

Statistical Commission

Forty-sixth session

3 – 6 March 2015

Item 3 (1) of the provisional agenda

Items for discussion and decision: Fundamental Principles of Official Statistics

Background document

Available in English only

United Nations Fundamental Principles of Official Statistics

Implementation guidelines

(Final draft, subject to editing)



UNITED NATIONS

United Nations Fundamental Principles of Official Statistics

Implementation Guidelines

United Nations Fundamental Principles of Official Statistics

Implementation guidelines

(Final draft, subject to editing)

(January 2015)

Table of contents

| | |
|--|-----------|
| Foreword | 3 |
| Introduction | 4 |
| <u>PART I: Implementation guidelines for the Fundamental Principles</u> | 8 |
| RELEVANCE, IMPARTIALITY AND EQUAL ACCESS | 9 |
| PROFESSIONAL STANDARDS, SCIENTIFIC PRINCIPLES, AND PROFESSIONAL ETHICS | 22 |
| ACCOUNTABILITY AND TRANSPARENCY | 31 |
| PREVENTION OF MISUSE | 38 |
| SOURCES OF OFFICIAL STATISTICS | 43 |
| CONFIDENTIALITY | 51 |
| LEGISLATION | 62 |
| NATIONAL COORDINATION | 68 |
| USE OF INTERNATIONAL STANDARDS | 80 |
| INTERNATIONAL COOPERATION | 91 |
| ANNEX | 98 |
| <u>Part II: Implementation guidelines on how to ensure independence</u> | 99 |
| HOW TO ENSURE INDEPENDENCE | 100 |

Foreword


The Fundamental Principles of Official Statistics (FPOS) are a pillar of the Global Statistical System. By enshrining our profound conviction and commitment that official statistics have to adhere to well-defined professional and scientific standards, they define us as a professional community, reaching across political, economic and cultural borders. They have stood the test of time and remain as relevant today as they were when they were first adopted over twenty years ago. In an appropriate recognition of their significance for all societies, who aspire to shape their own fates in an informed manner, the Fundamental Principles of Official Statistics were adopted on 29 January 2014 at the highest political level as a General Assembly resolution (A/RES/68/261).

This is, for us, a moment of great pride, but also of great responsibility and opportunity.

In order for the Principles to be more than just a statement of noble intentions, we need to renew our efforts, individually and collectively, to make them the basis of our day-to-day statistical work. Implementing them in our national institutions and systems is our common challenge. In this respect, much has been accomplished in the past twenty years, but much still remains to be done. It is in this spirit of shared responsibility that these implementation guidelines were produced. They build on the practical experiences gained by countries around the world and are shared with the global statistical community to provide inspiration and incentives for others. The guidelines are intended for a multitude of purposes, including communication with important stakeholders or training of staff within the wider national statistical system.

I hope you will find these guidelines a valuable reference and tool for your daily work. A worldwide team of enthusiastic members of the global statistical community contributed to this important document and I would like to take this opportunity to thank all of those who dedicated time, resources and experiences to the compilation of these guidelines. A special thank you goes to the co-chairs of the Friends of the Chair Group on the Implementation of the Fundamental Principles of Official Statistics, Ms. Sibylle von Oppeln-Bronikowski and Ms. Katherine Wallman, who led this work under the auspices of the Statistical Commission.

As the global community launches the Post-2015 development agenda and discusses the “data revolution” and “big data”, statistics and data are becoming ever more visible and important. This is indeed an opportune moment to bring the Fundamental Principles of Official Statistics, and their significance in ensuring reliable and sustainable information for analysis and decision making, to the attention of all stakeholders. The United Nations Statistics Division remains committed to working with all countries and partners to make the implementation of the Principles a global reality.



Stefan Schweinfest, Director
United Nations Statistics Division

January 2015

Introduction

Background

Almost twenty years after their adoption in 1994 by the UN Statistical Commission, the ten Fundamental Principles of Official Statistics are still as relevant today as they were in the past. They have become an integral part and a common reference in the statistical systems at global and national level.

A milestone in the history for the international statistical community was reached when, on 29 January 2014, the UN General Assembly adopted a resolution concerning the Fundamental Principles. It is the first time they have received such high recognition at global political level and it shows the importance of good statistics for decision-making in the democratic society.

The 20th anniversary of adopting the Fundamental Principles, which was celebrated in early 2014, was used as an occasion to further promote their worldwide implementation. In this context, two main tasks (amongst others) were mandated by the UN Statistical Commission:

- Revision and update of the language of the preamble of the Fundamental Principles in order to take new global developments into account.
- Strengthening the practical implementation by elaborating a practical guide for the implementation of the Fundamental Principles and on how to ensure independence of national statistical systems.

To accomplish these two main assignments, an international Friends of the Chair group on the Implementation of the Fundamental Principles of Official Statistics was established by the UN Statistical Commission at its forty-second session in 2011.

The first main task of the Friends of the Chair group, the drafting of a revised preamble of the Fundamental Principles, ended with its adoption by the UN Statistical Commission at its forty-fourth session in 2013. New global developments of the past two decades were taken into consideration bearing in mind the critical role of high-quality statistical information, the necessity to ensure public's trust in official statistics and stressing that legal and institutional frameworks need to guarantee fundamental statistical values and principles.

To accomplish the second task, the Friends of the Chair group developed in 2013 and 2014 implementation guidelines for the Fundamental Principles (see Part I of the implementation guidelines) and on how to ensure independence of national statistical systems (see Part II of the implementation guidelines). The implementation guidelines for the Fundamental Principles were highly appreciated by the UN Statistical Commission at its forty-fifth session in 2014. In this session the UN Statistical Commission also invited countries to further enrich the implementation guidelines with additional comments and submission of good country practices. From September 2014 to January 2015, 39 replies have been received, examined and considered. In

order to keep the implementation guidelines “easy to handle” a selection out of all submitted good practices had to be made.

Purpose of the implementation guidelines

The implementation guidelines for the Fundamental Principles in Part I list several actions or activities, which a statistical agency is advised to take into account when aiming to improve the practical and effective implementation of a certain Principle or when developing a certain Principle further. Concrete as well as practice-orientated examples (good practices) complement these recommended actions.

Part II of the implementation guidelines contains recommendations on how to ensure a high level of independence of national statistical systems. These guidelines differentiate between various forms of independence (such as institutional, professional and scientific independence) and recommend good practices in order to ensure independence. A collection of statistical laws reflecting the experiences of the national statistical offices complement and concretize the recommendations in the guidelines.

Approach followed by the implementation guidelines

The nature and intention of the implementation guidelines allow this guiding tool to remain open to the addition of activities and to integrate further good practice examples as they might evolve from time to time. Continuously revising and updating the content of the implementation guidelines is possible and desirable. The implementation guidelines will remain a “work in progress” that needs further input and regular updating. Statistical offices are encouraged to send their good practice examples to the UN Statistical Division (statistics@un.org), which are in their view missing at the moment, so that this document can be further enriched. In the context of regular monitoring of the implementation of the Fundamental Principles, which should take place every five years as agreed in the forty-fifth session of the UN Statistical Commission in 2014, comprehensive revisions of the implementation guidelines can be carried out. Updates outside the five year cycle are possible, for example to integrate good practices obtained from peer reviews carried out for instance in EU Member States or in other regions.

The implementation guidelines are based on existing material such as the UN “Handbook on Statistical Organization and Management” and UN Statistical Division “Country practices” website (<http://unstats.un.org/unsd/dnss/gp/searchgp.aspx>). Various experts were consulted to develop the implementation guidelines; therefore a linguistic diversity could not be fully avoided and has to be taken into account. Furthermore, the implementation guidelines are closely linked to other national and regional codes and frameworks. These codes and frameworks apply for different regions (like Europe, Africa, Latin America and the Caribbean), whereas the UN implementation guidelines have a broader application. The broader geographic coverage implies a different emphasis in terms of the described actions and good practic-

es. The fact that different codes and frameworks are used can lead to a certain “patch work”, but this is intended. The document should reflect the multitude of approaches and practices which is seen as an added value. As new developments occur in regions, the implementation guidelines have to be adapted accordingly.

The “living character” of the implementation guidelines ensures an adjustable and flexible use of the implementation guidelines in different institutional and regional settings (centralized versus decentralized statistical systems) and therefore meets the diversity and specific characteristics of all different UN Member States. The various actions and recommendations as well as the good practice examples described and presented in the document will not necessarily apply uniformly to every statistical agency. The components of the guidelines that may be most applicable to one country might be quite different for another country depending upon aspects such as available resources and the institutional environment within which it operates. Therefore, the statistical agencies are not expected to strictly apply to all of the proposed actions. Moreover, in the implementation guidelines the legal framework is mentioned in every principle as an important factor for implementation. But of course there are other factors to be born in mind regarding a successful implementation, such as practice, tradition, leadership, political context etc.

Structure of the implementation guidelines

The implementation guidelines for the Fundamental Principles as well as on how to ensure a high level of independence of national statistical systems follow (when possible) a uniform structure to make them manageable and easy to handle. The outline is as follows:

- I. Objective: This section includes a short description of the Principle and its objective.
- II. Scope of application: In this section each principle is broken down into different aspects or dimensions which operationalize or concretize the Principle. For example Principle 6 on “confidentiality” is broken down into the following aspects or dimensions: legal framework ensuring confidentiality, elaboration of a confidentiality policy, providing micro data by ensuring confidentiality aspects, establishing IT-security systems to protect confidentiality, etc. For each dimension, several actions or activities are listed, which are advised to be taken into account in order to improve the implementation of the Principle. To complement the recommended actions, good practices are shortly presented.
- III. Risks: This section describes the consequences and risks that appear, when the principle is violated.

Within the Friends of the Chair group several possibilities of structuring the implementation guidelines were largely discussed and pros and cons were carefully weighed. Finally, it was decided to adopt the current structure even if potential redundancies may occur.

Acknowledgements

The contributions to the work on the implementation guidelines by the Friends of the Chair group members of the following countries are gratefully acknowledged: Australia, Colombia, Dominican Republic, Germany, Italy, Mexico, Norway, Philippines, South Africa, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania and United States of America, the Friends of the Chair group's observers, like from the Statistical Offices of the European Communities and of the Economic Commission for Europe. Moreover, valuable contributions were also made by other Statistical Offices from all regions worldwide.

Sibylle von Oppeln-Bronikowski, January 2015

Co-Chair of the Friends of the Chair group

PART I:

Implementation guidelines for the Fundamental Principles

Principle 1 – Relevance, Impartiality and Equal Access

Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information.

RELEVANCE

I. Objective

“Relevance” is the degree to which statistics meet current and potential users’ needs.

Official statistics compiled by National statistical agencies and international and supranational organisations exist to provide information to the general public, governments, business and research communities in the economic, demographic, social and environmental fields. This information is essential for evidence based decision making, for mutual knowledge and trade among the States and peoples of the world. Official statistics as an important public good in democratic societies have to meet the needs of users and – as mentioned above in order to be credible and trusted – must be compiled in an objective, transparent and independent manner and in respect of the rights of respondents, and must be disseminated in an impartial way (see the UN Handbook of Statistical Organization 2003, page 7 and UN Global Review 2013, page 6).

To meet the test of practical utility statistics must be relevant, of suitable quality and in a form that facilitates easy and correct use. The key to achieving this is maintaining an understanding of users’ needs. Statistical agencies use various instruments to interact with users. As indicated in part 1, it is in particular recommended that during the development phase users and the scientific community are consulted. In addition, good planning (including priority setting) is essential in order to respond to the changing needs of users.

II. Scope of application

Statistical agencies are advised to organise regular dialogues with users to well understand their needs and the purpose statistics should serve (Fit-for-purpose paradigm). Scientific community should be involved in open debates on statistical methodology and research.

1. Legal framework

Multiannual and/or annual work programmes in the form of implementing legislation or administrative documents elaborated in consultation with users and approved by User Councils represent the frameworks for development, production and dissemination of official statistics. This could also be discussed in a National Statistical Council, which could be very supportive in a national statistical system.

Examples of “legal framework”:

National statistical programmes, e.g. Strategy and programme planning 2013-17 (Germany)

(<https://www.destatis.de/EN/AboutUs/OurGoals/StrategyProgrammePlan.html>)

Official Statistics Programme 2012-2016

(<http://www.turkstat.gov.tr/UstMenu/yonetmelikler/rip.pdf>) and Strategic Plan

(http://www.turkstat.gov.tr/jsp/duyuru/upload/stratejik-plan-2012-2016_ENG.pdf) (Turkey)

European statistical programme 2013-17

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=747728&p_v_l_s_g_id=0)

Corporate Business Plan (Canada)

(<http://www.statcan.gc.ca/about-apercu/bp-pe-eng.htm>)

Examples of “legal tools”:

UK Code of Practice for Official statistics (user orientation at the centre of principle 1) (<http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html>)

2. Consultation of users

2.1 Identify users and maintain knowledge and contact.

2.2 Engage effectively and regularly with users of statistics to promote trust and maximise public value.

E.g. advisory councils, working groups, meetings with stakeholders,...

2.3 Investigate and document the needs of users of official statistics, the use made of existing statistics and the types of decision they inform.

E.g. by user satisfaction surveys.

Quality control measures referring to relevance, timeliness, frequency.

2.4 Involve users in the evaluation of statistics.

2.5 Consult and inform users before making changes that affect statistics.

2.6 Consult users about uses of statistics

2.7. Contracts and Memoranda of Understanding can help to foster the exchange between statistical institutes and user groups (e.g. universities, etc.).

3. Work programme

3.1 Develop strategic goals and work programme plans in such a way that judgments can be made about competing user needs.

3.2 Adopt systematic statistical planning arrangements, including transparent priority setting, that reflect the obligation to serve the public good.

4. Informing users

4.1 Publish information about users' experiences of statistical services, data quality, and the format and timing of reports.

4.2 Informing about gaps between the measured statistical concept and the user's concept of interest, data limitation, data quality and changes to the data (e.g. in quality reports).

Examples of good practices:

Annual user satisfaction survey of Eurostat and user surveys conducted by national statistical agencies:

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=64251&p_v_l_s_g_id=0)

User Satisfaction Survey of INE Chile (not published on the INE website).

Statistical Council in Turkey was formed in order to identify the needs of official statistics, conduct a study covering proposals and opinions for the future and to evaluate and make recommendations to related functions, the development and implementation of official statistics by the preparation of the Official Statistics Programme (OSP). (<http://www.officialstatistics.gov.tr/?q=en/node/213>)

User council or other advisory body, e.g. Statistical Council in Lithuania, representing main user groups, respondents and producers of official statistics and focusing on the analysis of the key issues of organizing official statistics and submitting proposals to Statistics Lithuania.

(<http://osp.stat.gov.lt/en/web/lisd/statistikos-taryba>)

Statistics Canada: Policy on informing users of data quality and methodology

(http://www.statcan.gc.ca/about-aperçu/policy-politique/info_user-usager-eng.htm)

Annual reports published by national statistical agencies

Annual ESS report published by Eurostat:

(<http://ec.europa.eu/eurostat/en/web/products-statistical-books/-/KS-FN-13-001>)

Guidelines of “Quality Assurance” of the Official Statistics of Japan

(http://www.stat.go.jp/english/index/seido/pdf/qa_gl.pdf)

Oficina Nacional de Estadística (2013): Plan Estadístico Nacional. República Dominicana: <http://one.gob.do/>

Instituto Nacional de Estadística: Plan Estadístico Nacional. España
<http://www.ine.es/>

Instituto Nacional de Estadística y Censos: Estrategia Nacional de Desarrollo Estadístico, Costa Rica: Hacia el fortalecimiento y desarrollo del sistema de estadística nacional. Costa Rica, [unstats.un.org/unsd/dnss/docViewer.aspx?docID=2233](http://stats.un.org/unsd/dnss/docViewer.aspx?docID=2233)

Instituto Nacional de Estadística. (2006): Estrategia Nacional de Desarrollo Estadístico: Sistema Estadístico Nacional en el marco de la Estrategia Nacional de Desarrollo Estadístico (versión preliminar). Guatemala: Instituto Nacional de Estadística.

III. Risks

The real or perceived lack of professional independence of the national statistical agency and its head, lack of scientific competence of the staff and breaches of the principle of impartiality can undermine the credibility of statistics produced. If statistics are used for evidence based policy making, the credibility of those policies will be also affected.

National statistical agencies are expected to provide statistics which meet the needs of users. A lack of relevance of official statistics in the era of information society means that the agency is undermining its role and position on the information market and will be marginalised.

IMPARTIALITY AND EQUAL ACCESS

The use and benefit of official statistics is dependent on their credibility and confidence towards users. Professional independence of statistical agencies, scientific competence of their staff and impartiality are the crucial preconditions of trust in official statistics.

Secondly the benefits of statistics are increasingly recognised as essential tools for Transparency, Accountability, Results and Transformation (START)¹. The High Level Panel of the Secretary General argues that the data revolution should have two objectives: the integration of statistics into public and private decision making; and building trust between society and states through transparency and accountability (HLP Secretariat 2013). The explicit assignment of the responsibility to statistics as a system of accountability has implications on how the system interacts with society and subsequently its relative positioning.

I. Objective

The overall purpose of official statistics is to serve the information system of democracies. This is a big, demanding and complicated role to play. In addition to traditional economic, social and environment dimensions, new ones have emerged, e.g. peace and security or welfare. Official statistics have to serve not only governments but all the stakeholders involved in the political debates and all the users including the public at large when monitoring all kinds of development. Several preconditions have to be fulfilled to guarantee that official statistics can play this demanding role.

The independence of statistical agencies is essential for the credibility and integrity of official statistics. “Professional independence” is not an objective per se; it is rather a means to provide objective statistical information free from any pressures from political or interest groups. It covers elements of institutional independence, such as a possibility of setting up and publishing statistical work programmes autonomously (programme planning), a responsibility to manage the budget of the statistical agency² and a prominent role of the head of the agency³. The independence in developing, producing and disseminating statistics, in particular the selection of definitions, methods and data sources, and decisions on the timing and content of all forms of dissemination, is best assured via the professional independence of the head of the

¹ High level Panel on Aid Effectiveness in Busan: presentation by Pali Lehohla, Statistician General South Africa, on Statistics for Transparency, Accountability, Results and Transformation (START).

² Different terms are used synonymously in this document: statistical agency, national statistical agency, statistical institute, national statistical institute, national statistical (or statistics) office (NSO)

³ Different terms are used synonymously in this document: Head (of NSO) or Chief Statistician

statistical agency and transparent recruitment and dismissal procedures based on clear professional criteria and not on political grounds.

Independence and impartiality are interrelated. Similarly to professional independence, “Impartiality” means that statistics must be developed compiled and disseminated in a neutral and unbiased manner (determined by statistical considerations when deciding on choices of data and methods), and in addition, all users must be given equal treatment and equal access to statistical information.

Objectives of this Principle are closely related to objectives of Principle 2 dealing with professional standards and ethics.

II. Scope of application

A strong position of independence is essential for a statistical agency in order to establish credibility among its users and create a relationship of mutual respect and trust (see UN Handbook of Statistical Organization 2003, page 5).

Professional independence and impartiality have to be followed throughout the whole production process covering development, compilation and dissemination of official statistics. However, in the development phase it is essential to consult users in order to ensure relevance of statistics and the scientific community on potential methods in order to increase transparency, robustness and also potential advocacy. Compilation and release of data should be free from any interference, so as to ensure impartiality of the national statistical agency (see UN Global Review 2013, page 6).

1. Legal framework

- A law or formal provision is in force, which specifies that statistical agencies are professionally independent and impartial, develop, produce and disseminate statistics following professional standards, and treat all users in the same way. But this does not mean that there is no distinction between different types of users. For example, only accredited researchers might have access to anonymized microdata for research, while the general public would not be allowed such access. Among categories of users, each user must be treated "in the same way" in accordance with published guidelines.
- The laws, regulations and measures under which the statistical systems operate are made public (see NQAF 4 and 5).

Examples of “legal framework”:

The Treaty of the EU:

(<http://eur-lex.europa.eu/en/treaties/index.htm#current>)

Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European Statistics⁴:

(<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:087:0164:0173:en:PDF>)

Communication from the Commission to the European Parliament and to the Council on the independence, integrity and accountability of the national and Community statistical authorities and Recommendation of the European Commission on independence, integrity and accountability:

(<http://ec.europa.eu/eurostat/documents/34693/344802/Commission-recommendation-COM-2005>)

The African Charter on Statistics

(http://www.au.int/en/sites/default/files/AFRICAN_CHARTER_ON_STATISTICS.pdf)

National statistical law such as the Statistics Law of Turkey: It stipulates in Article 4: “Principles”: “[...] Official Statistics Programme⁵ shall be prepared and implemented in accordance with the principles of reliability, consistency, impartiality, statistical confidentiality, timeliness and transparency” and “All relevant information and methods used in producing official statistics shall be made public in order to allow the evaluation of the quality of official statistics and their compliance with the principles”. The principle that all users have equal access to statistical releases at the same time is laid down in Article 12: “Access to statistical results” and the National Data release Calendar in the Statistical Programme also explicitly stipulates equal access.

(<http://www.turkstat.gov.tr/UstMenu/yonetmelikler/StatisticsLawOfTurkey.pdf>)

National statistical law such as the Law on Official Statistics of the Republic of Azerbaijan: It reflects in many respects the Fundamental Principles of Official Statistics: For example the preamble (paragraph 2) stipulates that “Official statistics shall provide – on an impartial basis – accurate and qualitative (representative) information about the economic, demographic, social and environmental situation in the country to government institutions, social and economic agents, academic circles, the general public, international organizations and other users.” (http://www.stat.gov.az/menu/3/Legislation/law_az_en.pdf)

National statistical law such as the Law dated 29 June 1995 on Official Statistics (<http://bip.stat.gov.pl/en/law/law-on-official-statistics>) (consolidated text: Journal of Laws

⁴ The forthcoming Amending Regulation (EC) No 223/2009 on European statistics will be available in spring 2015.

⁵ In this document „programme“ and „program“ are used synonymously.

of the Republic of Poland of 2012 item. 591 with further amendments) indicates in article 1 professional independence in conducting statistical surveys and in article 14 equal treatment and equal access to statistical information.

Article 4 of the Law on Statistics of Mongolia legalized a basis of professional independence and impartiality of the activities of official statistics. The professional independence of the Statistical Authority of Mongolia (SAM) ensures the credibility of the national statistics of Mongolia. The mandate of the SAM are to collect, produce and disseminate data which is secured by the provisions of the laws and regulations that are implemented free from any pressures from public administration organizations, public officials, private sector, individuals and enterprises and without having no conflict of interests with them.

Statistics Korea is in the process of institutionalizing transparency in publishing data through legislative amendment, so as to ensure impartiality of official statistics. This will allow Statistics Korea to gain further independence and earn better trust from data users.

(<http://kostat.go.kr/portal/english/resources/5/index.static>)

Decision establishing the European Statistical Governance Advisory Board:

(<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:073:0017:0019:EN:PDF>)

European Commission Decision on Eurostat 2012/504/EU:

(<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32012D0504>)

Law Number 2 of 2011 on Official Statistics of the Ministry of Development Planning and Statistics of Qatar (MDPS):

(<https://qsa.gov.qa/eng/StatisticAct.htm>)

Concerning Impartiality: The Ministry of Development Planning and Statistics (MDPS) will develop, produce and disseminate statistics respecting scientific independence and in a manner that is professional, transparent, neutral and unbiased, in which all users are treated equitably (e.g. code of conduct, data dissemination policy, Release calendar)

FEDERAL LAW On Official Statistical Accounting and State Statistics System in the Russian Federation (with the Amendments and Additions of October 19, 2011, October 16, 2012, July 2, 2013) official statistical accounting and state statistics system

Principles of official statistical accounting and state statistics system shall be as follows:

- 1) completeness, credibility, scientific relevance, timeliness and accessibility of the official statistical information (except for information access to which is limited by federal laws);
- 2) application of scientifically based official statistical methodology corresponding to international standards and principles of official statistics, as well as to

the legislation of the Russian Federation, openness and accessibility of such methodology;

7) application of common standards when using the information technologies and Russian classifications of technical, economic and social information for development and maintenance of the state statistics system in order to make it compatible with other state information systems;

(<http://www.gks.ru/ENG/ABOUT/fed-law.mht>)

Examples of “legal tools”:

European Statistics Code of Practice (principles 1 Professional independence, 6 Impartiality and objectivity, 15 Accessibility and clarity):

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=64173&p_v_l_s_g_id=0)

UK Code of Practice for Official statistics (principles 2 Impartiality and objectivity, 3 Integrity, 8 Frankness and accessibility, Protocol 2 Release practices):

(<http://www.ons.gov.uk/ons/guide-method/the-national-statistics-standard/code-of-practice/index.html>)

Irish Statistical System Code of Practice (principles 1 Professional independence, 2 Timeliness and punctuality, 3 Accessibility and clarity, 4 Commitment to quality):

(<http://www.isscop.ie/>)

Guidelines for the template for a generic national quality assurance framework (NQAF) (United States):

(<http://unstats.un.org/unsd/dnss/docs-nqaf/GUIDELINES%208%20Feb%202012.pdf>)

Código de Buenas Prácticas de las Estadísticas Chilenas (Chile):

(http://www.ine.cl/canales/corporativo/buenas_practicas/pdf/codigo_buenas_practicas_2013.pdf)

Código de Buenas Prácticas Estadísticas (Ecuador)

(<http://www.ecuadorencifras.gob.ec/normas-tecnicas/>)

Public commitment on European statistics by the ESCB:

(<http://www.ecb.europa.eu/stats/html/pcstats.en.html>)

ISI Declaration on Professional Ethics:

(<http://www.isi-web.org/images/about/Declaration-EN2010.pdf>)

Italian Code of Official Statistics (Gazz. Uff. 13/10/2010, n.240):

(<http://www3.istat.it/istat/comunicazionilegali/CodiceStatisticheUfficiali.pdf>)

Independent external bodies overseeing independence of statistical agencies and impartiality of statistics (European Statistical Governance Advisory body, UK Statistics Authority, Swiss Ethics Board etc.)

Statistics Code of Good Practices for Brazilian Institute of Geography and Statistics – IBGE:

(http://www.ibge.gov.br/english/disseminacao/eventos/missao/codigo_boas_praticas.shtm)

Iranian National Strategy for the Development of Statistics (NSDS)

(<http://www.amar.org.ir/Default.aspx?tabid=285>)

2. Professional independence of the statistical agency

- 2.1 Transparent procedures for recruitment and dismissal of Head of the statistical agency are in place. These procedures must be independent of changes of government.
- 2.2 Head of the statistical agency is responsible for the budget management and has a right to publicly comment on the budget allocated to the statistical agency.
- 2.3 Head of the statistical agency has sufficiently high hierarchical standing to ensure senior-level access to policy authorities and administrative public bodies.
- 2.4 Statistical agency, when appropriate, comments publicly on statistical issues, including criticism and misuses of official statistics.

3. Compilation of statistics/statistical practices (should be free from political interference)

- 3.1 Statistics are compiled on the basis of common standards determined only by statistical considerations.
 - E.g. guidelines for assuring impartiality and objectivity explain the compilation of statistics, ...
- 3.2 Choices of sources and statistical methods as well as decisions about the dissemination of statistics are only made by statistical considerations.⁶
 - E.g. regular assessments statistically validate the collection mode and the methodology used, ...

4. Information on methods and procedures used in statistics (should be free from political interference)

- 4.1 Information on methods and procedures is publically available.
 - E.g. Meta-information, documentation of the production process, ...

5. Statistical releases

- 5.1 Statistical releases⁷ and statements made in press conferences are objective and non-partisan.
- 5.2 Statistical releases are clearly distinguished from political statements.

⁶ See principles 2 “Professional standards and ethics” and 3 “Accountability and transparency”.

⁷ See principle 4 “Prevention of misuse”.

- Policies and procedures exist for dealing with actual or perceived, or potential conflicts of interest, ...

5.3 Statistical release dates and times are pre-announced (release calendar).

- Deviations from the release calendar are announced and justified to the users but should be rare.

6. Equal Access to statistical releases

6.1 All users have equal access to statistical releases at the same time. There is no privileged access for governmental representatives. Any privilege pre-release access to any outside user is limited, controlled and publicised.

6.2 If leaks of statistical information occur, pre-release arrangements are revised so as to ensure impartiality. To that purpose specific procedures are put in place and made publicised.

7. Changes to statistical data

- Advance notice is given on changes to methods or classifications and revisions in general. Revision policy for those outputs that are subject to scheduled and non-scheduled revisions is publicised, errors discovered in published statistics are corrected at the earliest possible date and publicised. Internal procedures for error reporting and correcting are in place.

8. Supplementary statistical services

- Supplementary statistical services for which a charge is made follow a clear pricing policy. When custom-designed analyses are provided, the public is informed about the conditions of that service. Besides the offer of a special service, it has to be clear that data itself should be provided free of charge (in an accessible database).

9. Human Resources System

- An effective human resources system to objectively manage the appointment and promotion of the agency's staff are in place Recruitment and promotion of the staff responsible for the development, production and dissemination of statistical information is based on professional and clear processes, based on aptitude and expertise. Human resources development has to involve all staff members and must accompany processes of change. The aim is to identify, maintain and develop staff qualifications for an optimal performance of tasks. This is the only way the challenges to official statistics can be met.

Examples/good practices:

Statistics Portugal: Revisions policy:

(http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_cont_inst&INST=70084023)

Statistics Lithuania: General principles behind the performance, analysis and announcement of revisions of statistical indicators (<http://www.stat.gov.lt/en/reviziju-politika>)

Federal Statistical Office of Germany (Destatis): Guideline on how to deal with publication errors:

(https://www.destatis.de/EN/Methods/Quality/Publication_Errors.html)

Eurostat's Impartiality protocol:

(http://ec.europa.eu/eurostat/documents/4187653/5797673/IMPARTIAL_ACCESS_2012_OCT-EN.PDF/9526a103-275c-4c39-b0b3-44abf47add6c?version=1.0)

Australian Bureau of Statistics Statistical Quality Management:

(<http://www.abs.gov.au/websitedbs/D3310114.nsf/home/Quality:+Statistical+Quality+Management>)

Quality Management of Statistical Processes Using Quality Gates, Dec 2010 (Australia):

(<http://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1540.0Main+Features1Dec+2010>)

Commitment to quality (Austria):

(http://www.statistik.at/web_en/about_us/responsibilities_and_principles/commitment_to_quality/index.html!)

The Methodological Council in Slovenia was set up in order to have a systematic review of the used statistical methods from the external experts from the academic community. New statistical surveys, surveys which are subject to a major revision or surveys which are proposed to be terminated are on the agenda of the Methodological Council which issues an opinion about the proposed changes. (http://www.stat.si/eng/drz_stat_metodoloski_svet.asp)

Guidelines on Professional Ethics (Finland) :

(http://tilastokeskus.fi/org/periaatteet/eettinenopas_en.pdf)

Protocol on Professional competence (United Kingdom):

(<http://www.ons.gov.uk/ons/guide-method/the-national-statistics-standard/code-of-practice/protocols/index.html>)

Data Quality Assessment Framework (DQAF) (International Monetary Fund):

(<http://dsbb.imf.org/Pages/DQRS/DQAF.aspx>)

Quality Framework for OECD Statistical Activities, 17 January 2012:

(<http://www.oecd.org/std/qualityframeworkforoecdstatisticalactivities.htm>)

South African Statistical Quality Assessment Framework (SASQAF):

(http://www.statssa.gov.za/inside_statssa/standardisation_SASQAF.asp)

Statistical Data Quality in the UNECE, 2010 Version:

(<http://unstats.un.org/unsd/dnss/docs-ngaf/UNECE-Quality%20Improvement%20Programme%202010.pdf>)

Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies (United States Office of Management and Budget):

(http://www.whitehouse.gov/omb/fedreg_reproducible/)

A Framework for Assessing the Quality of Education Statistics (World Bank):

(<http://unstats.un.org/unsd/dnss/docs-ngaf/WB-UNESCO-DQAF%20for%20education%20statistics.pdf>)

The Principles Governing the Activities of the State Statistics Bodies of Ukraine:

(<http://www.ukrstat.gov.ua/>)

Regulation on Foundation of Data Quality Control Board and its Working Procedure and Principles (Turkey): The regulation gives details regarding the Data Quality Control Board, regulated in Article 41 of the Statistics Law of Turkey. The Data Quality Control Board shall be established at the Presidency to examine and evaluate the statistical work carried out by the headquarters and regional offices, works carried out for the production of statistics included in the Programme including whole process starting from the registers up to publication of data in terms of their scientific quality and compliance with the international standards, and also to perform quality control studies if needed.

(<http://www.turkstat.gov.tr/UstMenu/yonetmelikler/Regulations.pdf>)

Fundamental Principles of Official Statistics: guidelines for dissemination of results by Brazilian Institute of Geography and Statistics – IBGE:

(http://www.ibge.gov.br/english/disseminacao/eventos/missao/principios_fundamentais_orientacoes_divulgacoes.shtm)

European Statistics Code of Practice / ESS Quality Assurance Framework:

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=64173&p_v_l_s_q_id=0)

Japan's Statistics Act (<http://www.stat.go.jp/english/index/seido/pdf/stlaw.pdf>): In Article 8 (2nd clause) it is defined that the head of an administrative organ, when intending to publicize fundamental statistics, shall specify the date and methods of publication and publicize them on the Internet or through other appropriate methods in advance. In fact, Statistics Japan publicizes fundamental statistics as for example in National Accounts

(http://www.esri.cao.go.jp/en/sna/kouhyou/kouhyou_top.html) and in the Labour Force Survey (<http://www.stat.go.jp/english/data/roudou/1543.htm>). Furthermore in Article 8 (1st clause) and 23, it is defined that the head of an administrative organ shall, when having produced fundamental statistics, promptly publicize the fundamental statistics(...).

Principle 2 – Professional Standards, Scientific Principles, and Professional Ethics

To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage, and presentation of statistical data.

PROFESSIONAL STANDARDS, SCIENTIFIC PRINCIPLES, AND PROFESSIONAL ETHICS

I. Objective

Public trust in statistics relies heavily on the strict adherence by statistical agencies to scientific principles. To do this, the Chief Statistician and staff of the National Statistical Office(s) need a profound understanding of official statistics and the relevant scientific principles. It is also necessary that staff and statistical experts follow and respect professional ethics for statistics. Laws, regulations, and other mechanisms reinforce adherence to scientific principles and professional ethics.

The National Statistical Office(s) must guarantee that official statistics are based on scientific principles, and, therefore, that inference is useful, objective and of high quality. Users may have access to other data and statistics that do not guarantee that inference is based on solid scientific ground. Statistics is a strong tool when the scientific principles are followed but may be misleading when these principles are not followed.

In addition, official statistics is an exercise where statistical methods are combined with methods and models from various other sciences such as economics, demography and sociology. Scientific principles from other sciences have to be combined with statistical principles and methods.

“Professional ethics” may be defined for various scientific professions. For statistics, there are international standards, as well as several other national principles of ethics. While ethics is often conceived of as an individual code of conduct, the National Statistical Office(s) must also reflect professional ethics in organizational conduct and practice.

Building and maintaining public trust requires not only transparency of methodology, application of professional ethical guidelines, and objectivity of reporting, but also the assurance that all statistical decisions are based on scientific criteria.

II. Scope of application

The following sources of professional standards and ethics provide best practices in the implementation of this principle, which a National Statistical Office is advised to take into account when implementing this principle or when developing it further. Concrete examples complement the dimensions.

1. Legal framework

It is essential that clear provisions are laid down in law to uphold scientific standards and professional ethics and provide safeguards protecting scientific independence. This gains credibility with the public by ensuring impartiality in the collection and production of data. Ethical principles linked to confidentiality have to be strong – and laws should support and not interfere with this.

- 1.1 There must be clear provisions in the law to ensure scientific standards.
- 1.2 The legislation must guarantee the National Statistical Office(s) protection of scientific independence and provide safeguards against political interference (International Statistical Institute 2010, NQAF 4).
- 1.3 Legislation or regulation must be transparent regarding the selection, appointment, and dismissal of the head(s) of the National Statistical Office(s).
- 1.4 Regulations must provide the chief statistician and statistical office(s) with authority over professional decisions, including:
 - Scope, content, and frequency of data compiled;
 - Selection and promotion of staff;
 - Release of statistical information and accompanying press materials and documentation without prior clearance regarding the statistical content of the release;
 - Direct communication about the agency's statistics before political authorities and public bodies (National Research Council 2013, Global Review 2013, NQAF 4 and 5)
 - Processes and procedures.
- 1.5 There must be clear provisions in the law to ensure professional ethics.
- 1.6 Laws and regulations must require that statistical agencies protect confidential data, as described in the implementation guideline for principle 6.
- 1.7 Laws or regulations provide entities that can audit a statistical agency, such as an inspector general, or resolve private complaints against a statistical office, such as an ombudsman (NQAF 8, HSO 143).
- 1.8. There must be clear provisions in the law how to react in case of misconduct of employees.

Scientific Standards

The United States’ Paperwork Reduction Act of 1995 provides the governance structure for the U.S. Federal statistical system and provides the authority and duties of the Director and Chief Statistician for the system.

The Algerian Statistical Law (Legislative Decree No. 94-01, Article 4) stipulates as a general principle the respect for scientific and deontological criteria in the matter of statistical practice.

High hierarchical standing of Statistics Lithuania in the state management structure and the highest professional competence of the Director General of Statistics Lithuania are ensured by the national Law on Statistics

(http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=411845)

Professional Ethics

The United States’ Inspector General Act of 1978 installed inspector general offices within the federal government to audit federal agencies and the Budget and Accounting Act of 1921 created the Government Accountability Office, which evaluates public expenditures.

Even if not directly linked to statistics, the Code of Conduct of the European Parliament is an example of how to address professional ethics:

(http://www.europarl.europa.eu/pdf/meps/201206_Code_of_conduct_EN.pdf)

Statistics Finland (2006): Guidelines on Professional Ethics:

(http://tilastokeskus.fi/org/periaatteet/eettinenopas_en.pdf)

Regulation on the Principles of Ethical Behaviour of the Public Officials and Application Procedures and Essentials Metadata in Each Statistical Domain (Example) (Turkey) The objective of the regulation is to establish ethical culture in public, to determine the principles of ethical behaviour of the public officials who have to abide while executing their duties, to assist them in order to display behaviours in accordance with these principles and to raise the confidence of community to the public administration by eliminating the situations which create distrust in the society and which impairs the principles of justice, integrity, transparency and impartiality in carrying out the duties, to inform the community about the behaviours they are entitled to expect from the public officials and to arrange the procedures and essentials of application to the Council.

(<http://www.turkstat.gov.tr/jsp/duyuru/upload/Yonetmelik.pdf>)

2. Policies and mechanisms supporting professional standards, scientific principles, and ethics

Developed policies on scientific standards and on professional ethics are an essential element to establishing and upholding scientific practices, scientific independence, and professional integrity.

- 2.1. The head(s) of the National Statistical Office(s) is (are) of the highest professional caliber and adhere to the strictest quality standards (CoP 1.2., HSO 608).
 - 2.1.1. Staff of the National Statistical Offices(s) is recruited using high professional criteria.
 - 2.1.2. Staff receives statistical training and undertakes research and analysis (Global Review 2013, CoP 7.6., International Statistical Institute 2010).
 - 2.1.3. Guidelines support innovation and improvement (Global Review 2013, CoP 12.3., LAC 6.3.).
 - 2.1.4. Statistical offices have sufficient funding to support staff training, innovation, and improvement (CoP 3.1).
- 2.2. Policies issued by the chief statistician provide standards and guidelines concerning statistical collection procedures and methods, statistical data classifications, and statistical information presentation and dissemination, so that statistical information is of high quality (U.S. Public Law 104-13 1995 <http://www.gpo.gov/fdsys/pkg/PLAW-104publ13/html/PLAW-104publ13.htm>, HSO 40).
- 2.3. Standards support sound statistical collection procedures and methods.
 - 2.3.1. Standards provide requirements and best practices for information collection designs (NQAF 10).
 - 2.3.2. Standards provide requirements for informed consent from data providers for voluntary information collections (NQAF 13).
 - 2.3.3. Policies, standards, and organizational procedures are in place to plan, monitor, and enforce the quality of statistical production (CoP 4, U.S. Public Law 104-13 1995, SCQAF 5.1).
- 2.4. Policies provide standards for statistical data classifications, concepts, and definitions so that data are comparable across surveys, over time, and internationally (CoP 7.2., CoP 14.3., LAC 9.1., NQAF 3).
 - 2.4.1. Core topics for classification standards are:
 - Geographic units,
 - Industries and businesses,
 - Trade,
 - Business products,
 - Occupations and jobs.
 - 2.4.2. Additional topics for classification standards include:
 - Diseases and other health conditions,
 - Occupational injuries,

- Population characteristics such as race, ethnicity, and ancestry.
- 2.4.3. Classification standards adhere to those described in the implementation guideline for principle 9.
- 2.5. Standards and guidelines support sound statistical methods for the presentation and dissemination of statistics.
- 2.5.1. Standards determine transparent, timely release schedules of key economic and social indicators and measurements (CoP 6.5., NQAF 6 U.S. OMB 1985 http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/statpolicy/dir_3_fr_09251985.pdf, U.S. OMB 2008 http://www.whitehouse.gov/sites/default/files/omb/assets/omb/fedreg/2008/030708_directive-4.pdf).
- 2.5.2. Standards preserve the distinction between the policy-neutral release of data by statistical agencies and their interpretation by policy officials (U.S. OMB 1985, U.S. OMB 2008, CoP 1.6. and 6.8., ISI 3).
- 2.5.3. Standards embody statistical agencies' best practices for dissemination (U.S. OMB 1985, International Statistical Institute 2010).
- 2.5.4. Standards require public dissemination of documentation on data collection, processing, statistical methods employed, and all metadata (U.S. OMB 1985, U.S. OMB 2008, CoP 6.4., CoP 15.5., NQAF 19).
- 2.5.5. Statistical agencies are transparent to the public when diverging from published schedules or making major changes in data collection and processing methods (CoP 13.4. and 15.6.).
- 2.5.6. Standards and guidelines adhere to those described in the implementation guidelines for principles 3 and 4.
- 2.6. The chief statistician, policies, and organizational oversight ensure ethical practices.
- 2.6.1. Ethical codes are codified for civil servants in general (Global Review 2013).
- 2.6.2. Ethical codes established specifically for statistics provide guidance on ethical behaviour (Global Review 2013, LAC 7.7.).
- 2.6.3. Standards of conduct protect the confidentiality of the data as described in the implementation guideline for fundamental principle 6.
- 2.6.4. Standards of conduct ensure impartiality of staff members and prevent personal conflicts of interest (International Statistical Institute 2010, LAC 7.7.).

Examples/good practices of “policies on professional standards and ethics”

Scientific Standards

The United States' Office of Management and Budget (OMB) provides policies, standards, and guidance for designing surveys and information collections in Standards and Guidelines for Statistical Surveys

(http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/statpolicy/standards_stat_surveys.pdf). The United States also provides guidelines for scientific integrity and its implementation in (i) Guidelines for Ensuring and Maximizing the Quality, Objectivity, Utility, and Integrity of Information Disseminated by Federal Agencies (<http://www.whitehouse.gov/sites/default/files/omb/assets/omb/fedreg/reproducible2.pdf>), and (ii) Memorandum for the Heads of Executive Departments and Agencies: Scientific Integrity (<http://www.whitehouse.gov/sites/default/files/microsites/ostp/scientific-integrity-memo-12172010.pdf>).

Quality Guidelines of Statistics Canada:

(<http://www5.statcan.gc.ca/olc-cel/olc.action?objId=12-539-X&objType=2&lang=en&limit=0>)

Professional Ethics

The United States' statistical agencies have policies on ethics, data stewardship, and other codes of conduct, and provide mandatory training on those practices.

Stephen B. Vardeman and Max D. Morris (2002): Statistics and Ethics: Some Advice for Young Statisticians:

(<http://www.amstat.org/committees/ethics/linksdire/TAS2003Vardeman.pdf>)

Statistics Korea set a Code of Conduct for KOSTAT officials and conducts regular, ad-hoc and self-assessment of statistical quality (see Statistics Act of Korea: <http://kostat.go.kr/portal/english/resources/5/index.static>)

The Czech Republic's State Statistical Service Act No.89/1995: Article 5 a) states "In performing the State Statistical Service, the Czech Statistical Office follows the law and other legal regulations, applies expert opinions and requirements for practical use and professional ethics, and uses scientific methods in statistical work."

(http://www.czso.cz/eng/redakce.nsf/i/5_guarantees_of_the_impartiality_of_the_state_statistical_service)

3. Professional associations and other third party resources

Professional associations and other third party resources reinforce scientific practices, including innovation in practices, and monitor ethical conduct.

3.1 Entities from a variety of spheres provide quality assurance of scientific practices of the National Statistical Office(s), including:

- International or regional councils or committees;
- National councils or committees;
- Statistical or methodological councils or professional associations;
- Advisory groups;
- External experts and consultants (NQAF 8).

3.2 These entities provide external standards and guidelines on scientific quality.

3.3 These entities serve in an advisory capacity to the National Statistical Office(s) (NQAF 8).

3.4 These entities provide expert review and peer review (NQAF 8).

3.5 These entities share recent advances in scientific practices, methodology, and concepts (NQAF 8).

3.6 Entities from a variety of spheres monitor the ethical practices and conduct of the National Statistical Office(s) and its (their) staff(s), including:

- International or regional councils or committees;
- National councils or committees;
- Statistical or methodological councils or professional associations;
- Advisory groups;
- Watchdog organizations and other private citizens;
- Media.

3.7 These entities provide external standards and guidelines on professional ethics and integrity.

3.8 These entities may assess statistical offices and their programs.

3.9 These entities report violations of ethical principles to an external authority.

Scientific Standards

Statistics Lithuania: Methodology Commission, composed of internal experts, is responsible for the consideration of methodological issues, coordination and systematization of methodological work in Statistics Lithuania. Moreover, it deliberates the draft statistical survey (work) methodologies or other methodological documents prepared by other national producers of statistics.

U.S. Example – The Committee on National Statistics (CNSTAT) is a non-governmental statistical expert body established at the National Academies – a private entity established by an Act of Congress – to improve statistical methods and information on which public policy decisions are based. CNSTAT is supported by a consortium of federal agencies and publishes Principles and Practices for a Federal Statistical Agency.

The United States additionally has regulations allowing civil servants to serve as officials and directors of scientific and professional organizations as part of professional development; See Government Employees Serving in Official Capacity in Non-profit Organizations; Sector Unit Investment Trusts (<http://www.gpo.gov/fdsys/pkg/FR-2013-03-06/html/2013-05243.htm>).

The implementation of scientific standards in the Polish Central Statistical Office (CSO) is enforced by the Scientific Statistical Council. Article 26 of the Law issued on 29 June 1995 on Official Statistics states: The Scientific Statistical Council shall operate at the President of the Central Statistical Office, as an advisory and opinion-making body in the field of methodology of statistical surveys; the composition and procedures of activities of the Scientific Statistical Council shall be determined by the President of the Central Statistical Office on the basis of an ordinance.

Professional Ethics

The International Statistical Institute (2010) provides a “Declaration on Professional Ethics” describing shared professional values and ethical principles for statisticians:

(<http://www.isi-web.org/images/about/Declaration-EN2010.pdf>)

American Statistical Association/Committee on Professional Ethics (1999): Ethical Guidelines for Statistical Practice:

(<http://www.amstat.org/about/ethicalguidelines.cfm>)

NC State University (2006): Professional Ethics for Statisticians. Issues and Advice:

(<http://www.stat.ncsu.edu/people/fuentes/courses/st810a/ethics.pdf>)

III. Risks

Any failure to uphold professional standards and ethics can compromise public trust – and the ability of official statistics to provide meaningful information to support public and private decision making. This principle incorporates the concepts of “scientific independence” and “professional independence” described in an accompanying document. This principle further extends the impartiality element of principle 1.

Real or perceived threats to the professional standards, scientific principles, and ethics adhered to by a national statistical institute and its employees present a serious challenge to the trust with which statistical products are held. Even minor offenses or unsubstantiated accusations may lead to damage of the image and reputation of the statistical institutions in the long term, with potential implications for other government institutions. To reverse these damaging impacts afterwards is extremely difficult. Therefore statistical agencies are challenged to safeguard their independence and objectivity, be transparent in their methodology, and communicate openly with the public.

Principle 3 – Accountability and transparency

To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

ACCOUNTABILITY AND TRANSPARENCY

I. Objective

To guarantee user access to necessary information, to understand the characteristics and quality of official statistics by describing and making available policies and practices surrounding statistical production and dissemination in order to facilitate correct interpretation by the user and thereby improving the use of statistics.

Official statistics need to have high ambitions as regards the use and benefit for the users but also indirectly for all society. Transparency on the sources, methods and procedures used to produce official statistics as well as quality assessments readily available to users will enable them to judge the *fitness of use of the data*. Transparency therefore contributes greatly to increase the confidence and trust of users in statistics and thereby increasing use of statistics as evidence in decisions.

For the qualified users it is necessary not only to read the pure statistical results but also to have a professional understanding of how the statistics have been produced. The qualified user will reach the necessary understanding on how to use the statistical results only after knowledge about data sources methods and procedures. This is why it is important that every statistics includes relevant and scientific documentation. Metadata is an important part of the standard dissemination procedure for official statistics.

According to Principles governing International statistical activities, Good practices on Transparency include:

Aiming continuously to introduce methodological improvements and systems to manage and improve the quality and transparency of statistics;

Enhancing the professional level of staff by encouraging them to attend training courses, to do analytical work, to publish scientific papers and to participate in seminars and conferences;

Documenting the concepts, definitions and classifications, as well as data collection and processing procedures used and the quality assessments carried out and making this information publicly accessible;

Documenting how data are collected, processed and disseminated, including information about editing mechanisms applied to country data;
Making officially agreed standards publicly available.

II. Scope of application

In order to institutionalise the principle of Accountability and Transparency across the national statistics system, it must be encapsulated into statistical legislation, national policy and statistical practices within each entity or organ of state that is responsible for producing official statistics.

1. Legal framework

It is essential that clear provisions are laid down in the statistical law to ensure transparency.

- 1.1 The principle of transparency might be specified in form of a commitment or code or even specified in statistical legislations.
- 1.2 Rules how to react in case of non-compliance are laid down.
- 1.3 The domestic law governing the statistical system must be made available to the public.

Examples/good practices of “Legal framework”

South Africa's Statistics Act (6 of 1999): (<http://www.statssa.gov.za>). See Section 3: Purpose of Official Statistics and Statistical Principles (subsection 2) "Official statistics must be compiled, reported and documented in a scientific and transparent manner."

Namibia's Statistics Act: (<http://www.nsa.org.na>) See Section 4(c) Purpose of National Statistics System and principles of statistics (subsection c) "compiled, produced and analyzed in a scientific and transparent manner"

2. National/Regional policy or framework

The principle of transparency of methods applied is described in a regional and national policy or framework to guide implementation by all producing agencies. The national policy or framework must make reference to:

- Transparency on international standards and methods used;
- Transparency on any major methodology changes
- Transparency on concepts, definitions and classifications used;
- Rules and guidelines on accessibility of information on statistical practices and information.

Examples/good practices of “National/Regional Policy or framework”

Assuring transparency

| | |
|--|---|
| European statistics Code of Practice | <p>CoP 6.1: Statistics are compiled on an objective basis determined by statistical considerations.</p> <p>CoP 6.3: Errors discovered in published statistics are corrected at the earliest possible date and publicised.</p> <p>CoP 6.4: Information on the methods and procedures used is publicly available.</p> <p>CoP 6.5: Statistical release dates and times are pre-announced.</p> <p>CoP 6.6: Advance notice is given on major revisions or changes in methodologies.</p> <p>CoP 8.6: Revisions follow standard, well-established and transparent procedures.</p> |
| IMF DQAF | <p>1.2.1 The terms and conditions under which statistics are collected, processed, and disseminated are available to the public.</p> <p>1.2.2 Internal governmental access to statistics prior to their release is publicly identified.</p> <p>1.2.3 Products of statistical agencies/units are clearly identified as such.</p> <p>1.2.4 Advanced notice is given of major changes in methodology, source data, and statistical techniques.</p> |
| Latin America and the Caribbean Regional Code of Good Statistical Practice | <p>LAC 7.1 Statistical operations and research are implemented using methodologies and processes which are documented, are based on impartiality and transparency, and pursue clearly established aims.</p> <p>LAC 7.2 The standards, classifications, methods and processes used in the production of statistics (design, collection, processing and release) are documented and made available to the public.</p> <p>LAC 10.5. The revisions follow standard processes and consolidate in accordance with the schedule and comments that may be required. The studies and</p> |

| | |
|---|---|
| | analysis of revisions are made available to specialized users. |
| | LAC 15.3. A specific date and time is laid down for the release of all statistics. Any changes to the dissemination time schedule are made known in advance with explained and a new release date is set. |
| National Code of Good Practice for Official Statistics (Colombia) | <p>4.8. Announce the release calendar, prior to the publication of results.</p> <p>4.10. Correct and communicate the errors discovered in published statistics in a timely manner.</p> <p>6.2. To document the information needs of the users and its prioritization.</p> <p>6.3. Any modifications made to the methodological aspects of official statistics that have been produced, must be announced prior to the publication of results.</p> |
| African Charter on Statistics | <p>Principle 1: Professional independence</p> <p>Transparency: To facilitate proper interpretation of data, Statistics authorities shall provide information on their sources, methods and procedures that have been used in line with scientific standards. The domestic law governing operation of the statistical systems must be made available to the public.</p> |
| Statistics Canada NQAF | CAN.12 Managing institutional infrastructure – confidentiality, security, transparency, professional independence, impartiality, objectivity |
| Statistics South Africa SASQAF | <p>Quality dimension 8: Integrity</p> <p>Professional and ethical standards in guiding policies and practices, which should be reinforced by their transparency standards.</p> |
| Fundamental Principles of Official Statistics for Korea | <p>In efforts to ensure reliability of official statistics and user satisfaction, Statistics Korea established its own set of Fundamental Principles of Official Statistics for Korea in 2011, which largely reflect the UN's principles.</p> <p>Especially the Korean version specifies 'provide data to users through various means' under the principle 8 'enhanced service.'</p> |

| | |
|--|--|
| | This is very important element of official statistics which greatly improved accessibility to official statistics by users. |
| Norwegian Dissemination policy | <p>... Transparency Correcting errors Statistics Norway endeavours to explain errors encountered in statistics and publications in a transparent and professional manner, and corrections are to be documented...Further aspects which are covered by the dissemination policy: equal treatment of users, release calendar and pre-releases.</p> <p>(Norwegian Dissemination Policy: http://www.ssb.no/en/befolkning/artikler-og-publikasjoner/statistics-norways-dissemination-policy#content)</p> |
| Qatar National Quality Assurance Framework (QNQAF) | The Ministry of Development Planning and Statistics (MDPS) of Qatar states in the QNQAF in regard to “Assuring transparency” that policies and practices are documented and available to users, survey respondents and the public. Products of MDPS are clearly identified as such. |

3. Institutional Implementation through Manuals/protocols/guides/websites etc.

National Statistics Offices and other producing agencies must document and publish all phases of the production cycle in line with international standards and best practice:

Compile and publish a manual(s) on data collection, data processing, data analysis, and data presentation for example:

- the editing process,
- quality checking process/quality assessment,
- the estimations process,
- analytical procedures as seasonal adjustment,
- errors and stochastic properties have to be described.

Compile and publish a manual(s) of concepts and definitions on including information on:

- the units,
- the population,
- the variables, etc.

Compile and publish rules and guidelines on revisions and error policy;

Compile and publish a guide on the interpretation of the data used and estimates of each statistical series;

Compile and publish a guide on impartial and equal access.

Documented policies and practices must be easily accessible to the public.

The documentation should all together serve the purpose of submitting relevant information to the user. The users should be empowered to understand and evaluate the various quality dimensions of each of the official statistics.

Examples/good practices of “Institutional Implementation”

The UN Handbook of Statistical organization 2003 gives in chapter XI Getting information to the user’s relevant information on how to bring the metadata to the users.

Statistics Sweden: Publish Sweden's standard industrial classification and various Publications about statistical methods on the website for public access:

(<http://www.scb.se/en/Documentation/Publications-about-statistical-methods>)

Australian Bureau of Statistics: Webpage on Methods, Standards and Classifications. This page contains methodological research papers and information on time series and data quality. You can also find the standards and classifications used to collect, process, and present ABS data:

(<http://www.abs.gov.au/websitedbs/D3310114.nsf/home/Methods,+Classifications,+Concepts+&+Standards?opendocument#from-banner=GT>)

Statistics Canada: Webpage on statistical methods. Information and sources that describe methods of a statistical and mathematical nature used in gathering, processing and disseminating sample surveys, censuses or administrative data are available:

(<http://www5.statcan.gc.ca/subject-sujet/theme-theme?pid=1356&lang=eng&more=0>)

Statistics New Zealand: Webpage on methods. It contains information about how data collection is organized and the code used, methods in data analysis, Information about data integration – the combining of data from different sources to produce richer information etc.:

(<http://www.stats.govt.nz/methods.aspx>)

The United States: The Office of Management and Budget (OMB) provides policies, standards, and guidance for designing surveys and information collections in Standards and Guidelines for Statistical Surveys:

(www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/statpolicy/standards_stat_surveys.pdf)

National Statistical Institute of Spain: Webpage on Standards and Classifications. This page contains the standards and classifications used to collect, process, and present INE's data. All these standards have been approved by the Board of Directors of INE. Among them, it can be outlined the adoption of the ESMS (Euro SDMX Metadata Structure) structure for all the INE statistical op-

erations since the year 2012.

(http://www.ine.es/ss/Satellite?L=en_GB&c=Page&cid=1254735839296&p=1254735839296&pagename=MetodologiaYEstandares%2FINELayout)

The CSO of Poland webpage: (<http://stat.gov.pl/en/>) in the part on metainformation contains definitions of statistical terms used in Polish statistics

(<http://stat.gov.pl/en/metainformations/glossary/>), classifications used in statistical surveys

(<http://stat.gov.pl/en/metainformations/classifications/>), principles on quality in statistics including guide “Vademecum of Quality in official statistics”

(<http://bip.stat.gov.pl/en/activity-of-official-statistics/quality-in-statistics/>). This guide presents quality tools introduced to the statistical practice on the basis of the internal ordinance No 35 of the President of the Central Statistical Office of 28 December 2011 on measuring, evaluating and monitoring the quality of statistical surveys in public statistics.

In Korea, there is a national statistics online portal system which provides one-stop service to all official statistics produced by not only Statistics Korea (KOSTAT) but also other agencies that produce statistics. This system has been positively recognized for improving accessibility and convenience of using data for the users.

Moreover, KOSTAT is currently in process of developing an integrated system for micro data service on all officially approved statistics of Korea to promote sharing and use of statistical information.

Moreover Statistics Korea managed history of statistical metadata and provide metadata service for public use.

Eurostat website: SIMS Metadata and methodological manuals covering statistical domains

III. Risks

The risk that producing agencies do not comply with the national policy or framework on transparency and that there are no consequences for non-compliance to the legislation and policy on transparency may lead to the mistrust of users.

One of the necessities of official statistics is transparency to every detail as regards methods and procedures and full confidentiality only for individual micro data. A strong prerequisite for the total quality is that the principle 3 is respected and the quality for the user and the confidence in the results relies on adequate documentation.

Principle 4 – Prevention of Misuse

The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

PREVENTION OF MISUSE

I. Objective

To comment and respond to erroneous interpretation and misuse of official statistics in order to ensure that trust in statistics is maintained and thereby improving the use and understanding of statistics. To develop interventions to educate users on the correct interpretation of official statistics is therefore crucial.

Statistics can be used and interpreted in many different ways. Statistics are sometimes misused in advertising and politics. It is important to maintain trust in, and the credibility of, official statistics. Hence, statistical agencies should draw attention to obvious public incorrect use or interpretation.

According to Wikipedia "A misuse of statistics occurs when a statistical argument asserts a falsehood. In some cases, the misuse may be accidental. In others, it is purposeful and for the gain of the perpetrator. When the statistical reason involved is false or misapplied, this constitutes a statistical fallacy. Misuses can be easy to fall into. Professional scientists, even mathematicians and professional statisticians, can be fooled by even some simple methods, even if they are careful to check everything. Scientists have been known to fool themselves with statistics due to lack of knowledge of probability theory and lack of standardization of their tests."

Types of misuse include: Discarding unfavourable data, loaded questions, overgeneralization, biased samples, misreporting or misunderstanding of estimated error, false causality, proof of the null hypothesis, data dredging, data manipulation, non-enduring class fallacies, etc.

According to the Principles governing international statistical activities good practices include:

Responding to perceived erroneous interpretation and misuse of statistics;
Enhancing the use of statistics by developing educational material for important user groups.

II. Scope of application

In order to institutionalise the principle of Prevention of misuse of statistics, it might be encapsulated into statistical legislation, national policy and statistical practices within the national statistics system. Trainings for users and media on how to interpret and use statistics are very important in order to prevent misuse.

1. Legal framework

One possibility to prevent misuse is to lay down clear provisions in the statistical law to ensure that statistics are not misused or erroneously interpreted.

- 1.1 Statistical offices are entitled to comment on misuse or misinterpretation of official statistics. This might be specified in statistical legislations. This does not imply a restriction of freedom of opinion.
- 1.2 Laws or regulations provide entities and processes for reporting and investigating statistical offices' misuse of data, as described in the implementation guideline for principle 2.

Examples/good practices of "Legal framework"

South Africa's Statistics Act (6 of 1999): (<http://www.statssa.gov.za>). See Section 14: Statistical coordination (subsection 8) "The Statistician-General may – at his or her own instance or at the request of the Council, the Minister or any other Minister review and comment on the production, analysis, documentation, storage, dissemination, interpretation and use of official or other statistics of any other organ of state."

New Zealand's Statistics Act: (http://www.legislation.govt.nz/act/public/1975/0001/latest/DLM430774.html?search=sw_096be8ed80cd73d3_interpretation_25_se&p=1&sr=2) Section 14(l) "to examine and comment, where the Statistician considers necessary, on the interpretation and validity of any published unofficial statistics; and to publish any such statistics and comment thereon as the Statistician considers necessary."

As referenced to the Law on Statistics of Mongolia, the NSO shall explain to the public and take corrective actions when users of the statistics change and misinterpret results of official statistics. Accordingly this provision is reflected on Quality Policy for Official Statistics of Mongolia.

2. National/Regional policy or framework

The principle of Prevention of misuse is described in a supranational and national policy or framework to guide implementation. The national policy or framework must make reference to:

The right of the Head of the National Statistical Office/Statistics Authority and Head of the Regional body to comment publicly on the misuse or erroneous interpretation of official statistics.

Examples/good practices of “National/Regional Policy or framework”

Assuring transparency

| | |
|--|---|
| European statistics Code of Practice | CoP 1.7: The National Statistical Institute and Eurostat and, where appropriate, other statistical authorities, comment publicly on statistical issues, including criticisms and misuses of statistics as far as considered suitable. See also Federal Statistical Office of Germany PP presentation. |
| IMF DQAF | 1.1.3 The appropriate statistical entity is entitled to comment on erroneous interpretation and misuse of statistics. |
| Latin America and the Caribbean Regional Code of Good Statistical Practice | LAC 1.7. When appropriate, the heads of the statistical services of the national statistical system issue public statements on statistical issues, which include criticisms and address misuses of official statistics. |
| National Code of Good Practice for Official Statistics of Colombia | 4.11. In the event of misinterpretations of official statistics, clarifications must be formulated. |
| African Charter on Statistics | <p>Principle 1: Professional independence</p> <p>Responsibility: Statistics authorities and African statisticians shall employ unambiguous and relevant methods in the collection, processing, analysis and presentation of statistical data. Statistical authorities shall also have the right and duty to make observations on erroneous interpretation and improper use of the statistical information that they disseminate.</p> |

3. Institutional Implementation through Manuals/protocols/guides etc.

The National Statistical Office must have the right to comment on erroneous use of statistics or incorrect interpretation of official statistics in public when necessary.

Other measures to prevent misuse include the publication of documentation explaining key statistics and education programs for users to increase awareness and knowledge of official statistics. More attention should be paid to giving guidance to data users about the proper use and misuse of statistics.

This can be achieved by:

- General research on concepts and compilation methods;
- Investigating user practice;
- Modifying guidelines;
- Supplementing statistics with other information;
- Change the presentation of statistics to increase better understanding and knowledge;
- Training of users in the proper use of statistics;
- Transparent publications policy.

Another measure is to work with an “Open Copyright” (for example: Federal Statistical Office of Germany): Dissemination and duplication of official statistics will be allowed free of charge if the source is mentioned correctly (as long as the rights of third parties remain untouched). The free access is an incentive for users to rather refer to official statistics.

Examples/good practices of “Institutional Implementation”

Statistics Lithuania: Policy to intervene publicly on statistical issues in cases of criticism, misuses or misinterpretation of official statistics in the media is defined in the Rules for the Dissemination of Statistical Information

(<http://www.stat.gov.lt/en/oficialiosios-statistikos-sklaidos-politika>)

The statistical office of Montenegro reacts publicly on criticism, misuse or misinterpretation of official statistics in the media. Procedures are stipulated in a recently prepared internal paper ‘Guideline for Intervening in Case of Misinterpretation and Misuse of Official Statistics’. The paper has been prepared on the basis of Article 11 of the Law.

British Medical Journal (1998): Statistics on misuse of drugs have been misused.

(<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1114263/>)

Frits Bos (2007): Use, misuse and proper use of national accounts statistics.

(<http://www.cbs.nl/nr/rdonlyres/1dbebb42-89e2-4a59-9554-dc20c553203e/0/2007096p30pub.pdf>)

Federal Statistics Office of Germany where they outline and provide guidelines on (i) the typology of misuse, (ii) identifying sources of misuse (iii) determining level of reaction and (iv) procedures for terms and conditions for reaction and escalation.

The National Statistics Institute of Bolivia organized mobile brigades who travelled for months to educational establishments (like colleges and universities) of the major capital cities in the country to disseminate statistical information generated by the Census of Population and Housing 2012. Furthermore, the brigades met with neighbourhood organizations, unions and social movements that were part of the census and which received with keen interest the results that portray the demographic reality, but above all, social and economic information of the city, state and across the country. The main objective was to disseminate, in bulk, the 2012 Census data and other census operations conducted by the National Statistics Institute of Bolivia, through informative and participatory workshops to various social sectors of the population. The youth brigades were trained to disseminate census information with didactic, illustrative and interactive presentations. This is an unusual way to directly reach future professionals, with updated statistical information, and incidentally promote statistical literacy among students, academics and the general public.

III. Risks

The risk that statistics be misused can cause major damage to the credibility of the national statistics office and negatively impact on the public confidence and trust of users in official statistics.

It is important to also acknowledge that the National Statistical Office also takes some risks by entering into a public debate about misuse of their statistics, so responses need to be carefully measured. Depending on how it responds, a National Statistical Office could be perceived as being defensive or no longer impartial.

The risk that statistics be misused can cause incorrect policy decisions. This can be quite damaging to the quest for knowledge and correct decision making. For example, in medical science, correcting a falsehood may take decades and cost lives.

Principle 5 – Sources of Official Statistics

Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

SOURCES OF OFFICIAL STATISTICS

I. Objective

To ensure that producers and statistical operations, as well as the characteristics of the production process and the quality of the data generated are fully identified and are governed by the rules established to meet the demands of information.

To produce statistics is a costly and labour-intensive task for statistical offices as well as for respondents. Therefore, statisticians have to apply methods in a least intrusive way and have to choose sources that are most cost-efficient (without losing sight of quality requirements). That is why the use of existing administrative records is often recommended. Not only administrative data will be used as additional data sources in the near future. Therefore other secondary sources should be taken into consideration as complementary data to official statistics. By choosing among the different sources of official statistics, some other aspects should also be considered such as quality, timeliness and response burden.

II. Scope of application

The observation of this principle requires clear policy, mandatory oriented, to strengthen the regulatory role in the national statistical production. The main aspects to be considered are listed below.

This principle shall be applied in all sorts of surveys (planned and existing ones).

Quality aspects are to be born in mind for all the dimensions of principle 5. In fact, a wide range of existing frameworks contributes to fix quality management and is often the basis for national assurance frameworks: the General Data Dissemination System, the Data Quality Assessment Framework, the European Foundation for Quality Management, European Code of Practice, the European Statistical System Quality Assurance Framework, Total Quality Management and ISO EN 9001 and others.

The following dimensions have to be taken into account:

1. Legal framework

The legal framework is a key factor guiding the statistical production. There are recognized models for quality assessment, like the Data Quality Assessment Framework

(DQAF) developed by the International Monetary Fund. The legal framework is constituted by all laws, decrees, regulations, agreements or other regulations governing a statistical operation.

There are basic, cross-cutting or other specific regulations/legislation that affect all producers of the national statistical system. An Act of the national statistical system involves the regulation of institutional mechanisms to strengthen the statistical production process. International experience shows the ability to combine various frames to create your own. Before adopting a law or general rule, it is desirable that statistical offices consider if they can make use of administrative records in order to reduce the burden on respondents. But, there must be clear provisions in statistical law or a policy or commitment that lays down the rights and conditions of access to administrative data.

Access may be granted through bi-lateral agreements with relevant agencies. It is also important to negotiate, to maintain dialogue and to stay informed of changes that may impact administrative data.

The quality of official statistics depends largely on the cooperation of society as a whole, governmental institutions mainly, but also private entities. It would be important that law, in any way, contemplates the provision of obligation of the private sector for providing information. On the other hand, there are a number of problems that must be addressed in the law as to ensure private information providers maximum confidentiality, applying the international recommendations.

In terms of quality through surveys the information is better controlled but it is much more expensive. In contrast, the advantages of other secondary sources (such as administrative records or other sources) are lower cost, and imply fewer burdens on respondents. Depending on the quality of records, they can be a source of constantly updated information.

In developing countries the administrative records are limited in terms of duplication, obsolescence and low cover. This is a challenge for the NSOs to coordinate the national statistical systems.

Examples/good practices of “legal framework”

Statistics Act of Japan Article 27 (<http://www.stat.go.jp/english/index/seido/pdf/stlaw.pdf>): From the viewpoint of the reduction of the burden on respondents of statistical surveys, before conducting a survey on business establishments and companies, the statistics agencies utilize the information recorded in the statistical business register called “Development of Establishment Frame Database”. In addition, the statistics agencies register the business establishments or companies already surveyed (survey history registration), in order to be able to check the targets before conducting the survey and exclude any business establishments or companies on which an excessively heavy survey burden would be imposed (duplicate cor-

rection).

Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European Statistics⁸. Article 24 – Access to Administrative Records and legal tools CoP 8.1, 8.7, 8.8, 8.9 related to appropriate statistical procedures. (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1415086135840&uri=CELEX:32009R0223>)

The Slovenian National Statistics Act:

(<https://unstats.un.org/unsd/dnss/docViewer.aspx?docID=269&catID=10>)

Law on Official Statistics of the Republic of Albania, Article 6 and 8:

(<https://unstats.un.org/unsd/dnss/docViewer.aspx?docID=430&catID=5&catID=26&catID=27&catID=28#start>)

Law issued on 29 June 1995 on Official Statistics (Poland)

(<http://bip.stat.gov.pl/en/law/law-on-official-statistics>), article 13, 28,41

UK's Code of Practice for Official Statistics, Cost-effectiveness:

(<https://unstats.un.org/unsd/dnss/SearchResults.aspx>)

Access to administrative data is granted by Norway's Statistics Act § 3-2

(<http://www.ssb.no/en/omssb/styringsdokumenter/lover-og-prinsipper/the-statistics-act-of-1989>). Statistics Norway has agreements on cooperation and quality with institutions responsible for administrative registers used for production of statistics. There are separate quality reports linked to registers.

U.S. Office of Management and Budget Guidance for Providing and Using Administrative Data for Statistical Purposes, OMB Memorandum M-14-06.

(<http://www.whitehouse.gov/sites/default/files/omb/memoranda/2014/m-14-06.pdf>)

KOSTAT prepared legislation on statistical use of administrative data to provide legal mandates on statistical production using administrative data and develops new statistics using administrative data (ex. Linked Employer-Employee Data, business demography statistics).

Colombia:

El Plan Nacional de Información Oficial Básica – Planib:

(<https://unstats.un.org/unsd/dnss/SearchResults.aspx>)

Código Nacional de Buenas Prácticas Estadísticas:

(http://www.dane.gov.co/files/sen/bp/Codigo_nal_buenas_practicas.pdf)

Metodología de Fortalecimiento de Registros administrativos:

(http://www.dane.gov.co/files/sen/planificacion/metodologia/planes_fortalecimiento_RA.pdf)

Ley 79 1993, Article 5:

⁸ The forthcoming Amending Regulation (EC) No 223/2009 on European statistics will be available in spring 2015.

http://www.dane.gov.co/files/acerca/Normatividad/Ley79_1993.pdf

Sala de consulta y servicio civil del Consejo de Estado:

<http://190.24.134.67/sentencias/SALA%20DE%20CONSULTA/2003/CE-SC-RAD2003-N1209.doc>

Aspectos Generales del Aseguramiento de la Calidad Estadística:

<http://www.dane.gov.co/index.php/es/calidad-estadistica/aspectos-generales>

Evaluación del Proceso Estadístico:

<http://www.dane.gov.co/index.php/es/calidad-estadistica/evaluacion-del-proceso-estadistico>

Mejoramiento Continuo:

<http://www.dane.gov.co/index.php/es/calidad-estadistica/mejoramiento-continuo>

México

Ley del Sistema Nacional de Información Estadística y Geográfica:

<https://unstats.un.org/unsd/dnss/SearchResults.aspx>

Norma para el acceso difusión y promoción de la información estadística y geográfica que genera el Instituto Nacional de Estadística y Geografía:

<http://sc.inegi.org.mx/repositorioNormateca/On23Feb12.pdf>

Ley del SNIEG:

<http://www.snieg.mx/contenidos/espanol/normatividad/marcojuridico/LSNIEG.pdf>

Norma Técnica para la generación de estadísticas básicas:

<http://www.snieg.mx/contenidos/espanol/normatividad/tecnica/Norma%20T%C3%A9cnica%20para%20la%20Generaci%C3%B3n%20de%20Estad%C3%ADstica%20B%C3%A1sica.pdf>

Reglamento interior del INEGI:

http://sc.inegi.org.mx/repositorioNormateca/Oda_ri.pdf

Código de Ética para los integrantes del SNIEG:

<http://www.inegi.org.mx>

Aspectos Normativos y Metodológicos. Planeación y Control Administrativos en Proyectos Estadísticos:

<http://www3.inegi.org.mx/sistemas/biblioteca/detalle.aspx?c=29021&upc=702825003330&s=est&tg=0&f=2&pf=Eco>

Brasil

Lei n° 5534, de 14/11, Article 1°:

<http://www.ibge.gov.br/home/disseminacao/eventos/missao/leiobrigatoriedade.shtm>

Lei n. 5878, de 11/05/73, Article 8°:

http://www.planalto.gov.br/ccivil_03/leis/L5878.htm

Decreto n. 77624, de 17/05/76 Article 1°:

<http://www2.camara.leg.br/legin/fed/decret/1970-1979/decreto-77624-17-maio-1976-426694-publicacaooriginal-1-pe.html>

Código de Boas Práticas das Estatísticas do IBGE, Princípios 11 y 12:

http://www.ibge.gov.br/home/disseminacao/eventos/missao/codigo_boas_praticas.shtm

Spain

Ley Estadística Nacional:

<http://www.boe.es/buscar/doc.php?id=BOE-A-1989-10767>

The Resolution No 4 of 11 January, 2012 of the Government of the Republic of Lithuania on methodology of assessment of administrative burden on enterprises, obliges national authorities to evaluate the burden of draft legislation defining the need of new information from the enterprises and submit these projects to the Ministry of Economy for assessment and conclusions

http://www3.lrs.lt/pls/inter3/dokpaieska.showdoc_l?p_id=416691&p_query=&p_tr2=2

2. Conceptual and methodological framework

The conceptual and methodological framework for statistical production, which is the basis for approval or statistical harmonization, include the precise conceptual definition of variables, documentation (metadata), response categories, using classifiers and coding as well as the establishment of methodological processes from the scope of its objectives until analysis and dissemination, through the collection, processing and data validation. These aspects form, as well as the legal framework, the reference framework of the statistical operation. GSBPM as a standard structure for this aim can be mentioned in this context.

3. Reliability: Problems in data collection and processing

The reliability of statistical information criteria is present in various models of statistical quality assessment. It implies the absence of non-sampling errors in the case of operations from administrative records such as design, register or sub-register, misclassification, partial responses, etc. It also implies the reduction of non-response and data reliability by applying rules of internal and external validation in the case of sample surveys. Reliability rests largely on the work of collecting the data and performing the analysis in its consistency. If there are failures in these processes, reliability is affected directly, so that measures should take place to prevent this.

4. Management problems

Productivity in the generation of statistics depends on the factors of production such as models of organization and management, sufficient and qualified staff, equipment and technology according to defined production standards, and adequate budgetary resources to production goals. The proper definition of roles and division of labor when production is inter-institutional is another factor that affects significantly on productivity.

5. Statistical coordination

The issue of statistical coordination is based on the conceptualization of coordination as the set of processes and procedures for consolidating and achieving official statistics within an institution or between institutions. Coordination usually involves two fields, conceptual harmonization and institutional management.

The conceptual harmonization implies that, for all participants institutions in the management of an official statistics, the variables have the same definition, are known and shared by national or international classifications of the subject, are encoded in the same way, the methodology is shared in all phases of the life cycle of the statistical operation, and in the best scenario, the databases are shared.

Interagency coordination and management aims at the efficient management process within or between institutions, ie, mechanisms of communication, monitoring and control, and processes and procedures of articulation.

6. Coherence and consistency

The weak coordination in the field of statistical harmonization and the interagency management is largely a result of managerial inefficiency. Identification of statistics involving the participation of various entities and agencies in one or more stages of the life cycle of their production to analyze the conceptual and institutional management harmonization is the first activity to recommend in order to covering this aspect.

Duplicity is the situation in which two institutions or two departments within the same institution produced a single statistic, based on the same study population, and the same target same statistical technique for data collection (administrative record, survey or census). This is focused in the statistical operation, not the indicator. Duplicity can be accompanied (and usually is) by divergent data, resulting from the use of different methods of collection or processing.

There are several situations in which two different sources of information provide the same data based on a variable or set of variables. The data can come from a survey and an administrative record and this allows cross-validation of data, known as validation between sources.

7. Administrative records and statistical register

In order to reduce the burden on respondents, statistical offices shall have access to administrative data sources, from within their respective public administrative system.

Furthermore, they should be consulted on and involved in the initial design, subsequent development and discontinuation of administrative records built up and maintained by other bodies, thus facilitating the further use of these records.

To put it in a nutshell: The objective is to develop administrative records further or to develop them from scratch on the basis of statistical requirements. Thereby, a direct use of data is possible and a loss of quality can be avoided.

Nevertheless, the direct use of the content of administrative records is often not possible, because the content is not consistent with statistical requirements. If this is the case the development of a specific statistical register might be reasonable as an intermediate step.

Additionally, it should be kept in mind that administrative data complement surveys by improving the frame, the sampling, collection, processing and estimation, even when sample data drive the process.

The control over administrative data and changes in its production process is out of the hands of the National Statistical Office.

Another aspect can be mentioned in this context: Data-matching or data-linking is an efficient way to use existing frameworks for new statistics.

The statistical sub-register refers to the statistical operation. It does not capture or record all the units of analysis or events related to the subject matter of the same and becomes a cause of loss of quality of statistical operation resulting from the loss of information. The sub-register in the vital statistics of births, for example, is caused by the lack of reports from private to public health ministry or loss of information in transit from the health centre to the central level, where statistics are produced.

8. Information Technology

Specific standards should be established to preserve, capture, analysis and exchange of information by electronic means between the national statistical agency and the main producers of the national statistical system. It is necessary to remove different types of file formats of various statistical applications, various database engines, software development with extensions or proprietary formats that hinder exchange, buy commercial software with limited exchange, use of different applications for consistency and data processing.

9. Training

Training and professional expertise in statistics benefits the consolidation of a national training system. Accurate statistical demand for the public sector with a comprehensive training curriculum, comprising basic, means and specialization courses estimate is needed for different types of students with different backgrounds and interests that can be incorporated into the whole or in any point thereof. Information on the supply of existing providers in the country, with an inventory of experts and a certification mechanism of skill in the art is recommended. In parallel, training online and E learning should be fostered in times of financial constraints.

Examples/good practices

The Statistical Office of the Republic of Slovenia (SORS) is one of the few NSIs that conducted a completely register-based census of population, households and dwellings in 2011. (<http://www.stat.si/popis2011/eng/Default.aspx?lang=eng>)

In order to deal with the changing survey environment, Statistics Korea (KOSTAT) will be switching over a traditional population census to register-based census in 2016 using administrative data. Statistics Korea is anticipating enhanced efficiency from this change, such as reduced budget and manpower and also less burden on respondents.

Eurostat (n/d.): The European Self-Assessment Checklist for Survey Managers: <http://ec.europa.eu/eurostat/en/web/products-eurostat-news/-/G0-LEG-20031010>

Fondo Monetario Internacional (2003): Marco de Evaluación de la Calidad de los Datos (MECAD) correspondientes a las Estadísticas de la deuda externa.

III. Risks

The absence of a legal framework of the national statistical system to govern the universe leads to severe institutional weaknesses in statistical production. Poor administrative register, lack of uniformity in the data capture format, delays in process monitoring, lack of management systems databases, use of units of measurement and different formats that affect the processing quality, understaffed, lack of technical training, inadequate definition of roles, tasks are not met, high staff turnover, unmotivated staff, inadequate technological equipment, as well as failure to follow the classifications and standards, among other deficiencies prevents to count on reliable and current statistical information, necessary for decision-making that enables the implementation of the national development strategy of a nation.

The definition of a regulatory framework for statistical production, to guide producers throughout the life cycle of the statistical operation performed, whether derived basic statistics (surveys, censuses, and/or administrative records) is a task aimed at standardizing key stages of production. This is a commitment that requires political will from the highest authority of the state and involves all government institutions.

Principle 6 - Confidentiality

Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

CONFIDENTIALITY

I. Objective

A fundamental requirement for official statistics is confidence and acceptance of public. Accurate and timely data are reliant on public goodwill and cooperation – no matter if their participation is facultative or if it is based on compulsory response. In order to maintain the trust of respondents it is the utmost concern of official statistics, to secure the privacy of data providers (like households or enterprises) by assuring that no data is published that might be related to an identifiable person or business. At the same time this guarantees quality by avoiding loss of accurate data. Confidentiality protection is supposed to be implemented on each level of the statistical process – from the preparation of surveys up to the dissemination of statistical products.

II. Scope of application

In the following are listed several dimensions of confidentiality, which a Statistical Institute is advised to take into account when implementing this principle or when developing it further. Concrete examples complement the dimensions.

1. Legal framework

It is essential that clear provisions are laid down in the statistical law to ensure the statistical confidentiality.

- 1.1 There must be clear provisions in the statistical law or a policy or commitment that ensures the statistical confidentiality. (CoP 5.1, QAF 5.1.1 institutional level; SASQAF 1.4.1.
- 1.2 The legislation or policy absolutely guarantees:
 - the privacy of data providers (households, enterprises, administrations and other respondents) and the confidentiality of the information they provide,
 - the security of information received from data providers,
 - its use only for statistical purposes. (CoP Intro, LAC 4.1., NQAF – agency level, SASQAF)

- 1.3 Penalties are laid down in the statistical law or other legal provisions and are prescribed against persons (statistical staff or other personnel) who wilfully breach the statistical confidentiality leading to the release of confidential data. (NQAF – agency level, NQAF – supporting mechanisms, CoP 5.3.)
- 1.4 The statistical law distinguishes between various types of infractions, like carelessness, improper behaviour, behaviour with malicious intent and the use of confidential information for personal benefit. (QAF Method: 5.3.1 at institutional level, Handbook, S. 156)
- 1.5 Sanctions exist on administrative, penal and disciplinary level. (QAF Method: 5.3.1 at institutional level).
Statistics acts deal with "confidentiality" while other laws deal with "privacy" -- thus there could be several pieces of legislation relating to these sanctions.

Examples/good practices of “legal framework“ and “penalties”

Canada's Statistics Act (<http://www.statcan.gc.ca/about-apercu/act-loi-eng.htm>), see for example: Prohibition against divulging information, exception to prohibition, disclosing secret information.

Canada's Privacy Act (<http://www.statcan.gc.ca/about-apercu/law-acte-eng.htm>) is a very detailed document, see for example: personal information may be disclosed, right of access to personal information, etc.

Iceland's Rules of Procedure for Treating Confidential Data (<http://www.statice.is/pages/480>), a comprehensive regulation which deals in a very comprehensive manner with statistical confidentiality.

South Africa's Statistics Act (http://beta2.statssa.gov.za/?page_id=677), see section on confidentiality and disclosure as well as offences and penalties.

New Zealand's privacy act

(http://www.legislation.govt.nz/act/public/1993/0028/latest/DLM296639.html?search=ts_act%40bill%40regulation%40deemedreg_privacy+act_resel_25_h&p=1) lays out, besides other, the functions of the privacy commissioner.

The French Code pénal 2013 ([Article 226-13](#)) provides for any breach of statistical confidentiality a sentence of up to one year imprisonment and a fine of up to €15,000. Sanctions may be more severe in the case of violating the law of 1978 on data processing, data files and individual liberties.

The United States' Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA) (http://www.whitehouse.gov/sites/default/files/omb/assets/omb/inforeg/cipsea/cipsea_statute.pdf) provides strong confidentiality protections for statistical information collections with penalties for intentional disclosure of imprisonment for up to five years and fines up to US\$250,000.

Statistics Korea conducted research on active disclosure control methods (i.e.

masking technique).

The UK's Statistics and Registration Service Act 2007

(<http://www.statisticsauthority.gov.uk/about-the-authority/uk-statistical-system/legislation/key-legislative-documents/statistics-and-registration-service-act-2007.pdf>) includes provisions that require compliance with a duty of confidentiality to protect personal information and that make any contravention a criminal offence and liable to imprisonment, a fine or both.

The Ministry of Development Planning and Statistics (MDPS) of Qatar protects the privacy of data providers, their information is kept confidential, is not be accessible to unauthorized internal or external users, and is used for statistical purposes only. Statistics are not confidential if they allow statistical units or persons to be identified either directly or indirectly.

Singapore's Statistics Act (<http://statutes.agc.gov.sg/aol/search/display/view.w3p;ident=b699beb7-1d77-4cec-8da4-65a3189d5968;page=0;query=DocId%3A9dd7e5f2-c7ce-4907-80ea-8dd09345c9b8%20Depth%3A0%20Status%3Ainforce;rec=0>) also provides strong confidentiality protection for the collected information (see § 7 and §9).

2. Confidentiality policy and supporting mechanisms

Developing a comprehensive confidentiality policy is an essential element to establish principles for a trustful and confidential cooperation with respondents. Adequate mechanisms secure the successful implementation of data confidentiality.

- 2.1 A confidentiality policy is prepared by the statistical authority, is provided to the staff and is made publicly available (CoP 5.4., QAF Method: 5.4.3 at institutional level, NQAF supporting mechanisms).
- 2.2 The confidentiality policy lays out principles and commitments related to statistical confidentiality. (CoP 5.4., QAF 5.4.1 at institutional level)
 - 2.2.1 The confidentiality policy sets out how statistics are to be produced and disseminated to users in regard of the confidentiality. (CoP 5.4., NQAF, agency level, CoP 5.4., QAF Method: 5.4.3 at institutional level, NQAF supporting mechanisms)
 - Prior to or during data collection respondents are informed that the statistical authority fully commits to data protection and statistical confidentiality and that the data are only used for statistical purposes and personal data are put forward under no circumstances (QAF Method: 5.4.5 at institutional level).
 - Respondents are informed of the main uses and limitations in terms of access to the information that they provide. (LAC, principle 4)

2.2.2. The confidentiality policy sets out under what circumstances micro data (i.e. statistical information relating to individual respondents) may be made available for research and further analysis. (CoP 5.4., NQAF, agency level, CoP 5.4., QAF Method: 5.4.3 at institutional level, NQAF supporting mechanisms)

- Statistical data producers apply statistical disclosure control methods prior to the release of statistical information (aggregated data and micro data) (QAF 5.4.6. product level, QAF 5.4.7 product level, NQAF – agency stage).

2.3 Mechanisms to guarantee the privacy of data

2.3.1 During data collection and data processing:

- No entry of individual names of persons or enterprises in the databases; (Global Review 2013)
- Personal data and questionnaires are kept secure and are destroyed after some time. (Global Review 2013)

2.3.2 For publication of aggregated data:

- Suppression of information if the number of respondents allows easy disclosure of individual data; (Global Review 2013)
- Standard software applied for checking tabulations and micro data against disclosure, and use of other special software; (Global Review 2013)
- Review by authorized staff of all data prepared for dissemination for possible indirect disclosure. (Global Review 2013)

2.3.3 When releasing individual data:

- Examination of all applications for access to confidential data by a statistical disclosure committee at the national statistical office and in some countries by the data protection authority; (Global Review 2013)
- Release of individual data only as anonymized micro data for research purposes; (Global Review 2013)
- Limiting geographic details, limiting the number of variables, recoding and (sub) sampling. (Global Review 2013)

2.4 The confidentiality policy contains that persons (staff and external parties⁹) with access to individual or confidential information must sign a confidentiality commitment on appointment. (LAC 4.2., CoP 5.2, QAF 5.2.1.an institutional level, QAF 5.2.1.b institutional level, NQAF supporting mechanisms)

2.4.1 In this confidentiality commitment they ensure their respect for confidentiality and take note of the penalties for non-compliance. (LAC 4.2., CoP

⁹ External parties which undertake work on behalf of the statistical authority.

5.2, QAF 5.2.1.a institutional level, QAF 5.2.1.b institutional level, NQAF supporting mechanisms)

- 2.4.2 In case of modification, such agreements should be updated and signed again by all staff or parties concerned. (QAF Method: 5.2.1c at institutional level)

Examples/good practices of “confidentiality policy”:

Video from USA informing the users regarding the methods used in the Population Census (<http://www.census.gov/2010census/>).

France’s Guide to Statistical Confidentiality (<http://www.insee.fr/en/insee-statistique-publique/statistique-publique/guide-secret-18-10-2010.pdf>), guidelines and instructions are provided to staff on the protection of statistical confidentiality in the production and dissemination process.

Canada’s ten privacy principles (<http://www.statcan.gc.ca/about-apercu/pia-efrvp/section-partie1-eng.htm>) guarantee confidentiality during the legal and organizational aspects in the frame of producing a statistical survey.

Canada’s Privacy Notice (<http://www.statcan.gc.ca/reference/privacy-privee-eng.htm>) informs respondents and users in a very clear way; explains how confidentiality is kept in spite of using social media.

Canada’s privacy impact assessment (<http://www.statcan.gc.ca/about-apercu/pia-efrvp/pai-efvp-eng.htm>), for each survey Statistics Canada assesses if and to which degree confidentiality is violated. Developing measures to eliminate identified breaches.

New Zealand’s webpage on safeguarding confidentiality (<http://www.stats.govt.nz/about-us/policies-and-protocols/confidentiality-of-info-supplied-to-snz/safeguarding-confidentiality.aspx>) provides an overview of how data is adjusted to make sure that individual responses remain confidential and how the data may be affected by these adjustments; this page covers the different techniques used for different types of output: tables and micro data.

3. Micro data for research purposes

Providing anonymized data is an essential contribution of statistical institutes to third persons. Circumstances and conditions must be clearly defined.

- 3.1 Clear conditions for granting researcher access to confidential data for scientific purposes are set in the statistical law or relevant regulations. These conditions are publicly available on the website of the statistical authority. (QAF 5.6.1a institutional level, QAF 5.6.1b at institutional level)

- 3.2 Users of confidential information are bound to sign legally enforceable contracts of usage of micro data/public use files, which include
- information about existing sanctions for violation of statistical confidentiality. (NQAF, supporting mechanisms, QAF Method: 5.6.2b at institutional level, QAF Method: 5.3.2 at institutional level, CoP 5.6.)
 - information about a possible loss of information due to procedures, which ensure anonymized micro data. (NQAF, programme implementation stage)
- 3.3 Ways of granting access to micro data
- 3.3.1 Access to statistical information takes place in a secure environment (e.g. remote access, safe centre, remote execution). (QAF 5.4.7 product level, QAF Method: 5.5.4b institutional level, Global Review 2013)
- 3.3.2 Micro data are provided through a joint research project between the researcher and the national statistical office, with the researcher becoming a deemed employee of the national statistical office. (Global Review 2013)
- 3.4 In order to ensure privacy of micro data before publishing
- Statistical agencies have established appropriate procedures and processes (e.g. anonymization) before passing over the data to researches. (NQAF – agency level)
 - Additionally, the use of micro data is monitored in order to immediately apply corrective actions when circumstances appear in which confidentiality is violated (for example through file matching). (NQAF, post-collection evaluation stage, QAF Method: 5.6.4 at product level)

Examples/good practices of “micro data for research purposes”:

UNECE-Handbook on Managing Statistical Confidentiality and Micro data Access

(http://www.unece.org/fileadmin/DAM/stats/publications/Managing_statistical_confidentiality_and_microdata_access.pdf), listing principles, guidelines and international case studies of good practice on handling micro data issues.

European Commission Regulation No. 557/2013 (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:164:0016:0019:EN:PDF>) establishes the conditions under which access to confidential data transmitted to the Commission (Eurostat) may be granted for enabling statistical analyses for scientific purposes, and the rules of cooperation between Eurostat and national statistical authorities in order to facilitate such access.

Sri Lanka's micro-data dissemination policy of the Department of Census and Statistics (http://www.statistics.gov.lk/databases/data%20dissemination/DataDissaPolicy_2007)

[Oct26.pdf](#)) describes the procedures in place to ensure that information relating to any particular individual person, household or enterprise will be kept strictly confidential and will not be submitted to external parties.

South Africa's document on providing access to micro data (Gavin et al., 2007: Providing Access to Micro data: A Perspective from Statistics South Africa) explains how to meet users' needs on statistical releases while ensuring respondent confidentiality; additionally, examples of micro data products distributed are outlined.

Australia's webpage concerning micro data (<http://www.abs.gov.au/websitedbs/D3310114.nsf/89a5f3d8684682b6ca256de4002c809b/ea3125287ffe3a4cca257202007840b5!OpenDocument>) explains in detail different data sets and informs researchers in a comprehensive way about access to micro data.

Slovenia's webpage on basic instructions concerning the access and the use of statistically protected micro data (http://www.stat.si/eng/drz_stat_mikro.asp) provides an insight into the issues of statistically protected micro data for research purposes; provides forms for obtaining the statistically protected micro data, declarations on protection of data and contracts for researchers and research institutions, explains the system of rules and procedures concerning the dissemination of statistically protected micro data; and lists the examples of research analyses on micro data provided by national statistics.

TurkStat's Web Page Concerning Micro Data: TurkStat provides access and usage facility for the micro data of survey and researches in accordance with the legislation based on the national and international researchers demand (<http://www.turkstat.gov.tr/UstMenu.do?metod=bilgiTalebi>).

4. IT-security

Statistical data is subject to threats in regard of its availability, confidentiality and integrity. In order to guarantee privacy of data Statistical Agencies are challenged to fend off these threats by establishing efficient IT-security systems.

4.1 An IT-security policy for the protection and security of personal data is in place. It establishes guidelines on the security and integrity of statistical databases, covering all legal and technical safeguards to protect confidential information. (LAC 4.4., QAF Method: 5.6.2a at institutional level, QAF Method: 5.5.2 at institutional level)

4.2 An IT-security policy should cover the following three dimensions:

- Availability: Statistical agencies provide internal and external users access to data to the required extent.
- Integrity: Statistical agencies secure adequate survey methods and processing methods and guarantee that data are not falsified by human or technical misbehaviour.

- Confidentiality: Statistical agencies assure that provisions regarding confidentiality and data protection are guaranteed and that data is only used for statistical purposes.
- 4.3 The IT-security policy is widely known to the staff of the statistical authority. (QAF Method: 5.5.2 at institutional level)
- 4.4 Security measures are in place on physical, technological and organisational level to protect the security and integrity of statistical data. (SASQAF 1.4., NQAF, implementation stage, CoP 5.5, QAF Method: 5.5.1 at institutional level)
- 4.4.1 User rights are recorded and kept up-to-date to prevent unauthorized access. (QAF Method: 5.5.4c at institutional level)
- 4.4.2 Names and addresses or other personal identifiers are deleted as early as possible. (QAF Method: 5.5.4d at institutional level)
- 4.4.3 Systematic security audits on the data security system of the statistical authority are carried out. The audit evaluates every tool and safeguard to protect the security and integrity of statistical databases. (QAF Method: 5.5.3 at institutional level)
- 4.4.4 Information must be stored in secured environments (that prevent access by unauthorized persons), in accordance with established security and confidentiality protocols and existing standards. (LAC 4.7., QAF Method: 5.5.4a at institutional level)
- 4.5 Appropriate procedures for measuring the risk of violating confidentiality are in place:
- to assess the risk that individual respondents can be identified from the public release of statistics or of micro data,
 - to ensure that individual data are kept confidential, and used for statistical purposes only,
 - to prevent duplication of data (data illegally copied or not deleted after use). (QAF 5.6.3 at institutional level, SASQAF 1.4., NQAF, implementation stage)
- 4.6 All access to statistical databases is strictly monitored and recorded. (QAF 5.4.7 product level, QAF Method: 5.5.4b institutional level, Global Review 2013)
- 4.7 Statistical agencies identify the risk of publishing statistics or micro data and if the risk of identification of individuals is above a minimum level, there must be a consideration whether data or micro data is disseminated or not. (NQAF, implementation stage)
- 4.8 All procedures that are taken to eliminate or adequately reduce the risk of identification are properly documented and made available as part of the metadata related to the statistical dataset (NQAF, implementation stage).

- 4.9 Procedures are in line with the confidentiality policy to eliminate or minimize this risk (NQAF, implementation stage).
- 4.10 Procedures in use for data protection are periodically examined and are selected in a way to counteract the trade-off between the risk of identification and the loss of information in an optimal way. (QAF 5.4.4b institutional level, QAF 5.4.2 institutional level)

Examples/good practices of “IT-security” and measurement of risks:

Germany’s research data centres of the Federal Statistical Office and the Statistical Offices of the Länder (<http://www.forschungsdatenzentrum.de/en/index.asp>) provide access to selected micro data of official statistics to German and international researchers for scientific purposes. Different form of access to selected micro data of official statistics is provided.

International Household Survey Network (IHSN): Document on Tools and Guidelines on Micro data anonymization (<http://www.ihsn.org/home/node/118>) the website contains information on main principles associated with micro data anonymization, various techniques used for measuring the disclosure risk, methods available for reducing the disclosure risk, methods for assessing the resulting information loss, links to available tools are also provided, as well as a compilation of practices.

New Zealand’s data integration policy (http://www.stats.govt.nz/about_us/policies-and-protocols/data-integration-policy-2012.aspx) ensures that Statistics New Zealand minimizes risks concerning personal privacy when integrating personal data.

Slovenia’s management of information and data security (http://www.stat.si/eng/stat_informacijska_varnost.asp) covers a set of technical and organisational measures aiming to safeguard and ensure completeness, availability, usefulness, accessibility and confidentiality of information and data that are processed and prepared by Statistical Office of the Republic of Slovenia (SORS) and to warrant for uninterrupted operation of SORS; it also provides the security policy as the formal framework of the Information Security Management System at SORS.

5. Organization, staff and research

All dimensions of confidentiality are supported by additional measures, which enforce the efforts of Statistical agencies to secure the privacy of data.

5.1 Appropriate organizational structure

- Statistical agencies consider whether establishing an appropriate organizational structure or establishing external bodies to ensure confidentiality.

5.2 General security measures within the office regarding the staff

- Ethics of the profession and/or internal regulations do exist, which may include that staff take an “oath of office”. (Global Review 2013)
 - Training of staff on confidentiality rules and practices is essential. (Global Review 2013, NQAF supporting mechanisms)

5.3 On-going research

- The on-going research in the field of confidentiality is observed permanently. (QAF 5.4.4a institutional level)

Examples/good practices of organizational structure, staff and research

France’s Statistical Confidentiality Committee (http://www.cnis.fr/cms/Accueil/activites/trois_comites/Comite_du_secret_statistique): the Statistical Confidentiality Committee is responsible for enforcing strict compliance with the confidentiality of individual data and provides access to individual data, for which individual contracts are then signed with the accredited researchers or bodies.

Finland’s Data Protection Ombudsman (<http://www.tietosuoja.fi/1560.htm>), provides guidance and advice on all issues related to the processing of personal data and controls the observance of the law.

Working Group on the Management of Confidential Statistical Data of Statistics Lithuania, objective whereof is to consider the need for legal acts required for the protection and management of confidential statistical data possessed by Statistics Lithuania and, when needed, to initiate their preparation and/or amendment; to consider problematic confidential statistical data protection-related issues and to put forward proposals concerning the settlement thereof to the top management of Statistics Lithuania.

The Information Security Management Office was created in the CSO of Poland. The tasks of the Office include coordination actions of individuals of official statistics services for the protection of statistical data, personal data, confidential information and other secrets protected by law (including monitoring (audit) of official statistics services in the implementation of tasks resulting from the adopted information on security management system).

Data without Boundaries (<http://www.dwbproject.org/>), a research project to support equal and easy access to official micro data for the European Research Area, within a structured framework in which responsibilities and liability are equally shared.

UNESCO Chair in Data privacy (<http://unescoprivacychair.urv.cat/index.php>), it is an agreement between UNESCO and an academic institution (University Rovira i Virgili). It provides research, training and dissemination in a field regarding data

privacy.

III. Risks

Violating confidentiality is based on different impulses, like carelessness, improper behaviour, malicious intent or personal profit. In any case, statistical agencies are challenged to avoid any publication of private data due to severe negative consequences. Not only that applicable statistical law is offended and individual persons or enterprises may be harmed – it rather damages the image and reputation of statistical institutions in long term. Even minor offenses lead to tremendous negative effects and may discredit as well other governmental institutions or democracy itself. To reverse these damaging impacts afterwards is nearly impossible. Therefore statistical agencies are challenged to anticipate a possible loss of trust by investing in confidentiality protection at each stage of the statistical production process. To enhance these efforts, a transparent and continuous communication with public is required.

Principle 7 - Legislation

The laws, regulations and measures under which the statistical systems operate are to be made public.

LEGISLATION

I. Objective

High quality legislation is critical to the effective performance of a national statistical system. Such legislation should clearly set out the authority and powers of the national statistical office and establish its independence. Openness in all aspects of the production of official statistics is important for maintaining the trust of the providers of data and the credibility of the statistics produced. This openness is facilitated by the public availability of laws, regulations and measures under which a national statistical system operates.

II. Scope of application

In the following several dimension of legislation are listed, which a national government is advised to take into account when implementing this principle or taking it forward.

1. Legal framework

It is essential to the effective functioning of a national statistical system that it is governed by a high quality legal framework.

- 1.1 There should be clear laws and regulations governing official statistical activities within a country.
- 1.2 The laws and regulations should be consistent with, and give effect to, the Fundamental Principles of Official Statistics.
- 1.3 The independence of official statistics should be clearly set out in legislation.
 - There should be transparent procedures for the recruitment and dismissal of the chief statistician.
 - The chief statistician should be responsible for the budget of the national statistical office.
 - The chief statistician should be responsible for choices of sources and statistical methods and decisions about the dissemination of statistics.
- 1.4 The laws and regulations should be modern and up-to-date.

- 1.5 The laws and regulations should cover the activities of the national statistical office as well as the activities of other organisations involved in official statistics¹⁰.
- 1.6 Ideally, there should be a specific statistics law.
- 1.7 The laws and regulations should be comprehensive and provide sufficient detail to ensure that roles and responsibilities are properly understood and to avoid political arbitrariness. However, laws and regulations that are unduly prescriptive can be cumbersome and reduce flexibility to adjust to changing circumstances.
- 1.8 Critical aspects of the national statistical system should be established in legislation, with regulations and other measures providing supporting detail.
- 1.9 There should be consistency between the statistical laws and regulations and other laws and regulations governing the activities of the national statistical office and the national statistical system.

Examples/good practice of nature of the legal framework

Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European Statistics¹¹ (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32009R0223:EN:NOT>); see also Eurostat (2010): Legal Framework for European Statistics. The Statistical Law (<http://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-31-09-254>)

INSEE – Official Statistics: a Strong Identity:

(<http://www.insee.fr/en/insee-statistique-publique/default.asp?page=statistique-publique/identite.htm>)

Legal Framework of Slovene National Statistics:

(http://www.stat.si/eng/drz_stat_zakonski.asp)

Australian Bureau of Statistics – Legislative Framework:

(<http://www.abs.gov.au/websitedbs/D3310114.nsf/51c9a3d36edfd0dfca256acb00118404/339a2ca3e39bc7e8ca2569d8000085ff!OpenDocument>)

Statistics Law of Turkey:

(<http://www.turkstat.gov.tr/UstMenu/yonetmelikler/StatisticsLawOfTurkey.pdf>)

The Polish Law on Official Statistics (<http://bip.stat.gov.pl/en/law/law-on-official-statistics>) is a good example of statistical law that covers wide range of topics connected with the functioning of statistical system and it clearly determines procedures of recruitment of the chief statistician (see articles 23-24).

Statistics Act of Japan (full text) (<http://www.stat.go.jp/english/index/seido/pdf/stlaw.pdf>): The

¹⁰ See also the Implementation guideline for principle 8.

¹¹ The forthcoming Amending Regulation (EC) No 223/2009 on European statistics will be available in spring 2015.

Statistics Act defines the basic matters concerning Japanese official statistics, such as the definitions of official statistics and other specific terms, the establishment of a Master Plan (<http://www.stat.go.jp/english/index/seido/masterplan2014.htm>) concerning the development of official statistics, the production of official statistics, the utilization, provision and protection of Questionnaire Information, penal provisions, etc.

See also specific examples of statistical legislation in section II.2 below

2. Matters covered in laws and regulations

It is essential that laws and regulations cover the full range of activities and responsibilities of the national statistical office, and others involved in the national statistical system.

2.1 The following matters should be covered in laws and regulations:

- The nature of official statistics, which could include principles for official statistics;
- The role of the minister or other institutional body (e.g. parliament) responsible for statistics;
- The role and status of the chief statistician;
- The status and functions of the national statistical office;
- The staff of the national statistical office;
- The role and membership of the national statistical council;
- The coordination of statistical activities across government (and, for countries with federal systems, with state/provincial governments), including the roles and responsibilities of other agencies¹²;
- The matters to be covered by the statistical work program, and the manner by which the statistical work program is determined;
- The collection of statistics, including powers of entry and compliance obligations;
- Access to administrative data;
- Secrecy, confidentiality and privacy obligations¹³;

¹² In countries with decentralised systems, all members should have provisions defining their legitimacy, accountability and obligations to hold information in trust, as well as the sanctions to be applied if those obligations are not heeded.

¹³ See also Implementation guideline for principle 6.

- Compilation, analysis, dissemination (including micro data) and archiving;
- Public accountability;
- Participation in international statistical activities¹⁴;
- Offences and penalties (e.g. for failure to comply with a request to provide information, for breaches of secrecy etc.).

Examples/good practice of matters covered in laws and regulations

South Africa Statistics Act:

(http://www.statssa.gov.za/about_statssa/statistics_act.asp)

The South African Statistics Act is a good example of modern statistical legislation.

New Zealand Statistics Act:

(<http://www.legislation.govt.nz/act/public/1975/0001/latest/whole.html>)

Germany Law on Statistics for Federal Purposes:

(https://www.destatis.de/DE/Methoden/Rechtsgrundlagen/Statistikbereiche/Inhalte/010a_BStatG_Engl.pdf?__blob=publicationFile)

Canada Statistics Act:

(<http://laws-lois.justice.gc.ca/eng/acts/S-19/FullText.html>)

Ireland Statistics Act:

(<http://www.irishstatutebook.ie/1993/en/act/pub/0021/>)

Singapore Statistics Act (<http://statutes.agc.gov.sg/aol/search/display/view.w3p;ident=b699beb7-1d77-4cec-8da4-65a3189d5968;page=0;query=DocId%3A9dd7e5f2-c7ce-4907-80ea-8dd09345c9b8%20Depth%3A0%20Status%3Ainforce;rec=0>)

3. Public availability of laws, regulations and measures

It is essential to the trust and credibility of official statistics that laws, regulations and other measures are made public.

- 3.1 Laws, regulations and measures governing the operations of the national statistical office and the national statistical system should be easily discoverable and readily available to the public.
- 3.2 These laws, regulations and measures should be published on the website of the national statistical agency, either directly or through links, and this should be kept up-to-date.

¹⁴ See also Implementation guideline for principle 10.

- 3.3 The national statistical agency's website should have a clear section relating to matters of public accountability.
- 3.4 Annual reports, statistical work programs, reports and any evaluation reports and audits of statistical activities should be made public.
- 3.5 Decision making processes about what statistics are collected and how statistics are collected and compiled should be made public.
- 3.6 Statistical agencies should provide readily accessible information on the sources, methods and procedures used to produce official statistics¹⁵.

Examples/good practice of public availability of laws, regulations and measures

Statistics South Africa – Corporate Information:

(http://beta2.statssa.gov.za/?page_id=627)

Australian Bureau of Statistics – About Us:

(<http://www.abs.gov.au/websitedbs/D3310114.nsf/Home/About+Us?opendocument#from-banner=GT>)

Statistics Austria – Responsibilities and Principles:

(http://www.statistik.at/web_en/about_us/responsibilities_and_principles/index.html)

Statistics New Zealand – Policies and Protocols:

(http://www.stats.govt.nz/about_us/policies-and-protocols.aspx)

Statistics Netherland: Methods:

(<http://www.cbs.nl/en-GB/menu/methoden/default.htm>)

Australian Bureau of Statistics – Methods, Standards and Classifications:

(<http://www.abs.gov.au/websitedbs/D3310114.nsf/home/Methods,+Classifications,+Concepts+&+Standards?opendocument#from-banner=GT>)

The United States publishes statistical policies and implementation guidance in a Federal Register notice to the public as well as on a public government website, including collection standards, classifications and other guidance [see also Statistical Programs of the United States Government: Fiscal Year 2014]

(http://www.whitehouse.gov/omb/inforeg_statpolicy)

Statistics Act of Japan, Article 55 (<http://www.stat.go.jp/english/index/seido/pdf/stlaw.pdf>): In order to ensure fair application of the Statistics Act, Article 55 of the Act stipulates that the Minister of Internal Affairs and Communications must compile a report (every fiscal year) on the situation of the enforcement of the Act every year, publicize the outline thereof, and report to the Statistics Commission, which is a professional independent organization.

¹⁵ See also Implementation guideline for principle 3.

III. Risks

Poor quality laws and regulations, including laws and regulations that are not comprehensive and/or enable political arbitrariness can cause significant damage to the reputation of the national statistical office and the credibility of official statistics.

It can also significantly hamper the effective operations of the statistical system and can cause damage to the interests of individuals and organisations if the laws and regulations provide insufficient protection for the confidentiality of their information. The persons responsible for formulating laws and regulations, and those responsible for enacting them, often have only limited understanding of official statistics and the issues and risks relating to the official statistical system. Because of this, it is essential that the time and effort is taken by the chief statistician and his or her senior staff to work with law-makers to ensure that there are high quality laws and regulations. Such involvement with legislative processes does not diminish the independence of the statistical system and indeed can be critical in ensuring that the system is indeed independent. Even if there are high quality laws and regulations, a lack of public access to these will undermine the trust in the official statistical system by both providers and users. More generally, trust in the system will be enhanced by the regular publication of reports, etc. about the activities of the statistical system, including decision making processes and the time and effort to ensure this should be seen as critical work of the national statistical office.

Principle 8 – National Coordination

Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

NATIONAL COORDINATION

I. Objective

To describe how national statistical offices effectively coordinate statistical activities and thereby improve the consistency and efficiency of their statistical systems.

According to the United Nations Statistics Division's Global Review 2013, "No matter what the organizational arrangements are for producing national statistics, coordination of statistical activities should be undertaken to avoid duplication of work, to minimize the reporting burden of respondents and to facilitate the integration of data from different sources through the use of statistical standards" (Global Review 2013). It is important to note that the National Coordination principle is among the least implemented of the Fundamental Principles of Official Statistics (Global Review 2013) – and major improvements to statistical efficiency could result from increased implementation of this principle.

II. Scope of application

Institutional framework for coordination role and set of activities, mechanism and tools applied by national statistics offices which ensure that statistics produced by other members of the national statistical system meet the relevant quality standards.

National statistical offices vary by means of the context, complexity, and reach of the "system" in which they reside. Irrespective of this diversity, all national statistical offices must adopt methods of ensuring that national statistical activities are well coordinated. Therefore, the guidance presented here applies to all countries with national statistical systems, ranging from more centralized national statistical offices (such as Statistics Canada) to less centralized national statistical offices (such as the United States) and numerous variations in between (such as Germany).

1. Legal framework:

The institutional arrangement should meet the challenges and scope determined by each country according to its legal framework, recognizing the benefits of having a national statistical information system that upholds quality, relevance, objectivity and

accessibility of the statistical information. Often national coordination is laid down in the Statistics Act of a National Statistical Office.

We have to keep in mind that a properly working national statistical information system in each country is a necessary condition so that a United Nations Statistical Activities coordination system may function. But why do countries strive to coordinate? They coordinate in order to avoid duplication, to increase scope and efficiency, etc.

In the absence of a legal framework that makes effective Principle 8 of the Fundamental Principles of Official Statistics, an alternative is that the NSO proposes legislation containing the obligation to publish a Code of Ethics and a Code of Best Practices, inspired by the Fundamental Principles, that includes as one of its principles the coordination of statistical agencies as a key factor to ensure consistency and effectiveness of the National Statistical System. This code, first, shall apply to the Government Agencies that generate statistical information and should be promoted widely within the entire national statistical community.

Examples/good practices of “Legal framework”

A good example of a suitable legal framework establishing a National System of Statistical Information that facilitates coordination between the different actors involved in the production of statistical information is the case of Mexico, where in April 7th 2006, the decree that reformed Articles 26 and 73 fraction XXIX-D of the Mexican Constitution was enacted, establishing that the Mexican State will have a National System of Statistical and Geographical Information whose data will be considered official. Section B of Article 26 states that "The responsibility of regulating and coordinating that System will be in charge of an organization with technical and managerial autonomy, legal personality and with its own patrimony, with the necessary powers to regulate collection, processing and publication of the information generated..."

Under article 5.1 of the Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European Statistics¹⁶ (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1415088900279&uri=CELEX:32009R0223>), national statistical institutes are responsible for coordination: "The national statistical authority designated by each Member State as the body having the responsibility of coordinating all activities at national level for the development, production and dissemination of European statistics (the NSI) shall act as the contact point for the Commission (Eurostat) on statistical matters. The Member States shall take necessary measures to ensure the application of this provision."

Thailand's Statistical Act 2007 had been amended to extend the NSO roles to be

¹⁶ The forthcoming Amending Regulation (EC) No 223/2009 on European statistics will be available in spring 2015.

spearhead of the national statistical system management, direction, and process of which is to be outlined by the National Statistical Master Plan (see section 5 to 8 of Thailand's Statistical Act). The Statistics Act states that it is the obligation of NSO to develop a statistical master plan for all government agencies to ensure that Thailand's statistical development supports national policies and development plans. Therefore, the NSO, in collaboration with all line ministries, has developed Thailand's first Statistical Master Plan 2011-2015. There are two main boards which are the committee on national statistical management system working on management side and academic advisory committee working on techniques side. The committee on national statistical management system steers the direction and oversees the implementation of the Master Plan, is responsible for outlining statistical policies, overseeing and monitoring the management of the national statistical system including budget and human resource development, and reporting progress to the Cabinet. Furthermore the academic advisory committee has major duty to consult and guidance on technical matters of statistics products and services for all users especially on statistical standards, quality and methodology.

It is essential for the national government to consistently make progress in approaches, therefore in Japan, as defined in Article 4 of the Statistics Act (<http://www.stat.go.jp/english/index/seido/pdf/stlaw.pdf>), statistical guidelines for the whole country are formulated as the "Master Plan Concerning the Development of Official Statistics" based on deliberations of the Statistics Commissions, which is a specialized third-party, and are promoted. The Director-General for Policy Planning (Statistical Standards) coordinates with each ministry in order to achieve the plan. Also, the plan is reviewed every five years in order to respond to changes in the new social conditions. In addition, the Master Plan specifies the following matters: (i) Basic policies for measures concerning the development of official statistics; (ii) Measures that the government shall implement comprehensively and systematically in order to develop official statistics; (iii) Other matters necessary to promote the development of official statistics.

2. National policy

2.1 Maintain relevancy of national statistics

- In order to maintain relevancy of national statistics, coordination among statistical agencies within countries is essential. This means that it is mandatory and this coordination system consistency derives from the information generated and disseminated by the National Statistical Offices in each country. Furthermore, to be considered official, it must be bounded within a legal and institutional framework, which will determine the coordination rules, structure and processes, according to each country legal system.

- For coordination to take place there must be a combination of legal tools, strong communication and partnership between the National Statistical Offices and other producers and leadership by the National Statistical Offices.
- The coordination system's efficiency must be the result of each country's formally adopted institutional arrangement, according to their legal framework and their commitment to the Fundamental Principles of Official Statistics.

2.2 Ensure that statistical methods used by producers of official national statistics are appropriate for intended uses

- Coordination by national statistics office ensure that it engages fully with those being coordinated in such a way that the overall strategic goals and objectives are attained and that each actor makes a contribution according to standard and quality frameworks. The coordination ensures the use of international standards and appropriate statistical methods enhancing quality of national statistics. National statistical offices produce guidelines, methodological manuals, handbooks, and other common rules for guiding all national statistical producers or setting up standardized methods and processes.
- Technical knowledge exchange, including training courses, for members of the system, workshops and working groups can support the use of common conceptual framework, processes and appropriate statistical methods. If standards are generated, control mechanisms for implementing them should be established.

2.3 Monitor agencies' use of classification standards

The office responsible for coordination should be equipped to perform a monitoring role to be able to assure others producers of national statistical system use common classification standards, in order to enhance the comparability of the statistics.

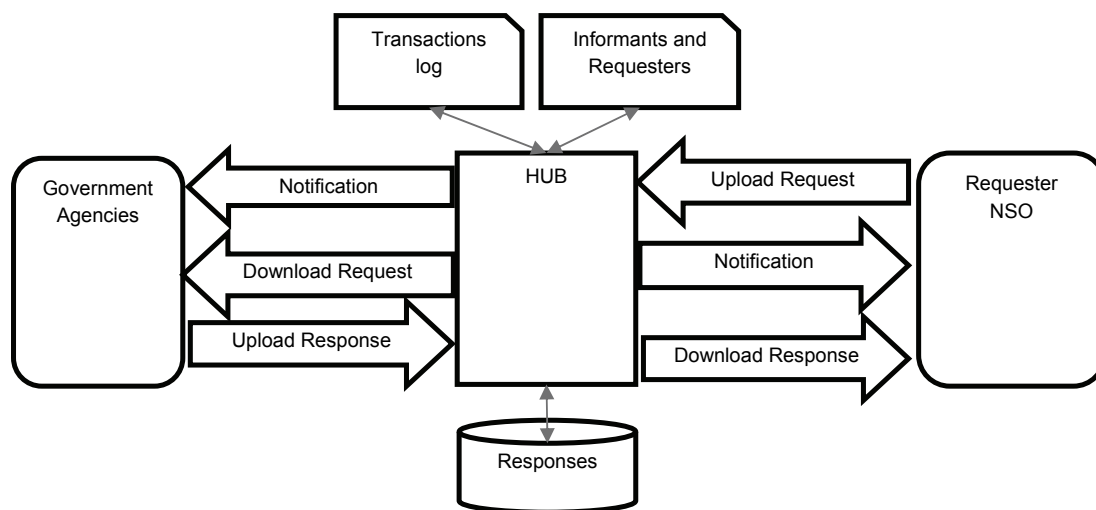
This role extends to development of guidelines on classification standards and formal checks/audits of activity and compliance with standards.

2.4 Facilitate the integration of data from different sources through the use of statistical standards

2.5 Coordinate collections carried out by various agencies

- A core feature of a legal framework that ensures the coordination of the National Statistical System is a model of information exchange¹⁷ to ensure an efficient response to each request, that could be schematically represented as follows:

¹⁷ This is an example of a specific model without claiming to be universal.



2.6 Prevent duplicative requests and thereby duplication of work

2.7 Reduce respondent burden

3. Methods of coordination:

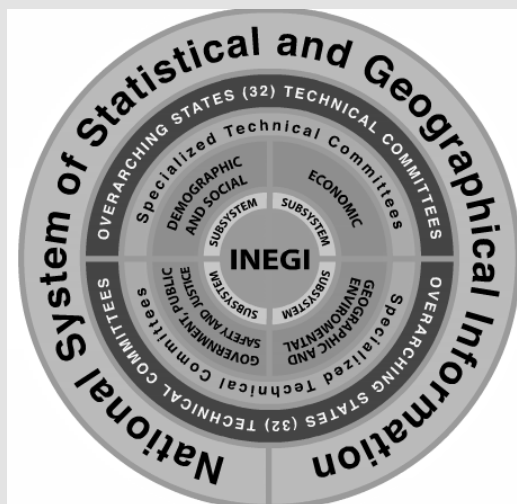
3.1 National Statistical Office coordination

- In many countries, a National Statistical Office coordinates statistics at the country or state level.
- Internationally, coordinating bodies include National Statistical Offices, central banks, line ministries and departments, and sub-national producers of regional statistics (Global Review 2013). As a general rule there should only be a coordinating body (usually the National Statistical Office) that coordinates and the other bodies listed should be coordinated. In a 2012 UNSD survey completed by 126 Member States' National Statistics Offices and the Palestinian Central Bureau of Statistics regarding the implementation of the Fundamental Principles, 87 per cent of NSOs reported use of one or more of the following national coordination methods:
 - "... regulations, agreements or laws;"
 - "Through supervisory, advisory, or technical committees;"
 - "As specified in the annual or multi-annual plan for data collection" (Global Review 2013);
 - Joint data collection; and
 - Pre-approval of survey methodologies.

Examples/good practices of "national statistical office coordination"

Mexico, by constitutional mandate, has developed the National System of Statistical and Geographical Information, which is the set of Information generated by the Federal and States Government (executive, Congress and Judiciary) organized

through four Information Subsystems, coordinated by Mexico's NSO INEGI, and articulated by a national information network with the purpose of producing and disseminating information, which could be schematically represented as follows:



When considering the ability of the National Statistical Office to provide meaningful coordination, it could be useful to review the explicit goals of the system:

“Do the objectives of the coordinating body of the national statistical system include: planning, implementing, coordinating, regulating and evaluating the development, production and dissemination of official statistics and ensuring their quality?” (NQAF 1: Coordinating the national statistical system). The following questions provide additional guidance:

“Do guidelines exist for the exchange, among members of the national statistical system, of unit records or other data?” (NQAF 1)

“Are mechanisms in place to facilitate the agreement, among the members of the national statistical system, on priorities for the production of statistics?” (NQAF 1)

The Code of Good Practice in Statistics for Latin America and the Caribbean states that coordination of the national statistical system “will enable the statistics producing entities to plan and implement national statistical activity in a participatory manner, maintain close contact and work jointly to improve the quality, comparability and consistency of official statistics” (LAC).

In the European context, the European Statistics Code of Practice Principle 14 offers indicators of coherence and comparability which include:

“14.1: Statistics are internally coherent and consistent ...

“14.3: Statistics are compiled on the basis of common standards with respect to scope, definitions, units and classifications in the different surveys and sources.”

“14.5: Cross-national comparability of the data is ensured within the European Statistical System through periodical exchanges between the European Statistical Sys-

tem and other statistical systems. Methodological studies are carried out in close co-operation between the Member States and Eurostat” (CoP).

In the U.S., the Office of the Chief Statistician, housed in the Office of Management and Budget, provides this coordination. Its responsibilities are outlined in the Paperwork Reduction Act and include:

- Budget review—particularly monitoring those agencies with significant statistical activities;

- Establishing statistical directives, policies; guidance, and standards;

- Reviewing and approving all collections of information from the public; and

- Fostering informal collaboration through interagency working groups and identifying shared goals.

The Office also coordinates participation in statistical activities with international organizations such as the United Nations, the Organization for Economic Cooperation and Development (OECD), the World Bank, and the International Monetary Fund.

Establishment of Director-General for Policy Planning (Statistical Standards), Ministry of Internal Affairs and Communications in Japan (regarding the statistical organizations of Japan see <http://www.stat.go.jp/english/index/outline/pdf/organ.pdf>). In order to ensure consistency among statistics and make adjustments for the exclusion of duplicative surveys within the decentralized Japanese statistical system, the Director-General for Policy Planning on Statistical Standards, Ministry of Internal Affairs and Communications, was established as a cross-sectional coordination institution among ministries and agencies based on the Ministry of Internal Affairs and Communications Establishment Act and the Statistics Act. The Director-General for Policy Planning on Statistical Standards has been implementing the following Affairs mainly: (i) The planning, framing and implementation of basic matters in statistical administration; (ii) The evaluation and coordination of statistical surveys; (iii) The setting of industrial classification and other statistical standards; (iv) The overall management of international statistical affairs.

Eurostat manages a coordinating body with the EU Member States – the European Statistical System Committee (ESSC). One of the tasks of the Committee is to "provide professional guidance to the ESS for developing, producing and disseminating European statistics". Although coordinating at supranational level, its practices of coordination could be replicated at national level.

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=747740&p_v_l_s_q_id=0)

Bilateral agreements on the organization, quality assurance and dissemination of official statistics signed between Statistics Lithuania and other national institutions

producing official statistics (ONAs).

There is also a possibility to exchange statistical data among Statistics Lithuania and ONAs within the framework of the Official Statistics Work Programme is formalized by the Agreements on data provision.

The system of statistical advisory committees in Slovenia assures a wide inclusion of professional public into the compilation of statistics. Their work has a significant impact on the development of national statistics in Slovenia at expert level and in co-operation of institutions in common efforts to provide quality, timely and relevant statistics. (http://www.stat.si/eng/drz_stat_sosveti.asp)

3.2 Data user/provider coordination

- Coordination by National Statistical Offices and others is important not only among state data producers at country level but also between those Federal entities and their data users/providers. “The statistical agencies should build and sustain very good relationships with all of their key stakeholders, including users, data providers, funding agencies, senior government officials, relevant community organizations, and the media” (NQAF 2: Managing relationships with data users and data providers).
- One important goal of national coordination is the reduction of respondent burden. Coordinating bodies should conduct “an assessment of the need to collect the information, the use of data from administrative sources or other surveys, and the use of sound statistical and survey methods to keep the burden to a minimum” (NQAF 13: Managing the respondent burden).

Examples/good practices of “managing relationships with data users/providers”

Eurostat has established the European Statistical Advisory Committee (ESAC) to discuss statistical issues with the data users and providers. The Committee plays an important role in ensuring that user requirements as well as the response burden on information providers and producers are taken into account in developing the Statistical Programmes.

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=747764&p_v_l_s_g_id=0)

When working to manage data user/provider relationships effectively, it can be helpful to answer the following questions:

“Has the statistical agency clearly identified all of its stakeholders?” (NQAF 2)

“Is the nature of the relationships between the statistical agency and each of its stakeholders defined and understood by both sides?” (NQAF 2)

“Are processes in place to consult stakeholders on their needs and concerns?”

(NQAF 2)

“Are stakeholders kept informed in actions taken to address their needs and concerns?” (NQAF 2)

“Are there subject-specific user committees?” (NQAF 2)

“Are there arrangements in place for periodic high-level discussions with key users?” (NQAF 2)

“Does the statistical agency have a provider management policy and/or a provider charter?” (NQAF 2)

“Does the statistical agency have access to records maintained by any government department, corporation, business or organization that could be used for statistical purposes?” (NQAF 2)

“Does the statistical agency have memoranda of understanding or other arrangements with administrative agencies to ensure that by-product administrative data provided to it will be suitable for statistical purposes?” (NQAF 2)

“Does the statistical agency maintain continuing liaison with the providers of administrative records to strengthen the statistical value and usage of the administrative source?” (NQAF 2)

“Does the statistical agency have a strategy to manage media relationships and does it maintain regular contact with the media?” (NQAF 2)

In Canada, “cooperative arrangements with suppliers ... are pursued through:

“a respondent relations program”

“a response burden management program”

“bilateral committees (e.g., with Canada Customs and Revenue Agency)”

“engagement with the small business community”

“a small business ombudsman”

“electronic reporting initiatives”

“recognition of respondents in publications”

“These are supported by the Policy on Informing Survey Respondents (Policy 1.1), and through the activities of Data Access and Control Division” (SCQAF).

3.3 Standard setting

- Standard-setting is another important statistical coordination tool. In a 2012 UNSD survey completed by 126 Member States' National Statistics Offices and the Palestinian Central Bureau of Statistics regarding the implementation of the Fundamental Principles, “[e]ighty-six per cent of the countries indicated

that they had organizational arrangements for setting statistical standards at the national level” (Global Review 2013). This standard setting was reported typically to be the responsibility of one body and to involve issuance of policies from the national statistical office and/or passage of legislation; creation of committees addressing specific areas of coordination; and collaboration with data users.

Examples/good practices of “standard-setting”

When considering the usefulness of statistical standards, it can be helpful to answer the following questions:

“Does the agency have an organizational unit responsible for taking the lead in the development of statistical standards and for supporting statistical programmes/domains in its efforts to develop standards, where such standards don’t exist or have become outdated? Is this responsibility assigned to staff with the appropriate level of seniority?” (NQAF 3: Managing Statistical Standards)

“Does the agency monitor the extent to which statistical standards are used by the statistical programmes/domains?” (NQAF 3)

“Are all relevant staff aware of statistical standards and any changes made to them?” (NQAF 3)

“Do statistical standards include a statement regarding the degree to which their application is compulsory?” (NQAF 3)

“Are statistical programmes/domains held accountable to apply the statistical standards?” (NQAF 3)

“Are statistical standards regularly reviewed and revised, if necessary, to ensure their quality, notably their relevance, coherence and clarity?” (NQAF 3)

3.4 Intra-governmental and nongovernmental coordination

- Intra-governmental and nongovernmental groups play an important role internationally in facilitating statistical coordination, including standard setting.

Examples/good practices of “intra-governmental and nongovernmental coordination”

In the U.S., numerous groups provide this intra-governmental and nongovernmental coordination. They include:

The Interagency Council on Statistical Policy (ICSP) consists of the heads of the major Federal statistical agencies and is charged in statute with advising and assisting the Chief Statistician in coordinating the Federal statistical system;

The Federal Committee on Statistical Methodology (FCSM) is chaired by the Chief Statistician's office and consists of Federal statistical experts. The FCSM is charged with informing and advising the Office of Management and Budget and the ICSP on methodological and statistical issues that affect the quality of federal statistics;

The Committee on National Statistics (CNSTAT) is a non-governmental statistical expert body established at the National Academies – a private entity established by an Act of Congress – to improve statistical methods and information on which public policy decisions are based. CNSTAT is supported by a consortium of federal agencies and publishes Principles and Practices for a Federal Statistical Agency.

In Europe the European Statistical Forum (ESF) provides a forum for coordination between the NSIs and the statistical departments of national central banks.

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=6077546&p_v_l_s_g_id=0)

The Statistical Council exists in the CSO of Poland. Its activity is the example of intra-governmental and nongovernmental coordination (see articles 15-17 of the Law on Official Statistics).

3.5 Additional sources of statistical coordination

Other coordination for national statistics comes from sources including national government experts, technical committees, and regulations and agreements.

III. Risks

Poor or non-existent coordination at national level has serious consequences, such as:

1. Information inconsistencies could mislead statistical information users. This is particularly worrying in the case of public policy makers, as they may base their decisions on misinterpretations of inconsistent information.
2. With waste of resources as a result of duplicated statistical information.
3. Inconsistencies and duplication of statistical information transferences to international organizations will cause confusion in its use and interpretation.
4. Statistical Information is sent to international organizations from different sources; international agencies should review the legal framework of each country to ensure that the information received comes from the official source.
5. Poor coordination of the national statistical system of each country undermines the credibility of Official Statistics.

Principle 9 – Use of International Standards

The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

USE OF INTERNATIONAL STANDARDS

I. Objective

Without common standards and metadata, comparability of data produced by different agencies would be impossible. This applies equally within a country, and between countries.

Comparability is an important dimension of quality. If data are not comparable, they lose a lot of their utility. If data lose their utility, the agency that produces them loses relevance. It is also a key principle of work to modernise official statistics production and services, that the use of common standards improves efficiency, both within individual agencies, and within the official statistics “industry” as a whole.

The objective of this Fundamental Principle is therefore to ensure that official statistics (and their producers) remain relevant to users, and provide good value for money to national governments. This principle further extends the scientific principles and standards aspect of principle 2.

II. Scope of application

This section includes a number of important considerations related to the use of international standards. These are illustrated where possible by concrete examples.

1. Legal framework

It is important to ensure in statistical law the obligation to be bound by scientific standards. In some cases it might be appropriate to stipulate more specifically in law for example the use of international standards.

A recent example of national legislation requiring the use of international standards is the Law of the Kyrgyz Republic on State Statistics¹⁸ (amended February 22, 2013), which states in Article 5 that:

¹⁸ http://stat.kg/index.php?option=com_content&task=blogsection&id=9&Itemid=37 or <http://unstats.un.org/unsd/dnss/docViewer.aspx?docID=424#start>

“The governmental bodies and local self-government providing the official statistical service shall be obliged to present the following:

- application of the scientifically-based statistical methodology meeting the requirements of international standards and principles of the official statistics, legislation of the Kyrgyz Republic;
- use of the uniform standards in application of information technologies and state classifiers of technical and economic and social information, their comparability and interaction in the integrated information space of the Kyrgyz Republic;
- conformity of the statistical indicators to the internationally-accepted standards;”

The fact that legislation explicitly requires the use of international standards clearly shows that the value of using international standards, even for sub-national statistics, is understood and supported at the political level.

Membership of international or supra-national organisations can also result in legal requirements regarding the use of international standards. The best example of this is the European Union, whose 28 member countries are required to produce statistics according to a wide range of supra-national legal acts. Paragraph 11 of the preamble to Regulation (EC) No 223/2009 of the European Parliament and Council¹⁹ (commonly known as the “statistical law”) states that:

“International recommendations and best practices should be taken into account in the development, production and dissemination of European statistics.”

The use of specific standards, concepts, classifications and methods is required in many of the pieces of subject-matter specific legislation, though in some cases the required standards are European Union versions of wider international standards, for example the “European System of Accounts”, which is based on the global “System of National Accounts”.

Similarly, membership of international organisations may impose requirements that are not strictly legal in nature, but are still a form of obligation. An example of this is the use of the Special Data Dissemination Standard (SDDS) for the provision of economic and financial data to the International Monetary Fund (IMF). According to the IMF website²⁰:

“Although subscription is voluntary, it carries a commitment by a subscribing member to observe the standard and to provide certain information to the IMF about its practices in disseminating economic and financial data.”

¹⁹ The forthcoming Amending Regulation (EC) No 223/2009 on European statistics will be available in spring 2015.

²⁰ <http://dsbb.imf.org/Pages/SDDS/Overview.aspx>

2. Which standard?

Sometimes more than one international standard may be relevant in a specific set of circumstances. For example the Eurostat Concepts and Definitions Database (CODED)²¹ lists no less than twelve definitions of the concept “employment”. All of these can be considered as international standards. Some are very domain-specific, for example relating to inland waterway transport, whilst others are more general, such as the standard definition published by the International Labour Organization.

Statisticians faced with such a choice of possible standards for just one concept, may often be unclear which one they should use. Unfortunately there is rarely a simple answer.

To make matters worse, there are even cases where different international organisations require a country to report the same data according to different standards. For data by economic activity, European Union reporting requirements are specified in terms of NACE (Nomenclature statistique des activités économiques dans la Communauté européenne – or Statistical classification of economic activities in the European Community), whilst United Nations bodies tend to use the more global ISIC (International Standard Industry Classification). The two classifications are related, but differ at the more detailed levels, requiring mappings and other adjustments when converting from one to the other.

Whilst the longer-term solution is clearly greater alignment of different international standards covering the same topic, the most pragmatic short-term solution is often to use the standard most frequently requested by users, and to maintain documentation on differences, including mappings where applicable, to facilitate reporting according to alternative standards when necessary.

Examples of standards:

The System of Environmental-Economic Accounting (SEEA) contains the internationally agreed standard concepts, definitions, classifications, accounting rules and tables for producing internationally comparable statistics on the environment and its relationship with the economy.

(<http://unstats.un.org/unsd/envaccounting/seea.asp>)

The System of National Accounts (SNA) is the internationally agreed standard set of recommendations on how to compile measures of economic activity. The SNA describes a coherent, consistent and integrated set of macroeconomic accounts in the context of a set of internationally agreed concepts, definitions, classifications and accounting rules. (<http://unstats.un.org/unsd/nationalaccount/sna.asp>)

Special Data Dissemination Standard (SDDS) for the provision of economic and

²¹ http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL_GLOSSARY&StrNom=CODED2&StrLanguageCode=EN

financial data to the International Monetary Fund (IMF)

(<http://www.imf.org/external/np/exr/facts/data.htm>)

The General Data Dissemination System (GDDS) was established in 1997 for member countries with less developed statistical systems as a framework for evaluating their needs for data improvement and setting priorities. The GDDS is focused on a set of core statistical frameworks and indicators that provide a clear set of links between the GDDS and the SDDS for member countries seeking to improve the quality of their statistics. (<http://dsbb.imf.org/Pages/GDDS/Home.aspx>)

ILO-Resolution concerning statistics of work, employment and labour underutilization from 21 November 2013: (http://www.ilo.org/global/statistics-and-databases/meetings-and-events/international-conference-of-labour-statisticians/19/WCMS_230304/lang-en/index.htm)

The International Standard Industrial Classification of All Economic Activities (ISIC) is the international reference classification of productive activities. Its main purpose is to provide a set of activity categories that can be utilized for the collection and reporting of statistics according to such activities(see <http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=27&Lq=1>).

SDMX (technical and statistical standards together with the necessary IT infrastructure)

Single Integrated Metadata Structure implemented through the Euro SDMX Metadata Structure for reference metadata and through the ESQRS for standard quality reports; (see also (<http://ec.europa.eu/eurostat/documents/64157/4373903/03-Single-Integrated-Metadata-Structure-and-its-Technical-Manual.pdf/6013a162-e8e2-4a8a-8219-83e3318cbb39>))

Standardisation process for standards of the European Statistical System (currently in preparation)

3. The quality perspective

In 2012, the United Nations Statistical Commission endorsed a generic national quality assurance framework (NQAF) template, developed by an expert group comprising representatives of national and international statistical organisations. The template is a tool to provide the general structure within which countries can develop and enhance their national quality frameworks.

Nineteen “NQAF lines” set out elements to be assured and supporting mechanisms. Several of these NQAF lines stress the importance of using international standards, and ask questions that aim to guide statistical agencies towards best practices. Some of the most relevant quotes from the NQAF documentation²² are included below.

²² <http://unstats.un.org/unsd/dnss/QualityNQAF/nqaf.aspx>

NQAF 3 – Managing statistical standards

- *Are agency statistical standards accompanied by a statement of conformity to corresponding international or national standards?*
- *Are divergences from the corresponding international or national statistical standards documented and explained?*
- *Are there detailed concordances to corresponding international and national standards?*

NQAF 10 – Assuring methodological soundness

- *In developing and compiling statistics, a statistical agency should use sound statistical methodologies based on internationally agreed standards, guidelines or best practices and consistent with established scientific principles. Effective and efficient statistical procedures should be implemented throughout the statistical production chain.*
- *Is the overall methodological framework of the statistical agency consistent with international standards, guidelines and good practices?*
- *If not, are divergences from international standards explained?*

NQAF 12 – Assuring soundness of implementation

- *In order to produce timely, reliable and accurate statistics, a statistical agency should carefully plan the implementation process of its statistical activities based on internationally agreed standards and guidelines and the application of sound and scientific methods.*

NQAF 17 – Assuring accessibility and clarity

- *Are procedures in place to ensure that any differences from internationally accepted standards, guidelines, or good practices are consistently annotated?*

NQAF 18 – Assuring coherence and comparability

- *Is compliance with international or national standards for statistical production periodically assessed?*
- *Are deviations from international or national standards made explicit and are users informed about the reasons for such deviations?*
- *Are the international and national standards concerning definitions, units and classifications known and followed?*
- *Coherence and comparability is promoted throughout the statistical agency by promoting the adoption of national or international standards*

The European Statistics Code of Practice²³ also stresses the principle that “sound methodology underpins quality statistics”. In particular, principle 7.1 states that:

The overall methodological framework used for European Statistics follows European and other international standards, guidelines, and good practices.

The Data Quality Assurance Framework (DQAF) published by the International Monetary Fund²⁴ also includes similar principles:

- *2.1.1 The overall structure in terms of concepts and definitions follows internationally accepted standards, guidelines, or good practices.*
- *2.2.1 The scope is broadly consistent with internationally accepted standards, guidelines, or good practices.*
- *2.3.1 Classification/sectorization systems used are broadly consistent with internationally accepted standards, guidelines, or good practices.*

The examples above clearly show the importance of using international standards from the perspective of the quality of statistical outputs. Compliance with international standards is often seen as a guarantee, or at least a strong indicator, of output quality.

²³ http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=64173&p_v_l_s_g_id=0

²⁴ <http://dsbb.imf.org/pages/dqrs/dqaf.aspx>

ty. See also fundamental principle 2 for how international quality standards are related to scientific principles.

4. Standards for international collaboration

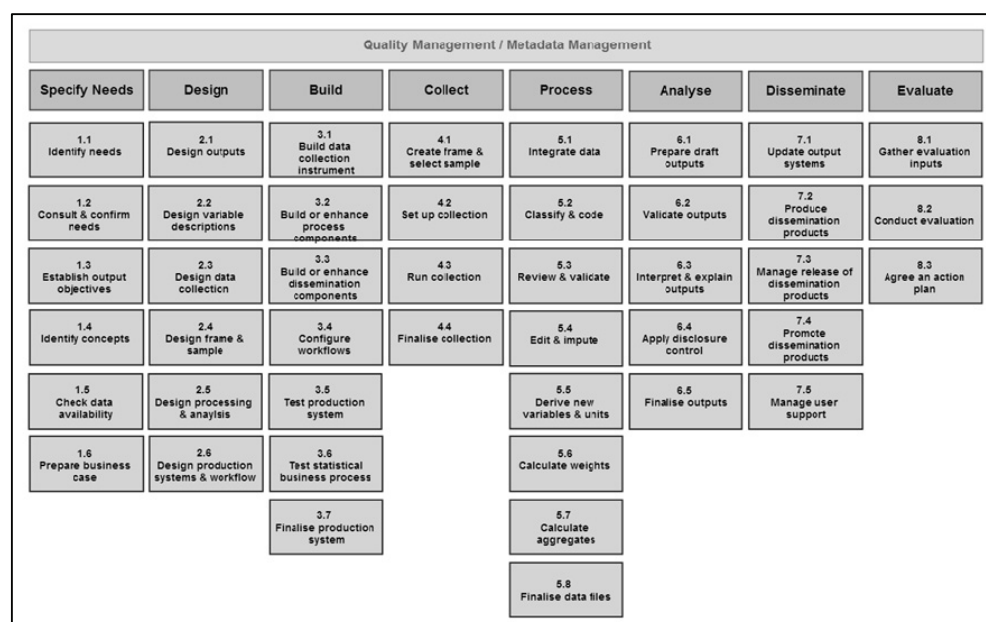
Collaboration between different agencies is greatly facilitated by the use of common standards. Standards provide a common framework of understanding and a shared vocabulary, which form the basis for communication, particularly between different languages.

In recent years there has been a growing emphasis on improving collaboration between statistical agencies, particularly in the areas of shared development activities and statistical modernisation. The High-Level Group for the Modernisation of Statistical Production and Services (HLG)²⁵ has recognised the fundamental importance of international standards, and promotes an agenda of “standards-based modernisation”. It has reviewed the standards necessary to support collaboration between agencies, and launched several major international projects to develop and enhance these standards.

According to the HLG, the key international standards to support greater collaboration between statistical agencies are:

a) *The Generic Statistical Business Process Model (GSBPM)*

The GSBPM²⁶ was first released in 2009, version 5.0 was released in December 2013. It provides a framework of standard terminology to describe and define the set of business processes needed to produce official statistics.



²⁵ <http://www1.unece.org/stat/platform/display/hlgbas>

²⁶ <http://www.unece.org/stats/gsbpm>

The GSBPM is intended to apply to all activities undertaken by producers of statistics, at both national and international levels, which result in data outputs. It is designed to be independent of the data source, so it can be used for the description and quality assessment of processes based on surveys, censuses, administrative records, and other non-statistical or mixed sources.

The rapid adoption of the GSBPM (or closely related national versions) by statistical agencies around the world, shows a wide acceptance of the idea that all statistical production can be modelled in terms of different combinations of less than 50 generic sub-processes. By mapping current and planned statistical processes to the GSBPM, it becomes easier to see where synergies can be found between processes, both within and across agencies. This, in turn helps to identify good practices and improve efficiency. The GSBPM is also increasingly being used as a tool to identify the cost of different parts of the production process, and to inform strategic decisions on resource allocation.

Good practices:

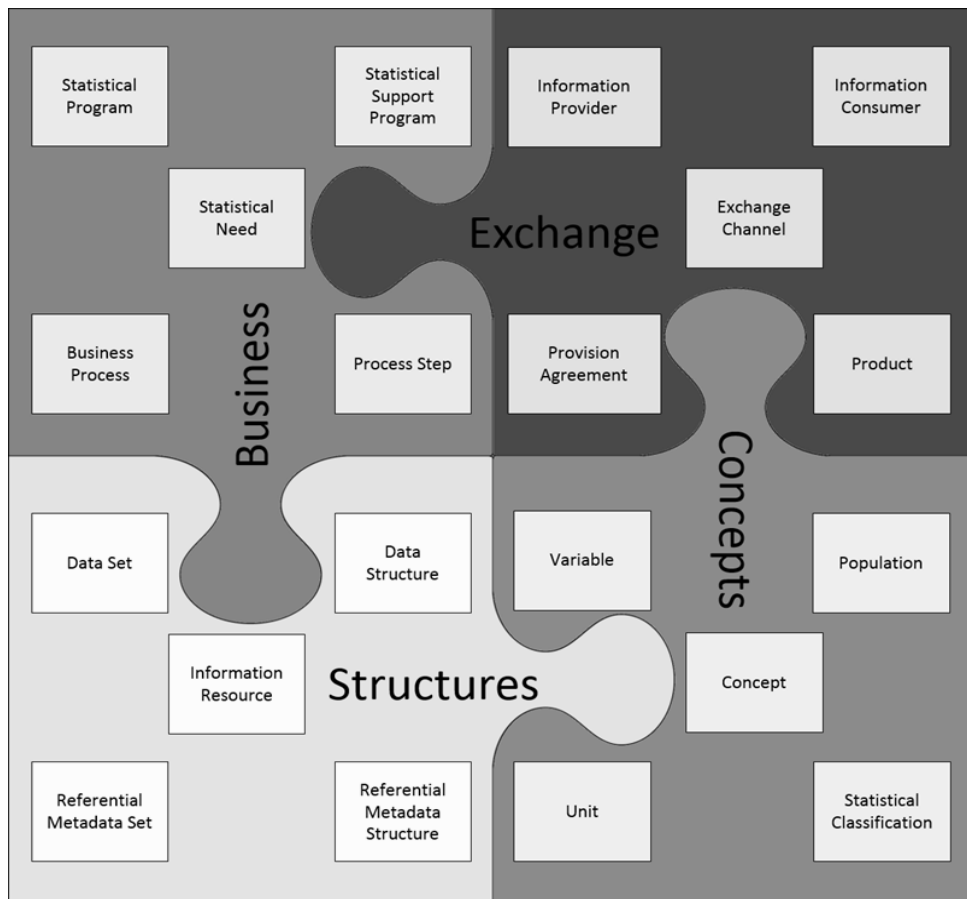
To give you an example: The Turkish Statistical Institute has made significant efforts to improve data quality and to implement Total Quality Management (TQM) system. It has been dealing with business processes which will establish a quality framework. TQM approach in the Turkish Statistical Institute has focused on Process Management. In the studies of Process Management, the Turkish Statistical Institute has adopted the Generic Statistical Business Process Model (GSBPM) which is used by several statistical organizations in the world to manage statistical production.

In line with this, the Turkish Statistical Institute realised a new organizational structure based on GSBPM.

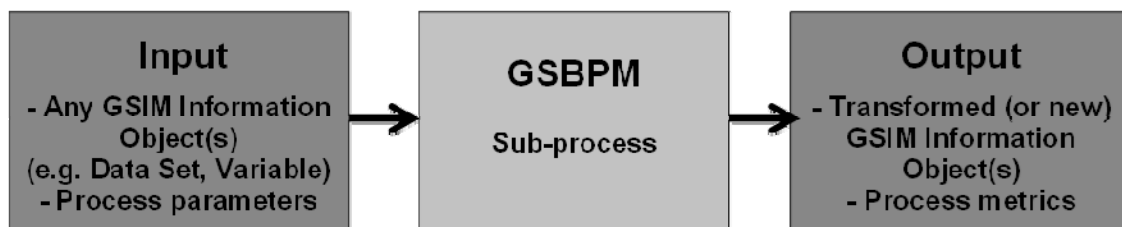
b) The Generic Statistical Information Model (GSIM)

In 2011, the HLG decided to accelerate the development of a Generic Statistical Information Model (GSIM), which would complement the GSBPM and provide a link to data and metadata standards such as DDI (Data Documentation Initiative) and SDMX (Statistical Data and Metadata eXchange). Version 1.0 was released in December 2012 and version 1.1, incorporating feedback from early implementations, was released in December 2013.

The GSIM is a reference framework of information objects, which enables generic descriptions of the definition, management and use of data and metadata throughout the statistical production process. It provides a set of standardized, consistently described information objects, which are the inputs and outputs in the design and production of statistics. GSIM identifies around 110 information objects, which can be presented in terms of four top-level groups. The diagram below gives some examples of these information objects.



The GSIM and the GSBPM are fully complementary, in that the former describes the objects that flow through the process, whilst the latter describes the building blocks of the statistical production.



c) *The Common Statistical Production Architecture (CSPA)*

The CSPA is a set of design principles to allow statistical agencies to develop components and services for the statistical production process, in a way that allows these components and services to be easily combined and shared between agencies, regardless of underlying technological platforms. In this way, the CSPA aims to provide the “industry architecture” for official statistics.

CSPA Services are defined in terms of GSBPM process steps, and their inputs and outputs are defined in terms of GSIM information objects. Version 1.0 of the CSPA was developed under a HLG project, and released in December 2013.

5. Organizational and human resources implications

Whilst the principle of using international standards is widely accepted, in practice there can sometimes be resistance from some parts of an agency. The argument “but we are a special case” will be familiar to anyone responsible for standardisation initiatives. Compromises may be required in the application of international standards to suit the conditions and requirements of the users within each country, and in some cases, a domain specific or local standard might be optimal for a specific type of statistical output. A survey reported in the review of the implementation of the Fundamental Principles, presented to the United Nations Statistical Commission in 2013, found that approximately half of respondent countries applied domain specific international standards as they were recommended, whilst half adapted the international standards to national circumstances.

However, any adaptations have the potential to reduce comparability, so it may be necessary to take a wider view and consider which standards are optimal at the level of the agency, the country, or even the international statistical community as a whole. Similarly, adapted standards may be convenient for producers, but are not necessarily optimal for all types of users of statistics.

Persuading staff to see the benefits of standardisation is therefore a strategic issue, often requiring the active involvement of senior management, and specialists in human resources management, communication and training.

Some agencies have moved from organisation structures based on statistical domains to structures based on functions, for example, by consolidating all data collection activities within one organisational unit. This approach can reinforce the use of international cross-domain standards, but may reduce the use of domain specific international standards. It is too early to say what the optimal organisation structure for a statistical agency is, and in any case, this may change over time. One approach that could be a reasonable compromise is to adopt a matrix structure with both domain-specific and functional dimensions (as in Statistics Sweden).

III. Risks

As stated in Section I, the main risks associated with not using international standards are inefficiency and loss of relevance. In an increasingly globalised world, cross-country comparisons are becoming more and more important for users of official statistics. Without common international standards, comparability cannot be guaranteed, and therefore the data lose much of their utility.

Users of non-comparable data risk making mis-informed decisions, which could have negative consequences. If this happens, it is very likely that they will blame the data,

and the agencies that provided the data. This would clearly have negative consequences for the image and reputation of official statistics.

An interesting discussion on the utility of data with different degrees of comparability (based on levels of compliance with international standards) is contained in section IV.B of the “In-depth review of entrepreneurship statistics” prepared by the OECD and Eurostat for the Bureau of the Conference of European Statisticians in October 2013²⁷.

²⁷ http://www.unece.org/fileadmin/DAM/stats/documents/ece/ces/bur/2013/october/3-In-depth_review_of_entrepreneurship_stats.pdf

Principle 10 – International cooperation

Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

INTERNATIONAL COOPERATION

I. Objective

An essential requirement so as to have high-quality statistics is to know the lessons learned and share the best practices of the Statistical Institutes with the purpose of implementing the best models/methods available according to international standards. In order to guarantee sustainability, statistical capacities have to be established as fundament for producing high-quality statistics, which is first of all the modernization of the Statistical Institute as an effective authority and at the same time ensuring the permanent implementation of statistical knowledge. A high international engagement has an impact on the image of the Statistical Institutes and may have an impact on domestic trust in the Statistical Institute of both sides (beneficiary and donor).

In general international cooperation is not one-way but a win-win situation for both Statistical Institutes, working hand in hand on an equal footing. For example twinning projects as administration partnerships are based on the joint solution of challenges and tasks of Statistical Institutes. Working processes of both sides might be scrutinized and further improved during cooperation-projects. Furthermore for staff members of both sides these cooperation activities are an incentive as they become aware of other cultures, perspectives and insights.

Also, based on partnership and ownership, the Statistical Institutes should actively participate in the main discussion forums pertaining to statistics, such as the United Nations Statistical Commission, in order to ensure continuous improvement of statistics at the international level. Finally, due to the scarcity of international cooperation resources that are allocated to statistics, the issues where cooperation will be requested pertaining to statistics need to be prioritized and different forms of cooperation and new sources of cooperation with the private sector need to be explored.

II. Scope of application

The following dimensions should be considered by National Statistical Institutes in the development of strategies for the implementation of the principle of international cooperation.

1. Legal framework

In most countries the Statistical Cooperation is not subject of the Statistics Law itself, but it is laid down in other forms of legal regulations between partner countries:

- 1.1 International treaties on political level based on the developing, foreign and economic policy of a country
- 1.2 Bilateral agreements on the level of the Statistical Institute itself based on strategic partnerships of countries or on cooperation requests of Statistical Institutes
- 1.3 In political agreements between the country and international organisations, such as the European Partnerships, the Stabilisation and Association Agreements, the Association Agreements, etc.
- 1.4 Project contracts with national and international donors in order to guarantee the funding of the statistical cooperation, e.g. for EU-Twinning-projects, World Bank-Twinning-projects
- 1.5 Contracts with private consulting companies based on public tenders

Examples/good practices of “international treaties and bilateral agreements”²⁸

The statistical system of Benin: see UN best practice website:

(<https://unstats.un.org/unsd/dnss/SearchResults.aspx>)

Bilateral cooperation and projects of the Federal Statistical Office (Germany):

(<https://www.destatis.de/EN/AboutUs/OurMission/InternationalCooperation/StatisticalCooperation/StatisticalCooperation.html> (refer to “target countries”))

Agreements with EU enlargement countries (<http://ec.europa.eu/enlargement>)

European Neighbourhood Policy

(http://ec.europa.eu/enlargement/neighbourhood/neighbourhood-wide/index_en.htm)

In the European Statistical System (ESS), international cooperation is accounted for in article 10 of the statistical law (Regulation (EC) No 223/9009) (<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:087:0164:0173:en:PDF>)

2. Application of International Cooperation frameworks and plans

Besides treaties and contracts mentioned under dimension 1, cooperation frameworks and plans exist, which result from international commitments in regard of development policy and statistical capacity building. In order to ensure the effective use of the international cooperation resources, it is necessary that the Statistical Institutes perform their activities according to the cooperation frameworks and plans that are in effect.

²⁸ Generally, in politics the term bilateral cooperation is used for agreements between two parties, whereas the term multilateral cooperation is used if several parties act jointly on an equal footing.

- a) The Statistical Institutes should know and implement the international cooperation frameworks in place.
- b) The Statistical Institutes must know and implement the action plans and cooperation agreements pertaining to statistics.
- c) Recipients and providers of cooperation pertaining to Statistics should be responsible for the results of the cooperation projects, their impact upon development and for the sustainability of results.
- d) The United Nations Statistical Commission, Regional and Sub-regional Commissions on Statistics must have medium-term cooperation strategies and programs.
- e) Institutes should participate in the main statistical commissions, particularly those in which international standards are defined (examples: United Nations Statistical Commission, Regional and Sub-regional Statistical Commissions).

Examples/good practices of “cooperation frameworks, agreements and plans”

Paris Declaration on Aid Effectiveness:

(<http://www.oecd.org/development/effectiveness/34428351.pdf>)

Busan Action Plan for Statistics:

(http://paris21.org/sites/default/files/Busanactionplan_nov2011.pdf)

Report of the Activities of Regional and International Cooperation Activities Biennial Program 2012 – 2013 and proposed activities schedule 2014 – 2015 of the Statistical Conference of the Americas of the Economic Commission for Latin America and the Caribbean:

(<http://www.eclac.cl/deype/noticias/documentosdetrabajo/3/51383/LCL3664e.pdf>)

European Consensus on Development:

(http://ec.europa.eu/development/icenter/repository/european_consensus_2005_en.pdf)

European Neighbourhood Policy, Action plans:

(http://eeas.europa.eu/enp/documents/action-plans/index_en.htm)

PARIS21 National Strategies for the Development of Statistics

(<http://nsdsguidelines.paris21.org/>)

3. Strategy and organization of Statistical Institutes in regard of Statistical Cooperation

In order to empower Statistical Institutes for the field of Statistical Cooperation, clear specifications in regard to the internal strategy and the organizational structure are required.

- 3.1 In accordance to the focus of the national political strategies, priorities and agreements (mentioned under dimension 1 and 2) the Institutes should define their priorities in terms of cooperation in statistics.

- 3.2 Statistical Institutes should have an organizational structure and personnel capacities that ensure the effectiveness of cooperation resources.
 - 3.2.1. Institutes should have in place a special division or a high-level committee responsible for organizing and disseminating cooperation activities.
 - 3.2.2. International organizations and institutes should develop monitoring and impact indicators of international cooperation projects that enable a clear identification of their contribution to the development of the country benefiting from cooperation.
 - 3.2.3. Institutes must have knowledge management mechanisms so as to make international cooperation more effective.
 - 3.2.4. Statistical Institutes should enhance their coordination networks (such as coordination with other producers of statistics) which are a multiplying factor.
 - 3.2.5. Statistical Institutes receiving support from other institutes/international organizations should have the capacity and structures in place to coordinate statistical assistance so as to maximize its impact.
- 3.3 Limited financial and human resources of the Statistical Institutes can be compensated by working together with private or government cooperation agencies of their countries. They can overtake the organizational and financial management of projects, whereas the Statistical Institutes themselves provide statistical experts.
- 3.4 The Institutes should advocate for the inclusion of strengthening statistical capacity and cooperation within the National Strategies for Cooperation.

Examples/good practices of “Organisation and Government Cooperation Agencies”

Organisation:

Twinning instrument of the European Commission:

(<http://ec.europa.eu/enlargement/tenders/twinning/>)

Twinning project of Swedish International Development Cooperation Agency (SIDA):

(<http://www.sida.se/PageFiles/32004/TWINNING%20PROJECT%20FICHE%20final%2030%2011%202010.pdf>)

Twinning projects of the Federal Statistical Office of Germany:

(<https://www.destatis.de/EN/AboutUs/OurMission/InternationalCooperation/StatisticalCooperation/ConsultingProjects.html>)

Fight against poverty:

Statistics – a tool in the fight against poverty:

(<http://www.sida.se/English/Countries-and-regions/Africa/Mali/Programmes-and-projects/Statistics--a-tool-in-the-fight-against-poverty/>)

See also “Demographic statistics for better health” of SIDA:

(<http://www.sida.se/English/current-topics-archive/2012/Demographic-statistics-for-better-health/>)

Statistics – Department for International Development (DFID):

(<https://www.gov.uk/government/organisations/department-for-international-development/about/statistics>)

Government Cooperation Agencies:

Korean International Cooperation Agency (government agency):

(<http://kostat.go.kr/portal/english/International/6/index.static>)

4. Exchange between Statistical Institutes

Continuous exchange of views and knowledge between Statistical Institutes is an essential prerequisite to ensure effectiveness in the Statistical Cooperation for both sides – the recipients and providers of assistance. Advantages of an existing close partnership between Statistical Institutes are besides others the establishment of strong consortiums in order to cope with large-scale projects and the facilitation of the implementation of the consulting project itself. Advantages of a close partnership between the Statistical Institutes receiving assistance is the possibility to learn, to implement East-East and South-South cooperation and to benefit from best practices.

4.1 Official visits of Heads of Statistical Institutions

4.2 Meetings at working level to exchange knowledge

4.3 Newsletters and webpage to inform about current projects

4.4 Hosting trainees from other Statistical Institutes

4.5 International training programs for exchange of best practices (e.g. European Statistical Training Program ESTP and Training Program of the Statistical Institute for Asia and the Pacific SIAP)

4.6 Institutes should have a space on the website of the Statistical Institute for disseminating best practices and lessons learned that can be applied by other statistical institutes.

Examples/good practices of “Websites and International training programs”

Dissemination of international cooperation activities of Statistics Korea:

(<http://kostat.go.kr/portal/english/International/1/index.board>)

Publication of the Federal Statistical Office of Germany: “Statistics across borders”:

(<https://www.destatis.de/EN/AboutUs/OurMission/InternationalCooperation/StatisticalCooperation/Publications/2013.html>)

Statistical Cooperation of Statistics Denmark:

(<http://www.dst.dk/en/consulting/projects.aspx>)

Newsletter of Statistics Finland:

(http://www.stat.fi/org/kvyhteistyo/consulting_news_2013.pdf)

World Bank informing in a comprehensive way about Statistical Capacity Building:

(<http://web.worldbank.org/WBSITE/EXTERNAL/DATASTATISTICS/SCBEXTERNAL/0,,contentMDK:20100922~hIPK:1144291~menuPK:229526~pagePK:229544~piPK:229605~theSitePK:239427,00.html>)

International cooperation of Statistics Lithuania (Cooperation with statistical offices of other countries, European Affairs, Technical assistance, Cooperation with international organisations) (<http://www.stat.gov.lt/en/tarptautinis-bendradarbiavimas>)

Newsletter “Statistics at Crossroads” of the Turkish Statistical Institute (TurkStat):

(<http://www.turkstat.gov.tr/arastirmaveprojeler/uluslararasi/Crossroads.html>)

International Cooperation Studies of TurkStat:

(<http://www.turkstat.gov.tr/arastirmaveprojeler/uluslararasi/ui/uiig.htm>)

Video of Statistics Canada on international work:

<http://www.statcan.gc.ca/about-apercu/video/trans/awb-pam-cc-trans-eng.html>

Institutional Development Cooperation in Statistics Norway

(<http://www.ssb.no/en/omssb/om-oss/vaar-virksomhet/planer-og-meldinger/attachment/143079?ts=141a6b0ddd8>)

Promotion of international cooperation by Statistics Japan by:

- Dispatch of statistical experts to international organizations
- Support for the Statistical Institute for Asia and the Pacific (SIAP) from Japanese Government (<http://www.unsiap.or.jp/>)

The NSO, Mongolia has been fortifying its collaboration at international level focusing on strengthening the capacity of national statistical system. The MONSTAT project on strengthening the national statistical system of Mongolia, funded by World Bank and Trust fund of Korea, is being implemented as a Twinning partnership project with consortium of Federal Statistical Office of Germany and Statistics Korea is deemed as effective and fruitful form of multilateral cooperation of the system.

The Law on Official Statistics of the Republic of Azerbaijan: Implementation of changes in the law has strengthened the processes of coordination of statistics in Azerbaijan with international standards and provision of international comparability of data (different articles such as “Statistical Council”, “Principles and autonomy of official statistics”, “Access to administrative statistical information”, “Relation of official statistics with administrative statistics”, “Use of confidential data”, “Scientific research”, “Access to confidential statistical data”, “Protection measures”, “Dissemination of confidential statistical data” were added). Last changes based on proposals related with definitions on “Official statistics”, “ad-

ministrative statistics” and “administrative statistical data” in Article 1 of the Law on Official Statistics of the Republic of Azerbaijan have been made in 2011 according to recommendations of the Global Assessment of Azerbaijan’s statistical system implemented in 2010 by Eurostat, EFTA and UNECE.

International training programs:

Andean Statistical Formation and Training Center (CANDANE) Website:
(<http://www.dane.gov.co/candane/>)

United States Census Bureau, seminars Webpage:
(<http://www.census.gov/research/seminars/>)

European Commission: European Statistical Training Program (ESTP):
(<http://ec.europa.eu/eurostat/web/ess/about-us/estp>)

Training Program of the Statistical Institute for Asia and the Pacific SIAP:
(<http://www.unsiap.or.jp/>)

III. Risks

The difficulties in accessing international cooperation and the limited resources of the NSOs and multilateral bodies are reflected in the lack of exchange activities on knowledge, good practices and lessons learned in statistics.

This affects the implementation of quality standards that contribute to the improvement of national statistical institutes and their statistical systems.

ANNEX

Used sources (main sources of reference) in alphabetical order:

| | |
|---------------|---|
| CoP | Eurostat (2011): European Statistics Code of Practice. |
| DQAF | International Monetary Fund (2003): Data Quality Assessment Framework. |
| Global Review | United Nations Statistics Division (2013): Implementation of the Fundamental Principles of Official Statistics Background Document. |
| LAC | Statistical Council of the Americas of the Economic Commission for Latin America and the Caribbean (SCA-ECLAC) (2011): Code of Good Practice in Statistics for Latin America and the Caribbean. |
| HSO | United Nations Statistics Division (2003): Handbook of Statistical Organization, Third Edition: The Operation and Organization of a Statistical Agency. |
| NQAF | United Nations Statistics Division (2012): Guidelines for the template for a generic national quality assurance framework. |
| EQAF | Eurostat (2012): Quality Assurance Framework of the European Statistical System. |
| SASQAF | Statistics South Africa (2008): South African Statistical Quality Assessment Framework. |
| SAQ | Task Force to Develop the Methodology of the Peer Reviews (2013): Self-assessment questionnaire for the NSIs (Draft). |
| SCQAF | Statistics Canada (2002): Statistics Canada's Quality Assurance Framework. |

Part II:

Implementation guidelines on how to ensure independence

HOW TO ENSURE INDEPENDENCE

The UN Fundamental Principles are critical in safeguarding independence, as well as quality and the role of the national statistical systems. The UN Statistical Commission expressed in 2013 at its forty-third session the need to highlight the importance of independence of national statistical offices. Therefore, implementation of independence is central to the UN Fundamental Principles overall.

In this context, mission and purpose of the Friends of the Chair group was not only to elaborate a practical guide for the implementation of the UN Fundamental Principles but also to stress and highlight independence of national statistical offices. That is why the Friends of the Chair group decided to write a separate chapter on how to ensure independence.

This chapter, which has an overarching character, has not the intention to be totally identical to what is mentioned about independence in principle 1 and 2 – but it has to be seen as complementary. Therefore, there might be overlaps in the contents between principle 1, 2 and part II.

I. Objective

Following on from the scientific, professional and institutional definitions of independence, there is a need to establish how these may be soundly implemented into the operational framework of a National Statistical Institute. This guideline draws together good practices concerning the implementation of independence of the different regional and global bodies. On their way to ensure independence, National Statistical Institutes can benefit from the input of regional and supranational statistical systems. This includes identification of limitations, weaknesses and strengths, as well as a collection of legal acts.

Professional independence of National Statistical Institutes or Agencies should be supported and promoted by common understandings or agreements at higher international political level (Example: Memoranda of Understanding).

II. Scope of application

The independence of statistics is crucial for the quality, the credibility and the integrity of official statistics. Therefore, statistical institutions at inter-, supra- and national level have to ensure that the statistics developed, produced and disseminated have been produced in an independent way. That is to say, statistics should not be subject to political pressure and should not serve specific interests. Statistical systems are rather to be governed by approaches that guarantee neutrality, objectivity, equal access, high quality and confidentiality. If this is the case, respondents, users, media, politicians and citizens can trust the statistics provided.

This section includes the definition of the different concepts of independence (the scientific, the professional and the institutional one), which are interrelated, and a number of important considerations related to the successful implementation of independence within a National Statistical Institute. Where possible, these are illustrated by concrete examples.

Independence in general

The concept of independence in general (including all the concepts mentioned above and explained below) refers to a stringent framework based on:

- (i) the specification in law of the elements of independence:

a legal basis, describing clearly the status of the institution and including that statistical institutions should not receive nor accept external instructions concerning the choice of statistical methods, techniques, standards, procedures and interpretation of results.

Nevertheless, it has to be born in mind that ministries might be allowed to set political priorities applying to statistical institutions (policymakers are often the main stakeholders). This is what makes it a balancing act to reconcile the independence with political considerations or interference.

- (ii) The status and the functional responsibilities of the heads of statistical authorities including the decisions on statistical methods, standards and procedures:

A human resources policy regulated by law and based on professional criteria within given financial frames, e.g. a transparent appointment and dismissal of top management and staff. Especially the appointment of the heads of the statistical institutions should be based on professional competence only. By setting clear rules and criteria on appointment, dismissal, terms and duration of office, independence is best maintained.

- (iii) the decisions on the content and timing of statistical releases:

An autonomous dissemination policy that regulates publication of statistical data and the intervention in case of errors. The availability of statistics equally to all respondents, users, media, politicians and citizens is also essential.

By taking these points (i-iii) as a basis, the degree of independence can be assessed.

The more the above mentioned aspects reflect reality, the more statistical institutions are considered to be credible by citizens and stakeholders.

Finally, setting up a monitoring system might be necessary for the implementation process in this context.

1. Scientific Independence

1.1 Legal Framework

The concept of scientific independence is closely linked to statistical processes and statistical product itself and does not focus on the institution as a whole. Therefore, it is not primarily related to the content of a survey (“What?”) but it is rather related to the way of collection and processing and dissemination of data, including the choice of methods and techniques applied (“How?”).

Statisticians have to be autonomous to select definitions, methods, techniques, sources, programming and implementation of survey and data processing and communication software, sampling methods, tools of data collection that they consider to be appropriate and that best reflect reality.

In fact, statisticians are supposed to be free to develop each step of the production process according to scientific methods that they consider to be the most appropriate, under the requirement that the framework conditions of professional independence (e.g. budgetary restrictions) are not violated. Scientific independence is an obligation for those producing statistics, but statisticians can also rely on it where necessary (e.g. when political pressure is applied).

Based on the scientific independence the broader concept of professional independence can be derived.

The concept of scientific independence may be encoded in law to facilitate good practice and to promote methodological transparency. The following collection of examples offers a range of good practice:

An example of national legislation requiring the overarching need to promote the scientific method is described in Article 2 of the Law of the Kyrgyz Republic of State Statistics:

Article 2. State Policy of the Kyrgyz Republic in Statistics

State policy in statistics as a component part of social and economic policy of the Kyrgyz Republic is aimed at the provision of statistical information based on a single scientifically-based methodology and its comparability with international statistics to satisfy the needs of all economic units and public administration bodies in necessary data characterizing the situation and trends of economy development, economic relations at all levels, structural movements and production effectiveness, social policy implementation.

The Government establishes a single system of primary accounting and statistics, manages the system, defines the essence and character of the statistical activity on the whole territory of the country.

Statistical policy is based on the objectivity and reliability of statistical data, stability

of the statistical information and transparency of summary statistical materials.

Alternatively, the Law of Georgia on Official Statistics includes scientific independence under the basic principle of reliability, stating:

‘The statistics shall be produced correctly, precisely and consistently, which implies the use of scientific criteria in order to select statistical standards, methodology and resources, as well as the openness of the methodology to be applied as a basis for producing the statistics.’

Article 1 of the Federal Statistics Law of Germany explicitly mentions scientific independence:

Federal statistics shall be subject to the principles of neutrality, objectivity and scientific independence.

In Article 17 of the Statistics Law of Turkey the Scientific and technical autonomy is laid down:

In the implementation of the Official Statistics Programme, any outer instruction cannot be given to the staff of the Institute and other implementing units in any case in regard to data sources, selection of statistical methods and procedures; form, content and time of dissemination; and observance of statistical confidentiality.

Chapter 3 of the Statistics Act of Finland, establishes the following within its section concerning the principles for data processing:

Data processing shall take place in accordance with good statistical practice and the international recommendations and procedures generally applied in the field of statistics.

Another example in which the tasks of state statistics with respect to scientific independence are set is the law of the Republic of Belarus on State Statistics:

Article 4. The main tasks of state statistics shall be as follows: development of science-based methodology and its improvement in compliance with the national and international standards in the field of statistics; collecting, processing, compiling, accumulation, storage and protection of statistical data (information) on the basis of statistical methodology; dissemination of summary statistical data (information).

A further example, which directly refers to the Fundamental Principles, is Article 6 of the Croatian Official Statistics Act:

‘Reliability means that the methods and procedures used in collecting, processing and disseminating statistical data shall be determined on the basis of established professional standards, scientific methods and principles of professional ethics, so that the statistical output reflects the observed phenomena as faithfully as possible and with an appropriate level of accuracy.’

Article 3: (...) Official statistics provide to the government, to the economy and to the public, on an impartial basis, reliable statistical data on the economic, demographic, social, health, and environmental situation, and on activities or events that can be measured by using statistical methods, and ensure the meeting by the Republic of Croatia of international obligations concerning the production and dissemination of official statistics.

With regard to the Fundamental Principles and the use of methods, the Statistics Act of Japan establishes:

Article 3 (...) (2) Official statistics shall be produced with appropriate and reasonable methodologies, so as to ensure neutrality and reliability.

In placing extra emphasis on the selection of statistical processes on a scientific criterion, National Statistical Institutes may also find Article 5 of the Moldovan Law on Official Statistics useful:

b) Statistical deontology – obligation of the official statistical bodies to select on the scientific basis the sources, methods and procedures of statistical surveys conducting and publish, in an accessible form, the sources of data, area of coverage and computing methodologies;

In addition, Article 15 of the Statistics Act of New Zealand may be useful:

(1) The Statistician shall have the sole responsibility for deciding the procedures and methods employed in the provision of any statistics produced or to be produced by the Statistician, and shall also have the sole responsibility for deciding the extent, form, and timing of publication of those statistics.

In this sense, it is worth considering the example presented by The Law of the National Statistical and Geographical Information System of Mexico regarding scientific independence:

Article 30: The Executive Committees shall have the following powers: (...) IV. Proposing to the Institute, in due time and manner, those methodologies used to generate the information, taking into account national and international standards and best practices in the field, which will be reviewed periodically by international agencies at least every eight years

Article 57: The Institute shall prepare and submit to the relevant Executive Committee, technical standards and methodologies necessary to perform the Statistical and Geographical activities of a subject or sector, when the corresponding unit cannot timely propose them or when these activities do not take into account national and international standards or, where appropriate, best practices in the field.

Article 62: The Institute shall promote the adoption of technical standards and methods in capturing data subject to registration, in coordination with the authorities responsible for managing directories of physical or moral persons, cadastre, public records on property and trade, inhabitant registration inventory and other administrative records that allow obtaining information.

In the case that a National Statistical Institute has a governing body, a lower level of specificity may be required. An example of national legislation requiring the overarching need to promote scientific independence is the UK Statistics and Registration Act (2007). Under part One, the Board (the preferred name for the Statistics Board) of the UK Statistics Authority – an independent institution – is notably accorded the right to promote and safeguard:

- a) The quality of official statistics,
- b) Good practice in relation to official statistics, and
- c) The comprehensiveness of official statistics.

References to the quality of any official statistics include:

- a) Their impartiality, accuracy and relevance, and
- b) Their coherence with other official statistics.

As regards the National Administrative Department of Statistics of Colombia (DANE), technical regulation instruments such as good practices, quality assessment processes and guaranteeing the official nature of statistics are topics that are being developed in the “Dirección de Regulación, Planeación, Normalización y Estandarización (DIRPEN)” without a legal framework. They are derived from the de-

cree 262²⁹ regarding the certification of statistical information and the regulation of basic official information.

Similar to Colombia, Ecuador INEC has a structure in charge of Planning Statistics, generating Regulations and standards and of quality assurance processes in the NSS. This is supported by the National Statistical Program and Presidential Decree 77 (<http://www.ecuadorencifras.gob.ec/planificacion-estadistica/>).

1.2 Professional recommendations

Concerning the practicalities of scientific independence, there are a number of measures for good and best practice. These include:

The employment of highly skilled persons, by means of clear, transparent and objective selection processes, particularly methodologists, who are able to ratify sophisticated statistical processes and statistical production. In the first place, this puts emphasis on human resourcing and the successful recruitment of top expertise. However further to this, there must be consideration of updating skills through training, in order that the latest scientific knowledge is maintained;

This may be supplemented by advisory input, completed using the specialist knowledge of academia and non-governmental organizations – such as think-tanks. There is also the potential to exchange knowledge with other National Statistical Institutions through international collaboration and capacity building, as well as permanent interaction or participation in specialized statistical groups of international statistical agencies;

Lastly, there is a role for clear public guidance on the governance of scientific statistical methods by National Statistical Institutes in general, supported by a professional advisory committee of experts.

Other measures to recommend are: training programs, rotation schemes and mentoring of junior staff by senior staff.

Of course, a commensurate amount of financial resourcing is required to support the above, some of which may be embodied in information technology systems.

2. Professional Independence

2.1 Legal Framework

Professional independence means that statistics have to be developed, produced and disseminated in an independent manner, particularly regarding the selection of techniques, definitions, methodologies and sources to be used, and the timing and content of all forms of dissemination, free from any pressures from political or interest

²⁹ Decree 262 of 28 January 2004 modified the structure of the National Administrative Department of Statistics and established other provisions: http://www.dane.gov.co/daneweb_V09/en/index.php?option=com_content&view=article&id=188&Itemid=28

groups, without prejudice to institutional settings, such as national institutional or budgetary provisions or definitions of statistical needs.

Professional independence shall require as a minimum:

- (a) Transparent recruitment and dismissal processes which must be based only on professional criteria;
- (b) Budgetary allocations which must be made on an annual or multiannual basis;
- (c) The date of publication of key statistical information must be designated significantly in advance.
- (d) Assurance that all users have equal access

Professional independence also serves as an umbrella for statisticians for not being accused of defending statistical rules and standards especially when it comes to political interferences.

The concept of professional independence is closely linked to the institutional independence. The concept of professional independence may be encoded in law in order to offer an overarching explanation of accountability by which a National Statistical Institute must operate. As above, these may be supplemented by further measures to add contextual and explanatory detail.

Within the African Charter on Statistics, the principle of professional independence includes not only scientific independence, but impartiality, responsibility and transparency, as follows:

Impartiality: Statistics authorities shall produce, analyze, disseminate, and comment on African statistics in line with the principle of scientific independence, and in an objective, professional and transparent manner.

Responsibility: Statistics authorities and African statisticians shall employ unambiguous and relevant methods in the collection, processing, analysis and presentation of statistical data. Statistical authorities shall also have the right and duty to make observations on erroneous interpretation and improper use of the statistical information that they disseminate.

Transparency: To facilitate proper interpretation of data, Statistics authorities shall provide information on their sources, methods and procedures that have been used in line with scientific standards. The domestic law governing operation of the statistical systems must be made available to the public.

An explicit example of a legal act on professional independence is embedded into the Croatian Official Statistics Act. Article 6 includes the juncture:

6. Professional independence means that the producer of official statistics shall perform the tasks of official statistics based on professional and scientific methods and knowledge and shall be protected from any kind of influence.

A further example is the Bulgarian Statistics Act, which includes a number of specific criteria to corroborate and complement professional independence. Under Chapter 1 – General Provisions – Article 2 states:

(2) Statistical activity shall be carried out in compliance with the following principles: professional independence, impartiality, objectivity, reliability, statistical secret and cost efficiency.

(3) Statistical information shall be produced in compliance with the following criteria for quality: adequacy, accuracy, timeliness, punctuality, accessibility and clarity, comparability and logical consistency.

(...) 11: “Professional independence” is a principle according to which statistical information shall be developed, produced and disseminated regardless of any pressure from political or interested parties.

Law on Official Statistics and Official Statistical System of Montenegro:

(http://monstat.org/userfiles/file/o%20nama/11_04_12_Law%20on%20Official%20Statistics.pdf)

According to the definitions of the principles in Article 6 (principle 1) producers of official statistics shall be professionally independent *‘from other policy, administrative or regulatory authorities and bodies, as well as from private sector operators’*, and shall *‘produce and disseminate official statistics in an objective, professional and transparent manner, respecting scientific independence, in which all users are treated equitably’*.

According to Article 11 of the Law, the Director of the statistical office of Montenegro is obliged to protect the professional credibility of official statistics against unprofessional influence of any kind.

Another example related to the subject is found in the principles established in the Law of the Republic of Belarus on State Statistics (compare Articles 5 and 10):

One of the main principles of the state statistics of the Republic of Belarus is professional independence.

Unauthorized interference in state statistical activity is prohibited. (<http://www.belstat.gov.by/en/o-belstate/pravovye-osnovy-gosudarstvennoi-statistiki-respubl/zakon->

respubliki-belarus-o-gosudarstvennoi-statist/) (a revised version of the Law of the Republic of Belarus on State Statistics has been developed with enhanced standards on professional independence and coordinating role of the National Statistical Committee of the Republic of Belarus in state statistics)

Finally, in the case of Mexico, the Law of the National Statistical and Geographical Information System establishes:

Article 7: (...) The Institute shall issue a code of ethics governing the standards of conduct to which all those performing Statistical and Geographical Activities, shall adhere, including the Institute itself. The code of ethics shall be made available to the public through Internet.

In order to embed this principle, the following good practices are advisable:

Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European Statistics³⁰ (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1415089830972&uri=CELEX:32009R0223>) article 2.1.a: 'professional independence', meaning that statistics must be developed, produced and disseminated in an independent manner, particularly as regards the selection of techniques, definitions, methodologies and sources to be used, and the timing and content of all forms of dissemination, free from any pressures from political or interest groups or from Community or national authorities, without prejudice to institutional settings, such as Community or national institutional or budgetary provisions or definitions of statistical needs"

European Commission Decision on Eurostat 2012/504/EU (<http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1415088980539&uri=CELEX:32012D0504>), article 4: "Eurostat shall develop, produce and disseminate European statistics in accordance with the statistical principles of professional independence, impartiality, objectivity, reliability, statistical confidentiality and cost-effectiveness as defined in Article 2(1) of Regulation (EC) No 223/2009³¹ and as further elaborated in the European statistics Code of Practice;"

European Commission Decision on Eurostat 2012/504/EU, article 7: "1. With regard to European statistics, the Director-General of Eurostat shall have sole responsibility for deciding on processes, statistical methods, standards and procedures, or on the content and timing of statistical releases, in accordance with the

³⁰ The forthcoming Amending Regulation (EC) No 223/2009 on European statistics will be available in spring 2015.

³¹ The forthcoming Amending Regulation (EC) No 223/2009 on European statistics will be available in spring 2015.

European statistical programme and the annual work programme. When carrying out these statistical tasks, the Director-General of Eurostat shall act in an independent manner; he or she shall neither seek nor take instructions from the Union institutions or bodies, from any government of a Member State, or from any other institution, body, office or entity. 2. The Director-General of Eurostat shall act as authorising officer for the implementation of the appropriations

The preparation and publication of a national code of practice, drawn from the Fundamental Principles, but which provides a tangible level of detail and granularity. This should offer sufficient transparency to allow for evidence-based accountability; The Declaration on Professional Ethics of the International Statistical Institute, provides a basic set of behavioral rules that contribute to the development of professional independence;

Ensuring that the general public has access to technical documentation and metadata of produced statistics;

Statistical releases that are clearly distinguished and issued separately from political or policy statements;

Notice and explanation of methodological changes, which should be given in order to inspire public trust;

A consistent trustworthy pre-release calendar, as well as sound practice for pre-release access.

In some legal frameworks, it is unusual to find references to professional independence, as independence principles are not explicit in the texts. But progress can be made in the National Code of Good Practice regarding the development of a set of principles in the production of statistics (for example: Colombia³².)

3. Institutional Independence

3.1 Legal requirements

Institutional independence refers to legal, administrative and budgetary autonomy and shall require as a minimum:

- (a) Possibility of setting up and publishing statistical work programs autonomously (program planning);
- (b) Budgetary responsibility of the statistical institution, the ability to manage the budget in an autonomous way;
- (c) Prominent role of the head of statistical institution.

³² DANE has made progress beyond what is required in law 79 of 1993: http://www.dane.gov.co/files/acerca/Normatividad/Ley79_1993.pdf

The program planning for statistical activities is supposed to be based on the users' needs and respond to the demand of official statistics for policies and information to citizens and stakeholders.

Clearly defined and adequate budgetary accountability and resources on an annual or a multiannual basis (and not exposed to external ad-hoc changes) enable the statistical institutions to plan activities in an autonomous way and in the medium term by being provided with funding and financial resources before the planning process starts: This is very important in order to be able to prioritize activities, topics and items sufficiently in advance.

Furthermore, it is desirable to strengthen the role of the heads of statistical institutions in proposing and negotiating the budget of the institutions. They are supposed to be accountable, e.g. report on statistical activities and also on the budgetary execution.

Concerning the issue of budget, Sierra Leone states:

National Statistical Agencies are established by government and receive financial and technical support from government and its development partners. In this situation, the autonomy of statistical agencies is constrained given the fact that the agency depends on government to support its activities.

The budget management should be incorporated in the Act of Parliament that establishes the agency; this will give authority to the head of the institution to publicly comment on the budget allocated to the institution. This gives an opportunity to defend the budget, otherwise statistical activities slated for a particular period cannot be carried out and the information required from such activity will not be available. An information gap will thus exist.

There is the potential for the role of the head of the National Statistical Institute to be specified in law. Within the current UK legislation, the role of the National Statistician is defined as:

30: National Statistician: advisory functions

- (1) The National Statistician is to be the Board's principal adviser on
 - (a) the quality of official statistics,
 - (b) good practice in relation to official statistics, and
 - (c) the comprehensiveness of official statistics.
- (2) The Board must have regard to the advice of the National Statistician on those matters.
- (3) If the Board rejects the advice of the National Statistician
 - (a) in relation to the development and maintenance of definitions, methodologies, classifications and standards for official statistics, or
 - (b) as to the application to any statistics produced by the Board of any definition, methodology, classification or standard promoted by the Board under section 9,
 - (c) the Board must publish a statement of its reasons for doing so.

Another example that relates to this issue is Article 8 of the Act on Official Statistics of Croatia:

The Central Bureau of Statistics is the chief producer, disseminator and coordinator of the official statistics system of the Republic of Croatia.

The Central Bureau of Statistics is a state administration organization which autonomously performs its tasks, in conformity with the law.

Article 8 of the Law on Official Statistics and Official Statistical System of Montenegro:

(http://monstat.org/userfiles/file/o%20nama/11_04_12_Law%20on%20Official%20Statistics.pdf)

The competent body (Statistical office of Montenegro) shall be the main holder and disseminator of statistical data, as well as responsible professional body, organizer and coordinator of official statistics system, and it shall represent the official statistics of Montenegro in the international statistical system.

The competent body shall be obliged to collect and process data for statistical purposes, and to provide processed statistical data to the Government of Montenegro (hereinafter referred to as the "Government"), local self-government units, general public and international users, as well as to provide comparable statistical

data both at national and international level.

Article 10 of the Law: The competent body must be informed by all state administration bodies and the Central Bank of Montenegro on preparation of new or amendments to the existing laws and on other relevant activities related to and directly affecting the official statistics.

Another example, in relation to institutional independence, is presented in the Law of the National Statistical and Geographical Information System of Mexico:

Article One – Section 26 of the Political Constitution of the United Mexican States is amended to read as follows:

... The responsibility for regulating and coordinating such system belong to an organization with technical and managerial autonomy, legal personality and assets, with the necessary powers to regulate the collection, processing and publication of generated information and ensure its enforcement.

Article 52: The Institute is, as provided in paragraph B of Article 26 of the Political Constitution of the United Mexican States, a public organization with technical and managerial autonomy, legal personality and assets, responsible for regulating and coordinating the National Statistical and Geographic Information System, as well as performing the activities referred to in Article 59 of this Law

Article 66: The exercise of the functions of the Institute corresponds, in the scope of their respective powers, to the Board of Governors and President of the Institute.

Article 67: The Board of Governors is the highest governing body of the Institute, and shall be formed of five members appointed by the President of the Republic with the approval of the Senate Chamber or, when in recesses of the latter, the Permanent Commission. Among the members of the Board of Governors, the Federal Executive shall appoint the President of the Institute, who shall chair the said collegiate body. The other members of the Board of Governors shall act as vice presidents thereof.

Article 68: The Presidency shall be the highest executive body of the Institute. The President of the Institute shall hold office during the term of six years and the vice presidents of the Board of Governors for the term of eight years. The term of the President of the Institute shall begin the first of January of the fourth calendar year of the term corresponding to the President of the Republic. The terms of the vice presidents of the Board of governors shall be staggered, succeeding every two years and beginning on January first, of the third and fifth years of the Federal Executive term. Members of the Board of governors may be appointed to hold office up to two times.

Another example, in relation to institutional independence, is presented in the Statistics Netherlands Act (Section 2), which refers to the applicability of the Autonomous Administrative Authorities Framework Act.

The Autonomous Administrative Authorities Framework Act gives (in article 1 a) a definition for an autonomous authority and describes (in article 3 sub 1) that an autonomous administrative authority may be instituted (amongst others) if there is a need for independent judgement based on specific expertise”.

3.2 Professional recommendations

There are other practices of wider public administration which perform the same role but not through a legal framework. These could include:

- Clear, transparent recruitment procedures that are publicly available;
- Term, conditions and qualities of the chief of the National Statistical Institute;
- That the head of the National Statistical Institute should have sufficiently high hierarchical standing to ensure senior level access to policy authorities and administrative public bodies.;
- Defined job characteristics, such as the responsibility for methods, the budget of the National Statistical Institute, and the need to offer an apolitical stance on statistical issues;
- Statistical work programmes that are published with periodic progress reports.³³

4. Independence in general

Monitoring systems may be set up in order to add credibility and address statistical issues covered by both the National Statistical Institute and the wider public sphere. The UK Statistics Authority is an example of good practice in this respect. The Authority’s function relates to its statutory areas of responsibility, which are as follows:

Oversight of the UK official statistics system, which includes around 30 central government departments and the devolved administrations, and the promotion, safeguarding and monitoring of quality, comprehensiveness and good practice in relation to all official statistics, wherever produced;

European Statistical Governance Advisory Board

³³ Compliance with the above suggestions will help the institution in achieving a framework of institutional independence, without the existence of a legal framework. The entity should work hand in hand with the human resources department and the CNSC to prevent staff recruitment from being influenced by political considerations.

(http://ec.europa.eu/eurostat/c/portal/layout?p_l_id=747758&p_v_l_s_g_id=0)

Production of a Code of Practice for Official Statistics and assessment of those statistics against the Code; and

Governance of the Office for National Statistics (ONS) the UK's National Statistical Institute and the largest producer of official statistics.

Self-assessments to position the national statistics to identify the priority spheres for further development and improvement could form the basis for a national code of practice covering amongst others professional independence.

The State Statistics Service of Ukraine (SSSU) is an example of good practice in this respect. In 2008, the State Statistics Service of Ukraine made a self-assessment of compliance of its activity with the principles from the Code of Practice of European Statistics. Among others, this work was a prerequisite to prepare in 2009-2010 the national "Principles of Activity of the State Statistics Bodies" (http://ukrstat.org/en/prc_dk/prc_ddos_eng.htm). The Principles of Activity have been developed and implemented for the purpose of building the framework for further strengthening the SSSU's institutional capacity.

Another good practice in this respect: In accordance of the Code of Practice of European Statistics the Mongolian Statistical Office established "The Standards for the Quality Management of the Mongolian Official Statistics".

III. Risks of non-compliance

If the principles are not implemented on sound practice, or if the process or outcome of their being addressed is not considered convincing, then:

- a) Statistical systems will not be as credible, affecting public trust;
- b) The impact and influence of those persons working on Official Statistics becomes dissipated resulting in a loss of status and credibility;
- c) Patronage practices which do not respond to the requirements of the statistical activity might be generated.

