

Report on the Project “Improving trainings that focus on coordination of the National Statistical System”

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Abbreviations

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| DDI | Data Documentation Initiative |
| GAMSO | Generic Activity Model for Statistical Organisations |
| GIST | Global Network of Institutes for Statistical Training |
| GSBPM | Generic Statistical Business Process Model |
| NSO | National Statistical Office |
| NSS | National Statistical System |
| OPOS | Other Producer(s) of Official Statistics (i.e., other than NSO) |
| SDG | Sustainable Development Goals |
| SDMX | Statistical Data and Metadata eXchange |
| UN-NQAF | National Quality Assurance Framework |

1. Executive summary

This report has been produced for the Global Network of Institutions for Statistical Training (GIST) and is funded by the GIST secretariat, the United Nations Statistics Division, Department of Economic and Social Affairs (DESA). The report is developed as a response to needs identified among National Statistical Offices (NSOs) by the GIST task team on addressing NSO demands.

The report is based on interviews with authorities in eight countries: Armenia, Ethiopia, Fiji, Ghana, Mexico, Morocco, Mozambique, and Vietnam. In all countries the National Statistical Office (NSO) was interviewed, and in two of them there were additional interviews with other producers of official statistics (OPOS). The author wishes to thank these authorities for their contributions and their engagement and openness in the discussions.

The report proposes to urge the countries that do not have a legislation enhancing the coordination of NSS to work to implement such legislation.

It further proposes the development of a training program concerning the coordination of NSS for NSO and OPOS staff and management. A recommended way forward is e-learning programs, developed by national NSOs and adapted and offered by international organisations to NSOs and OPOS in countries. Also, it is recommended that international donors help the coordination of NSS in countries by financing international experts as mentors for the management of NSOs.

2. Purpose and scope of the project

The aim of the project is to propose how the coordination of NSS in countries could be strengthened through training. For the purpose of this report, the delimitation of the NSS will be narrower than used in some references.

2.1 Delimitation of the National Statistical System (NSS) in this project

NSS is defined as comprising all entities directly engaged in the production of Official Statistics; it comprises their statistical processes and output statistics, and the dissemination of statistics and metadata to all kinds of users in and outside the country.

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| Definition of Official Statistics: |
| Official Statistics is in this report defined as statistics on all major areas of citizens' lives, such as economic and social development, living conditions, health, education, and the environment ¹ , produced by state or national agencies as a common good and suited to be used as a basis for policy making and policy evaluation, as well as decisions by public and private actors. In order to be recognised as Official Statistics it should comply with certain standards on quality and content as laid down in national guidelines and in line with the UN Fundamental Principles of Official Statistics ² . Official Statistics and its producers may be defined in national law, but it is not necessarily so. |

The National Statistical Office (NSO) is the central producer of Official Statistics and acts as the coordinator of Official Statistics, and thus of the NSS.

In addition, there are other national authorities engaged in the production of Official Statistics (Other Producers of Official Statistics, OPOS); these can be ministries or agencies.

Some definitions of NSS also comprise the public authorities who do not themselves compile Official Statistics but provide basic data for this, e.g., a civil population register; their data are created for administrative purposes, and their use for statistics is a secondary use. The report will only touch upon the cooperation with providers of basic data in stressing that the access to and use of the administrative basic data for statistics by the NSO and the OPOS should be coordinated.

2.2 The importance of coordination

For users of statistics, be they national or international, it is of utmost importance that Official Statistics are coherent and well defined. A key element in this is the publication of metadata along with the data that specify collection and processing approaches, concepts and definitions. The data and statistics may show variations in the results from different producers, e.g., if the collection approaches or definitions differ, but it should always be possible to understand where the differences lie. The different producers should also, as far as possible, seek to harmonize approaches, including concepts and definitions to avoid confusion among users. It should also be meaningful to divide one indicator from one producer by one from another producer to make a rate or coefficient without having to fear meaningless or misleading results. Users should not have to be concerned with who produced what, i.e., how government has organised the statistics production. Therefore concepts,

¹ UN (2020_1); Wikipedia (2020)

² UN (2014)

classifications and methods must be harmonised, and they must be in accordance with international standards³.

Users should be able to easily find and distinguish high quality information such as Official Statistics, and they should be assured they can rely on this information as a basis for their decisions. This requires some kind of certification of the quality, which should be managed by the coordinator of the NSS. It also calls for coherent dissemination of Official Statistics.

Efficiency concerns also dictate that Official Statistics should be coordinated to avoid duplication of work, and to ensure that the most efficient and effective methods are used throughout the system.

2.3 Organisation of NSS

The way government is structured is crucial to the task of coordination of the NSS. In some countries the production of Official Statistics is very centralised, having one organisation (NSO) responsible for almost all Official Statistics, which should make coordination more manageable. In others, the production is spread out on a large number of organisations.

Another important feature is the regional organisation within the country: The NSO as well as other producers may be concentrated in one location, or they may have regional branches. This has implications for the approach that needs to be taken. If the NSO and several OPOS each have their own regional branches, coordination may become quite complicated.

The legislation governing Official Statistics also differs between countries and impacts on coordination. Differences are:

- Is there a Law instituting an independent NSO?
- Does the Law mention Official Statistics produced by other producers of official statistics?
- Does the Law recognize the NSO as the leader of a NSS with powers to coordinate?
- Does the Law set up an organisational structure for coordination?
- Does the Law prescribe a system of common statistical plans or programmes for the NSS?

The functioning of coordination of NSS also depends on aspects of organisation:

- The number of OPOS. Obviously, it is easier to coordinate if there are rather few actors than if there are many. In this sense a total centralisation of statistics production would be ideal, but on the other hand, this is quite unrealistic and hardly exists in any country, and the decentralised organisation has the advantage of bringing key users close to the producers.
- Is there a functioning coordination committee or structure of committees? Without such a committee structure it is not possible to coordinate. Even if a committee structure is laid down in the legislation, it may not be possible to make it work in practice.
- Have Memoranda of Understanding (MoU) been drawn up and signed between the NSO and some or all OPOS?

³ UN (2014)

2.4 Training for NSS

Training programs can help shaping good coordination and functioning of the NSS. This training can be carried out by the NSO, by OPOS, or jointly by some or all partners, and can be helped by or in collaboration with outsiders, such as national training institutes or universities, international organisations, international assistance programs, NGOs, and other donors.

All the organisations in NSS may have training programs. The way they are organised and the contents of the training programs of course determine, to which extent they contribute to enhancing NSS:

- Is there training for NSO staff in the concept of NSS and related subjects?
- Is there training for OPOS staff in the concept of NSS and related subjects?
- Does NSO conduct systematic training in NSS related subjects of OPOS?
- Is there a common training program for new statisticians in NSO and OPOS?

Most of the countries contributing to this report felt a strong need for more systematic training programs and, especially, training relating to NSS coordination and to establishing closer links and common ground between partners of the NSS through training.

E-learning played an increasing role in several countries as an affordable and meaningful way to accommodate these and other training needs. However, it was difficult to find suitable courses aiming directly at the field of subjects related to NSS coordination. It was a wish that more relevant e-learning offers should be made available from international platforms.

3. Discussions with countries

This report is based on a number of interviews with authorities in eight countries: Armenia, Ethiopia, Fiji, Ghana, Mexico, Morocco, Mozambique, and Vietnam. The NSOs were the primary interview partners, but it was also attempted to get interviews with OPOS in order to get a better knowledge of their situation regarding participation in NSS coordination and training related to this; interviews with OPOS have so far only been carried through in two countries, Morocco and Ghana.

The question frame of these interviews can be seen in Annex 1, but the interviews were informal and not restricted to the questions in the frame. Some countries had prepared a presentation of their NSS and its coordination. Some of the interviews were conducted together with consultants from the parallel modules of the GIST consultancies on internal training and administrative data as a basis for statistics. The main points found in each of these interviews are shown in Annex 2. The interviews have taken place during December 2020 and January 2021.

A brief overview of some aspects of coordination of NSS are found in Table 1.

| | | Armenia | Ethiopia | Fiji | Ghana | Mexico | Morocco | Mozambique | Vietnam |
|--------------|--|---------|----------------|------|--|---------|-----------|----------------|----------|
| Legislation | Is there a Law instituting an independent NSO? | yes | yes | yes | yes | yes | yes | yes | yes |
| | Does the Law mention Official Statistics produced by other national agencies? | yes | no | no | yes | yes | yes | yes | yes |
| | Does the Law recognize the NSO as the leader of a NSS with powers to coordinate? | yes | yes | yes | yes | yes | no | yes | yes |
| | Does the Law set up an organisational structure for coordination? | yes | no | no | yes | yes | no | yes | yes |
| | Does the Law set up a common statistical plan for the NSS? | yes | no | no | yes | yes | no | yes | yes |
| Organisation | Number of OPOS | Two | large, unknown | One | 16 recognised, number is larger, unknown | unknown | around 40 | large, unknown | 22 |
| | Is there a functioning coordination committee | yes | no | no | yes, but not working | yes | no | yes | no |
| | MoU | yes | no | yes | no | yes | yes | yes | 10 of 22 |
| Training | Is there training for NSO staff in the concept of NSS and related subjects? | yes | no | no | no | yes | no | no | no |
| | Is there training for OPOS staff in the concept of NSS and related subjects? | no | no | no | no | yes | no | no | no |
| | Does NSO conduct systematic training in NSS related subjects for OPOS? | yes | no | no | no | yes | no | no | no |
| | Is there a common training program for new statisticians in NSO and OPOS? | no | no | no | no | yes | no | no | no |

Table 1. Summary of main points found in interviews.

4. What has been learnt

4.1 The present state of NSS coordination and cooperation

The development of NSS is at different stages in different countries. It is an ever evolving, evolutionary process. The countries in this study also are in different stages of this evolution, and this has an impact on which measures might be relevant for them.

In all the interviewed countries, the NSO was producing more than half of the official statistics, while OPOS produced the rest. The OPOS would have their own data collections from own surveys or their own administrative sources. Typically, the statistical units of OPOS were quite small, with notable exceptions such as the National Bank which would have a large statistics department.

There is a very well developed and effective coordination in Mexico, based on a Law with appropriate coordination powers for the NSO, also defining a strong organisation of the necessary cooperation. Mexico also has well developed training programs for the NSO as well as for OPOS, and there is common training for staff from all statistical partners. These programs include elaborated e-learning courses for all NSS partners on important issues of coordination, courses that could be used as a paradigm or inspiration for use in many other countries.

Other interviewed countries lack the legislation on NSS and its coordination powers, while some have a legislation that has not been fully implemented because of difficult circumstances, including covid-19.

4.2 Problems and opportunities regarding NSS coordination

Measures that may promote the coordination of the NSS include:

1. A Law that establishes a legal basis for the NSS, including its organisation, powers to coordinate, and principles that must be followed
2. Regulations or descriptions of standards to be followed throughout the NSS regarding planning, data collection, processing, dissemination, data protection and confidentiality, quality assurance and metadata
3. Sharing among NSS members of data registers and sampling frames of key statistical units
4. Methodological help and guidance to OPOS from NSO, e.g., on sampling, seasonal adjustment, and data protection
5. Common dissemination or shared expertise in dissemination of statistics
6. Coordinated reporting to international organisations
7. Common metadata systems or assistance to OPOS on metadata
8. Certification system for Official Statistics
9. Training

The situation in relation to each of these points in the interviewed countries differs, as described below.

In relation to point 1, the Law, one of the interviewed countries, Morocco, has real problems with legislation that need to be remedied in order to support coordination: they have a statistics law, but the law does not ensure coordination powers and a workable organisational structure. In one country, Ghana, there was good legislation in place, but because of practical obstacles it had not been possible to realise its intentions regarding

coordination of NSS. If countries wish to improve the statistics law with a view to NSS coordination and wish to establish training for this, they could take inspiration from the UN generic law on Official Statistics⁴.

In relation to point 2, regulations or descriptions of standards, several of the interviewed countries lack such standards and express a need to develop them and wish assistance to do that. It is possible to identify some best practices for these aspects in the international literature and adapt them to the structures and environments of individual countries. Here it is recommendable to build on the foundation of the UN Fundamental Principles and UN's National Quality Assurance Framework (UN-NQAF). UN-NQAF contains "recommendations (that) are directed at assuring the quality of official statistics throughout the entire national statistical system (NSS) (...) it provides the components and a general structure within which an individual country-specific NQAF can be developed, if needed"⁵. The UN-NQAF can be used for assessment and subsequent prioritization. The updated version has three separate principles and requirements for coordination of the NSS that can inspire the countries in their endeavors, see annex 4

A useful framework for the work on coordination between several producers of statistics is the Generic Statistical Business Process Model (GSBPM). This is a World standard from the UNECE, which sets up a terminology for the processes of the statistical production. It could be used as the framework to evaluate and compare existing statistical production processes in the agencies in the NSS, but also as a framework for common guidelines and standards to be used across the NSS. GSBPM has quality indicators aligned with requirements in UN-NQAF.

However, it is not only the statistical production processes that are in focus for the coordination of NSS. Figure 1 shows these other relevant processes, based on the UNECE standard GAMS (Generic Activity Model for Statistical Organisations)⁶. Very much depends on the management processes in "Strategy and leadership", as this encompasses organising the cooperation between organisations. The Corporate Support services are essential in standardising and sharing services, e.g., exchange of data and statistical results. Likewise, Capability Management in general is about how to plan and implement major changes on tools, processes etc. This includes training programs for staff, aimed to enhance coordination in the NSS.

⁴ UNECE (2018)

⁵ UN-NQAF (2019)

⁶ UNECE (2019)

Management-, core-, and support-processes

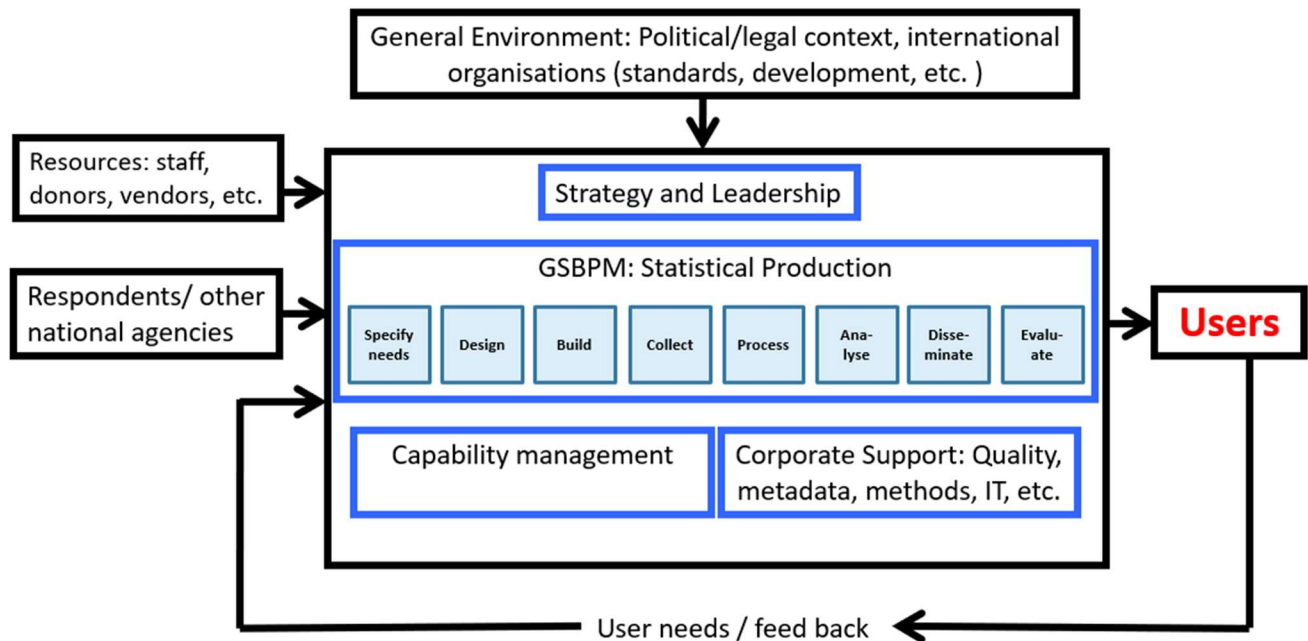


Figure 1. The national statistical organisation and environment

In relation to point 3, sharing of data such as sample frames or data for partially prefilling questionnaires, such sharing will promote coordination, because it prevents inconsistencies between the statistics of different agencies, e.g., stemming from different deficiencies in the sampling frames, and sharing can improve the maintenance of sampling frames if several agencies contribute to updating from their contacts with respondents. Obviously, sharing also adds to efficiency. Sharing occurs in several of the interviewed countries but not in a systematic way. A legal basis for these practices is necessary in order to make progress because it is necessary to protect the data used and processed for statistics against use for other purposes; there must be a strict organisational borderline between the statistical and administrative departments of the OPOS, and statistical base data must not cross the line from the statistics side.

In relation to point 4, methodological help and guidance to OPOS, direct methodological assistance from NSO seems to occur rarely in the interviewed countries; It occurs regularly only in Mexico. Expertise in many different fields of statistical methodology is required for producing statistics of a quality required for Official Statistics in line with the UN Fundamental Principles and UN-NQAF. The OPOS are often quite small units (sometimes as little as 2-3 staff), which means that they cannot have expertise in all the necessary fields of statistical methodology. Therefore, it would be beneficial for the quality and coordination of statistical services if the methodology capacity of the NSO could be seen as a kind of shared competence center for the whole of the NSS, and this would greatly help coordination of the NSS. This could take the form of the NSO offering

methodology training, giving concrete advice for specific surveys, or even the methodology experts of the NSO solving specific tasks for OPOS, such as grossing up of advanced sampling designs and compiling sampling errors. All of these activities would help the coordination of NSS.

Point 5, dissemination: For users it is important that they are able to see Official Statistics from any statistical agency as part of a whole that can meaningfully be used together. Ideally, users should be able to go to one national access point and find the statistics they need, presented in a uniform way and with harmonised metadata. If this is not fully possible, the statistics sites should at least be linked together and follow common standards. This seems to be the case to a certain extent in some of the interviewed countries, e.g., that OPOS deliver some or all their statistics to the NSO for dissemination; a good example of this can be found in Statistics Ireland web site, <https://data.cso.ie/#>, where all OPOS statistics are shown in the list of statistics domains. But several of the interviewed countries tell that there is a need to improve the coherence of the dissemination. For instance, it is important that publishing of new figures takes place simultaneously if there are several web sites, so there must be a direct electronic updating mechanism connecting the sites. Therefore, as stressed by authorities in Morocco, technologies for interconnection and exchange is an important subject in training programs to support coordination of the NSS.

Point 6, coordinated reporting to international organisations: It is important for the usefulness of international statistics that the contributions from countries are well coordinated, and that there is a mechanism to make sure the statistics fit together across national producers and comply with international standards. This can be achieved by the NSO being seen as the central contact point for these reportings and, in case OPOS themselves report directly to the international organisations, they should keep the NSO well informed about the reporting. This is a weak point in several of the interviewed countries. In some, the NSO takes care of some of the reporting and communication between the OPOS and the international organisations, while there was no certain overview of what went on in other parts of the system.

Point 7, metadata. Some of the interviewed countries expressed a need to develop standards for metadata to be used by all members of the NSS, but it seems that none of them has made it. Metadata standards are important for all users, because they allow users to ascertain the contents and quality of the statistics and decide whether they are useful for their purpose. Metadata should also be used for the generation of the statistical products of each partner in the NSS, for the exchange of data between partners of the NSS, and between the NSS and external partners, e.g., international organisations. One or more of the recognised international metadata standards should be used as a basis for the national standards in order to make statistics useable across borders; depending on the sophistication and level of ambition of the country's statistical system, interesting contributions can be found in Nesstar⁷, Single Integrated Metadata Structure (SIMS)⁸, and DDI Lifecycle 3⁹. SIMS is a standard for reference metadata prepared by Eurostat (see box 2 below).

⁷ Norwegian Centre for Research Data (NSD) (2021)

⁸ Eurostat (2020)

⁹ DDI Alliance (2014)

Point 8, certification system for Official Statistics: Among the interviewed countries, only Mexico had developed and published a certification system. This certification would have to be administered by the NSO or some other central authority that has been given the power to do so by the legislation. If an OPOS is awarded the certification, this would certify that certain quality standards are adhered to. It would have to be clearly announced on the web sites together with the statistics. The certification would give users the possibility of evaluating the usefulness of the statistics for the intended purpose, and it would allow them to identify useful quality statistics and thus increase trust in the statistics; this again will lead to increased use of the statistics across user segments, and the fact that several actors use the same statistics as a base for decisions or arguments will increase its usefulness.

Point 9, training, is treated in the next paragraph.

4.3 The present state of training related to NSS coordination

In all the countries in this report, the NSO has a training program for their own staff. In some, it is organised as a school more or less separated from the statistical production, and in one, Morocco, there is a special university-like organisation specialised in statistical training, not only for present NSO staff but also for to-be statisticians and statistics experts. However, most of the interviewed countries do not carry out training directly dealing with the concept of NSS and coordination.

Nevertheless, many training activities in most countries relate indirectly to NSS, as they deal with subjects that are common to NSO and OPOS, such as classifications or internationally agreed standards on concepts, e.g., in national accounts.

Box 2. Some metadata standards

DDI (Data Documentation Initiative) is a set of open standards, freely available from the DDI web site. DDI has two versions:

- DDI-Codebook (version 2), which is a simple documentation standard for datasets, designed for surveys and similar datasets. It has been used all over the World for decades. It is freely available.
- DDI-Lifecycle (version 3) is designed to document and manage data across the entire life cycle, from conceptualization to data publication, analysis and beyond. It encompasses all of the DDI-Codebook specification and extends it.

Nesstar is a rich and free package based on DDI-Codebook, which offers multilingual support for multilingual metadata and publishing of data.

SDMX (Statistical Data and Metadata eXchange) is an XML-based standard developed by 7 international organisations and designed for enhancing exchange of data and metadata. The SDMX information model mainly focuses on the structure for cubes (data and metadata) used for exchange.

Single Integrated Metadata Structure (SIMS) is a rich metadata standard that can be used together with SDMX. It was developed by the European Union for documentation of the content of statistical data (reference metadata). It comprises all quality concepts required for reporting in the European statistical system (19 concepts and 80 sub-concepts).

In most countries, NSO training programs are mostly aiming at NSO staff and only occasionally invite participants from OPOS, and few countries have a common introductory training program for new statistical staff.

NSOs and OPOS of several countries use and encourage their staff to increase their competences through e-learning courses, but, as explained in the following section, it is not easy to find on the web available e-learning courses that are very well suited for enhancing NSS coordination.

In all interviewed countries shortage of expert trainers is a problem. NSOs try to recruit trainers who are key experts working every day with the subject of the training, but naturally these experts are scarce and busy with their daily duties. It is also a problem that it is difficult to remunerate the trainers for their extra effort. In some countries, trainers were hired from academic institutions.

4.4 Problems and opportunities regarding training related to NSS coordination

Some of the countries told that they use e-learning programs in training and they encourage their staff to enhance their competences by using e-learning. In most cases they tried to find such courses outside the organisation.

In one country, Mexico, the NSO has developed a full e-learning program. Others mention international platforms offering free or paid e-learning services¹⁰, and this could be an affordable and useful way to go. An example of this could be: “MOOC Strengthening Stakeholder Engagement for the Implementation and Review of the 2030 Agenda (2020 - 2nd ed)”¹¹. However, it seems that these training platforms today are very much aiming explicitly at SDG and, although they contain elements relevant to NSS coordination, they are not telling so much about how the NSS could be more effectively organised.

GIST has worked to establish a common platform for statistics e-learning courses, which is publicly available at www.unsdglearn.org/statistics. As of now it only has around 60 courses, but GIST is working to add more. This is also where more courses from countries could be added.

In Mexico, INEGI has developed a strong e-learning suite related to NSS and coordination. These courses seem to be relevant as potential inspiration for many other countries and comprise the following elements:

- The National System of Statistical and Geographic Information (SNIEG)
- The SNIEG Regulations
- Mexican Classification of Study Programs by Fields of Academic Training in carrying out Statistical and Geographic Activities related to statistical information on education
- National System for Classification of Occupations in the performance of Statistical and Geographic Activities related to information on occupation and employment
- Workshop on the Generation of Statistical Information
- Course on Conceptual Design for the Generation of Basic Statistics
- Workshop on the Presentation of Statistical Data in Tables and Graphs
- Workshop on Design of Capture Instruments

¹⁰ UNITAR (2020); UN (2020_2); UN/ESCAP (2021)

¹¹ UNITAR (2020)

- Tool for the Evaluation of the Quality of Administrative Records (HECRA)

If INEGI agrees, some of these courses could be evaluated more closely and a generalised version could be generated and offered as a basis to other countries. It would be good if such generalised programs could be adapted to specific conditions in the country where they are going to be used.

Some of the good practices found during the interviews – but not all – are highlighted in this box:

Box 3. Some good practices found

Ghana, among others, work on inducing more trust in official statistics, as it is not used in many situations where it would have been reasonable

Several countries report that there is an exchange of staff between NSO and OPOS, which helps coordination

Mexico has a common web site for the NSS, www.snieg.mx .

In Mozambique, the NSO has one director for Integration and Coordination, which stresses the importance of coordinating the NSS

Armenia is pursuing a strategy of virtually streamlining all public administrative registers run by all agencies into a system with common standards so as to make them more useable in a coordinated register based statistical system

5. Proposed activities to enhance training in NSS coordination

5.1 Training of NSO staff

NSO staff would benefit from training courses that focus on the existence of NSS and the importance of coordination; the training should include knowledge of the system actually existing in the country. Such courses could be offered as face-to-face courses, but it could be easier and more affordable to organise them as e-learning courses. They could be developed based on, e.g., the Mexican e-learning courses¹² but would have to be adapted to countries regarding language as well as content. They could include a kind of exam or check questions, making sure that the student has understood and acquired the knowledge of the training course and perhaps also accreditation.

The training should comprise some or all of the following subjects:

1. The UN Fundamental Principles of Official Statistics¹³ and Code of Practice

¹² See Annex 2, Mexico

¹³ An inspiration for this might be found in an e-learning course in Portuguese from Brazil's CSO (IBGE) <https://www.unsdglearn.org/courses/fundamental-principles-of-the-official-statistics/> (visited on 4 January 2021)

2. The Statistics Law
3. The importance of NSS
4. The content and organisation of the NSS
5. Basic methods for generating statistics
6. Quality in statistics and quality assurance¹⁴
7. Metadata standards¹⁵
8. Standards for contents, including classifications
9. Effective means of data exchange
10. Data confidentiality and protection of statistical data

Not all of these courses should be “forced upon” all staff. Different degrees of detail in the courses could also be developed. Some elements of these subjects are included in existing training courses, e.g., <https://www.unsdglearn.org/courses/introduction-to-data-governance-for-monitoring-the-sdgs/>.

A system of accreditation, e.g., having a grade as official statistician of “grade A” that can be obtained by staff in the NSO as well as the OPOS, could be useful for the coordination of the NSS, ease cooperation between partners and spur staff to take recommended training. Any accredited qualification called accredited statistician should be consistent with the professional criteria used by Royal Statistical Society, American Statistical Association and other national statistical professional bodies. A system for accreditation as official statistician could be developed in collaboration with the various professional bodies.

5.2 Training of OPOS staff

In principle, the training programs for NSO staff are also relevant to OPOS staff. However, it has to be taken into account that the resources of OPOS are in many cases very scarce, and so is the capacity to adopt new knowledge and invest in training. It would be important if NSO and OPOS staff could acquire a similar understanding of NSS related matters.

5.3 Training of NSO and OPOS management (top and middle level)

For management and decision makers, training in the following subjects would be particularly relevant:

1. The UN Fundamental Principles of Official Statistics and Code of Practice
2. The Statistics Law
3. The importance of NSS
4. The content and organisation of the NSS
5. Metadata as a basis for quality and coordination

However, traditional training courses are not enough. Especially for the top-level management of the NSO, it would be important for the Chief Statistician to receive support in fulfilling the role of coordinator of the NSS. This is a complicated and delicate task: Complicated, because it is difficult to know where to start and where to end when we look at the numerous requirements for a NSS as shown in Annex 4; delicate, because it involves negotiating and balancing different interests and regards of the partners of NSS.

¹⁴ A proposal for the possible contents of such a training course is presented in Annex 3

¹⁵ A proposal for the possible contents of such a training course is presented in Annex 3

For these reasons it would be helpful to draw on expertise and experience from other countries having worked on NSS coordination and management. To this end, it is recommended to organise direct contact between the chief statistician (or the top managers) and a foreign colleague with this expertise, who could act as a coach or mentor giving concrete advice and evaluating and commenting on plans and progress. This could involve seminars for the management group, where the situation regarding NSS coordination and plans for improvement is discussed with the outside colleague, who could also assist in negotiations with OPOS and Government. It is recommended that such a mentoring arrangement is extended over a period of time, e.g., two years, during which time there is periodical interactions between the partners.

5.4 Joint training programs for new staff

Joint training programs for all new statistical staff in NSO as well as OPOS should be organised in countries not already having such programs. The programs should be organised by the NSO or a statistics school, if such a school exists. Teachers could be experts from NSO or in some cases OPOS.

It is important if the training can take place in classes on site with participants from several institutions, so that it encourages a spirit of sharing a common task and helps to establish personal relations across the system. In countries with a large number of small OPOS it may be too difficult to organise for all, so it will probably be necessary to limit the ambition to including only the most important partners. In order to be affordable, the program could be limited in time to, say, five or ten half day sessions.

Subjects covered could be:

- Overview of the country's NSS
- Quality in statistics
- Seasonal adjustment

6. How international donor groups can help with coordination and training

The international community could help countries by urging them to establish and implement a suitable legal basis for coordination of NSS, where such a basis is not in place. This is already clearly stated in several UN documents, e.g., UN-NQAF, see Annex 4, but in some countries, it is difficult to persuade the legislative power to comply with this requirement. This should be stressed when UNSD and GIST sends the conclusions of this consultancy to countries.

E-learning is an affordable and meaningful way to accommodate training needs, including training aiming at NSS coordination. However, it is difficult to find suitable courses aiming directly at the field of subjects related to NSS coordination. GIST members and other international donor groups can help by sponsoring making an inventory of existing e-learning courses and development of e-learning courses on NSS relevant subjects and making them freely available on a repository like unsdlearn.org/statistics. In some cases, programs already developed by countries could be adopted, developed further in such a way that they become useable in many other countries, and then made available. This would require hiring consultants to make the further development. Also, donor groups might hire consultants to develop training courses such as those outlined in Annex 3.

The training should comprise some or all of the following subjects:

1. The UN Fundamental Principles of Official Statistics¹⁶
2. The Statistics Law
3. The importance of NSS
4. The content and organisation of the NSS
5. Basic methods for generating statistics
6. Quality in statistics and quality assurance¹⁷
7. Metadata standards¹⁸
8. Standards for contents, including classifications
9. Effective means of data exchange
10. Data confidentiality and protection of statistical data

Donor groups could support establishing joint training programs for NSO and OPOS in selected countries, like the ones mentioned in paragraph 5.4 above. When donors provide training in countries that are relevant to more than one agency, they should include them all. NSOs could for instance be invited to trainings for OPOS (typically WHO would train both Ministry of Health and NSO or ILO would train Ministry of Labour as well as NSO); if trainings are general such as on the Fundamental Principles, legal framework or SDGs, OPOS should be invited to participate alongside the NSO.

International donors should help develop a system for accreditation as official statistician in collaboration with various professional bodies. A system of accreditation, e.g., creating a grade as official statistician of “grade A” that can be obtained by staff in the NSO as well as the OPOS, would be useful for the coordination of the NSS, ease cooperation between partners and spur staff to take recommended training. An accredited qualification called accredited statistician should be consistent with the professional criteria used by Royal Statistical Society, American Statistical Association and other national statistical professional bodies.

Furthermore, support might be given to mentoring or coaching arrangements for the top management of the NSO, like those mentioned in paragraph 5.3 above. This would require hiring senior statisticians from other countries with proved experience in coordination of an NSS. International organisations could invite countries to express their interest in such arrangements and describe how they would use it, and subsequently countries could be prioritised and some projects could be chosen as starters.

A problem that exists in many countries, is that many of the key statistical products are surveys financed by international donors who often have their own focus/agenda, and who may use differing concepts and standards. Because of this financing structure, there is a risk that the funding is not there for the next survey, which makes coordination difficult. This problem could probably be eased if international donors keep this

¹⁶ An inspiration for this might be found in an e-learning course in Portuguese from Brazil’s CSO (IBGE) <https://www.unsdglearn.org/courses/fundamental-principles-of-the-official-statistics/> (visited on 4 January 2021)

¹⁷ A proposal for the possible contents of such a training course is presented in Annex 3

¹⁸ A proposal for the possible contents of such a training course is presented in Annex 3

problem in mind and try to take coordination of the total NSS into account, including adapting their surveys to standards.

Finally, international donors could help countries in setting up certification systems for Official Statistics. The certification would have to be administered by the NSO or some other central authority that has been given the power to do so by the legislation. If an OPOS is awarded the certification, this would certify that certain quality standards are adhered to, and this would be published and made known to users.

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Annexes

Annex 1. Question frame for country interviews

The state of NSS

1. Overall description of the present state of NSS
2. Do you use a definition of official statistics? Which?
3. How many other major producers of official statistics (OPOS)? Which are most important?
4. Does NSO have legal provisions to coordinate? Which Law?
5. Who in NSO is responsible for coordinating OPOS?
6. How is the coordination of NSS organised?
 - a. Is there a coordination committee? If so:
 - i. Who chairs it?
 - ii. How often does it meet?
 - iii. At which level is the representation of OPOS?
 - b. Memoranda of understanding (MoUs)
 - c. Is there a “label” for Official Statistics managed by NSO?
7. What is coordinated?
 - a. Contents (a common Statistical Work Plan)
 - b. Concepts & classifications
 - c. Methodology for sampling
 - d. Shared sampling frames
 - e. Methodology for collection
 - f. Methodology for editing & estimation
 - g. Methodology for dissemination
 - h. Dissemination media shared
 - i. Metadata
 - j. Data exchange with international organisations
 - i. UN
 - ii. MFI
 - iii. WB
 - iv. Others
8. Is there any kind of oversight or review of adherence to these standards?
9. Which are the most important challenges of NSS?
10. Do you have a need to further develop NSS coordination, a strategy? If so: In which respects (categories)?
 - a. Contents (a common Statistical Work Plan)
 - b. Concepts & classifications
 - c. Methodology for sampling
 - d. Shared sampling frames
 - e. Methodology for collection
 - f. Methodology for editing & estimation

- g. Methodology for dissemination
- h. Dissemination media shared
- i. Metadata
- j. Data exchange with international organisations

Training and training needs

11. Is there a common training program for (new) NSO and OPOS staff regarding statistical methodology?
12. Does NSO offer training and advice to OPOS regarding methodology (categories)
 - a. Contents (a common Statistical Work Plan)
 - b. Concepts & classifications
 - c. Methodology for sampling
 - d. Shared sampling frames
 - e. Methodology for collection
 - f. Methodology for editing & estimation
 - g. Methodology for dissemination
 - h. Dissemination media shared
 - i. Metadata
 - j. Data exchange with international organisations
13. Do you conduct training of own staff regarding NSS?
14. If you have a training program and training material, will you share with us and other countries
15. Do you feel a need for more NSS training?
 - a. Do you need training of NSO staff regarding NSS? Which aspects?
 - i. Who should be the target group (policy makers, NSO management, statisticians,...)
 - ii. are you interested in having e-learning courses
 - iii. or a workshop with instructors
 - iv. should it be together with other countries
 - b. Do you need training of OPOS regarding NSS? Which aspects?
 - i.

Next activity

16. Would you be prepared to have a conference call with me and one or two OPOS? If so, could you point to contact persons, and I'll try to organise it next week.

Annex 2. Discussions with countries

Armenia

Meeting with CSO Armenia 2021-01-25

Participants : Stepan Mnatsakanyan, Anahit Safyan (Armstat), Lars Thygesen (GIST).

Duration 45 minutes

National Statistical System (NSS)

There is a new Law on Official Statistics (No. LA-194-N, March 21, 2018), passed in 2018, which is compliant with the UNECE model Law (GLOS), which is anchored on the UN Fundamental Principles of Official Statistics and European Statistics Code of Practice. This gives Armstat the powers to coordinate the NSS and also access to administrative data. The supreme governance of the NSS rests with the State Statistical Council. The NSS is regulated by an annual and a 5-year Statistical Plan.

The definition of official statistics is in article 3 of the Law.

In the Armenian NSS there are only 2 OPOS: The National Bank and the Ministry of Finance. However, many ministries deliver administrative data to the NSO, Armstat. Armstat has a strategy of moving to an admin-data based statistical system and is therefore gradually convincing the admin data providers of basic data to use the international classifications and nomenclatures, e.g., NACE and occupation.

Even health statistics are compiled by Armstat, based on data from the health ministry, and Armstat has influenced the classifications used in the health system, e.g., including Covid-19.

An important fact is that the housing and population census to be conducted in October 2021 will be a combined census based mostly on administrative data (75%), while only 25% of households will need to be interviewed; interviews will be taken by telephone. Sources will be the population register and the Transborder register.

Population register compared with Cross border information system register to ensure quality. This was piloted in 2019

The major challenges for the NSS are lack of financial funding and lack of human resources

Training related to NSS

Armstat regularly makes training sessions and seminars for OPOS and other ministries providing data for Armstat. These trainings can be on classifications like NACE (for the tax authority, the ministry of environment among others), for which classification Armstat has provided a guide or handbook in Armenian. There has also been courses or seminars on subjects such as the UN Fundamental Principles on Official Statistics and the European Statistics Code of Practice, which have been translated and are adopted by the State Council as the foundation of the NSS. Training courses on the ILO methodology for labour market statistics have been held for the Ministry of Labour and Social Affairs.

Armstat is offering training on the concept and principles of NSS to staff, as new staff arrives, and Armstat is very interested in being able to offer e-learning courses on these subjects, if such courses are made available by UN or other organisations.

Last year Armstat has used several e-learning opportunities offered by international donors, e.g., training on STATA software by EU “Statistics through the Eastern Partnership (STEP)” program, training in DDI offered by FAO (Armstat is implementing DDI as basis for their metadata), training on SDG offered by ESCAP. Armstat is organising a microdata archive with a lot of data from population and agricultural censuses, living conditions survey, labour force survey, etc., based on NADA, and will move this important archive to DDI.

On 17 September 2019, Armstat has launched the new National Reporting Platform (NRP) on SDGs indicators at <https://www.unsdglearn.org/courses/introduction-to-data-governance-for-monitoring-the-sdgs/>, based on Open data source, which is a tool for disseminating and reporting national statistics for the global SDG indicators that provides the framework for monitoring progress towards SDGs.

Armstat would also like very much to have assistance for organising training courses for the administrative agencies and other statistics producers on an integrated administrative register system inspired by the Scandinavian experience. Armstat’s clear strategy is to move in this direction and a lot of progress has been done. Armstat has even produced a “bible”, which could be used for such an activity.

Ethiopia

Meeting with CSO Ethiopia 2020-12-14

Participants 4: Damtew Bernahu, Aberash Tariku (Central Statistical Agency of Ethiopia, CSA), Dag Roll-Hansen, Lars Thygesen (GIST)

Coordination of NSS:

CSA has the legal authority to coordinate the national statistics system according to the Proclamation 442/2005. But the agency has not been successful in doing so as it was expected to be. This is mainly because the Law has some limitations in providing CSA adequate power needed for effective coordination.

The most important OPOS are (The official statistics they produce are within braces)

- the National Bank of Ethiopia (Monetary Statistics)
- The Ministry of Finance (financial statistics)
- The Ministry of Revenue (Government revenue, Tax related statistics)

Damtew agreed to set up a conference with CSA and at least two of these in near future

There is no Coordination Committee, but a wish and a plan to set it up. The same goes for Memoranda of understanding. This is mentioned as a one activity under CSA coordination role and included in NSDS-II goal in the strategy document of CSA

Training related to NSS

There is a training program for staff in CSA and OPOS, which has been working for 6-7 years, but it is not functioning well, not in an orderly fashion or it only focused on specific topics.

There have been some workshops with NSS members.

Formal Training has been carried out in relation to surveys, e.g., LFS, HCE AGSS etc... And some nonformal trainings like SDGs (e.g. training on the African Information Highway)

Training on methodology and NSS is needed, especially:

- Methods for surveys and admin data management
- Software packages
- GIS
- Data Quality issues
- Quality Management Systems

Fiji

Meeting with CSO Fiji 2021-01-21

Participants: Ms Shaista Bi, Mr Isikeli Senibulu (**Fiji Bureau of Statistics (FBoS)**), Lars Thygesen (GIST)

Duration 45 minutes

National Statistical System (NSS)

The NSS is centralized. FBoS is the NSO and is the only organisation in Fiji producing official statistics, so there seems to be no need for coordination.

Current stance of NSS in Fiji

While the Fiji Bureau of Statistics is mandated to collect data (Statistics Act, Cap 71 and Census Act (Cap 72), it has limited or still does not have the full authority of all official statistics particularly administrative data. At present, providers of administrative data are in many cases working in isolation from the National Statistics Office. Statistics collected from these agencies are usually for administrative use, therefore there is no focus nor attention on statistical standards or methods such as classification and coding systems, sectoral boundaries, reference periods to ensure that there is consistency and comparability of data across the national statistics systems. Currently, custodians of administrative data sources collect statistics without adherence to specific statistical international frameworks such as the fundamental principles of Official Statistics. To address these issues FBoS has developed MoU's with the administrative data providers such as Ministry of Health, Reserve Bank of Fiji and Fiji Revenue and Customs Authority and aims for other departments and ministries as well.

A huge challenge too for the National Statistical System in Fiji would be meeting a growing demand of statistics from different users. While this cannot always be fulfilled at the moment due to resource constraints, FBoS and other data producers need to ensure that statistics provided to users are available in required forms and formats, are easily accessible and user-relevant. There was no documented system in place to set the rules of engagement between data producers and data users. This led to the formulation of Fiji-SDS [Fiji Strategy for the Development of Statistics]. Fiji-SDS aims to have a systematic and harmonized data productions system in Fiji. NSS training would allow providers and users to better understand the role of NSO and the need to adhere to statistical systems and principles while producing data for public use.

There is a Law on statistics which authorises FBoS to collect data, particularly administrative data from other agencies, and compile statistics. There is no formal system for the sharing of the administrative data, so cooperation with other agencies is based on goodwill and MoUs. Challenges are faced when obtaining data from households and businesses. Therefore the review of the statistics act was carried out by the department. Reviewed act is currently with the Minister responsible for vetting purpose.

The Bank of Fiji produces and publishes financial statistics and is also one of the major users of data from FBoS. Other ministries and agencies also produce statistics, e.g., the Ministry of Health, the Revenues and Customs Authority, but it is only for their own use and is not published except for financial statistics

which are needed for policy making and investments. There is a Memorandum of Understanding (MoU) between FBoS and the central bank, and MoUs have also been drawn up with other administrative agencies and ministries who deliver their administrative data to FBoS, e.g., the Medical Services, and the Fiji Revenue and Customs Service. It is FBoS who carries out all household surveys.

Regarding reporting to international organizations, it is normally FBoS who reports unless there are specific data needs from the related data producer. For instance, if data is needed for specific diseases the Ministry of Health reports on it. In some cases, e.g., a Multi Indicator Survey on the conditions for women and children sponsored by UNICEF, the questionnaire is drawn up in cooperation with the Ministry of Health and FBoS carries out the survey assisted by UNICEF.

FBoS is currently working on formulating a strategy document, Fiji Strategy for Development of Statistics (FSDS), with assistance from an international consultant. It is in the final stages. The FSDS will aim to coordinate the administrative data used for statistics.

FBoS has 143 staff and is organized with a central office in Suva, and 3 regional branches.

Training related to NSS

The Ministry for Civil Servants gives training to all government agencies incl. FBoS, but they offer no training on Official Statistics specifically. FBoS makes a few internal training courses for their own staff relating to statistical methodology, they have had two rounds of a course on time series analysis and seasonal adjustment carried out by the methodology unit. Sometimes trainers are hired from academic institutes, e.g., universities. However, FBoS would love to have the opportunity to send their staff to more relevant training courses on official statistics, especially regarding reporting and analysis and national statistical systems.

There has been an e-learning training on gender policy sponsored by the Japanese international cooperation agency (JICA). E-learning has only been used for subject matter training, not methodology, but FBoS would like to have e-learning on methodology. Other e-learning courses are offered by international organizations and staff are encouraged to participate on such courses; e.g., FBoS recently had staff participated in CSPro software course. There is a need for coordination and training since FBoS has administrative data providers such as FNPF, Reserve Bank of Fiji, etc., and providers of official statistics which is FBoS. Therefore, training on NSS would be vital to ease the process and provide guidance. Especially the training of trainers so that other staff/ data providers could be trained on NSS.

Ghana

Meeting with CSO Ghana 2020-12-23

Participants: Samuel Annim, Hellen Ayitevie (Ghana Statistical Service, GSS); Silja Emmel (Collaborative on admin data), Lars Thygesen (GIST)

Duration 45 minutes

National Statistical System (NSS)

The coordination of the NSS of Ghana is at present weak. According to Statistical Service Act, 2019, GSS is responsible for the coordination of the NSS. A Statistical Advisory Committee with the key ministries who are partners in the NSS (here called OPOS, Other National Authorities) should be set up to harmonise and coordinate the system and have meetings at least twice a year. Because of covid-19 challenges this has not been possible, and no meetings have been held.

Key tasks for the coordination, and a precondition for starting the Committee's work, are:

- Code of Practice / Ethics, which has not yet been finalised;
- Quality Assurance framework, not existing

Drafts of these important documents exist and have been discussed and enhanced within the cooperation with Statistics Denmark. The work on the documents is carried out by a working group, consisting of 14 people from GSS and OPOS. The work on these documents is funded by international donors and is at the moment solely focused on the SDGs. Once it has been developed, GSS will expand it with the aim to coordinate the totality of official statistics.

The NSS, according to the Act, consists of GSS and 16 Ministries, Departments and Agencies, but there are many more partners who should be considered as producing official statistics. GSS is opening up the inclusion of these partners. Some will not be members of the Committee, but they will be called upon when the coordination of statistics in their domain is to be discussed.

GSS has the authority to nominate a statistics as Official Statistics – or not. Official Statistics is a new concept, comprising statistics that are used for policy making, and it needs to be operationalised. In order for it to be used more, advocacy work is needed, for policy makers and the OPOS to understand the importance of Official Statistics. At the moment every OPOS produces their own statistics and publishes them. This has on occasions led to different statistics on the same topic being published by different OPOS (especially in the field of economic statistics).

Financing: Many of the key statistical products are surveys financed by international donors who often have their own focus/agenda, and who may use differing concepts and standards. Because of this financing structure, there is a risk that the funding is not there for the next survey, which makes coordination difficult. Some statistical activities are financed over the government budget, and for some of them there is a common budget between GSS and some OPOS.

Regarding human resources, GSS has some 350 staff, of which 1/3 is in the 16 regional offices.

In the OPOS, there is typically a statistics unit with between 1-3 staff that is responsible for everything in that OPOS related to statistics.

Training related to NSS

There is a need for training for GSS and NSS staff on the NSS and the concept of Official Statistics and what is required to qualify as OS. Other important common NSS training needs relate to Code of practice and quality assurance framework.

A competences framework is under development in cooperation with the ONS (UK NSO), whereby skills of NSS staff are continuously developed and assessed, so people can move up and down according to skills; a specification of this system will be shared. A skills mapping of all GSS staff has been carried out during the last year.

Top priorities of GSS and NSS

The top priorities at present are:

1. Enhancing the use of administrative data as basis for official statistics
2. Enhancing the role of statistics as the basis for policy making. The GSS's aim is to increase the use of their products by enhancing the analysis content, so that for instance inflation rates are set in an analytical context. At the moment the presentation of results is merely descriptive.

Meeting with Ghana Ministry of Education 2021-01-29

Participants : Mr Edward Dogbey (Ghana Ministry of Education (MoE)); Lars Thygesen (GIST)

Duration 45 minutes

National Statistical System (NSS)

1. Which statistics are you producing? All statistics about schools on classes, teachers, students. But not for higher education like universities, this is done by another agency, who sends their results to MoE.
2. How are they produced? MoE sends questionnaires to all schools, and data are collected in the districts by districts offices of the Ghana Education Service (not part of MoE); this service has a regional and districts structure of offices including statisticians. They validate and prepare a database and send districts results electronically to MoE, who aggregates at different levels.
3. Statistics are published on web site, however not working at the moment, new dashboard under construction.
4. Reporting to international organisations: MoE reports to them. However, UNESCO doesn't take the statistics but the basic data; this is probably because UNESCO doesn't wish to use the population statistics of GSS but instead uses estimations from the World Bank data.

5. How is your statistics department organised? It is a Directorate within MoE, Directorate of Statistics, Research and Information Management.
6. How many staff? 18+2 on National Service.
7. General evaluation of coordination with other producers: MoE works closely with GSS and other statistics producers. GSS supervises the statistics. There is an exchange of staff, which helps coordination
8. Statistical Advisory Committee membership: The Director is a member
9. Key tasks for the coordination, and a precondition for starting the Committee's work, are:

Code of Practice / Ethics, which has not yet been finalised; MoE is not participating in the development but will be eager to use it when completed

Quality Assurance framework, not involved
10. Financing: Donors have a big role. World Bank has initiated the Information Management System and funded since 1997. UIS of UNESCO continued from 2012 to 2014. From 2015 we were part of the Ghana Statistics Development Project (GESDP) and was funded by the World Bank through GSS. That project ended in 2018. 2019 we were solely funded by the Ghana government and for the current year, plans are far advanced to role us onto the Harmonizing of Statistics in West Africa Project (HISWAP), and extension of the GSDP but this time involving some other African countries. DFID support was actually in 2010/2011 academic year has been funding as well. Now the government is financing, but it is difficult to get the funding.

Training related to NSS

11. Do you have training on statistics methodology? MoE is invited for training with GSS when subjects of their interest come up, e.g. on statistics software, project management and on compiling a statistical compendium
12. Do you have a need for training on the NSS and the concept of Official Statistics ? Code of practice and quality assurance framework? Yes absolutely necessary
13. Do you participate in the competences framework in cooperation with the ONS (UK NSO), whereby skills of NSS staff are continuously developed and assessed? MoE has participated in some meetings but is not aware if needs have been evaluated and skills mapped
14. What are your top priorities for education statistics ?
 - a. Funding
 - b. Getting more trust in statistics, it is not used in many situations where it would have been reasonable
 - c. Training, training! Young staff need to be trained and they often stay too short time. Senior experts retire and are difficult to replace.
 - d. Develop the statistical system to the use of administrative data as basis for statistics.

Mexico

Meeting with CSO Mexico 2020-12-11

Participants 4: Rocio Mondragón, Pilar García, Eric Rodriguez (INEGI), Lars Thygesen (GIST)

A Constitutional reform law from 2006 is the basis for INEGI as an autonomous Institution. It was enhanced by a law on NSSGI in 2008, giving INEGI authority for NSS coordination. INEGI has therefore 12 years of experience coordinating the NSS.

INEGI is organised with:

- A Governing board with 5 members (Vicepresidents from INEGI, one of them to become the President of INEGI)
- 8 Directors General: Sociodemographic Statistics; Economic Statistics; Integration, Analysis and Research; Statistics on Government, Public Security and Justice; Geography and Environment; Coordination of the NSS; Communication, dissemination and Institutional Relations; Audit; and Administration.

The NSS is organised in:

- National Advisory Council: 29 State Units, chaired by INEGI, at least 1 meeting per year
- 4 sectors with 150 organisations, coordinated by National Information Subsystems (NIS), each with
 - Executive committee, chaired by INEGI, at least 2 meetings/year, advisory and revision role.
 - Technical Specialized committees (40), chaired by the main producer of the sector statistics, at least 2 meetings/year.

The term “Information of National Interest” is a category given by the Governing Board of INEGI to Official Statistics that are necessary to support the design and evaluation of public policies of national scope; is generated regularly and periodically and is prepared based on scientifically supported methodology; there are around 300 Indicators of National Interest. These are governed by “Normativity”, meaning that they must follow common rules, which are laid down in 40 regulations, 15 of coordination and 25 on techniques, e.g., metadata standards, classifications, geocoding. Compliance is monitored by INEGI.

There is a common training program for all staff who work with NSSGI, whether in INEGI or other State Units. The annual training program contains 500 annual events, with around 10,000 participants.

There are online courses on NSSGI and on several of the NSSGI standards:

- The National System of Statistical and Geographic Information (SNIEG)

- The SNIEG Regulations
- Mexican Classification of Study Programs by Fields of Academic Training in carrying out Statistical and Geographic Activities related to statistical information on education
- National System for Classification of Occupations in the performance of Statistical and Geographic Activities related to information on occupation and employment
- Workshop on the Generation of Statistical Information
- Course on Conceptual Design for the Generation of Basic Statistics
- Workshop on the Presentation of Statistical Data in Tables and Graphs
- Workshop on Design of Capture Instruments
- Tool for the Evaluation of the Quality of Administrative Records (HECRA)

These courses should be studied as they could serve as inspiration in other countries.

There is a common web site for NSS, www.snieg.mx .

Reporting to international organisations:

- Most from INEGI.
- INEGI is notified of all reporting, coordination role.

Morocco

Meeting CSO Morocco 2020-12-15

Participants 4: Samir Issara, Hasnae Fdhil, (HCP); Dag Roll-Hansen, Lars Thygesen (GIST)

Duration 120 minutes

HCP gave a thorough presentation of its training program, which is impressive.

More than 20 training courses a year are organized in the framework of international and regional cooperation (Eurostat, AITRS, FMA, METAC, FMI, ESCWA, OIC Statcom, OIT, CEA, UA, ITU, etc.) but the number of participants doesn't exceed 2 participants in general except the cases when the Training course is dedicated to the HCP staff or the NSS.

Those training courses are based on a previous need diagnostics (priorities, scope, level, for trainers or training of trainers, etc.). They are conducted in face to face mode with some experiences in e-learning mode. This mode is becoming more frequent with regard to the pandemic context.

Coordination of NSS:

HCP is the central authority for statistics, but a large number (about 40) of other ministries and authorities (OPOS) also carry out surveys and statistics based on admin data. HCP publishes the Yearbook and an online statistics databank, and OPOS provide their data for these to HCP, and an estimate from HCP is that 50% of contents comes from these.

Presently HCP does not have legal power to coordinate NSS. HCP is working under a law from 1968, and preparation of a new statistics law has been underway for many years but has not yet been passed. The new law will contain legal provisions for coordination. It seems that OPOS would like to have such rules.

There is a Coordination Committee (COCOES), but it has not met for many years and is thus not functioning.

HCP maintains bilateral cooperation with many OPOS, and with some of them (Central Bank+ Office des Changes, Agriculture, Water & Forest, OCP, CNSS, Tourism, etc.), a Memorandum of Understanding (MoU) has been agreed.

Reporting to international organisations goes, to a certain extent, through HCP, who receives the questionnaires and fills them from databases or asks OPOS to fill in. But in some cases, OPOS send their own data without any coordination or information.

Training related to NSS

There is no common training system for the NSS. In general, HCP's training courses are for their own staff only. In some cases, HCP offers special training courses to OPOS, e.g., to the Ministry of Finance/

Office des changes/ Central bank. National accounts and classifications were mentioned. In connection with international projects, e.g., with Eurostat and Statistics Denmark, HCP invites partners from the NSS to participate.

Some inhouse training courses for HCP staff are also ensured by other departments (Office des changes)

There is a special School of Statistics INSEA, which is affiliated to HCP but independent. INSEA organises high level courses in statistics, (including doctorates) and they are attended by staff from HCP as well as OPOS. This gives a common background.

Another measure that gives cohesion is that staff from HCP shift to employment in ministries and OPOS, and often come back again later, and a similar movement takes place in the opposite direction.

The interest in conducting training courses on exchange of data, SDG, the use of alternative sources was highlighted.

Meeting with Maroc Office des changes (OdC) & HCP 2020-12-21

Participants 4: Ouljour Houssaine (Office des changes), Samir Issara, Hasnae Fdhil, (HCP); Dag Roll-Hansen, Lars Thygesen (GIST)

Duration 50 minutes

Office des changes is responsible for statistics on foreign trade in goods and services plus the Balance of Payments (BoP)

There are 53 staff working on these statistics and they are in a special department only dealing with statistics

There is a close every-day cooperation between HCP and OdC, and the statistics of OdC is closely related to especially the National Accounts run by HCP. A Memorandum of understanding (MoU) has been agreed and constitutes the basis for a close collaboration between the two institutions.

The coordination relates to all issues of production and dissemination.

There is a direct, semi-automatic transfer of information between the parties, allowing both OdC and HCP to disseminate the statistics on their web databases. Still this needs to be improved.

Data exchange with international organisations is coordinated; data are not sent to the international organisations, instead they extract the data themselves directly from the databases.

Morocco is already advanced in respect to exchanging data and presenting all official statistics in HCP databases, but still there is need for improvement, e.g., enlarging the coverage and disaggregation of statistics.

A need to have an even closer coordination is felt on both sides.

At the moment work is going on to establish a National working group with OdC and other authorities on a) Seasonal adjustment, b) classifications, c) automatic machine-to-machine exchange between NSS databases using SDMX; these subjects are essential to coordination.

OdC and HCP annually organise training sessions for each other on subjects of mutual interest, where experts from one organisation leads a one-week session on a topic for staff from the other organisation. These are practical, non-academic sessions where real life problems are discussed.

Training from international and regional organisations

OdC received important training from IMF and UNSD, e.g., on BoP and international exchange of services, and they wanted more, especially regarding new or rising phenomena, e.g., like statistics on the rising digital trade in relation to covid-19. e-learning was important, allowing more staff to benefit. But also face-to-face training would be important. Especially in relation to implementing new handbooks on National accounts, BoP, etc.

OdC and HCP both participate in the MedStat cooperation organised by the EU, and from there they receive valuable training.

In order to organise cooperation on mutual and common training in the NSS, HCP training center tries to investigate and coordinate needs, organise needed training.

HCP wants to learn best practices from other countries on how to make training to improve coordination of NSS.

Meeting with Maroc Banque nationale (BN) & HCP 2020-12-21

Participants 12: El Ounani Abdelilah, Tahri Joutei Hassani Dounia , Dkhissi Tarik, Fatima Zohra Ben Amar, Lahlou Kamal, Lamzalah Hicham, Chadib Mohamed Amine, Nadifi Mustapha, Bachiri Ouafae (BN), Samir Issara, Hasnae Fdhil, (HCP); Dag Roll-Hansen, Lars Thygesen (GIST)

Duration 80 minutes

Banque nationale is responsible for financial and monetary statistics. They are produced by the Statistics Directorate with 51 staff, mostly engineers in statistics and economics. BN conducts its own monthly business surveys, and the Bank has many discussions with respondents about financial and monetary questions.

There is close cooperation and coordination between BN and HCP. A lot of information is exchanged and meetings are held. Classifications are well coordinated, e.g., classification of activities. When transfer from one version to the next is done, the BN invites HCP to a seminar in order to make the transfer in the right way. Before BN makes a survey, they have to discuss with HCP to make sure that the same is not already done by someone else. The Bank asks and gets from HCP the sample for every survey. Some surveys also include other agencies such as the Department for Climate.

Cooperation in NSS tends to be bilateral rather than a coordinated system. There is a memorandum of understanding with HCP and BN, and there are close personal relations. Ideally the Statistical Law should be passed to create a legal and formal basis for systematic coordination. But until then something should and could be done. There is a common wish to organise it better, in a number of groups with one group for one domain of topics (e.g., gender, National accounts) where producers would work together.

Training from NSS and international and regional organisations

There is advanced training in statistical topics with HCP, but there isn't a systematic training in how to make the NSS work together in a coordinated way.

A lot of cooperation on training with other central banks, e.g., in France, Portugal, Spain, UK

IMF and WB

Mozambique

Meeting with CSO Mozambique 2020-12-21

Participants : Alda Rocha, Anselmo Nhane (INE); Dag Roll-Hansen, Lars Thygesen (GIST)

Duration 45 minutes

National Statistical System (NSS)

The NSS of Mozambique is governed at the highest level by the High Council for Statistics, chaired by the Prime Minister. The High Council, among its various attributions, decides which organisations, in addition to INE, will be delegated as producers of Official Statistics.

INE is the governing body and the coordinator of NSS; therefore, it has one director for Integration and Coordination. There are 8 delegated authorities, or OPOS, each with responsibility for data collection, processing, and dissemination: The Ministry of Economy and Finance, Health, Education, Science and Technology, Public Works, Fishery, Agriculture and Labor. There is also cooperation with Ministry of Justice, which is responsible for the civil registration system but is not yet a delegated member, they are working with INE in a special working group on civil registration. 6 other ministries are also under consideration to become delegated members.

The Central Bank of Mozambique (Directorate of Statistics and Economic Studies) is member of NSS.

There are Memoranda of Understanding (MoUs) with the delegated ministries signed by ministers. There is a joint 5-year NSDS (National Strategy for Development of Statistics) covering 2020-2024, which is broken down into one-year annual plans with all activities of delegated ministries and budget are laid down.

Regarding dissemination, each OPOS disseminates its own statistics but normally they also give their statistics to INE.

Reporting to International organisations is normally performed by INE, who gets the data from OPOS, but in other cases they do it themselves.

Information Technology is not coordinated among NSS, including regional offices, which is a hindrance for exchange of information and statistics. The same goes for communications technology. Sometimes statistics are not reported, and often there is a lack of documentation.

The most important challenge to NSS coordination is lack of staff. Sometimes staff is hired on a temporary basis to fill gaps and the salaries are paid by specific project.

Training related to NSS

There is a strong need for common training in Quality Management, including quality of products as well as processes, among other areas of data analyses and data producer as well on IT areas.

Training of staff is sometimes performed by the national statistic school, sometimes by INE, when resources are available.

The school uses teachers from INE when possible. They also invite trainers from international organisations, especially where there is a lack of expertise in INE.

In order to assess needs, the school sends ToR or curriculum to INE and OPOS, they evaluate their needs and comment on it.

Vietnam

Meeting with GSO Vietnam 2021-01-27

Participants : Ms. Duong Thi Kim Nhung Deputy Director, Department of Statistical standard Methodology and quality Management, GSO; Mr. Nguyen Ngoc Binh, Statistician Department of Statistical standard Methodology and quality Management, GSO; Ms. Phan Thi Ngoc, Deputy Director, Human Resource Department; Mr. Duong Thi Hong Anh, Statistician of Human Resource Department; Mr. Nguyen Tri Duy, Deputy Director, Institute of Statistical Science (ISS); Mr. Ha Manh Hung, Director, Statistical Training Center, ISS ; Ms. Hoang Thi Kim Chi, Deputy Director, Department of Foreign Statistics and International Cooperation; Mr. Nguyen Chi Hung, Statistician of Department of Foreign Statistics and International Cooperation (all from GSO); Lars Thygesen (GIST)

Duration 75 minutes

National Statistical System (NSS)

Official Statistics are defined in the Statistics Law: State statistical activities are statistical activities in the statistical program implemented by the national statistical system, or authorized by competent line ministries to perform.

The center of the NSS is the General Statistical Office (GSO) which is organized into a vertical system from the central to local administrative level with the GSO headquarter at central level and 63 provincial statistical offices (PSO) at province and 595 district branch offices at district.level. The total staff is about nearly 6,000 staff, of which 238 staff are working in the central office (GSO). The coordination with PSOs is good. According to the Law, GSO is in charge of coordinating with the ministries (OPOS). There are 22 ministries and government agencies (incl. Central Bank) producing official statistics, each with their own statistical division/unit. They carry out own surveys and do statistics. There is no Coordination Committee. According to the Law, the GSO reviews and appraises the ministerial and sectoral statistical indicator system, reporting system and survey plan]. Coordination with ministries has been improving since the passing of the Law.

The General Statistics Office directly signed a Regulation/MOU to coordinate with 10 ministries and government agencies, including: Ministry of Industry and Trade, Ministry of Agriculture and Rural Development, Ministry of Education and Training, Ministry of Health, Committee for Ethnic Minorities, Central Economic Committee, General Department of Taxation, Vietnam Post Corporation, Ministry of Finance, General Department of Taxation ... Currently, the Regulation/MOU on coordination and data sharing between the General Statistics Office and the State Bank Vietnam, the State Treasury of Vietnam and Vietnam Social Insurance are being urgently completed.

GSO publishes a Publication calendar and publishes statistics in accordance with it. Ministries also publish their own statistics, but they must give GSO the data of National Statistical Indicators and let GSO publish them.

Challenges: There is an unstable situation because the statistical staff of the 22 ministries who produce statistics changes very frequently. Furthermore, they are not well trained in statistics, so they lack

necessary competences for collecting and processing quality statistics. Furthermore, statistics are not in focus of the management in the ministries. As a consequence, it is not possible to obtain agreement on consistent methodology (sampling, etc.), and the statistics are not coordinated. There is a Memorandum of Understanding between GSO with 10 of the 22 ministries however; several manners mentioned in MOU have not been implemented well.

Training related to NSS

There are training programs (professional training for newly recruited civil servants, advanced training according to the category of civil servants and specialized training), but only for GSO staff, not ministries. Three types of statistical training programs are applied for both GSO staff and people who work in ministries. And when the GSO receives the needs of training from ministries, GSO will conduct the trainings. An attempt is made by GSO to collect training needs from the OPOS, but it has not worked well and only a limited number of trainings have taken place.

Normally, the training courses are conducted directly at GSO building or at the GSO Statistical college (one college in the North and one college in the South of Viet Nam) In the context of Covid -19, some Training courses are conducted virtually. GSO has not had and used e-learning systems but would be interested if it were possible to identify relevant courses. GSO would welcome UN and other international organizations offering such courses.

In 2020, the GSO has 21 training courses:

- 15 training courses according to the category of civil servants;
- 6 specialized training courses, of which 4 training courses for Provincial Statistics Office and 2 for the GSO Central office, one in forecasting with 71 participants from the central office and 1,000 from local offices (virtually), and another on supply and demand tables, where 40 from the central office participated directly.

GSO expresses a need for international organizations to train the GSO on a number of subjects:

- (1) National accounts and related indicators, analysis and use of national accounts statistics;
- (2) Statistical analysis and forecasting (need to clarify contents of analysis and forecast)
- (3) Apply Excel to analyze statistics at intermediate level;
- (4) Calculate production value of agriculture, forestry and fisheries;
- (5) Price statistics, especially in the field of producer price statistics;
- (6) Survey, collect and disseminate statistical information on industry / processing and manufacturing industries; business and business trends.
- (7) Smart document editing;
- (8) Use digital pictures and videos.

(9) Use administrative data of ministries to calculate and compile the official statistical data and indicators

(10) Extract the data from the official website of GSO (gso.gov.vn)

(11) Calculate the SDG indicators in case of Vietnam

(12) Training on methodology of statistical quality, methodology for developing indicators and measuring digital economy.

There is also a need for more training in the NSS, for GSO as well as ministries.

GSO already use training from UN, ESCAP and others.

Annex 3. Proposed outlines of some training courses to promote coordination of NSS¹⁹

Training 1. Quality management in a statistical office

Type of course: Basic, face to face

Duration: 5 days

| | |
|----------------------|---|
| Objective | To make participants acquainted with different quality concepts, quality criteria, the quality management and quality frameworks, and to know how to apply methods to measure quality concepts |
| Training methods | Lectures and presentations combined with Brainstorming and group discussions and case studies |
| Target group | Staff involved in quality management, quality measurement, and quality reporting. This includes both subject matter staff and specialised quality management staff. |
| Entry qualifications | University degree or equivalent experience in the area of statistics Sound command of English/National language |
| Contents | The quality framework and quality tools and their implementation. Focus will be on commonly accepted and widely used quality methods to harmonize the statistics, used in the statistical production Definition of quality in statistics Quality dimensions Product quality and quality reporting Tools for measuring product quality Process quality Tools for measuring process quality components (brainstorming, current best methods, technical tools, auditing, and benchmarking) Quality management and quality frameworks: Quality Assurance Framework (e.g. UN-NQAF), Total Quality Management (TQM) Tools for measuring perceptions of users (self-assessments, auditing, customer satisfaction surveys, focus groups, public opinion polls) Strategic management and policy UN-NQAF, GSBPM, and GAMS0 |
| Required reading | Manual for the standard compilation of statistics: UN National Quality Assurance Framework Manual – 2019 Edition: https://unstats.un.org/unsd/methodology/dataquality/un-nqaf-manual/ |
| Suggested reading | GSBPM, GAMS0– introduction: https://statswiki.unece.org/display/GSBPM/I.+Introduction |
| Required preparation | The participants are requested to write a short summary of their own activity at their organisation, and of the organisation’s practices, problems, and experiences with quality management |

¹⁹ Developed by Mogens Grosen Nielsen, <https://nielsenstatistics.com/>

Training 2. Introduction to statistical metadata

Type of course: Basic, face to face

Duration: 5 days

| | |
|----------------------|---|
| Objective | <p>The main objectives of the course are to let participants understand and use:</p> <ul style="list-style-type: none"> • the main conceptual and technical statistical standards related to work on metadata (GSBPM, GSIM, SDMX, DDI) • the suitable steps for implementing a standardisation strategy for metadata that supports more efficient and coordinated processes related to the dissemination, reporting and in general to data and metadata sharing • guidelines and best practices on how to use tools appropriate for the work on metadata in the organisation |
| Training methods | Lectures and presentations combined with exercises and case studies |
| Target group | Subject-matter and metadata experts without specialist IT knowledge, and IT staff working with supporting dissemination, reporting and metadata management. |
| Entry qualifications | <p>University degree or equivalent experience in the area of statistics</p> <p>Sound command of English/National language</p> <p>Ability to make short interventions and to actively participate in discussions.</p> |
| Contents | <ul style="list-style-type: none"> • Introduction to strategy for a Statistical Metadata System (SMS) • UN-NQAF and GSBPM • Statistical metadata and principles • Introduction to the UN's Common Metadata Framework and standards • Standards related to SMS: DDI, SDMX, GSBPM, GSIM • Architecture and SMS development process • Organisation: development and maintenance • Cases and exercises |
| Required reading | <p>Manual for the standard compilation of statistics: UN National Quality Assurance Framework Manual – 2019 Edition: https://unstats.un.org/unsd/methodology/dataquality/un-nqaf-manual/ Common Metadata Framework part A. Statistical Metadata in a Corporate Context: A guide for managers: http://www.unece.org/fileadmin/DAM/stats/publications/CMF_PartA.pdf</p> |
| Suggested reading | <p>GSBPM, GAMS0, GSIM – introduction : https://statswiki.unece.org/display/GSBPM/I.+Introduction DDI – introduction: https://ddialliance.org/about/work-products-of-ddi-alliance SDMX – introduction: https://sdmx.org/wp-content/uploads/SDMX_COG_2016_Introduction.pdf</p> |
| Required preparation | The participants are requested to write a short summary of their own activity at their organisation and of the organisation's practices, in the field of metadata. |

Annex 4. UN-NQAF Level A: Managing the statistical system²⁰

Principle 1: Coordinating the national statistical system

Requirement 1.1: A statistical law establishes the responsibilities of the members of the national statistical system, including its coordination. Its members are identified in a legal or formal provision.

The coordination role of the NSO or other body is defined in a statistical law.

- The statistical law specifies the requirements for official statistics and the scope of the NSS.
- Members of the NSS are identified in a formal document.
- Responsibilities of NSS members for the development, production and dissemination of official statistics are clearly specified in the respective laws and regulations.

Requirement 1.2: There are a body and mechanisms for the coordination of the national statistical system for activities at the local, national, regional and international level.

- The NSO or other body is tasked with the coordination of the NSS.
- The NSO and other statistical agencies have mechanisms to ensure the coordination (including the exchange of data and statistics within the NSS) and the quality of official statistics.
- An NSS-wide (central) coordination body (which is by default part of the NSS and is typically the NSO) sets, monitors and reviews guidelines for the development, production and dissemination of official statistics.
- A central coordination body establishes and maintains engagement with advisory bodies, academic institutions and other regional and international bodies as appropriate.
- A central coordination body coordinates data collection to improve cost-effectiveness and reduce respondent burden, in particular with regard to coordinating sample surveys.
- A central coordination body monitors the use of agreed standards, concepts, classifications and methods throughout the NSS.
- A central coordination body promotes and enhances data sharing within the NSS and liaisons with members of the extended data ecosystem regarding the sharing of data.
- A central coordination body promotes the sharing of technical knowledge and good statistical practices and ensures the provision of training, including on the production of official statistics and SDG indicators.
- Processes for the evaluation of the quality of the statistics are developed and applied within the NSS.

Requirement 1.3: There is a mechanism for considering statistics produced outside the national statistical system and, if appropriate, for those statistics to become official.

²⁰ UN-NQAF (2019)

- The body coordinating the NSS evaluates statistics produced outside the NSS for use as official statistics or alongside official statistics. Examples of such statistics are some of the SDG indicators.
- The NSS-wide (central) coordination body or a task force composed of members of various statistical agencies can be given the responsibility for the evaluation of the quality of relevant statistics outside the NSS (e.g., some SDG indicators) as needed.
- There is a unit such as a task force that discusses and provides support for the use of new data sources within the NSS.

Requirement 1.4: There is a national plan or programme for the development and production of official statistics.

- There is a multi-year national plan for the development and production of official statistics, which can take the form of a National Strategy for the Development of Statistics.
- The multi-year national plan for the development and production of official statistics covers the entire NSS.
- The multi-year national plan should address quality assurance.
- Annual plans for the NSS members supplement the multi-year NSS-wide plan.
- The multi-year national plan is established in close consultation with statistics producers, users and data providers.
- The multi-year national plan for the development and production of official statistics is approved for implementation by an NSS-wide governance body and/or a higher-level government or a legislative body.
- The programmes and activities of the multi-year national plan are monitored on a regular basis by the NSS-wide (central) coordination body.

Principle 2: Managing relationships with data users, data providers and other stakeholders

Requirement 2.1: Stakeholders are identified and consulted regarding their interests, needs and obligations.

- The statistical agencies clearly identify all their stakeholders.
- Processes are in place to consult stakeholders about their concerns, interests, needs and obligations.
- Stakeholders are kept informed of actions taken to address their needs and concerns.

Requirement 2.2: The statistical agencies have a strategy and institutional arrangements are in place to engage with their users.

- User needs and how to engage with users are reflected in the statistical agencies' strategies, such as the strategy for the development of statistical outputs and the dissemination strategy, as well as for NSS-wide relevant strategies such as the National Strategy for the Development of Statistics.

- Service agreements or similar arrangements with the main users of the statistics are in place (e.g., with regard to what will be supplied by the agency, the quality of the statistics, the dissemination format, etc.).
- Statistical agencies have press offices, hotlines and a central email contact who responds to all user inquiries in a timely manner.
- Users can engage with statistical agencies and request information in their preferred means of communication, such as through telephone, email and other common means of communication.
- Processes and arrangements (such as a user committees) are in place so that users can advise statistical agencies about their emerging needs and priorities and during the development of new or review of existing statistics.
- There are subject domain-specific user committees. See also principle 14 on assuring relevance.

Requirement 2.3: The statistical agencies continuously maintain and develop cooperation with funding agencies, academic institutions and international statistical organizations, as appropriate.

- The statistical agency's workplans and budgets are shared with the funding agency as appropriate to ensure mutual understanding of funding requirements and trade-offs.
- Statistical agencies maintain and develop cooperation with the scientific community to develop new statistics, improve methodology and promote the use of statistics.
- Statistical agencies cooperate with international and regional organizations in the area of statistics and with the statistical organizations of other countries.

See also principle 1 on coordinating the national statistical system.

Requirement 2.4: The national statistical office and, if appropriate, other statistical agencies have the legal authority or some other formal provision to collect data for the development, production and dissemination of official statistics.

- The statistical law provides appropriate provisions to guarantee the NSO and, if appropriate, other statistical agencies the right to collect data for statistical purposes through surveys and censuses.
- Based on the legislation, the statistical agencies are able to apply appropriate sanctions, such as fines, if a response to obligatory statistical surveys or censuses is not received.

Requirement 2.5: The national statistical office and, if appropriate, other statistical agencies have the legal authority or some other formal provision to obtain administrative data and adequate access to those data from other government agencies for statistical purposes.

- The statistical law provides appropriate provisions to guarantee the NSO and, if appropriate, other statistical agencies the right to obtain or access administrative data in a timely manner.
- Where statistical agencies do not have a legal right to obtain administrative data, memorandums of understanding are in place that provide such access.
- Statistical agencies' access to administrative data are free of charge.
- Agreements with owners of administrative data are in place to operationalize data access which describe technical conditions for access and possibilities for linking the data with data from other administrative data sources.

- Statistical agencies are involved in the design and development of administrative data sets in order to make them suitable for statistical purposes; this involvement extends to the possible discontinuation of such data sets.

Requirement 2.6: The national statistical office and, if appropriate, other statistical agencies have the legal authority or some other formal provision and related agreements to access and use data (including big data) maintained by private corporations or other non-governmental organizations for statistical purposes on a regular basis, including for testing and experimentation.

- The statistical law provides appropriate provisions to guarantee the NSO and, if appropriate, other statistical agencies the right to obtain or access, in a timely manner, data held by private corporations or other non-governmental organizations for statistical purposes (e.g., all corporations that provide services to individuals and legal entities residing in the country).
- The statistical law foresees adequate sanctions to ensure access to privately held data where appropriate (such as fines for not granting such access).
- Where statistical agencies do not have a legal right to obtain access to data maintained by corporations or other non-governmental organizations, memorandums of understanding are in place that provide such access.
- Statistical agencies consider the relevance and the scope of data requested.
- The access and use of privately held data follow procedures agreed between the statistical agencies and the owners or holders of the data.

Requirement 2.7: The national statistical office cooperates with and provides support and guidance to data providers.

- The NSO regularly consults with data providers and maintains cooperation with the providers of administrative data and with corporations, businesses and other organizations that hold data to strengthen the statistical value and usage of these sources.
- Quality reports for administrative data are developed in cooperation with the NSO and the data owner and describe accuracy, completeness, timeliness and punctuality, among other things.
- Holders of administrative data, businesses and other organizations receive feedback on the quality of the data provided, allowing for further improvements.
- Partnership agreements with data providers are in place.

Principle 3: Managing statistical standards

Requirement 3.1: The statistical agencies cooperate in the development and implementation of international, regional and national statistical standards.

- The NSO actively works with other statistical agencies and international and regional statistical organizations in developing, reviewing, promoting and implementing statistical standards.
- The NSO has an organizational unit responsible for facilitating and coordinating the adoption and development of international, regional and national statistical standards and for supporting statistical programmes/domains in their efforts to adopt and develop such standards.

- All relevant staff in statistical agencies are aware of statistical standards and any changes made to them.
- There is a repository and a list of all standard classifications available in all statistical agencies.
- The process for originating, developing and approving statistical standards involves statistics producers, data providers and data users.
- The impact of the adoption of new statistical standards is assessed, documented and communicated to users; where applicable, conversion tables are provided.
- The statistical agencies use conceptual frameworks, such as the System of National Accounts, that provide a basis for integrating statistical information.
- Statistical standards (concepts, definitions, classifications, etc.) are regularly reviewed.

Requirement 3.2: The national statistical office provides support and guidance to all data providers and producers of official statistics in the implementation of statistical standards.

- The NSO monitors the extent to which statistical standards are used by data providers and producers of official statistics.
- Periodic reports are prepared with regard to compliance with international, regional and national statistical standards.
- Statistical standards are communicated and made available to all data providers and producers of official statistics.
- Plans and schedules for the development and application of new standards are communicated in advance.
- The NSO assists other statistics producers and data providers in the implementation of international, regional and national statistical standards as appropriate.

Requirement 3.3: Divergences from the international, regional or national statistical standards are kept to a minimum, and are documented and explained to all stakeholders.

- Concordance tables for international, regional and national standard classifications are developed and made available in cases where diverging standards are used.
- The adopted standards (concepts, definitions, classifications, etc.) are explained to all stakeholders.
- Stakeholders are informed about compliance with international, regional and national statistical standards.