sharing individual data outside the system for any other use than statistics, e.g. for administrative purposes or administrative registers.



Professional independence: Each producer of statistics within the NSS should be independent in professional issues (as defined in *Chapter 3 - The Basis of Official Statistics*) from any organizational unit outside the national statistical system, including parent bodies and bodies to which they report. Professional independence also extends to protection from any

interference in professional issues from outside the administration.³ Professional independence must be ensured in the statistical law itself but not at a lower level of legislation so that it cannot be curtailed or even abolished by the government.



Scope of legislation: Statistical legislation should extend to the whole NSS as well as collection and utilisation of data by other administrative bodies that are subsequently used for the purposes of official statistics (see *Chapter 4.2.2 – Legal frameworks, obligations, and restrictions*).



Users: Anybody who accesses and/or reprocesses any data or statistics disseminated by the NSS, independently of the nature of use, is considered a user. Use of data and statistics can vary between simple re-dissemination of results, their inclusion in an internal report, or extended reprocessing of data using sophisticated statistical methods. The data or statistics could be used for internal purposes of the organization, with all or part of the results they produce made public under their own responsibility. Users engaged in the more elaborate type of using data from official statistics are sometimes distinguished from other users as re-users.



Quality of official statistics: Delimitation of organizational units limits the application of the statistical legislation to those units that are recognised as producers of official statistics. Organizational units that do not produce official statistics and are outside the NSS are affected by the statistical legislation only in as much that explicit reference is made to them or their activities, e.g. as providers of administrative data, respondents in surveys, users, or in some instances decision-makers. This does not confer upon them the institutional quality of producers of official statistics and members of the NSS. Therefore, it is crucial that the delimitation of the NSS in terms of organizational units covered is clear at any given moment and is transparent to the public. In the case of the other national producers, only a specific department of the parent body and not the parent body as a whole can be part of the statistical system, and therefore the list of members of the statistical system should show this degree of detail. Since such internal organizational arrangements vary frequently, it is recommended to include a list of organizational units in the statistical programmes (see *Chapter 4.4 – Annual and multi-annual planning and priority setting*) or, as recommended by the GLOS, in a lower-level legal act adopted by the government rather than directly in the statistical law itself. In whatever form such a list is adopted, the composition of the national statistical system should be easily accessible for users, e.g. through the websites of the NSO.

Statistical systems can sometimes be defined in a more encompassing sense where all stakeholders and all users are included. Since every person is a potential or actual user of official statistics, it is difficult to see the practical utility of including such a wide definition in a statistical law. The notion of a system does not imply that there are no relationships or transactions between units inside and outside the boundary. It implies only

³ The relationship between producers of the same statistical system is part of the governance rules of the system, which may restrict the autonomy of individual producers through professional standards and procedures that are binding for the whole system, and through other prerogatives of the chief statistician (see *Chapter 4.3.3 – Chief statistician*)

that the relationships and functions of those within the system have some unique characteristics compared to the units outside the system. In the definition that is used in this handbook, this is clearly the case, since the units within a national statistical system are bound by the UNFPOS, notably the provisions on confidentiality and professional independence, whereas this is not the case for the units outside the system. Over and above these unique characteristics of the insiders, the statistical legislation should cover the relationships between them and other stakeholders such as users, respondents, and administrative data providers.

4.2.2 Legal frameworks, obligations, and restrictions

There are several conditions that a producer of official statistics must fulfil in order to become part of the national statistical system. These conditions are mainly derived from the UNFPOS and are typically included in the statistical law.

Any additional specific conditions need to be explicitly included in the law. The statistical legislation might have to define a process by which producers are certified (and decertified) as members of the statistical system.

The main criterion to be met by each producer of official statistics is whether it has the capability and willingness to fully and sustainably respect all UNFPOS, not least those on confidentiality and professional independence, and the other provisions of the statistical law. Other criteria include:

- **Regular production and dissemination of statistical products:** This covers official statistics for which the producer is fully accountable.
- **Freedom from conflicts of interest:** The statistical department in charge of the production has to be free of any conflicts of interest that may be created by parallel non-statistical tasks of the parent body, such as administrative decisions concerning individual persons or businesses or the maintenance of administrative registers. Combining simultaneous responsibility for such non-statistical activities and official statistics activities in a statistical department can undermine the commitment to use data exclusively for statistical purposes. A statistical department acting as producer of official statistics should not be seen as part of the policy-making branch of the parent body as this can undermine the credibility of impartiality. Neither should it act and be considered as part of the monitoring activities of the parent body. However, a producer of official statistics can carry out a limited range of statistical activities that do not qualify as official statistics because of their experimental, scenario-based, or internal nature⁴.
- **Autonomy:** For its official statistics activities, the statistical department has to be autonomous from the rest of the parent body in terms of choice of methods, definitions and in the timing and content of all forms of dissemination (see *Chapter 4.2.1 – Delimitation of the national statistical system*), and this has to be accepted by the senior managers of the parent body.
- **Use of administrative data:** The statistical department should have the knowledge and the authority to make the necessary adaptations to data collected by the parent body for administrative purposes in order to render them as close as possible to concepts, definitions, and target universes of official statistics. This may involve:
 - estimating missing elements and eliminating statistical units that are not relevant from a statistical point of view;
 - combinations with other data sources;
 - using editing and imputation methods.

The results disseminated as official statistics are therefore in most cases different from a simple counting or adding up of the records of the original administrative transactions.

- **Quality management:** The statistical department has implemented or is willing to implement a process of quality management that is in line with the standards established for the whole statistical system (see *Chapter 7 - Quality Management*).

⁴ If a producer of official statistics is engaged in these types of activities, it should limit its responsibility to statistical concepts and methods used and the quality of data, but leave the responsibility for assumptions about policies or conclusions in terms of policy actions to actors from outside the statistical system. Otherwise, the credibility of impartiality and independence may be at risk.

- **International participation:** The statistical department has the means to participate in international activities in official statistics relevant to its domain of responsibility and to implement any new statistical standards that may emerge at the international level.

Whether the conditions above are met in practice, both by producers other than the NSO that are part of the NSS and by other organizational units that seek to become members of it, should be regularly assessed. Such an assessment should take place as part of the NSO's task of preparing a multi-annual programme. (see *Chapter 4.4.1 – Annual and multi-annual statistical programmes*). An NSO should also be assessed against these criteria. This may be done through regular internal audits of the various departments in turn as part of its quality management. Occasional assessments of the NSO (or the national statistical system as a whole) by the international community of official statistics may also be organized. For this purpose, this community has developed instruments such as peer reviews or global assessments (see *Chapter 4.2.5 – Relationship between national and international statistical systems*). Such reviews are also a valid mechanism for the occasional assessment of other national producers by the NSO.

Many statistics published as part of activity reports of the various parts of the national administration are not designed to qualify as official statistics. If this type of output is the only statistical product, the relevant administration unit should not be considered a producer of official statistics. An organization may have an administrative data source that has a potential value as input into official statistics but not be willing to make the organizational changes and investment needed to ensure the respect of the provisions of the statistical legislation (including to separate statistical from administrative tasks).

The task of converting these administrative data into official statistics should be assigned to the NSO or another producer of official statistics. In such cases, the organization responsible for collecting and processing the administrative data has to regularly transmit the data set to the NSO or another unit within the NSS. The NSO or the responsible national producer would then take over the responsibility for transforming these data into official statistics and disseminate them as such with a clear indication of the origin of the data sources used.⁵

The delimitation of the NSS is also necessary as it defines the scope of how statistical legislation is applied for any data collected on the basis of other legislation than the statistical law. When such data are imported into the statistical system, they become subject to the statistical law. Depending on the national legislation, notably concerning data protection, it may be advisable to include a provision in the statistical law such as article 15.3 of the GLOS so as make any change of legal frame explicit. This is also likely to reduce conflicts between confidentiality regulations in the statistical and other laws.

Some national statistical laws focus on the NSO and do not address the issue where there are several producers of official statistics, especially in small and developing countries. In such cases, the provisions in the law concerning data collection, production and dissemination, and the principles to be respected refer only to the NSO, leaving undefined the status of statistical products disseminated by other government bodies.

In such cases, it is recommended that the law is changed and extended to all activities of official statistics irrespective of the producer. If that is not feasible, it is recommended that the NSO reaches out to the other producers, seeking to convince them to follow the provisions of the law and the UNFPOS as concerns their activities related to official statistics.

⁵ In practice, situations can be found where the administrative body transmits to the NSO only aggregates, together with some metadata. However, a quality check by the NSO is only possible if the individual data are transmitted to the NSO as well. Otherwise, the administrative body acts as producer of official statistics within the national statistical system and would have to be certified accordingly; it may however use the NSO for the dissemination of its products.

4.2.3 The position of the Central Bank

In most countries, the statistical department of the Central Bank has the responsibility to produce official statistics in certain subject areas such as monetary and financial statistics or balance of payments statistics, as provided for in the law of the Central Bank. However, the Central Bank law is unlikely to include the same provisions on the principles of official statistics as the statistical law.

Therefore, it is important to make sure that the official statistics for which the Central Bank is responsible are subject to the same (or at least equivalent) principles as contained in the national statistical law and the UNFPOS. Similarly, the statistical department of the Central Bank needs to be professionally independent of the top management of the Bank and a part of the NSS. Some countries have assigned the responsibility for producing the national accounts to the Central Bank. However, for such a widely accepted and powerful analytic system for economic, social, and demographic statistics, this is not a recommended practice (see [Chapter 9 - Analysis and Analytical Frameworks](#)).

It is recommended to explicitly mention the Central Bank in the statistical law, and not only in a lower-level legal act or in the statistical programme for statistical departments of ministries. The reason is that the Central Bank law normally states that it is independent of the government, which in some countries is interpreted as making it impossible for the statistical department of the Central Bank to be part of a national statistical system and to be bound by the provisions in law other than the Central Bank law.

An explicit statement in the statistical law can open up the possibility of including the statistical department of the Central Bank in the NSS and ensure that its activities on official statistics are in accordance with the UNFPOS. In this way, the official statistical activities of the Central Bank will be subject to the NSS-wide standards and to other provisions on coordinating official statistics. As an important user of official statistics, it will also ensure that the Central Bank has access to data that are available for statistical purposes within the NSS (see [Chapter 4.5.5 – User access to confidential data for their own statistical purposes](#)).

4.2.4 Relationship between national and sub-national statistical systems

One of the conditions for qualifying as national statistical system is a common legal base. For national systems, this common legal basis is the statistical law at national level, but countries differ in the status of sub-national statistical offices and their coverage by the national statistical law.

Sub-national statistical offices as units of the NSO

The simplest case of sub-national statistical offices in legal and organizational terms is regional statistical offices that are an integral part of the NSO and are, therefore, integrated into the national statistical system without being a separate member of this system. The role and functions of regional statistical offices that are subordinate to the NSO vary substantially between countries.

Some NSOs have regional offices with identical functions throughout the territory of the country, sometimes at more than one layer. Many small countries do not have regional offices but operate from a single location, usually, the capital. Other countries have a few offices in other places than the headquarters, but with responsibilities for certain nation-wide activities assigned to them. In some countries, the statistical law requires the NSO to set up regional offices, but that may be it is essential that such statistical sub-offices have only one line of reporting, that being to the headquarters of the NSO, and do not have a second line of reporting to a senior administrator of the local or regional entity (as used to be the case in some countries with centrally planned economies).

Organizational models in federal countries and countries with regions that have a special status

Different organizational and legal solutions may exist in countries composed of states that form a federation or confederation, or countries with regions that have some degree of autonomy guaranteed by the constitution or by an international agreement.

A comprehensive NSS can be set up in federally organized countries if the federal and state level agree that an NSS should meet the information needs also of state administrations.⁶ The statistical law would then not only be a federal statistical

⁶ Examples are Australia, Brazil, Canada, and Mexico

law but a true national statistical law. The same holds for the NSO in terms of its mandate, although in most cases it will remain a part of the federal executive structure and mainly financed by the federal budget. In such cases, the role of the states in the governance of the NSS will have to be clearly spelt out in the statistical law. If the federal and state level can agree to such a solution, and if it is constitutionally possible, this can be an efficient set-up, independent of the number of states. However, it implies a high degree of functional centralisation in the NSO. Such an NSO may have, as part of its internal organization, regional offices or branches.

In some federal countries, such a national solution for official statistics would be possible only if it were explicitly foreseen in the constitution, which is not always the case. Otherwise, states either have to be satisfied with what is produced by the federal statistical system or if not, create the necessary legal basis for additional statistical activities they would like to carry out at their territorial level, including the possibility of organizing their own data collection for statistical purposes. In this case, there will be a statistical law at the federal level and parallel statistical laws for some or all states, which will normally designate a single producer of official statistics (or at the maximum a sub-national statistical office⁷ plus a very limited number of other producers of official statistics in the sub-national administration), thus forming a parallel statistical system at the sub-national level.⁸

Sub-national statistical offices (and possibly the other producers at this level) have a dual role in official statistics: they can be asked, on the basis of the federal statistical law, to participate actively such as by data collection for official statistics at the federal level, and, based on the sub-national statistical law, engage in any additional statistical activity (official or otherwise) limited to the respective territory.

Therefore, such sub-national offices are simultaneously members of the NSS and of the sub-national statistical system, which institutionally and legally is a rather complex set-up⁹. Sub-national statistical offices at the level of an autonomous region are therefore the third type of members of the NSS, in addition to the NSO and other national producers. To avoid substantive problems from this dual role, it is essential that the provisions in the two statistical laws are as identical as possible, notably on the issue of confidentiality and exchange of confidential data within both systems.

As members of the NSS, sub-national statistical offices must fulfil the criteria (see *Chapter 4.2.2 – Legal frameworks, obligations, and restrictions*) applying to other national producers, with the possible exception of the ability to participate in international activities of official statistics. Since they tend to be relatively small units, sub-national statistical offices may face the same problem of a credible organization-internal borderline at a relatively low organizational level as statistical departments of other national producers. The statistical law at national level should include explicit provisions about the possibility that the state level is charged with carrying out parts of official statistics activities that are part of the federal statistical programme and how they are involved in the process of preparing such programmes at the federal level (see *Chapter 4.4.2 – Types of statistical programmes*).

Finally, it would be desirable to use the same criteria to periodically assess the institutional quality of each sub-national statistical office from time to time that are applied for the assessment of other national producers when their inclusion in the statistical programme is discussed.

The chief statistician's authority in a federal country is normally limited to the federal statistical system and does not cover the activities that sub-national statistical offices carry out based on their own legislation. Thus, the standards issued by the chief statistician are not systematically applicable to the state activities of official statistics; although, in most cases, sub-national statistical offices will apply these standards for their own activities for purely professional reasons. It remains that, the regular production and dissemination of official statistics will be an activity based on the sub-national statistical legislation, and the appointment of the head of the sub-national statistical office will be entirely governed by the legal provisions at that level.

⁷ In the context of a federal statistical system, a sub-national statistical office is the main producer of statistics at level of a state or an autonomous region.

⁸ Examples are Austria, Germany, and Switzerland, and for countries with regions that have special status UK (Scotland Northern Ireland, Wales) or Denmark (Greenland, Faeroe Islands).

⁹ If the sub-national statistical office is not involved in any production process for federal official statistics, it would cease to be member of the national statistical system.

4.2.5 Relationship between national and international statistical systems

NSOs and possibly other producers at the national level with international statistical responsibilities, can be members of a multi-national or international statistical system and be responsible for applying the relevant rules and procedures of these.

In a supra-national set-up such as the European Union, a common legal basis has been established, containing statistics-specific rules of common approaches, procedures, methods and definitions, as well as on governance and decision-making. Such a system includes a statistical office as the only producer of official statistics at the supra-national level, the NSOs of all member countries, and possibly additional national producers responsible for producing official statistics relevant to the supra-national system.

In practice, the term ‘international statistical system’ is not precisely defined. It may apply to the statistical department(s) of an international organization plus the NSOs (and the relevant other national producers) of the member countries of a given organization. Or it may refer to the sum of various statistical departments of an international organization but without producers from member countries.

Currently, a number of international organizations have signed up for a mirror set of the UNFPOS that are applicable to their own statistical activities, the Principles Governing International Statistical Activities (🔗). The UN Statistics Quality Assurance Framework (🔗) includes a definition of official statistics at the international level that is fully in line with the definition of national official statistics given in *Chapter 3 - The Basis of Official Statistics*.

However, these principles have not been translated into legally enshrined institutional arrangements specific for international statistical activities in such a way that professional independence of statistical departments within their parent international organizations is protected, or that a distinction between official and other statistical products are made. The above-mentioned UN quality assurance framework requires that statistics disseminated by international organizations, based on statistics provided by member countries, are checked for consistency with international standards by the responsible international statistical department, in order to ensure a sufficient degree of international comparability. Only in this case can such a department be considered a producer of international official statistics. Where the quality of national statistics is uncertain or clearly inadequate, the relevant international statistical department would either have to disregard them or, in consultation with the national producer, adjust them to make them comparable internationally and over time. If made available to users as part of international statistics without adjustment, these products should at least be labelled appropriately.

For national producers, participation in supra- and international systems and networks is important in many respects:

- to participate in the development and revision of international statistical standards (see *Chapter 4.6.2 – Coordination through standards*);
- to organize internationally coordinated and funded major data collection activities such as the International Comparison Programme (ICP);
- to gain a deeper understanding of the international standards and requirements in order to enhance the relevance, quality, and comparability of their own national statistics;
- to assist countries with less developed statistical systems in improving their national statistical capacities.

Yet another type of international statistical activities merits special attention here: the periodic assessment of national statistical systems regarding their capacity to produce key official statistics in compliance with the UNFPOS or similar codes such as the European statistics Code of Practice in the European Statistical System. These activities are called peer reviews or global assessments; they are carried out by teams of official statisticians with extended work experience at national and international levels. The reviews and assessments are conducted under the auspices of international or supranational organizations and the final reports are made publicly available. Whereas the NSO periodically assesses other producers at national level for their capability and willingness to comply with the UNFPOS, international assessments are the most efficient way to ensure that NSOs are periodically examined against the same criteria. In the UN context, it is up to a country to request such assessments; they are a necessary input into developing a strategic plan and attracting funds from donors for this development. In a supra-national context like the EU, all member countries are subject to such assessments periodically.

4.3 Organization of national statistical systems

4.3.1 Centralised vs. decentralised systems for producing official statistics

The organization of official statistics varies considerably between countries. This depends on the institutional structure of the countries, on traditions and on how the official statistics have developed, in particular with respect to multi-national and international requirements and practices.

Thus, it is up to the countries to choose how many organizations in the national or federal administration should be defined as producers of official statistics; keeping in mind that the main criteria is for each of them the capacity and willingness to comply with the statistical legislation and the UNFPOS.

However, if independent statistical offices exist at the sub-national level, it is advisable to keep the production of official statistics at the federal level as centralised as possible.

The importance of separating the NSS clearly and credibly from the rest of the administration has been emphasized. As one of the key elements of institutional quality, Credibility is necessary to enable users, data providers, and respondents to establish and maintain trust in the producers, the processes, and the products of official statistics. Producers have to establish credibility with respect to the exclusive statistical use of individual data referring to natural and legal persons, as well as with respect to impartiality and professional independence of each producer of official statistics.

The organizational separation between official statistics and policy or administrative tasks is more intuitively credible, the higher the hierarchical level at which it is located. In many countries, the NSO is an organization that reports directly, i.e. without any intermediate hierarchical level, to the President, the Prime Minister or to a minister (see [Chapter 4.3.3 – Chief statistician](#))¹. At this level, the unique characteristics of the NSO's status that differentiates it from administrative organizations at the same level are easier to implement and to convey to the outside, because it is an essential part not only of the legislation but of the common culture of all staff, given that official statistics is the core activity of all NSOs.

The situation is more complicated for a producer of official statistics that is a lower-level organizational department of a parent body whose core function is not official statistics, and where the UNFPOS are not part of the common culture of all staff of this parent body. This is especially the case when the statistical department is also in charge of data processing for administrative purposes. Even if this were not the case, the exclusive statistical use of individual data also implies that no such data would be shared for other than statistical use with the rest of the parent body.

This difference is one of the major advantages of centralisation of official statistics at the NSO. The greater the number of other producers, the greater the number of organization-internal borderlines (firewalls) between statistical departments and the rest of their parent bodies that would have to be established at a lower organizational level.

The NSS gains from having, alongside the NSO, a relatively small number of other producers of official statistics. Each of these producers should have a sufficient volume of regular statistical operations to raise their hierarchical level within the parent body and to justify the organizational complications of separating internally official statistical activities from administrative tasks. The statistical department of the Central Bank is such an example.

Another major advantage of a high degree of centralisation of official statistics is the recognition of the brand “**official statistics**”. The more it overlaps with the brand of an easily identifiable NSO, the easier it is for users to recognise products of official statistics as distinct from the rest of government and guarantee high-quality work based on professional standards. This branding is not easily extended to the output of other producers, which will in most cases be attributed to the parent body, a body that is likely to insist that its own brand is given priority over or at least equal status to the brand

¹ In small countries, the equivalent of the NSO may be a smaller organizational unit that does not report directly to the Prime minister, the President, or another member of the government. In this case, it is very important that the intermediate levels of hierarchy respect the professional independence of the NSO, and that they ensure proper briefing of the responsible minister whenever issues of official statistics are brought to the level of government. This situation also occurs frequently in the case of sub-national statistical offices within their state administration.

of official statistics². The maximum overlap between official statistics and NSO requires that the many statistical products published by various administrative bodies without being official statistics are disseminated so that users immediately realise the difference compared to official statistics. This requirement is also valid for any statistical output of the NSO and of other producers within the system that does not constitute official statistics.

One argument frequently put forward in favour of centralisation is that coordination is easier when more subject areas are under the chief statistician's authority. However, coordination in substantive terms requires the same input in centralised and decentralised systems, especially concerning the systematic gathering of information about user needs.

The flows of information for the preparation of statistical programmes may appear easier the more activities are concentrated within the NSO, but this may also work well in a decentralised system if all parts perceive a benefit in preparing and exchanging this information. However, monitoring the implementation of system-wide decisions is easier in a more centralised system. Whether coordination is working well or not in a decentralised system depends more on how well the producer in charge of the coordination, typically the NSO, can interact with both governmental users and other producers, and on the extent of the authority of the chief statistician, by law and by his or her professional quality, to set system-wide standards (see *Chapter 4.6.2 – Coordination through standards*). If this authority were to be absent, decentralisation is rather likely to result in uncoordinated activities of official statistics, as well as in a non-homogeneous interpretation of what are considered official statistics and what are not.

In summary, centralising official statistics in the NSO offers the following advantages:

- clearer organizational separation between official statistics and administrative or policy tasks, which is central with respect to the principles of confidentiality, impartiality and independence;
- higher overlap of the branding of products and activities of official statistics with the easily recognisable NSO;
- easier building (through training) and commitment to a common staff culture specifically based on the UNFPOS;
- increased user-friendliness as more subject areas are covered in the dissemination platform of the NSO;
- no need for replicating conceptual and methodological know-how in the coordination department of the NSO for areas of responsibility of other producers (see *Chapter 4.6.1 – The how and why of coordination*);
- efficiency gains (up to a certain size);
- possibility to resolve co-ordination issues by internal decisions and to monitor implementation by internal follow-up mechanisms;
- easier monitoring of compliance with system-wide standards, especially quality management;
- simpler relationship between federal and state producers of official statistics;
- wider range of data-sets for methods such as data integration and data matching, unless the statistical legislation provides for the NSO to access data sets of other producers at individual level as recommended in the GLOS (see *Chapter 4.3.4 – National statistical office*);
- comprehensive responsibility for international aspects of official statistics.

The three major advantages of a decentralised statistical system are:

- higher capacity to provide in-house statistical services outside of official statistics that are relevant for the parent body;
- proximity (organizational, physical, and intellectual) of statistical departments of ministries or similar administrative bodies to the subject-matter policy work;
- reduced dependence on outputs of the NSO giving a greater autonomy in implementing the data collections that are necessary to produce the official statistics required by the parent body. In the case of the NSO being ineffective in delivering the output relevant for the ministry in time, a statistical department that is part of the NSS has a higher potential to act, at least, as a partial substitute.

² An example of the opposite is Finland: the label of official statistics is used by other producers, and Statistics Finland operates a common dissemination platform that enables access to all official statistics.

The advantages of a centralized system have to be weighed against the advantages of decentralisation as listed before. However, opportunities to systematically reorganize a statistical system across the board will only occur at certain junctures, such as the preparation, adoption, and implementation of a new statistical law, in the case of a general restructuring of the administration, or after a crisis. The opportunities for smaller changes arise more frequently, such as when a parent body of another statistical producer plans a complete reorganization, or when the data collection methodology for a specific official statistics activity undergoes a significant change. In the context of the multi-annual programme preparation, the chief statistician can also trigger smaller changes in the assignment of responsibilities for specific activities to other producers (see *Chapter 4.4.4 – The multi-annual statistical programme*). A larger organizational change should be based on a professional global assessment of the system (see *Chapter 4.2.5 – Relationship between national and international statistical systems*), so as to identify the major shortcomings that have to be addressed. In most cases, it is not sufficient to simply reallocate activities between producers, but rather to revise the statistical legislation so as to establish a fully-fledged NSS with all characteristics as defined here.

Economies of scale are an important consideration. They are present in modern official statistics, mainly because of the higher extent of data integration of various sources as opposed to the traditional production in parallel stove-pipes, with one stove-pipe being responsible for one or more data collection activities and the subsequent processing and dissemination of results based almost exclusively on these inputs. However, economies of scale have to be weighed against organization and management difficulties that grow with increasing size of an organization. For this reason, larger countries tend to have functionally decentralised NSSs, but the reverse is not necessarily the case. Many small countries have not been able so far to establish an NSO in charge of producing official statistics in most subject areas, although centralisation in an NSO would not increase the size of the organization to a level where the above-mentioned management problems would show up. For a large group of countries, the history of how official statistics was taken up as a government function still appears to be the determining factor for the present degree of functional centralisation of official statistics, irrespective of the potential of efficiency gains through centralisation.

4.3.2 Governance of national statistical systems

A national statistical system requires rules of governance of which at least a part is different from the general rules of decision-making in the rest of the administration, due to requirements for professional independence specific to official statistics. However, professional independence does not systematically coincide with managerial autonomy. The allocation of resources for official statistics as part of the overall budget appropriation follows the rules applicable to the entire national or federal administration. The same holds for general rules on accounting and procurement. In most countries, the general rules about the salary grid applicable for the central administration are also valid for staff working in the NSO or with other producers except the Central Bank.

Professional independence requires that all issues on definitions, classifications and methodology, as well as decisions concerning data collection, data processing and analysis, timing and content of all forms of dissemination, are made within the statistical system, without interference from any interest group or government organization. Such decisions should be based on consultations with users and follow international standards of official statistics. The statistical law has, therefore, to address two issues of governance:

- Where exactly is the interface between purely professional decisions and decisions that are submitted to a body outside the statistical system such as the government, President, or Parliament?
- What is the extent of autonomous decision-making on professional issues for the other national producers, or in other words, what kind of professional decisions require national producers to obtain some kind of approval from the chief statistician?

National practices on these two issues differ quite substantially. Concerning the first issue, the greatest extent of autonomy can be found in countries where the general decision making of government and Parliament only defines the total budget appropriation for official statistics, leaving the allocation of funds for official statistics entirely to the statistical system. This approach can be found in some countries, but it generally applies only to an NSO with a high degree of functional centralisation, especially in countries where the NSO is an autonomous agency outside the main administration (see *Chapter 4.3.3 – Chief statistician*). It does not really apply to a statistical system composed of an NSO and several other national producers. It shows a high degree of confidence in the chief statistician, not only concerning professional

competence but also in terms of priority setting among subject areas. In such countries, the government has no role in the process of adopting statistical programmes.

However, some countries provide at least for some role of decision-making bodies outside the NSS, in most cases the government, basically because of three considerations:

- ensuring a balanced priority-setting among subject areas;
- providing a higher degree of legitimacy for the necessary data collections for statistical purposes from households, businesses, and other respondents outside the government, especially when such an activity is associated with a response obligation;
- seeking to ensure that the information needs and data collection are balanced against the need to limit the response burden.

The exact involvement at the government level in such decisions can take two forms, which may be combined:

- either through the adoption of the various statistical programmes for the whole national statistical system (see *Chapter 4.4.5 - Authority to take decisions on the programmes*), or
- by adopting legal acts at government level, based on the statistical (and not any other) law, about a set of statistical surveys or activities, or exceptionally, an individual major survey with response obligation.

These two forms can be combined. The first form addresses the issue of balance and strategic development, and the second form the two other considerations mentioned above. However, when adopting a statistical programme or deciding on data collection activities through the adoption of lower-level legal acts, the government should not modify any methodological and terminological issues that fall under the statistical system's professional independence. In countries with the NSO as an autonomous agency, most of the objects of decision-making by the government are assigned to the executive board of this agency, thus bringing such decisions to the inside of the NSS.

Concerning the second aspect of governance, the decision making on professional issues within the NSS, it should be noted that producers that together form the NSS are not completely independent of each other. Other national producers, although not subject to the authority of the chief statistician, have not only to respect the full set of provisions contained in the statistical legislation, but also the final system-wide authority of the chief statistician on professional issues, provided this competence is explicitly foreseen in the statistical law. They have to respect and implement in their activities of official statistics any standards that the chief statistician has decided to be valid for the system as a whole (see *Chapter 4.6.2 – Coordination through standards*).

The dual role of sub-national statistical offices as members of two parallel statistical systems is also reflected in differences of system-internal autonomous decision making on professional issues. When carrying out activities for the federal statistical system, their autonomy is even more reduced than in the case of other national producers, because they must comply with all specifications of the specific activity to which they contribute, and which are fixed by the responsible producer at the federal level (preferably after a participatory process with the sub-national statistical offices). However, concerning their activities as members of the sub-national statistical system, their professional autonomy is defined by the sub-national statistical law and, legally speaking, not constrained by any provision of the legislation at the federal level (see *Chapter 4.2.4 – Relationship between national and sub-national statistical systems*).

4.3.3 Chief statistician

Appointment, protection, and reporting

In the great majority of countries, the chief executive of the NSO is also assigned by law the responsibility of chief statistician, i.e. as the leader and coordinator of the whole NSS³. In particular, at the international level, he or she represents not only the NSO but the entire national statistical system.

In addition to the managerial responsibilities as chief executive officer of the NSO (further discussed in *Chapter 5 - The National Statistical Office*), the chief statistician should be made, through a provision in the statistical law, responsible for

³ Exceptions are the US and the UK, where the head of a separate body in charge of coordinating the national statistical system is the chief statistician.

the professional integrity of the whole system, for securing trust in the statistical system, and not just the NSO. Because of the professional independence of the NSO, the superior of the chief statistician cannot be held politically responsible for any professional errors that may occur within the statistical system. Therefore, a chief statistician does require not only sound experience and professional know-how about statistics from a broad producer or a broad user perspective, but also management and communication skills as it is the case with similar top-level jobs of the civil service. Therefore, this post does not lend itself to be part of a mobility scheme for senior staff in the civil service, through which incumbents would be replaced regularly after a relatively short period. This is one of the reasons why the GLOS recommends that the minimum term of office for a chief statistician should be at least 4 years.

In view of the principle of impartiality, it is furthermore important to avoid that the chief statistician is perceived as directly or indirectly linked to one or the other side of the political spectrum.

This requires a transparent, non-political process of hiring the chief statistician to make the final appointment on purely professional grounds. This applies although the appointing body often is a political one, in most cases, the government. To further strengthen the non-political and impartial character of the post, it is recommended that the term of office does not coincide with the terms of office of the appointing body and that the term of office for the chief statistician should not be affected by changes in the government or come automatically to an end when national elections take place or government changes. Provisions of this nature may not apply to other posts in the administration at the same level⁴. For this reason, it is crucial to include them in the statistical law as an exception to the general rules laid down in some other legislation.

The impartiality and professional independence of the chief statistician also has to be protected to discourage threats of dismissal by superior or other influential bodies. Therefore, it is recommended to include another special provision in the statistical law, which exhaustively lists the possibilities by which a term of office can exceptionally be terminated before expiry. The statistical law should also regulate the number of times the term of office for an incumbent can be renewed. The GLOS, article 6, contains a few specific proposals on this and other aspects of the status of the chief statistician, together with a summary list of responsibilities as mentioned in various parts of this and other chapters.

Because of the importance of having a clear borderline of the statistical system to the rest of the administration, (see *Chapter 4.2.1 – Delimitation of the national statistical system*), it is crucial that the chief statistician reports directly to the government. In some countries, the chief statistician operates at the ministerial level and reports to the government (prime minister as head of the government or President of the country). However, because of the non-political nature of the post, it is recommended that the chief statistician is not seen as a regular member of the government and only takes part in meetings at government level only when issues of official statistics are on the table. The same prudence is advisable for the participation of the chief statistician in policy committees⁵.

Various countries have set up different solutions as to whom should a chief statistician report. The following conclusions can be drawn:

- The reporting line should be a direct one to the government level, without intermediate superiors between the chief statistician and a minister;
- The reporting line should be a stable one and not redefined every time a new government is formed;
- The line of reporting chosen should minimise the perception of political influence and proximity to the general communication function of the government (which in some countries may exclude direct reporting to the Prime minister);
- It is also important to avoid the perception that the superior of the chief statistician biases the activity pattern of official statistics in favour of the narrow purposes of his or her ministry.

Whether the chief statistician in such set-ups can participate in government meetings when issues of official statistics are on the agenda, depends on whether the laws regulating the government functions allow such extensions in special cases, not only for official statistics. In many countries, this is legally impossible. If the chief statistician cannot participate personally

⁴ There are a few other posts within the national or federal administration that may be subject to specific regulations for the appointment and the protection against dismissal, such as the ombudsperson, the heads of the data protection authority or of the body in charge of auditing the accounts of the government.

⁵ An example of a non-statistical assignment for the chief statistician that does not lead to conflicts of interest can be found in Germany and the Czech Republic: the chief statistician is also responsible, because of his or her reputation and status of impartiality, for overseeing the correct determination of the results of national elections. However, in countries where the process of election and campaigning preceding the day of election is not considered fair and free, such a combination of tasks may exhibit a reputational risk.

in government meetings when issues of official statistics are discussed or decided, his or her government minister has to act as spokesperson for official statistics and for the NSO. This is the case for statistical programmes, statistical legislation, and especially for decisions on financial and staff resources as part of the general budget procedure.

Countries have in the past tried solutions other than a member of the government being the superior of the chief statistician. As mentioned before, the first is the government as a whole, but without the presence of the chief statistician at government meetings. Defacto, this has sometimes resulted in reporting to a deputy prime minister, whose status and/or interest in statistics is likely to be limited. Another solution is the President of the country. He or she may have some role in appointing the chief statistician, in order to buttress the perception of impartiality. This may not be optimal for the regular reporting line unless the President is involved regularly in government meetings. In countries where the government is considered highly politicised and partisan, there have been attempts to have the chief statistician report directly to the Parliament or a parliamentary committee. In this case, there is a risk that no designated person feels responsible enough to act as a spokesperson for the cause of official statistics on a continuous basis. The GLOS recommends reporting to the Prime minister or the President if the latter is an operational part of the executive branch. However, many countries have chosen a member of the government other than the Prime minister or President with an important cross-sectional portfolio like the minister of finance.

The chief statistician as head of an autonomous agency

Some countries⁶ have the experience of establishing the NSO as an autonomous agency located outside the main administration with a special status defined in the statistical law⁷.

The GLOS mentions this agency model as an option. The main difference with an agency set-up is a decision making and oversight board as the highest level of governance, either specifically for the NSO or the NSS. The exact title of this executive board varies. The statistical law would have to explicitly provide for this solution with all necessary organizational provisions, such as the appointment and office terms for the executive board members. The executive board is meant to take over most of the government's decision-making powers in matters of official statistics other than the provision of resources, e.g. the adoption of statistical programmes and decisions on the strategic developments of official statistics. In some countries, the executive board also plays a role in the process leading to the appointment of the chief statistician by the government or President of the country.

In this agency model, the chief statistician no longer reports directly to a member of the government (except for general issues such as accounting) but reports to the executive board.

It is recommended that the chief statistician acts as chairperson, or at least as deputy chairperson, of such a board. If a country opts for the solution of the NSO as an autonomous agency with an executive board, the statistical law is very likely to be a law on this agency only, without due regard to statistics produced elsewhere.

If the executive board's composition is balanced and credible from the point of view of impartiality and independence, such a solution is a solid signal to underline the special status of the NSO in terms of professional independence. However, it implies a very high degree of centralising activities of official statistics in the NSO.

Being outside the main administration under the government, either as an autonomous agency, as part of the presidential administration, or under the Parliament, may also lead to difficulties in establishing and maintaining regular networks with those many parts of the main government administration that are regular users of official statistics or providers of data. This difficulty has to be weighed against the advantages of an agency model. It may also make access to administrative data for the NSO more difficult, in legal, organizational, and practical terms.

⁶ Examples are Armenia, Brazil, Mexico, Portugal. In Brazil and Mexico, the agency is responsible for both official statistics and cartography.

⁷ Given that autonomy in terms of resources is impossible for an NSO, the term semi-autonomous is sometimes preferred to describe the organizational solution presented in this section.

4.3.4 National statistical office

As the major producer of official statistics, the NSO is the backbone of official statistics in a country. Official statistics are the core business for this organization, with notably the following responsibilities:

- ensuring continuity of production and dissemination of all statistics under its responsibility;
- providing an effective performance of the system-wide functions such as setting standards, compiling multi-annual and annual plans, and coordinating the NSS, as well as providing services for other producers (e.g. sampling);
- ensuring quality and efficiency of the production and dissemination processes, based on using the best-suited methods and equipment, and carrying out research to enhance quality and effectiveness;
- developing and maintaining networks with the various user groups to assess the relevance and capture new and changing information needs sufficiently early;
- ensuring trust of users, respondents, and data providers in its institutional quality and in the integrity of the whole NSS through regular monitoring of adherence to the UNFPOS or equivalent principles across the whole national statistical system;
- participating in international activities of official statistics.

The division of work between the NSO and other national producers varies across countries. To avoid duplication of efforts by various producers of the national statistical system, notably concerning data collection, data should be shared among the producers of official statistics, including individual data of statistical units that may be subject to confidentiality. The statistical law should contain explicit enabling provisions to facilitate this system-internal exchange of data, however within the strict limits of the principle of exclusive use for statistical purposes of such data. In countries where the NSS is not yet considered to be established strongly enough to allow the exchange of all confidential data between all producers, the statistical law may allow the exchange of confidential data with identifiers of the statistical units only in one direction, from another producer to the NSO, but not the other way round.⁸ In such cases, it is also recommended that one method frequently used in the production of official statistics, the matching at the level of statistical units of data sets from different sources by using identifiers, is the exclusive responsibility of the NSO⁹, with the necessity to follow strict protocols.¹⁰

An important systemic function of the NSO is establishing and maintaining statistical registers, i.e., lists of respondents/statistical units that combine direct identifiers and selected content characteristics for relevant target universes of official statistics.

Other producers should not engage in keeping parallel registers, even if they were to cover only a subset of units. If they need samples of statistical units for their own production, the NSO has the obligation to provide such services. Statistical registers are an exception to the standard practice where direct identifiers should be removed from sets of individual data generated for statistical purposes as early in the production process as possible. Statistical registers use many sources for updating, both administrative and statistical. For this reason, they may differ from related registers, managed for administrative purposes by other parts of the administration, which are based on legal requirements which are not equivalent in content or coverage to the concepts of official statistics. Censuses are a major source for the establishment and a comprehensive update of statistical registers, but other sources should be identified for being used for more frequent updates of at least part of the statistical units between censuses.

There are a few cases where an NSO is made responsible by law for managing administrative records, such as processing individual data for administrative use (by other administrative organizations). Sometimes, data processing for statistical and administrative uses are mixed in operations like the management of registers assigned to the NSO. In both cases,

⁸ The GLOS contains in article 23 such restrictions. As an exception, data from statistical registers managed by the NSO can be transferred to other producers including identifiers, as sample of statistical units to be contacted for statistical surveys, given that there are relatively few content variables associated.

⁹ Other producers at national and sub-national level can retain the competence to match data from different periods of the same data source under their responsibility by using identifiers (longitudinal matching).

¹⁰ In countries with data protection laws applicable to the government, data matching for administrative purposes is only legal when the data sources used, the purpose, and the limited set of users are listed exhaustively at the level of a law. If data matching is carried out exclusively for statistical purposes, with no risk of harming consequences for individual units, a general enabling clause in the statistical law is normally considered sufficient, but the implementation has to follow strict protocols and to take place only in an organization where the institutional separation between statistical and administrative use is beyond any doubt.

the principle of exclusively statistical use is violated, and therefore should such an activity not take place within the NSS. An NSO in charge of such activities would have to concentrate them in one department that would not, like the rest of the NSO, be part of the national statistical system. The NSO would, in this case, have the same problem of a credible organization-internal borderline or firewall as the other national producers inside their parent bodies. This combination is a potential reputational risk, and it is therefore not recommended, even if it may offer some efficiency advantages. Where such an arrangement is present, ways should be found for the NSO to shift the responsibility of the administrative part of the activities to an administrative body, but to maintain regular access to this data source for the purposes of official statistics, especially as a main source for keeping up to date the statistical registers for which the NSO is responsible.¹¹

In most countries, the statistical activities related to the functioning of the system as a whole, as opposed to the production and dissemination of statistics in subject areas, have been assigned to the NSO for which official statistics are the core function. This includes strategic and multi-annual programmes, legislation, coordination, setting of professional standards for the whole system, including setting standards for quality management and monitoring the adherence to the UNFPOS.

However, this may involve a risk of putting the production and dissemination interests of the NSO ahead of being a non-partisan mediator between the different producers of the system; or of the NSO being too weak to exert sufficient authority over other producers of official statistics in terms of quality and adherence to the UNFPOS. For this reason, in a few larger countries, some or all of these functions have been assigned to an organization that is separate from the NSO and has no production function of its own. The earliest example of this model is the US (though for slightly other reasons), but it has been recently followed by the UK and France.

Such separate entities with programmatic and coordination tasks, but without production functions, are the fourth type of members that a national statistical system may include, in addition to the NSO, the other national producers, and the sub-national statistical offices in federally organized countries. Such an extension would have to be explicitly foreseen in the statistical law.

However, NSO staff may perceive the creation of a separate body which, among other tasks, has the role of monitoring their adherence to the UNFPOS as a loss of professional independence and a lack of trust in their professional competence. A less radical approach is to concentrate these activities in a special department within the NSO and assign to it some prerogatives, the essence of which may also be incorporated into the statistical law.

4.3.5 Other producers of official statistics

Other producers of official statistics at the national and sub-national level must be professionally independent organizational entities, and exclusively or primarily focused on statistical work. The statistical activities can comprise a substantial volume of statistical work outside official statistics, but to qualify as producers within the national statistical system, regular production of official statistics in a given subject area must be part of their responsibility. The NSO may wish to sign bilateral agreements with other producers or parent bodies to increase their personal commitments to see the UNFPOS followed by the statistical department with respect to all its activities of official statistics.

National producers of official statistics should be included in the annual statistical programme when they have demonstrated their capability and willingness to comply with all UNFPOS principles and national statistical system standards. They may also be included at an earlier stage as part of the effort to ensure that they comply with the UNFPOS.

Belonging to the NSS can bring the following benefits:

- strengthening the institutional quality, notably the professional independence, of each producer of statistics in line with the statistical law and strengthening the common staff culture within the NSS;
- supporting quality improvements and development of statistics;
- facilitating professional exchange within the NSS;

¹¹ Some NSOs are responsible for maintaining registers of units that are not protected by confidentiality, such as registers of territorial units, for both administrative and statistical purposes. As long as the function of the NSO is to update this register based on decisions by other bodies, and to make this register accessible to users or even to the public, there is no conflict with a fundamental principle of official statistics arising from such a task, although it cannot be considered an activity of official statistics.

- increasing awareness and use of common tools and standards as a major element of the common culture of official statistics;
- providing a strong mandate for surveys and ensuring access to the necessary administrative data;
- providing a higher status as a producer of official statistics in the country with the subsequent labelling of products;
- enabling the regulated exchange of individual data for statistical purposes within the NSS;
- keeping producers better informed of the latest international developments in statistics.

The GLOS recommends that the heads of other national producers are hired through a non-political process similar to the one recommended for the chief statistician. It may be desirable that the chief statistician is involved to a certain degree in such recruitment processes. Some NSSs may require the chief statistician's explicit consent for the appointment of heads of other national producers.

4.3.6 Overview of the main types of national statistical systems

The organization of NSSs can be grouped into the following categories:



A functionally centralised NSO as the only member, including its executive board if placed as an autonomous agency outside the main administration. The Central Bank's statistical department will also produce official statistics but may not formally be part of a system that comprises all official statistics. In federally organized countries, the NSO acts in this set-up as truly national statistical office and not only as a federal statistical office; there are no independent sub-national statistical offices.



An NSO as the core producer, in most cases located within the national government administration, and a limited number of other national producers, with various degrees of functional centralisation, and with coordination responsibilities for the chief statistician. The Central Bank's statistical department may be a part of such an NSS in which case this will typically be authorised in the law of the Bank. There are no independent sub-national statistical offices.



In federally organized countries, an **NSO with a high degree of functional centralisation acting as a federal statistical office**, a very limited number of other producers at the federal level, and independent sub-national statistical offices in most or all territories insofar as they are involved in the production of federal statistics. The chief statistician has the mandate to coordinate the system.

These are the main types found in practice, but there are many national variations of the three basic set-ups, either towards more complexity or, because of a relatively old statistical legislation, through some missing elements. For the second and third type, the Central Bank's statistical department should be a member of the national statistical system.

Many developing countries face a range of organizational and institutional difficulties to set up a comprehensive and effective NSS. In addition to a lack of resources, they often suffer from the following:

- each department and ministry have started to produce statistics in an uncoordinated way, mainly for in-house information needs;
- users in ministries have difficulties in specifying their information needs;
- it is not clear which data sources are exclusively for statistical use;
- there are no or only weak dedicated organizational units for official statistics in these departments and ministries;
- statistical staff, both in ministries and the NSO, may not have a statistical background and adequate training;
- statistical standards that are valid for all producers of statistics may be lacking, notably on quality management;

- neither data nor intermediate results are shared between producers before they are disseminated, and therefore the use of techniques like data integration or data matching is rare;
- dissemination to the public is irregular;
- there is no clear conceptual basis like the UNFPOS, and statistical laws are either non-existent or old and insufficient.

In such situations, there is a need to plan for enhancing the institutional and organizational frameworks of official statistics (see *Chapter 4.4.4 – The multi-annual statistical programme*). A development plan should have, as a strategic component, the establishment of an NSS based on a statistical law that contains the clear conceptual basis of the UNFPOS. It should also include an institutional framework for all producers, including the NSO, which is able to strengthen the system and shield the producers from undue interference into professional issues. At the same time, the plan should give a long-term perspective that might attract international donors for supporting the building of all types of capacities and skills necessary for a well-functioning NSS. This is also the opportunity to increase the functional centralisation of official statistics activities at the NSO and concentrate the staff with the required skills in the NSO, especially in small countries.

4.3.7 Including actors from outside the national statistical system

There may be a need to include in the NSS actors that normally wouldn't be part of the system for specific tasks and predetermined periods. In such cases, it is necessary to ensure that these actors are incorporated temporarily in the NSS are bound by the country's statistical legislation and the UNFPOS. This applies in particular to the confidentiality requirements concerning the exclusive use of data for statistical purposes. Such conditions arise typically when an external actor, public or private, is assigned by law or subcontracted for specific tasks related to official statistics, including processing confidential data. An example of the first case is the use of staff from local municipalities in traditional population censuses. Examples of the second case are the sub-contracting of telephone interviews for a given survey to a specialised private company, or the use of an IT centre dependent either on an administrative body or a private company.

In most cases of this type, the rules have to be even more restrictive than simply respecting all relevant provisions of the statistical legislation, by:

- including only a limited number of staff and not an organizational unit in its entirety;
- limiting the authorised use of data for statistical purposes to the narrow part of a statistical operation contained in the legal act or in the contract;
- prohibiting any forwarding of confidential data to other receivers than those prescribed;
- excluding any access to such data by non-authorised persons;
- handing over all data to the responsible producer at the latest at the end of the mandate.

The legal act or the contract would have to spell out these obligations. The producer listed as responsible in the statistical programme has the obligation to make sure that the involved persons respect these limits. However, the producer still bears the full professional responsibility for the process irrespective of any sub-contracting or delegation based on arrangements of this type. Such restrictions are also applicable to statistical departments of state administrations in federally organized countries that do not qualify as members of the national statistical system if they are involved in the production of a specific activity of federal official statistics.

With regard to IT centres, it is essential that at least the NSO as the main producer has full managerial responsibility for its IT used for the production and dissemination of official statistics. Similarly, the NSO should not be dependent on an IT centre under the responsibility of another part of the national administration for any processing that involves complete sets of confidential data protected by the statistical law¹². On the other hand, other national producers will depend on the IT of the parent body in most cases. Hence, the responsible producer must ensure that the staff from these non-statistical organizations and their superiors are aware of and respect the obligations that accompany their work on official statistics.

¹² However, activities like software development may be carried out by such centres for the NSO.

4.4 Annual and multi-annual planning and priority setting

4.4.1 Annual and multi-annual statistical programmes

In most countries, the NSO and other producers of official statistics spend considerable effort in planning their activities. In well-established NSSs, the planning is coordinated within the system, in most cases by the NSO, and the planning activities and the statistical plans or programmes are seen as important vehicles for coordinating the activities of the NSO and the various other producers of official statistics.

It is customary to distinguish between two types of statistical plans: annual programmes of work and multi-annual strategic plans. Plans for capacity building of NSSs and individual parts thereof belong to the multi-annual programmes. The annual work programmes and the multi-annual strategic plans are typically drawn up under auspices of the NSS and under the leadership of the NSO. Ideally, they should cover the activities and outputs of all producers of official statistics, i.e. all members of the NSS.

The main objectives of the statistical programmes are the following:

- Plan activities of the national statistical system in a coordinated way in order to ensure total coverage of statistical domains and avoid duplication and overlaps.
- Set priorities for the period that are compatible with a realistic overall resource envelope for official statistics. To make such decisions possible, an estimate of the resources for individual activities of official statistics, especially for new activities or extensions, has to be included.
- Obtain a mandate for the proposed set of statistical activities from the body to which the chief statistician reports, i.e. the government in most cases, or in some countries the executive board. The programmes legitimize the priorities proposed, the necessary data collections from respondents, and the necessary transmission of administrative data sets to the NSO or another producer of official statistics. In some countries, government approval or legitimization is not required.
- Allocate professional responsibility for a given set of activities of official statistics to individual national producers within the NSS.
- Define in federally organized countries, the extent to which the sub-national level must contribute to the production process of selected official statistics activities at the national level.
- Set the benchmarks against which the performance of the statistical system and of each producer will be evaluated.
- Serve as coherent framework for soliciting external assistance in the case of developing countries.
- To define a strategic plan for capacity building in developing countries and countries with major shortcomings in their statistical system.

The statistical programmes should quantify the resources that are necessary for the planned activities, showing at least the total cost of statistical activities for each national producer and, at least for the NSO, the cost of the main sets of statistical activities, e.g. by subject area. This allows the government (or the adopting body of the programme if there is one) to better evaluate the programme and make informed decisions thereon. The chief statistician should ensure that, if the programme is adopted in its entirety, it can be implemented from the resources and management point of view.

The statistical programme's adoption is an important step but is still not a guarantee that the competent authorities will provide the necessary resources in the annual central government budget. The central government budget will not show the appropriation of funds to the statistical system as a whole but to each of the institutions involved in the production of official statistics. Hence, this does not allow funds to be transferred from one national producer to another once the budgets are decided¹ (there may be exceptions to this in very special circumstances, such as in cases of transfer of tasks between institutions in very large joint projects, e.g. censuses).

¹ If the state level has to contribute to selected activities in the national programme, it is up to the budgetary process of each state to organize the necessary resources. The federal programme would include estimates of resources only if states would be reimbursed for parts or the total of their contribution from the federal budget, but this is rarely the case in practice and would have to be explicitly foreseen in the statistical legislation at federal level.

As one of the important system-wide responsibilities, statistical programmes should be prepared by the NSO with inputs from other national producers of official statistics.

The chief statistician as leader and coordinator of the NSS should define the process by which the various parts of the NSO and the other national producers prepare and submit their inputs to the relevant department of the NSO or to the distinct body in charge of coordination within the national statistical system in countries where such a body exists. At this stage, all proposals for including activities in the statistical programmes should be assessed in terms of their relevance and against the programmes' priority setting. To evaluate the proposals, the NSO has to have a good overview of user needs (see *Chapter 4.5.3 – Interaction with user groups outside the statistical advisory council: capturing their information needs*), as well as having an overview of existing official statistics and the data sources (surveys and administrative or other data sources) used in the production processes. It has to be knowledgeable about the multiple relationships between the various data sources and outputs, not only for the areas of responsibility of the NSO but also for those for which other producers are responsible. This means that the NSO has to build up some conceptual and methodological know-how in areas where the main responsibility is assigned to other producers.

The evaluation of proposals is not limited to those activities that are new or for which important modifications are proposed. Preparing the statistical programme entails a critical look at existing products, looking for possible efficiency gains, methodological improvements, and ways to make them compatible with newly developed international standards. One of the main purposes of the programme is to ensure that the producers respond to new information needs and aim to improve statistics that do not yet meet the principles of official statistics. The chief statistician can request changes and decide whether proposed activities should be included in the statistical programme as official statistics.

Concerning the use of new administrative data sources for official statistics or important changes in their use or content, it is desirable to include the administrative owner of the data in these discussions, irrespective of whether the administrative body has a statistical department that is part of the national statistical system or not. Sometimes, adjustments such as the use of economic activities classification are easier to apply before the data set is imported by the statistical system than afterwards. In such cases, the chief statistician has the important task of encouraging the administrative data owner to modify their processes accordingly and offer to assist in the implementation with advice and expertise by NSO staff. In some countries, the statistical law obliges the owner of administrative data to comply with requests from the NSO or chief statistician to make the administrative records as well fit for statistical purposes as possible. While this may not be possible or not fully possible, discussions between the chief statistician and the administrative authority should always be useful and may lead to closer cooperation than before. In some countries, such discussions have led to the establishment of formal agreements or memoranda of understanding, MoUs, on the use of the administrative data. Such MoUs may then involve specifications of the administrative data as well as provisions on the frequency and mode of delivery of the data or the access to the data by the NSO.

The Guidance on modernising statistical legislation UNECE 2018 , recommends inserting a provision in the statistical law by which providers of administrative data, when planning new data collections or revisions in existing data collections in a way that may significantly affect data provided for official statistics, would be obliged to consult the NSO in advance of the decision.

4.4.2 Types of statistical programmes

The national and federal statistical programmes of countries vary in the coverage, period covered, and focus. The GLOS recommends using both annual and multi-annual programmes. Proposals for their content are given under *Chapter 4.4.3 – Content of the annual statistical programme* and *Chapter 4.4.4 – The multi-annual statistical programme*.

There are several options open for determining the coverage of the statistical programme. The following four possibilities concerning national or federal programmes are discussed here:

- The statistical programme covers the statistical activities under the responsibility of the NSO.
- The programme covers all activities of official statistics carried out by national producers.
- The programme encompasses all statistical activities, whether official statistics or statistical services, carried out by producers of the national statistical system at the national level.

- The programme involves all government data collection activities for statistical, administrative, or combined purposes, plus the subsequent processing and dissemination of all kinds of statistical information, whether as official or other statistics.

From the conceptual point of view, the second option is preferable since it matches best the definition of official statistics. However, for national producers other than the NSO, it may be difficult to split the statistical department's total cost between official statistics and other statistical activities. From this point of view, most programmes, de facto, include all statistical activities of those organizational units that are national producers and thus follow the third option above. The first option is valid in countries with only one officially recognised producer of official statistics, the NSO. In both cases, the programme includes the activities of official statistics and other statistical activities in most countries, bringing the total of activities covered as closely as possible in line with the budgets of the national producers. In some countries, only the multiannual programme covers all national producers, whereas the annual programme is limited to the NSO.

However, it is important that in the first and third options above the programmes clearly assign the proposed outputs or activities to be either official statistics or additional statistical activities outside official statistics, with the understanding that in case of the necessity of downscaling the proposed programme because of insufficient resources, priority would be given to official statistics activities over the rest. It is also important that the statistical programmes do not contain any data collection or processing activities for administrative purposes in cases where the clear separation of statistical and administrative tasks has not yet been fully implemented. On the other side, where applicable, programmes should include statistical activities carried out by a national producer but financed from outside the responsible producer's budget (e.g. by international donors).

When sub-national statistical offices are members of the NSS, their contribution is mentioned as part of the national or federal activity under the responsibility of the NSO or another national producer. Statistical activities that sub-national statistical offices plan to carry out based on their own legislation at the state level should not be included in the national programmes. However, it is recommended that each sub-national statistical office has a plan for its statistical activities.

The fourth option mentioned above used to be applied in countries where the concept of official statistics covers all government data collection without distinction between administrative and statistical purposes. This used to be the case in centrally planned economies and some developing countries. It is not recommended as a good practice and will not be discussed further here.

The focus of the statistical programme can be on one or a combination of several of the following aspects:

- statistical activities (both strategic/new and other);- input data (statistical surveys and administrative or other data sources);
- outputs (main indicators and major breakdowns, notably the smallest sub-national level for which results should be produced);
- strategic developments and capacity building.

In most cases, programmes will be a selection and combination of the options above, to satisfy all stakeholders to a certain extent.

4.4.3 Content of the annual statistical programme

The annual programme, also referred to as the work programme, is an operative plan, preferably for the whole NSS, or separately for each producer at the national level, notably the NSO. The annual periodicity is proposed to provide the basis for the standard budgetary cycle and form a stable annual preparation process. However, countries with a biennial budgetary cycle will prefer a biennial statistical programme. The annual (or biennial) programme should fit into the longer-term framework of the multiannual programme and highlight possible additions to this framework that were not foreseen at the outset of the multiannual programme.

In general, the annual statistical programme covers all main inputs, outputs, and activities in the national statistical system: official statistics to be released; data sources, such as statistical surveys, administrative data, and any other data sets; and annual development activities.

The annual statistical programme will also provide a list of producers of official statistics with responsibilities for the relevant inputs, outputs, and activities. For many activities, the outputs are likely to be unchanged from the preceding annual programme, even if some of the inputs or processing methods change. From the user perspective, it is therefore important to highlight significant changes in output from the previous period, including those affecting existing time-series.

Users (with the possible exception of re-users) are mainly interested in the output, especially in new series (or discontinuation or downscaling of existing statistics), and less in the way they are produced. From their perspective, it is up to the statistical system to bundle similar needs from different users into a set of operational activities, each of them covering most information needs of various user groups in a given subject area effectively. The term “effectively” means to make maximum use of data that already exist, not only in the NSS, but in the administration at large, and to minimise extra data collection through statistical surveys with due regard to the response burden. To assess the resource implications, programmes have to present activities, especially data collection activities, in a suitable grouping to which cost can be assigned. If one of the purposes is to provide sufficient legitimacy for collecting data from respondents or accessing data sets from administrative bodies outside the statistical system, data sources must be explicitly mentioned.

All statistical activities and surveys carried out by the NSO, and other national producers should be covered by the annual programme regardless of the source of funding, be it producers’ budgets, budgets of other government bodies, or external funding, either from national or international sources. Any statistics that may be under development but are not yet considered official statistics may be covered in the programme under a separate heading.

The annual statistical programme informs about, and in many countries legitimizes, data collection from respondents necessary for the programme’s outputs, and that is not already collected elsewhere, e.g. through administrative activities. It also declares surveys voluntary or compulsory. In federal countries, it also indicates the activities the sub-national bodies have to be involved in; typically data collection. Information on the costs of data collection activities and estimates of the response burden should be included. The latter can be based on the approximate number and type of respondents and an assessment of the average time needed to fill in or respond to each questionnaire.

Transmission of administrative data to a producer should be specified in the annual statistical programme if relevant, to ensure smooth access to and use of administrative data in the production of official statistics. The transmission details can subsequently be fixed through bilateral agreements or memoranda of understanding between the administrative data provider and the responsible producer.

4.4.4 The multi-annual statistical programme

In some countries, a multi-annual statistical programme is drawn up at the same time as the annual work programme. These multi-annual activity plans, sometimes termed strategic plans, are not to be confused with major capacity building programmes as are frequently applied in developing countries and are discussed here below.

The purpose of the multi-annual programme is to outline medium-term plans, typically three to five years, for the statistical activities, particularly the development of statistics on new subject matters and changes in the composition of the statistical services and outputs, reflecting social and economic changes and changes in government policies. Hence, the multi-annual activity plans may reflect or set out specific goals for the activities in the medium term as well as indicate the main strategies for reaching the goals. One main purpose of the multi-annual programme is to ensure a balance between stability in the output on the one hand and changes due to new series or to important reductions in output on the other hand. This is important from the user perspective as it gives assurance that existing series are continued and that at the same time, some new information needs are taken on board. This is also important from the management point of view to avoid that too many simultaneous changes are undertaken and that new projects do not involve a risk of mutually reinforcing delays and other deficiencies.

The multi-annual activity plans normally extend to a period of three-five years. In some countries, the plans are also drawn up at such intervals. Another and better practice is to maintain the multi-annual plans as rolling plans which are renewed every year concomitant with the annual planning process or as an integral part of it.

Capacity building programmes are specific types of multi-annual statistical programmes. These refer to plans for major improvements in the statistical capacity of NSSs as are mainly undertaken in developing countries.

Such plans are normally supported by international development partners, such as international agencies or individual countries. They are frequently divided into strategic plans and implementation plans. The strategic plans are used to define the main shortcomings and needs of the statistical system and lay out the strategies for capacity building for improving the system and the services of the producers of official statistics. The implementation plans seek to spell out how and when the capacity building actions may be carried out and how they are funded.

The main examples of strategic plans for developing countries are the National Strategies for the Development of Statistics (NSDSs). These have been developed in cooperation by the international statistical and development community and advocated as critical first steps in capacity building in official statistics. The NSDSs (in some countries also called master plans or something similar) have come to include analysis of the current situation, setting of objectives and priorities, and discussion and selection of strategies. Plans or scenarios for implementation are often included to indicate the timing of major steps and major activities, but it is more common that those are subsequently developed in detail in cooperation with the development partner involved. The Partnership in Statistics for Development in the 21st Century (PARIS21) has been the main promoter of the NSDSs, working in close cooperation with the World Bank and various other institutions and countries involved in work and funding of NSDSs and similar plans.

The NSDSs or master plans focus on long-term challenges and strategic development of the NSS as a whole. This includes the following aspects:

- Strategies and priorities for developing statistics across the whole NSS. This is especially important for countries with major shortcomings in their legal and institutional set-up or their capacity to produce key statistics according to international standards.
- Specific issues identified for improvement, in particular horizontal or systemic issues.
- Analysis of changes of different user groups needs and changes in the context in which producers of official statistics are operating.
- Weighing the development needs against a realistic projection of available resources.

The GLOS recommends that the NSDSs or master plans are aligned with any major national development programmes or plans. It is crucial that the national statistical system's long-term strategic development, particularly for the NSO, gets support from the appropriate political body and access to funds for the overall national development programmes. In this context, the NSDS model developed by PARIS21² offers important guidance that many developing countries have used.

In preparing the programme, the NSO has to make sure that enough scope is given to crucial activities for which there may not be an explicit request from a user group within the country, such as:

- information that the public at large needs in a democratic society;
- anticipating future needs, notably for the implementation of forthcoming international standards of official statistics;
- information needs deriving from national development plans where they exist;
- systemic activities for the national statistical system as a whole, such as statistical registers or training activities for staff;
- forthcoming information needs of international organizations of which the country is a member;
- renewal or major update of key IT systems and other infrastructure;
- active participation in international activities of official statistics that have considerable resource implications, such as the ICP or capacity building in other countries.

² Guidelines for National Strategy for the Development of Statistics (NSDS)

4.4.5 Authority to take decisions on the programmes

The authority to adopt a statistical programme lies in most cases with either the government or, if the NSO is an autonomous agency, its executive board. In some countries, however, a formal adoption of the statistical programme is not required in which case the NSO just publishes it.

In the case of government adoption, care has to be taken that this decision does not extend to issues covered by professional independence. The government should, therefore, neither comment on nor change the way the development and production of statistics will be implemented, including the selection of data sources, concepts, definitions, methods and classifications to be used, and how the timing and content of all forms of dissemination will take place. However, the government may identify priorities for using the limited resources and request the development of new statistics or the reduction of the response burden of specific activities. Some countries foresee the presence of the chief statistician at the government meeting when statistical programmes are discussed; if this is not the case, the minister to whom the chief statistician is reporting has to be the spokesperson.

For activities of autonomous state bodies like the Central Bank covered by the statistical programmes, the government is not authorised to alter any elements agreed by the chief statistician with the Central Bank. Such activities feature in the programme for information purposes and are not for decision by the government.

The preparation of statistical programmes is a process within the statistical system that involves contacts with individual users or user groups (see *Chapter 4.5.3 – Interaction with user groups outside the statistical advisory council: capturing their information needs*).

In many countries, the draft programme is discussed or reviewed by a high-level body where all important user groups are represented before being submitted to the government for adoption.

This review aims to check whether the overall balance of the programme finds support across various user groups. This is one of the functions of an advisory body specific to the national statistical system that is featured in the GLOS and in the Guidance on modernising statistical legislation UNECE 2018 (9), and is called the statistical advisory council, hereafter SAC (see *Chapter 4.5.1 – The Statistical Advisory Council* for more details). The SAC expresses an opinion on the draft programme that is included in the submission for adoption by the government.

In the agency solution for the NSO, this discussion takes place at the executive board before it takes the decision on adoption. Being part of the national statistical system, the executive board may ask for changes of the draft in all respects within the limits of statistical legislation.

In view of the transparency principle, the adopted programmes and the opinion of the SAC should be made public. In some countries, the draft statistical programme is posted on the website of the NSO while it is under preparation. This is done to inform users and other main stakeholders of the programme's planned content and give them the opportunity to comment on the draft plans and suggest changes.

Some countries in which the government adopts statistical programmes go as far as adopting them in the form of lower-level legal acts. However, this will reduce the flexibility in implementation in the case of unforeseen developments. In countries where certain items of the statistical programme such as censuses, or statistical surveys with response obligation, require an explicit legal basis, these parts should be assembled in a legal act that can be adopted by the government separately³, and if the activity is to be repeated periodically, for a period until the end of the multi-annual programme. However, such legal acts should not be too detailed to allow the responsible producer the necessary fine-tuning according to professional standards and incorporate gradual improvements in methodology without having to change the legal act. In countries with the NSO as an autonomous agency with an executive board, the procedure for converting parts of the statistical programmes into legal acts, if it were necessary, would be the same, but it might require more time because of the separate bodies that adopt statistical programmes and lower-level legal acts.

³ For censuses, many countries require a law adopted by the Parliament rather than a government legal act. This level of legislation is in any case necessary if the census is not a purely statistical one, but is also used to update administrative registers, a use for which the statistical law cannot serve as a legal basis.

4.4.6 Follow-up and reporting

Once a programme is adopted, and responsibilities have been assigned, there must be monitoring mechanisms for the chief statistician to get information on implementation progress, not only for the activities of the NSO, but for all official statistics. It is recommended to include this function as part of the quality management processes (see *Chapter 7 - Quality Management*) used by the producers of official statistics, notably the NSO. The NSO must keep track of the degree of implementation of all activities in the programme, not only those in the responsibility of the NSO, so as to assess as early as possible the impact a delay in one activity may have on other activities. The NSO is also responsible for informing key users about delays. Changes in the timing of surveys have also to be communicated to the respondents' representatives, especially in the case of enterprises. Some countries require the establishment of interim reports for multi-annual programmes.

It is essential, as a corollary to professional independence and accountability to the government, users and the public to report on activities and deliveries of the NSS, including costs incurred. The adopted programmes are the benchmark against which performance can be assessed.

Therefore, most countries with statistical programmes require through the statistical law that the chief statistician prepares at the end of the period covered by a programme, a report evaluating the extent of implementation. The SAC or the executive board should review the report. Together with the opinion of the SAC or the executive board, the report should be made public to honour the principle of transparency. Some countries may ask for such reports to be formally brought to the attention of the government.

4.5 Involving users in the national statistical system

4.5.1 The Statistical Advisory Council

In many countries, the statistical law stipulates that a high-level advisory body assists the NSO or the NSS, referred to in the GLOS as a statistical advisory council (SAC). The SAC's role is to discuss and express views on strategic priorities and the relevance of statistical activities in terms of user needs. Such views may be addressed to the chief statistician, the NSO or another national producer or government. The authority to decide to what extent these opinions will be considered remains with the relevant institutions fixed by the statistical legislation.

The SAC should represent users and user communities, not producers. In institutional terms, it is, therefore, unlike the board in the agency model, not part of the NSS, which defines users as being outside the borderline. For this reason, the SAC should not be used as a body for coordination between producers, nor for the managing of individual statistical processes.

Conflicting views on methodological issues should not be brought before the SAC for decision either; this is not an issue for users, but for the professional statisticians within the statistical system, under the final authority of the chief statistician.

The size, role, composition, and effective ways of functioning of a SAC vary considerably from country to country. The rules are laid down in the statistical law and in lower-level legislation based on this law. One of the core functions of the SAC is the discussion of draft statistical programmes, be they multi-annual or annual, and of interim or final reports on their implementation.

Some considerations for an effective SAC, as included in the GLOS, are as follows:

- Legitimacy is higher when most SAC members come from outside the national administration. In selecting user institutions, priority should be given to those that use statistics from several domains, such as the government ministries with cross-cutting tasks, mass media, the Parliament, regional and local administrations, or multidisciplinary research institutions.
- The persons designated as members of the SAC should have sufficient seniority within the user institution or the user community they represent. For organizations like the Central Bank or the ministry of finance, which are both

users and producers of official statistics, the member has to represent his organization's user departments and not the department producing official statistics. The separate fora where the NSO interacts with other producers are described in *Chapter 4.6 – Coordination of the national statistical system*.

- The only SAC member who does not represent users of statistics is the chief statistician who acts as an ex-officio member.
- The NSO should act as secretariat for the SAC by providing its staff and premises.
- It is recommended that the SAC members' appointment is the responsibility of the same authority that appoints the chief statistician, i.e. the government in most cases, upon proposals by the bodies or groups to be represented. All stakeholders should be informed of the possibility to propose members for the SAC.
- It is the competence of the SAC to decide how it functions within the limits given by the statistical legislation. It elects a chairperson who preferably represents a user community from outside the government and the national administration. The legislation in some countries may prescribe that the chief statistician also acts as chairperson of the SAC. The SAC can foresee in its rules of procedure the creation of sub-groups for specific questions or domains.
- The SAC also acts as the advocate of the principles of official statistics. SAC members have an essential role to play within their communities and in public in terms of advocacy for the cause of official statistics. This may imply that the SAC discusses the interpretation and implementation of the principles and monitors the compliance of products and producers with the principles on its own initiative. The NSO or another producer may also submit a case related to one of the UNFPOS to the SAC for its opinion if it has broad implications beyond the statistical system and helps increase users and the public's awareness of these principles.¹
- Since the role of the SAC is to contribute to the relevance of official statistics, it will discuss both the coverage and quality of official statistics. In this respect, it may recommend independent external assessments of the quality of specific statistics or the implementation of the principles of official statistics in specific domains or activities are carried out.
- Opinions of the SAC and the results of the assessments should be made public.

Some countries have experienced difficulties in making a SAC work in practice, despite a good legal basis. It is not easy to find outsiders who have sufficient interest in official statistics across subject areas and to make them feel relevant as they are only members of an advisory body. This is especially the case when communication between the NSO and the members of the SAC is limited to one meeting per year. If the chief statistician is the chairperson of the SAC, he or she may take initiatives for activating the SAC. Another way of raising the level of interaction may involve individual members of the SAC as spokesperson to specific user communities (see *Chapter 4.5.3 – Interaction with user groups outside the statistical advisory council: capturing their information needs*). SAC members may also actively communicate with the media and participate in events organized by the scientific community and the social society.

4.5.2 Differences between the roles of SACs and executive boards

There are important differences between the mandates of SACs and executive boards in countries with the NSO as autonomous agency (see *Chapter 4.3.3 – Chief statistician*):

- The executive board can also decide on various issues that are binding for the NSO and possibly other producers, including, as noted in *Chapter 4.4.5 – Authority to take decisions on the programmes*.
- The executive board members are not, as in an advisory group, mainly spokesperson for a user community, but part of a decision-making body for the NSS and have therefore to put the interests of this system first. For this reason, the statistical legislation can foresee in such situations that, in addition to the executive board with decision-making function, an additional body composed of important users with an advisory role similar to the SAC be set up.

¹ Another option is to create in the statistical legislation a separate body for this function, with an advisory role, as is the case in the European Statistical System with the European Statistical Governance Advisory Board (ESGAB). In a few countries, similar bodies exist at national level, but in general, this function is carried out by the NSO (or by the separate administrative body created for coordination of official statistics) with support from the SAC or the executive board as part of the coordination activities for the national statistical system.

- The chief statistician is often the chairperson (or at least the executive board's deputy chairperson).
- As decision-making body, the size of the executive board shouldn't be large. Its members should preferably have a sufficiently senior level but also enough time to participate actively in meetings and work of the executive board.
- Members of executive boards can be appointed from selected user organizations or communities but also from other stakeholders. In the case of an NSO as an agency and other producers that are officially part of the NSS, the other producers are also members of the executive board.
- The executive board is not only advocating for the cause of official statistics but is also monitoring to what extent the producers of official statistics comply with the UNFPOS.

4.5.3 Interaction with user groups outside the statistical advisory council: capturing their information needs

In the context of official statistics, users are typically classified into user groups. This classification may vary between countries.

In the present context, the following user groups are distinguished:

- government, Parliament, and ministries with a broad remit such as the ministry of finance at the national level;
- specialised ministries such as health, education, agriculture at the national level;
- regional and local administrations;
- mass media;
- large businesses;
- small and medium-size businesses;
- the scientific community, including research institutions;
- schools and universities;
- international and supra-national organizations (including their statistical departments);
- non-governmental organizations and the civil society.

It is crucial for the NSO and the other producers in their areas of responsibility to establish networks with these user groups to obtain their substantive inputs and feedback regularly. Such networks allow contacts on an on-going basis and more frequently and less formally than in the context of the SAC. Their function is in the first instance to formulate their needs for statistical information from the NSS. User networks are a key element in minimising the risk of losing touch with changing reality and becoming less relevant over time in the production and dissemination of official statistics (See *Chapter 6 - Users and their Needs*).

Information needs are best formulated in terms of quantitative output content, periodicity, and major breakdowns. The extent of sub-national breakdowns between national aggregates and small area results is a dimension with considerable impact on the activity's volume and cost. Sometimes, users cannot express their information needs in terms that can easily be translated into indicators and in subsequent steps into statistical sources or data collection vehicles. The latter is the producers' main task, but the users should be involved so that they can assess the impact of various options. Furthermore, producers should make an effort to invite the representatives of users that are part of these networks to think ahead to anticipate future information needs that may arise, e.g. through new legislation.

As part of what relevance means for the users, many users press for shorter delays in the production of official statistics, up to the extreme of "real-time" statistics. Whereas some gradual improvements in timeliness are possible, this request is difficult to reconcile with the high-quality standards and benchmark function of official statistics. User networks and the SAC are channels by which the difference between official and other statistics can be communicated to users, emphasizing that for requests for "quick and dirty" jobs, they would have to turn to other providers, typically accepting lower quality. One partial solution for increasing the timeliness of official statistics may be the release of key "provisional" results ahead

of the full set of final results. Still, quality standards and quality management procedures would have to be set up for such provisional results.

Policymakers have an increasing need to monitor their policy actions and consequences through quantitative indicators. Therefore, the NSO should proactively follow legislative developments and emerging requests for statistics and indicators across ministries to timely address these needs. In some countries, official statistics can even be used to allocate seats or distribute subsidies. Therefore, it is desirable that the NSO plays a role and gives advice about the adequacy of various indicators to monitor or even steer policy actions. However, it should clarify its role as producer of high-quality, timely and disaggregated indicators but not as part of policy decision-making. When policymakers require indicators for this purpose that deviate from definitions and classifications of official statistics, the statistical system should be ready to produce them as tailor-made statistical services but continue to publish as official statistics the results based on the concepts and definitions internationally agreed upon and applied across the national statistical systems².

4.5.4 Other aspects related to the UNFPOS in the organized interactions with users

Networking with user groups is not only crucial for gathering knowledge about the demand for new statistics. It should also be used to obtain feedback on the current statistical activities and deliveries as included in the existing programmes, and how statistics are made accessible to specific user groups (see *Chapter 10 - Dissemination of Official Statistics*). Users identified by the producer within a specific dissemination channel can be surveyed for their satisfaction with the statistical products and how they are disseminated. Additional instruments to obtain information about users can be used for web users.

User networks can also be used for discussing issues of the supply side of official statistics, such as:

- access to administrative data in the case of ministries;
- response burden caused by statistical surveys in the case of businesses;
- with individual large businesses, updating their structure and changes in their structure as an important element in keeping statistical business registers up-to-date;
- possible joint ventures to test new methods for official statistics in the case of research institutions.

Networks with the statistical departments of international organizations exist not only to satisfy their data requests. From a national perspective, it is even more important to have the opportunity to participate in international efforts to derive new and revised standards for official statistics, to learn from the experience of other countries, and to engage in other projects led or partly financed by international organizations or donors. Networking with international statistical organizations may also allow the NSO or NSS to participate in peer reviews and assessments, either as systems to be assessed or through enabling experienced staff to be part of a team of experts to assess national statistical systems in other countries.

The statistical system can also help users make good use of official statistics by organizing training events for specific customers, particularly for the media that eventually reach a larger audience. It is also essential to keep privileged relations with more institutional users of statistics such as the government and the administration and inform them in advance about possible disruptive changes in times series due to revisions or the adoption of new international methodologies and standards.

As a public good, the results of official statistics can be used by everybody at his or her own responsibility. The only obligation is to indicate the source. However, according to the fourth fundamental principle, producers are entitled to comment on erroneous interpretation and misuse of statistics, if necessary, also publicly. Erroneous interpretation or misuse takes place, e.g. when a user disregards the limits to the interpretation of a statistical release; in this case, the NSO or the responsible producer should contact the user to prevent this from happening again. Another example would be a ministry communicating about a specific situation using other statistics than those produced for the same subject area by the NSS; without giving reasons.

² Example: a specific law may provide for funds to be indexed with the consumer price index but excluding certain good or services. The statistical system should provide an index defined in this way, but the main CPI published as official statistics should continue to include the goods and services excluded in the specific context of the non-statistical legislation.

It is within the chief statistician's authority to set up specific advisory groups for one or several of the above purposes and decide on their mandates and composition. He or she may prefer, in certain cases, to involve the SAC (or the executive board) to adopt the mandate and to act as the body to which such groups report, or to invite members of the SAC (or executive board) to participate in such groups. These groups can be set up for a limited or unlimited duration. In any case, it is important to be clear about the reporting so that their effectiveness can be assessed.

4.5.5 User access to confidential data for their own statistical purposes

Once a specific data set subject to confidentiality is within the NSS, this data set can only be used for statistical purposes, including experimental statistics, research or analytical activities by a producer of official statistics. The access to that specific data set is regulated by the statistical law and is under the responsibility of the producer in charge of acquiring and processing this data set as foreseen in the statistical programmes.

Confidential data set can be shared between producers of official statistics only if the producers are unambiguously identified in the statistical programme as producers of official statistics and bound by the statistical legislation.

For countries not having the confidential provision explicitly applicable to all producers or a blurred delineation of the NSS, the exchange of confidential data should only operate from another (pseudo-)producer to the NSO; but not the other way around nor between (pseudo-)producers. A solution to that specific situation or during a transition phase would be to allow the transfer of individual data without identifier from the NSO and other producers of official statistics. It should be the chief statistician's prerogative to decide, on a case to case basis, if the conditions are met to share confidential data with other producers of official statistics; the risk being that confidential data is then shared by the other producers of official statistics with other non-statistical entities within their respective MDAs.

However, most statistical laws also provide for access to anonymised individual data without to be granted to selected users outside the statistical systems, for extensive research or analytical activities, following strict protocols based on a contract.

These users must be part of the scientific community, avail themselves of the means and expertise necessary to protect the integrity of the data, have no conflict of interest leading to the identification of statistical units, and commit to the exclusive use of the data transmitted for the described research purposes. Because of these constraints, there is an institutional and legal difficulty in granting the same form of access to government departments, since they may have a conflict of interest in terms of using data beyond the limits of statistical purpose (e.g. through re-identification of statistical units by matching data from the statistical system with their own data sets from administrative data collections).

One solution to this limitation would be for the statistical legislation to allow the producers of official statistics, particularly the NSO, to **provide data processing services to government departments** and other users beyond the public sector. Statistical processing services should not be funded from the regular budget of the NSO, and therefore customers requesting statistical services would have to pay for the additional costs of the required processing. While statistical processing services are essential for promoting the use of data, producers of official statistics should have the right to decide which processing services to engage in. They should first ensure sufficient resources for the activities mandated through the statistical programmes to ensure the highest quality of the regular production of statistics. Finally, the principle of confidentiality must be strictly observed, and results of data processing services do not allow natural or legal persons to be identified directly or indirectly.

A second solution for ministries is **establishing a research department** that is organizationally separated from the administrative departments. If this separation is credible, such a department could be considered a research institution covered by the relevant legal provisions of access to confidential data from official statistics for scientific purposes.

4.6 Coordination of the national statistical system

4.6.1 The how and why of coordination

Regardless of the number of producers within a national statistical system, it is necessary to coordinate the activities of the system, for the following reasons:

- to ensure comparability between the various outputs, also across subject areas, so that they can be meaningfully related to each other using common target universes, common classifications and unambiguous terminology of concepts;
- to avoid duplication of efforts and undue burdening of respondents through collecting data through surveys when similar data exist as part of administrative records;
- to ensure that official statistics cover all socially important subject areas;
- to enhance the image of official statistics through branding and common release practices;
- to ensure that the best possible data are forwarded to international organizations;
- to ensure in federally organized countries that the information needs at sub-national level are incorporated efficiently into the national programme to reduce the need for additional statistical surveys to be carried out at the sub-national level.

The scope of coordination should at least cover the scope of the statistical programmes (see *Chapter 4.4 – Annual and multi-annual planning and priority setting*). In federally organized countries, an effort should be made by the NSO to look for coordination issues and possible efficiency gains also between federal and state-level activities. In some other cases, coordination has to go beyond the NSS activities, and include data from other origins, such as indicator sets required for national policies or by international organizations.

To make coordination work in practice is the responsibility of the chief statistician and the NSO (or the separate body in charge of coordinating the NSS). However, the other producers should not have reasons to perceive this function as an infringement of the NSO into “their” affairs, but as a mutually beneficial activity from which all producers benefit. For the NSO, a useful way of building a positive attitude by other producers is to couple coordination with advice and services like sampling, with sharing information about on-going activities at the international level, and with a participatory process of regular meetings with the other producers of the system to prepare the decisions to be made by the chief statistician.

This participatory process can take place either multilaterally in a process involving all producers if the issue is a cross-sectional one, or bilaterally with the producer directly affected by, e.g. a subject-oriented standard. For the multilateral aspects, the chief statistician may set up a coordination body, consisting of the heads of all producers, that meets regularly and advises the chief statistician. The flexibility of such a coordination body is essential, and therefore detail functional and governance modalities should not be ruled in a legal text.

Co-ordination is not only explicitly mentioned as an obligation in the UNFPOS. Recent decisions at the UN level also require NSOs to explicitly ensure coordination in the production and transmission to the UN of the SDG indicators, produced by various national actors¹. A similar obligation for NSOs of Member States is included in the statistical law of the European Union².

The main mechanism for coordination is the preparation but also the implementation of the multi-annual and annual statistical programmes.

Specific mechanisms such as project groups or memoranda of understanding involving all actors could be set up to ensure that a particular activity is followed closely, and operational steps are laid down precisely. A proactive approach is much preferred to some of the traditional mechanisms of coordination, such as the approval of questionnaires since they become active only at a stage in the process that is too late to consider changes that improve outputs and avoid overlaps.

¹ Resolution 71/313 (🔗) on the Global indicator framework for the Sustainable Development Goals and targets of the 2030 Agenda for Sustainable Development, adopted by the UN General Assembly on 6 July 2017

² Regulation (EC) No 223/2009 (🔗) of the European Parliament and of the Council of 11 March 2009 on European statistics, and the additional provisions based on this law.

Other coordination instruments complement the preparation of statistical programmes. They have to find a basis in the statistical legislation, mostly at a lower level than the statistical law itself. Only the chief statistician's authority, in consultation with other producers of official statistics, to endorse system-wide standards should have an explicit basis in the law itself. Some mechanisms are listed below:

- Standards on the implementation of the UNFPOS;
- Content-oriented standards;
- Methodological standards;
- Dissemination standards;
- Standards on metadata, documentation, and archiving;
- Standards on statistic-specific processes, notably quality management;
- IT standards, including standards on data security;
- Approval-based instruments outside the statistical programmes;
- Staff-oriented instruments.

However, there are statistical laws that are silent about the system-wide authority of the chief statistician. This case, frequently found in developing countries, is equivalent to a purely voluntary approach to coordination, leaving the decision on respecting a system-internal standard to each producer. Even if the NSO is in charge of preparing statistical programmes, the chief statistician would not have the authority to demand changes in activities proposed by other producers for inclusion in the statistical programme. In this situation, bringing as many activities of official statistics as possible under the line authority of the chief statistician is beneficial, if the legal basis cannot be upgraded in terms of the system-wide authority of the chief statistician. Given the growing interrelationships between statistical activities, such as the same set of data can be an input for more than one statistics, the need for better coordination is essential.

4.6.2 Coordination through standards

Coordination through setting standards that are valid for the whole statistical system is the second most important coordination tool. Although the chief statistician has the final authority to decide on such standards and their updating, all relevant producers must prepare these standards before they are formally adopted and generally made applicable through the participatory process mentioned in the previous section. Some countries' legal tradition may require that such standards are also issued as lower-level legal acts, but this is better avoided. If a co-ordination issue involves only one producer in addition to the NSO, agreements or memoranda of understanding between the two organizations may be a good option.

Setting standards, especially content-oriented standards, is greatly facilitated by adopting the standards established at the international level to the maximum extent. Recently, the international statistical community has also developed international standards concerning metadata, data transmission, business architecture, or access to confidential data for research purposes, including in some cases national examples of good practices. The references to such international and national standards are given in the respective chapters of this handbook.

Not all UNFPOS principles need explicit standards to assist producers in respecting them. The principle that may be the first candidate for standards is the principle of confidentiality, notably for the transmission of confidential data between producers and the scientific community (see [Chapter 4.5.5 – User access to confidential data for their own statistical purposes](#)). Other elements for standards of this type are the suppression of small aggregates with a disclosure risk of information about a single statistical unit that could be identified indirectly, the handling of identifiers in the different forms of data collections, and access to and use of statistical registers. Equally important as setting standards is establishing a mechanism by which controversial issues related to one of the UNFPOS can be discussed and decided. Such a mechanism would apply both internally to the NSO and between producers. Over time this may allow a kind of collection of case law that serves as a model for treating similar cases. Cases that have a wider bearing for users and the public can also be brought before the SAC or the executive board.

The content-oriented standards comprise classifications, terminology, and definitions to be used across all official statistics areas. The purpose is to ensure that the same term is used for one concept and that different terms are assigned to different concepts. A corollary of this task for the NSO is to establish and maintain a glossary of terms and definitions used in official statistics and to work out conversion keys when important classifications undergo changes. In some cases, the national standard-setting consists mainly of fixing the terminology in national languages that corresponds best to the terminology used in an international standard.

Classifications such as the economic activity classifications are fundamental to ensure the coherence of statistics from various data sources in a subject area like economic statistics. When a national statistical system adopts international classifications, national specificities can be incorporated, but preferably in such a way that they do not form an obstacle to international comparisons. This can be a problem when these national specifications reflect legal or administrative categories used in non-statistical legislation, especially when these categories change frequently. Generally, it has to be avoided that classifications used in the NSS and crucial for international comparisons to become dependent on categories fixed in national non-statistical legislation. On the other hand, national users may have a legitimate need for statistics that reflect the nationally relevant categories. The considerations given in *Chapter 4.5.3 – Interaction with user groups outside the statistical advisory council: capturing their information needs* concerning the use of official statistics for administrative allocation purposes are applicable also in such cases to satisfy both types of user needs.

Methodological standards in the narrow sense refer to issues like sampling, treatment of non-response, imputations etc. It is more important that the methodological department of the NSO advises the rest of the NSO and other producers than to issue rigid standards. However, all sample surveys of official statistics should use, when applicable, the statistical registers managed by the NSO as sampling frames.

Dissemination standards are related both to standards about the implementation of the UNFPOS and those on processes. One example related to impartiality in dissemination is setting clear rules to ensure that all users, including those from government or parent bodies, have simultaneous access to results when released and ban any pre-release access to anybody outside the statistical system. Other examples for dissemination standards are about using the label of official statistics, a common internet platform for all results of official statistics, managed by the NSO but open to all producers, or the metadata that must accompany results (see below). A common dissemination platform for all results of official statistics from the entire NSS in the responsibility of the NSO is a very efficient and user-friendly tool to ensure harmonised dissemination by all producers, including metadata.

A crucial part of the standards in official statistics is related to metadata and documentation. For both system-internal purposes and access by users, documentation about sources, methods, and definitions is essential to honour the principle of transparency. The NSO, in cooperation with the other producers, should establish guidance or rules in this respect, both for accompanying sets of individual data from which results of official statistics are generated and accompanying results that are disseminated. The NSO should also be available for advice on how to apply such rules in particular circumstances. Together with the national archive, the NSO should also work out standards for archiving data sets and products from official statistics. However, data sets should be available within the statistical system for some time to facilitate processing any request that would come up at a later stage.

Another important set of standards refers to processes common to the production and dissemination of many official statistics activities. Examples of such standards are:

- collection of information about user needs as an input into draft statistical programmes;
- quality management, and definition of quality criteria for results to be released as official statistics;
- revisions of existing series, e.g. due to new benchmark data such as censuses, or the implementation of a revised international standard also for past periods;
- correction of errors in published results;
- testing of new or modified data collection vehicles, notably questionnaires;
- transmission of data to international organizations.

Concerning data transmission to international organizations from national producers, the NSO has to define a process by which it is ensured that the most authoritative national data are transmitted, together with the necessary metadata. This

applies particularly when the data is not simply a subset of a regular production process within official statistics, or when the transmission involves the selection and transmission of data across different areas of responsibility within the NSS.

4.6.3 Operational coordination by the chief statistician

The implementation of internal NSO activities follows the management rules of the NSO, which foresee periodic reporting to and approvals by different levels of the hierarchy at appropriate junctures. These are questions of the internal organization of the NSO addressed in more detail in *Chapter 5 - The National Statistical Office*.

It is the producers of official statistics' responsibility to implement the activities and deliver the statistical results assigned to them in the statistical programmes. Where interdependencies exist with activities of the NSO, or any other producer, regular cooperation, collaboration and exchange of information should occur. But formal interventions or explicit approvals by the Chief Statistician are not recommended generally for operational activities conducted by other producers. This could undermine the sense of responsibility of individual producers and cause unnecessary delays. An exception could be the adoption of new terminology and definitions for statistical results that the chief statistician has not endorsed. Consistent terminology and definitions should be used across the NSS. However, the operational coordination through the chief statistician's approval should not delay, more than needed, the overall production process and eventually, the dissemination of the results.

A traditional approach of coordination is the approval of forms for all data collection for statistical purposes by the NSO. In the modern way of producing official statistics, where many sources are combined for producing results, such a formal approach is unlikely to produce value-added. Piloting a new or modified survey with a small set of respondents would probably contribute more to the improvement of questionnaires than a formal approval by the chief statistician.

4.6.4 Coordination through staff policies

The set of shared standards, rules of procedures, and guidelines constitute a key element of what is referred to as a common culture of official statistics in a country. They transform the intentions of the statistical legislation into operational rules that respond to issues most staff would be confronted with in their respective duties. However, staff will not automatically use such standards if they are not aware of them, or if they remain too abstract to serve them in their daily work. Therefore, training staff on when and how to use the various standards, rules of procedures, and guidelines is essential and can be considered the third important coordination mechanism. Most NSOs organize such training for their staff, but staff from other producers at the national and sub-national levels should be encouraged to participate in these training events for official statistics. In particular, in decentralised NSSs, the statistical departments of other national producers of official statistics are confronted with the cultural environment of their respective MDAs and such training courses mingling, statisticians from the NSO and the other producers of official statistics may contribute to the development of a common official statistics culture within the NSS.

Some countries with a substantial number of other national producers use a system of exchange or rotation of staff between producers to ensure that the culture of official statistics is effectively spread to all members of the national statistical system.

If this takes place at a sufficiently high level, it is an effective way of strengthening the notion of a system of official statistics as a single-family. However, this would not replace other coordination instruments necessary at a more operational level.