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Implementation of the Fundamental Principles of Official Statistics

Background document
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Implementation of the Fundamental Principles of Official Statistics

Prepared by the United Nations Statistics Division

Contents

I. Background

1. The Fundamental Principles of Official Statistics were developed by the Conference of European Statisticians in the early 1990s, at a time when official statistics in various countries, particularly in Central Europe and the former Soviet Union, were going through a period of existential crisis. Political and economic systems were transformed and a number of new nation States emerged. As with many other functions of government, official statistics in those countries had to be re-invented. Public trust in official statistics had to be rebuilt and governments had to learn to understand the place of official statistics in a changed context. To support these processes, it was deemed useful to develop an international document that would set out the role of official statistics, and provide some general guidelines for the functioning of statistical systems. The Conference of European Statisticians adopted the Fundamental Principles of Official Statistics in 1992 and the United Nations Statistical Commission endorsed them in 1994 (after a few minor amendments to the preamble).

2. Following a request at the thirty-fourth session of the Statistical Commission, the Statistics Division conducted a first global review of the implementation of the Fundamental Principles in 2003. The results were reported to the Commission in a report to its thirty-fifth session in 2004[1] which coincided with the tenth anniversary of the adoption of the Fundamental Principles by the Commission.

3. At its forty-second session, the UN Statistical Commission "agreed that it was desirable to conduct periodic reviews of the implementation of the Fundamental Principles by Member States and asked the United Nations Statistics Division to undertake such a review and report the results to the Commission before 2014" (Decision 41/111). This request was reaffirmed during the forty-third session in 2012 (Decision 43/111).

II. The 2012 survey: overview

4. To comply with the Commission's request, the Division, together with the Friends of the Chair Group which was established by the Commission in 2011, developed a questionnaire for countries to report their experiences with the Fundamental Principles in a uniform way. The new questionnaire was based mostly on the previous 2003 questionnaire since most of the questions continued to be relevant. This also allowed for historical comparisons. The 2012 questionnaire consisted of 78 questions, of which 60 were identical to the 2003 questionnaire (or had only minor editorial amendments) and 18 were additional. As in the previous round, the questionnaire was translated into Arabic, French, Russian and Spanish. It was sent by e-mail to 193 national statistical offices of Member States and to the Palestinian Central Bureau of Statistics and was posted on the Division's website on official statistics.[2] By 31 January 2013, the Division had received 126 responses from Member States and the Palestinian Central Bureau of Statistics. Furthermore, replies from 8 territories were received. This document presents the results of the survey based on 126 responses from Member States and the Palestinian Central Bureau of Statistics. Table 1 below gives an overview of the responses as compared to the 2003 survey.

[1] See E/CN.3/2004/21

[2] http://unstats.un.org/unsd/dnss/gp/globreview-2012.aspx

Table 1: Overview of response rates: 2003 and 2012

Economic grouping/ Geographic area	*Survey Year*	*Recipients*		*Respondents*		*Response rate*
		Total number	*Percentage of all recipients*	*Total number*	*Percentage of all respondents*	
		By economic groupings				
Developing countries						
	2003	145	76	73	65	50
	2012	146	75	82	65	56
Incl. least developed countries						
	2003	49	26	15	13	31
	2012	50	26	25	20	50
Developed countries						
	2003	47	24	39	35	83
	2012	48	25	44	35	92
Total						
	2003	*192*	*100*	*112*	*100*	*58*
	2012	*194*	*100*	*126*	*100*	*65*
		By geographic regions				
Africa						
	2003	53	28	23	21	43
	2012	54	28	28	22	52
Americas						
	2003	36	19	14	13	39
	2012	36	19	14	11	39
Asia						
	2003	48	25	36	32	75
	2012	48	25	36	29	75
Europe						
	2003	42	22	34	30	81
	2012	43	22	36	29	84
Oceania						
	2003	13	7	5	4	38
	2012	13	7	12	10	92
Total						
	2003	*192*	*100*	*112*	*100*	*58*
	2012	*194*	*100*	*126*	*100*	*65*

5. Out of the 126 replies received in 2012, approximately two-thirds (83 countries) had also replied in 2003 and approximately one-third replied for the first time (43 replies). Twenty-eight countries that participated in the 2003 survey did not

send the questionnaire back in 2012 and 40 countries did not respond in both rounds.

6. The 2012 questionnaire included four introductory questions, seventy-one questions structured according to the ten Fundamental Principles and three concluding questions. For principles 1 to 9, the questionnaire (in both rounds) started with a general question to determine the extent of implementation of the particular principle in the country. The replies to these general questions are presented in table 2 below.

Table 2: Implementation of principles

	In your country, overall, this principle is:							
	Fully implemented		*Largely implemented*		*Somewhat implemented*		*Not implemented*	
	2003	*2012*	*2003*	*2012*	*2003*	*2012*	*2003*	*2012*
	%	*%*	*%*	*%*	*%*	*%*	*%*	*%*
Principle 1	44	60	45	30	9	10	1	0
Principle 2	59	64	37	33	4	3	1	0
Principle 3	43	53	50	42	6	5	1	0
Principle 4	37	50	37	28	19	15	7	6
Principle 5	49	46	42	43	8	10	1	1
Principle 6	80	90	19	10	0	0	1	0
Principle 7	77	76	17	17	4	6	3	0
Principle 8	31	26	44	54	19	20	6	0
Principle 9	45	48	50	49	5	2	1	0
Principle 10	-		-		-		-	-

7. Given the vast differences between statistical systems around the globe, it was decided for both survey rounds to not specify whether the questionnaire referred to the national statistical office or the national statistical system. However, in order to allow for better analysis of the replies, a question was added in the 2012 survey to determine whether the answers referred to the national statistical office, the national statistical system or “other”. The majority of the replies — 93 of them —referred to the national statistical office and 19 referred to the national statistical system. Some 13 respondents indicated that their replies referred to both the national statistical office and the national statistical system and one respondent replied “other” and explained that the answers in some cases referred to other producers of statistics, in addition to the national statistical office.

8. The 2012 questionnaire also asked three additional concluding questions on the improvement of the implementation of the Fundamental Principles.

III. Survey results

A. 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."

1. Introduction

9. Official statistics are one of the cornerstones of good government and public confidence in good government. Official statistics, which are produced by government agencies, can inform debate and decision-making both by governments and by the wider community. Objective, reliable and accessible official statistics give people and organizations, nationally and internationally, confidence in the integrity of government and public decision-making on the economic, social and environmental situation within a country. To meet the test of practical utility, statistics must be relevant and of a 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, including advisory bodies and user satisfaction surveys. In addition, good planning is essential in order to respond to the changing needs of users. Compilation and release of data should be free from political interference, so as to ensure impartiality of the national statistical office. In many countries this independence is enshrined in their statistical legislation (see also principle 7). Statisticians need to act professionally by the sound application of statistical methods (see principle 2), by openness about concepts, sources and methods used (see principle 3), and by avoiding partisan commentary. Furthermore, making information available on an impartial basis requires dissemination activities which provide information in a form useful for the users, and release policies which provide equal opportunity of access. Sound statistical principles need to be followed when presenting statistics so that they are easy to understand and impartially reported.

2. Survey responses

Has a "user council" or other advisory body been established? (2012 and 2003)

10. In the 2012 survey, 72 per cent of the countries replied in the affirmative, although the user councils and advisory bodies come in many different shapes and sizes. In 2003, only two thirds had confirmed the existence of such a body.

11. Based on the analysis of the explanations provided by some of the countries without a "user council", it seems that quite a few of them also have some sort of advisory bodies for specific surveys and/or various other types of committees to ensure user-producer dialogues.

12. In other cases, the main reasons given for not having a "user council" were very similar to those in 2003: there was either no statistical law or that the existing statistical legislation did not provide for or require a council. Thus, presumably some countries have not been proactive on user councils.

13. Examples provided by respondents show a large variety of existing models for user councils. The number of members in user councils ranges from about ten to very large councils. Many have sub-councils or sub-committees to deal with specific matters. The bodies also vary in who participates and who nominates or invites the participants. Some meet regularly and frequently, others only once a year or only when an issue has come up. Many user councils combine several roles and apart from sharing one common characteristic which is "representing the user's interests", they have a variety of tasks and responsibilities which can be grouped under three broad headings:

- Strategic advice on statistical policy and priorities;
- Technical advice, in general or on specific statistical programmes and topics;
- Coordination of statistical activities.

Is regular feedback of user satisfaction with statistical products and services actively sought? (2012 and 2003)

14. In addition to user councils, feedback can be sought through various other mechanisms. More than three-quarters of the countries reported that they use such mechanisms. This is an improvement on two-thirds that replied in the affirmative in 2003. In fact example feedback mechanisms include:

- Established user councils or more loosely organized user groups;
- Regular (often annual) and ad hoc user satisfaction surveys assessing the satisfaction with various quality aspects; in paper or electronic format;
- Commissioning independent reviews of key stakeholders' satisfaction;
- User workshops or stakeholder coordination meetings to discuss the usefulness of the data;
- Web-based feedback mechanisms;
- A supplemental questionnaire seeking feedback is attached to each statistical product;
- Analysis of downloads from the internet.

15. Current feedback-mechanisms are very similar to those ten years ago though electronic means in general and the analysis of website traffic or downloads were more frequently mentioned in 2012. Furthermore, the importance of not only contacting current users but rather all potential users was brought up.

16. Very few respondents provided reasons for not seeking user feedback regularly. Some reasons mentioned are the lack of resources to carry out such activities, the lack of resources to actually implement the findings of such a mechanism even if there was one, very poor response rates to user satisfaction surveys in the past and simply "no interest in it". The main reason given in 2003 was the lack of resources.

Does the national statistical office have an annual or multi-annual work programme? (2012 and 2003)

17. Good planning is an essential part of the implementation of principle 1; to that end, the most commonly used planning instruments are annual and multi-annual year programmes.

18. Virtually all respondents confirmed having a multi-annual work programme. These vary in the timeframe they cover, how frequently they are updated, how detailed they are and who approves them. In 2003, more than 90 per cent of the respondents had confirmed that they had such programmes.

Is a systematic dissemination policy being pursued? (2012 and 2003)

19. Approximately 90 per cent of the countries reported that they had a systematic dissemination policy. This was the case ten years ago as well.

20. Many offices have specialized dissemination units and/or units dealing with the media. A number of countries mentioned that their dissemination strategy was either part of or closely linked to their communication strategy. The following elements of a dissemination strategy were mentioned:

- Publishing an advanced release calendar (see also the related question below);
- Use of through various available media, for example print publications, CD-ROMs, websites with pdf files and excel files, online databases, etc;
- Press releases, press conferences and other media contacts;
- Free of charge online access to data in the majority of countries;
- Making microdata available (however this was barely mentioned despite the fact that many countries seem to in fact make microdata available; see principle 6, page 24);
- Other services, such as a library or free telephone consultation were mentioned.

21. In the 2003 survey, a popular part of a dissemination strategy mentioned was the pursuit of rapid growth of electronic dissemination. It seems as if this has now been achieved and, hence, is no longer a prominent part of dissemination strategies. Furthermore, in 2003 many countries mentioned that their publications were available on the internet but access had to be paid for. This was never mentioned in this year's survey.

22. Even most countries that do not have a formal policy in place report systematic dissemination practices. A few countries report that they are in the process of formalizing dissemination strategies.

Do you produce catalogues of publications, documents and other services? (2012 and 2003)

23. Almost 90 per cent of the countries reported that they had such catalogues. Again, this is unchanged from 2003. The 2012 survey shows that:

- In the majority of countries, a catalogue is available online; one country described that "the Publication Hub includes this functionality";
- Quite a number of countries still issue a print version;
- Many countries update the catalogue annually, some more frequently;
- In terms of coverage, for some countries the catalogue lists only print publications; others list all print and electronic publications, and databases; other countries include methodological publications as well as other services;
- Many respondents mentioned that their catalogues include descriptions and brief information on all publications;

- A number of countries point to the advance release calendar.

24. As in 2003, the lack of resources and qualified staff were the main reasons mentioned for not having a catalogue.

Is the national statistical office free from political interference when preparing the annual and multi-annual work plans? (2012 and 2003)

25. More than 90 per cent of the countries reported that political interference had not been encountered, which is very similar to the 2003 numbers (95 per cent). Main safeguards mentioned were provisions in statistical laws and (semi-)autonomous statuses of national statistical offices. Also mentioned was the importance of practical arrangements such as a transparent mechanism through which work plans are developed. A number of respondents pointed out that the head of the national statistical office or the governing board could not be members of a political party. Most national statistical offices stated that they did not need any approval for their work plans at all; however, the fact that the national statistical office's budget is decided by parliament or another government ministry will of course have an indirect influence on the work programme and whether all activities in the programme can be implemented. One particular example is that the conducting of a population and housing census needs political approval, as it is very costly.

26. In 2003, some countries had mentioned the influence of certain "political" users regarding the formulation of work programmes. No such examples were provided this year.

Does the national statistical office need political approval to publish statistical information? (2012 and 2003)

27. About 90 per cent of the countries reported that they never needed political approval. Nine per cent reported that they needed approval in specific cases and four countries reported that government approval is always required before they publish any data. This is an improvement from 2003, where twenty per cent of respondents reported that they needed approval in some cases.

28. Examples of cases when political approval was needed are not limited to a certain statistical area, but similar to the 2003 results, run across many areas. The following were mentioned in the current survey: population census results, gross domestic product numbers, and other key monthly and annual publications.

Does the national statistical office publish an advance release calendar announcing when the various sets of statistics will be published? (2012 and 2003)

29. About 80 per cent of the countries do have a release calendar. This is a significant improvement from 2003, when about one-third of the countries did not have one.

30. Most respondents who did not have calendars reasoned that there were so many uncertainties in the statistical production system (such as difficulties obtaining data, lack of resources, etc.) that it was impossible to predict when statistics would become available.

31. About 80 per cent of the countries reported that they published an advance release calendar. The examples given by the respondents revealed that calendars varied in:

- Coverage: some calendars only included the main economic indicators, others included all statistics;

- Periodicity and time span: most national statistical offices publish such a calendar once a year, usually between September and December of the year before. Others publish updated versions for a shorter period of time;
- Reliability: some national statistical offices indicated that they always adhere to the pre-release calendar; however many indicated that they adjust the dates throughout the year.

Are statistics made available to all users at the same time? (2012 and 2003)

32. Eighty per cent of the responding countries reported that this was generally the case. Another 16 per cent stated this was only true for some statistics. Five countries replied to the negative. This is in contrast to answers to the next question where two-thirds of the respondents actually confirm pre-release to governments.

33. The comments confirm that, while indeed a large number of respondents indicated that there was equal access, a significant number (from both the "always" category and the "in some cases" category) reports that there are exceptions. This shows that the question has been interpreted in different ways. These exceptions fall into two categories: early access for certain government officials and early access for the media. In both cases the early access spans from 15 minutes to about a day in advance. The information is always embargoed, though exact modalities vary.

If any government departments are given access to statistics prior to their release, is this publicly identified? (2012 and 2003)

34. About two-thirds of the respondents confirmed that this question was applicable to them. Out of these, approximately one-third noted that this was always publicly identified and another one-third noted that this was the case "in some cases". The other one-third mentioned that this was not the case at all. However, based on the comments provided it seems that quite a number of countries checked the "No, never" category instead of the "not applicable".

35. Modalities described include a "locked room access" and "confidentiality agreements", etc. Such procedures and recipients are usually published on the national statistical office's website, though the IMF General Data Dissemination System webpage was also mentioned by a few respondents. Times vary from a few minutes to 24 hours.

B. Principle 2: Professional standards and 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."*

1. Introduction

36. This principle further extends the impartiality element of principle 1. Sound statistical methodology, based on the use of frameworks and statistical standards, the correct application of statistical methods and the objective presentation of statistics, must be used for the production and presentation of statistics. The choice of the methodology should be made by the statistical agency, be free from political interference and be determined in accordance with professional ethics. To ensure the proper application of methodology, staff need to receive statistical training and undertake research, and innovation needs to be supported.

2. Survey responses

Does the chief statistician have direct access to policy authorities and public administrative bodies? (Question only introduced in 2012)

37. More than 90 per cent reported to have direct access to policy authorities and public administrative bodies. Among the few obstacles mentioned include the reality of essentially reporting to a "secretary" and a ministry that "shows no interest in statistical matters". All countries that commented on the lack of such access are small countries where intuitively one would assume such access was easier than in a large government system.

Are there clear rules for the appointment and dismissal of the head of the National Statistical Office? If yes, are they observed? (Both questions only introduced in 2012)

38. Three-quarters of the countries reported to have such clear rules. Except for two, all such countries reported that the rules are being observed.

How satisfied are you with the number, skills and experience of your staff? (2012 and 2003) Is the budget of the national statistical office for training of staff adequate? (Question dropped in 2012, only in 2003)

39. About 87 per cent of the chief statisticians were "satisfied" or "fully satisfied" with the number, skills and experience of their staff, whereas about 13 per cent said that they were "not satisfied". This seems to be slightly better than ten years ago.

40. Not a single country in Africa reported to be fully satisfied with the number, skills and experience of their staff. Approximately one-fifth of the respondents from Africa actually report to be not satisfied.

41. Similar to 2003, the major of problems mentioned by the national statistical offices, regarding whether they were satisfied with their staff or not, were very similar and seemed to differ mainly in magnitude:

- Insufficient and decreasing number of staff due to budget cuts; a number of respondents particularly referred to the lack of permanent staff;
- Difficulties in recruiting and retaining qualified staff: mainly, but not exclusively, developing countries experience competition from other employers in the private as well as the public sector where salaries and work conditions are better. This often lead to difficulties in hiring, in particular in hiring young and highly qualified staff, as well as to a high turnover of such staff;
- Lack of training capabilities and lack of adequate training funds for training.

42. Not mentioned this year or mentioned to a much lesser degree were the following problems:

- Lack of analytical capabilities;
- Lack of information technology (IT) capabilities;
- Insufficient language capabilities;
- Insufficient international experience.

Is the National Statistical Office free from political interference in relation to methodology and survey design? (2012 and 2003)

43. One hundred per cent of the national statistical offices reported that they choose their methodology without being subjected to political interference. In most countries, this independence is formally laid down in the statistical legislation that forms the basis of the work of the national statistical offices. In addition to, or instead of, this legal status, a number of arrangements serve alone or in combination as practical safeguards against political interference. These are:

- Statistical or methodological councils take formal decisions on the methodology;
- Use of internationally recommended standards and methods;
- Involvement of advisory groups, external experts and consultants;
- Full disclosure of the methodology applied;
- A tradition and reputation of independence and professionalism.

44. One country reported that "the government does not intervene in the day-to-day business of public agencies. However, the government has certain possibilities to influence methodology, e.g. by attributing funds for specific purposes such as enhancing sample size for a specific survey."

45. Also, about 95 per cent of the national statistical offices reported being free from interference with regard to content and timing of data releases.

Do you have guidelines on professional ethics for staff?

46. Eighty per cent of the national statistical offices reported that they had written guidelines on professional ethics. In 2003, about 75 per cent had replied in the affirmative.

47. However, the understanding of "guidelines on professional ethics" varied and there was a wide spectrum of existing codifications, such as:

- The statistical law provides a general framework;
- Internal regulations and staff rules give more specific guidelines;
- Ethical codes for civil servants in general;
- Ethical codes specifically established for statistics provide guidance in ethical behaviour;
- The European Code of Practice and the ISI Declaration on Professional Ethics.

48. Existing guidelines, regardless of their form of codification, are usually supported by the following measures:

- Orientation and training programmes and seminars;
- Swearing in of new staff and receipt of the relevant laws and guidelines;
- Handbooks, booklets, posters and the Intranet.

49. Of those countries that did not have any ethical guidelines, some were in the process of developing and/or adopting guidelines in the near future.

C. 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."

1. Introduction

50. From the design stage through the dissemination stage of a statistical collection or compilation, there are many ways in which errors can be introduced into the results. Some errors, in particular those resulting from the use of sampling, are random and their magnitude measurable. Other errors, mainly from non-sampling sources, can introduce bias into the results but are difficult to measure. This information on known sources of error as well as concepts, sources and methods used to compile statistics should be readily available to users so that they can judge the fitness of use of the data.

2. Survey responses

Do you provide an indication of the quality of data published, for example adequacy of the source data, biases the data may have, response rates, non-response and its treatment, imputation? (2012 and 2003)

51. Ninety-three per cent of the countries provide an indication of the quality of the data published. This is a marginal improvement from 2003 when about 90 per cent reported providing an indication of the quality of the data published.

52. Overall, responses indicated that increasing attention was being given to this aspect. Many respondents emphasized that they provided information on the sources, methods and procedures used to compile the statistics, either in the statistical publications themselves or in special publications. In this context, the following special points were made:

- In most countries such information is provided in a methodological note in the publication or on the website, or as part of a separate methodological publication or website;
- The information is often provided in some standardized form;
- The information may be provided in a long form and a short form;
- Some information is published while additional information is made available on request.

53. While the number of countries that provide such quality indications has not changed much, it seems from the comments provided that there has been a shift from a more informal and incoherent way to providing such information about quality in a more routine and more standardized format. [3]

54. On the other hand, 10 per cent of the respondents indicated that they did not provide any indications of the quality of the data. The main reason given in both survey years was the lack of staff.

[3] Previously, informal and incoherent ways included meeting with users directly to explain data quality issues and issuing special quality reports from time to time with variations in comprehensiveness from one statistical field or publication to another.

Does the national statistical office routinely provide analytical/explanatory text with published statistics? (2012 and 2003)

55. Virtually every statistical office provides some sort of explanatory and/or analytical text with published statistics. This result is similar to 2003. Almost 90 per cent of the countries provide explanatory text and 50 per cent provide analytical text. About 40 per cent actually provide both.

56. As in 2003, many respondents seem to have understood this question to relate to the issue of providing technical, methodological descriptions and replied in the affirmative. This may mean that the publication of analytical or explanatory text may not be as pervasive as suggested by the 95 per cent affirmative answer.

D. Principle 4: Prevention of misuse

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

1. Introduction

57. While statistics can be acceptably used and interpreted in many different ways, it is important that trust in official statistics is maintained and that they are accepted as being credible. Hence, statistical agencies should draw attention to, and if necessary comment on, obvious public incorrect use or interpretation. In addition, other measures to minimize misuse include the publication of documentation explaining key statistics and education programmes for users to increase awareness and knowledge of official statistics.

2. Survey responses

Is the national statistical office entitled to comment on erroneous interpretation and misuse of statistics? (2012 and 2003)

58. Similarly to 2003, more than 90 per cent of the national statistical offices are entitled to comment on erroneous interpretation and misuse of statistics. The extent to which national statistical office react to misuse or misinterpretation of data ranges from "monitoring misuse" and "regularly writing to newspapers" to reacting somehow "only once in the last five years".

59. Most misinterpretations are reported to occur in the mass media and usually chief statisticians or substantive units of national statistical offices respond by submitting letters to the editor (which the concerned press in many countries is obliged by law to print), as well as by holding press conferences or issuing press releases. Quite a number of statistical offices mentioned that they comment on misuse on their own website, for example on a page entitled "For the record".

60. Many respondents reported problems of misinterpretation due to their users' lack of methodological knowledge, and are thus focussing their efforts on improving their documentation of metadata and the education of users (see the next question). It was also pointed out that reacting to misuse was time-consuming and that the national statistical office "should also be careful not to participate in political debates as such".

61. Illustrative examples of cases where a national statistical office corrected a misinterpretation include:

- "Some media misinterpreted statistics saying that 40 per cent of all households consist of one single person writing that 40 per cent of all persons live alone."
- "The Government Statistician published an article explaining the purpose and constraints of statistics produced by the Household Labour Force Survey with regard to employment, unemployment, and the number of vacant and filled jobs."

62. Nine national statistical offices reported that they were not entitled to comment on misinterpretation of their data.

Does the national statistical office carry out activities to educate users, including the media? (2012 and 2003)

63. Activities to educate users are conducted for "furthering literacy on statistics" of key users, such as the mass media, and to prevent misinterpretation. According to the survey, almost 90 per cent of the national statistical offices carried out activities to educate users. Some did so regularly, giving as many as 20-30 courses a year, and others provided such activities more intensively before censuses and large surveys or when a major change of methodology had been adopted. On the other hand, some countries reported that they conducted such activities irregularly. Most countries, however, seemed to see user education as part of a broad public relations strategy, "to deepen the general public's understanding of the importance of statistics". From that perspective, many different groups have been identified, and some of those that are targeted by national statistical offices include:

- Government employees, namely staff of ministries and "assistants to lawmakers";
- Mass media (print media, radio and television);
- Businesses;
- Non-governmental organizations (NGOs);
- Trade unions;
- Academia (professors and students) and high school students;
- Users of anonymized census microdata;
- The general public.

64. Some of the activities carried out by various national statistical offices to educate users include:

- Publications and booklets tailored for specific user groups;
- Seminars for certain user groups (media, microdata users), and including Web-based training;
- User-friendly websites with specific pages ("corners") for certain user groups, including students;
- Use of social media to inform users about national statistical office products, including posting videos on YouTube to inform users about new findings from the census, online chat sessions with the national statistical office;

- (Re-)designing publications to make them more user-friendly;
- Press conferences or press releases which include contact names and phone numbers for help with interpretation;
- Participation in annual conferences of user groups, book fairs and other similar events (one respondent also mentioned the appearance in talk shows);
- Open house events;
- Visitors' service or special unit for user education;
- Awareness campaigns, such as a "National Statistics Day/Week/Month", including events during the World Statistics Day and African Statistics Day;
- Specific events such as the "Mini census" or a "census at school project" (described by quite a few national statistical offices as useful tools to educate students).

65. The list of is very similar to the list compiled in 2003, however, the replies show that in many countries focus is shifting towards electronic media and also slowly towards the use of social media.

66. It is clear from the answers provided to this and other questions that educating users and seeking feedback on user satisfaction (covered under principle 1) are clearly linked and involve similar activities. Many countries indeed pointed out that user education "is done in the context of user-producer dialogue or workshops" and that such engagements are being "done continuously".

67. Most national statistical offices that do not actively pursue user education give the lack of financial and human resources as the main reason. However, one national statistical office stated that "there is no tradition for an initiative from [them] specifically targeted towards media." All national statistical offices that report that they lack resources for user education purposes are in developing countries.

E. 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*."

1. Introduction

68. Statistical offices should operate in the most cost-effective manner, and make the best choice of concepts, sources (including administrative records) and methods by balancing quality, timeliness, costs and the reporting load of respondents. Agencies should, therefore, have policies to minimize the reporting burden and should implement quality management programmes to achieve the quality and timeliness required of their statistics.

2. Survey responses

Does the national statistical office have access to administrative data? (2012 and 2003)

69. In virtually all countries, national statistical offices seem to have access to some sort of administrative data, although there are many variations in the scope

and conditions of such access. This confirms the 2003 results. In the majority of countries, the rights and conditions of access to administrative data are described in the statistical law. In many cases, access is granted through bi-lateral agreements with the relevant agencies and in quite a few cases, such agreements exist to supplement the law.

70. Some national statistical offices reported that they receive aggregated data based on administrative data, rather than individual records. A few respondents mentioned that although they have full access to administrative data, they do not make full use of it (yet). One country reported that "even though access is provided for in the Statistics Act, there is no penalty for refusing access, so officials still deny access."

If the national statistical office has access to administrative data, does it make efforts to improve the statistical potential of administrative data? (Question only introduced in 2012)

71. While virtually every respondent (98 per cent) replied in the affirmative to this question, the analysis of the comments brings to light that the question was interpreted basically in two different ways.

72. Many respondents replied in the sense that their office improves the quality of the data after receiving it from the administrative sources. The majority of respondents, however, seemed to have interpreted the question as it was intended, meaning whether any efforts are made to improve the actual source data (before the data reaches the national statistical office). These replies fall into the following categories:

- Continuous cooperation with the custodians of the administrative data "at the stage of design, construction, operation and modernization of information systems"; a concrete example provided was the development of a geo-referencing tool which enabled the use of administrative data for statistical purposes;
- Proposals to "amend the composition of data and classifications used in administrative records" were mentioned frequently. More than one country reported that "when the administration is setting up new or amending existing administrative records, the administrative authority is obliged to ask for the opinion of [the national statistical office]";
- Capacity building through training, for example, in "coding and data storage";
- Immediate feedback to the data source when data errors are detected by the national statistical office.

73. In addition, it was mentioned that embedding access to administrative data in the National Strategies for the Development of Statistics helps. One country reported creating "an Administrative Records Committee, which deals with the study and evaluation of administrative sources and methodologies and tools necessary for statistical use."

Does the national statistical office use any private sector data? (Question only introduced in 2012)

74. About 70 per cent of respondents stated that they do use private sector data. However, comments show that in many cases the question was interpreted to refer to the collection and publication of data about the private sector through surveys or other means rather than the use of private databases as a source.

75. Below is a list of examples provided on the use of private sector databases:

- "transactional data from supermarkets and electricity providers"
- "the balance sheet of the companies consolidated by the Securities and Exchange Commission"
- "administrative records from associations"
- "chambers' data"
- "data from various professional organizations"
- "cost estimates provided by a private company to estimate the monetary value of a building from the data provided in the building permit"
- "as a supplementary data source e.g. price statistics"
- "use of [country]-based electronic transactions and to compile the release of electronic card transaction statistics. Electronic transaction data is collected by private companies."
- "price information from chain head offices instead of collecting the same data directly from the stores."

76. Such data from the private sector is rarely used, mostly in the area of economic statistics, and requires special agreements.

Does the national statistical office systematically work on improving data quality? (Question only introduced in 2012); and: Does the national statistical office have an explicit quality management programme/strategy/framework for its statistical outputs? (2012 and 2003)

77. Almost all countries reported that they are working on systematically improving data quality, though only about 70 per cent have an explicit quality management framework. The latter is an increase from 2003, when sixty-three per cent of the countries replied in the affirmative.

78. The 2003 document reported that "from the specifics provided to illustrate what is being done, it is clear that the label 'quality management programme' covers many different approaches designed to enhance statistical quality, from relatively simple procedures and ad hoc measures to more sophisticated, wide-ranging multi-year strategies." While this is still true in 2012, the analysis of comments provided also shows some coherency.

79. The following efforts for improving data quality were reported:

- Improving data sources, such as administrative records;
- Training of staff;
- Improving coding;
- Improving coordination among data producers in general;
- Increasing the use of standard methodology and classifications;
- Improving documentation.

80. Many offices have designated units, committees, teams or networks to assess and improve quality, and some use peer reviews or external audits to assess data quality of outputs.

81. A wide array of existing frameworks was mentioned as being used or being the basis of national quality assurance frameworks. They include: 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.

82. Many of the countries that reported that they did not have a quality management programme mentioned that they were in the process of developing or adopting a formal programme or would do so in the near future. Equally many mentioned the shortage of resources hindering the development and implementation of such a framework.

Does the national statistical office systematically work on improving timeliness? (2012 and 2003)

83. Improving timeliness, defined as the time from the end of the reference period to the publication date, is an important goal in virtually all countries. Thus 95 per cent of the respondents are working systematically in improving timeliness. Already in 2003, more than 90 per cent said that this was the case.

84. Since the 2003 survey, the nature of the measures applied for improving timeliness have also shifted, with a stronger focus on IT in 2012. Most answers provided this year, fall in the following categories:

- Establishing and publishing a release calendar and the continuous or frequent monitoring of timeliness (including alert mechanisms) were frequently mentioned as starting points;
- Improving all processes predominantly through the use of new technologies, including web-based data collection, handheld devices, ICR scanning, etc.;
- Improving or changing methodologies, for example through the use of flash estimates.

85. Mentioned to a much lesser degree than in 2003 were the following measures:

- Frequent meetings with data providers, especially other government departments, and setting up agreements and deadlines for submitting data;
- Releasing preliminary data.

86. The role of the Special Data Dissemination Standard and similar standards was mentioned a few times and the "improvement of staff qualifications and competence" was identified as a contributor to improving timeliness.

87. In addition to many systematic approaches, more ad hoc measures, such as the use of staff overtime and hiring temporary staff, were also mentioned.

88. Many examples of successes were mentioned, including the following:

- Monthly CPI is released within 10 days after the reference period;
- Indicators on general education were published 97 days earlier than previously;
- A flash estimate of the quarterly gross domestic product is published 60 days after the reference period;
- CPI data used to come out after 4-6 weeks, but this has been reduced to 3 weeks.

Does the national statistical office systematically work on reducing the reporting burden on respondents? (2012 and 2003)

89. Response burden can be measured by the number of surveys per respondent and the time spent on completing a survey. Both need to be regularly assessed or monitored to allow for measurable progress in reducing the response burden.

90. Eighty-eight per cent of the countries reported that they worked systematically on reducing the reporting burden on respondents, which is practically unchanged from 2003.

91. The three most frequently mentioned approaches in this round are:

- Increased use of administrative data;
- Use of various sampling (techniques), including reduced sample sizes to avoid burdening respondent with multiple surveys;
- Integrated surveys or data collection with modules as well as survey coordination among all government agencies, for example through having a shared survey calendar or a clearing house mechanism.

92. Other measures mentioned include:

- Simplification of questionnaires, including the development of computerized surveys that allow for an adjusted flow of questions and avoid asking irrelevant questions;
- Having indicators and goals for response burden so progress can be measured;
- Prefilled questionnaires.

93. Last but not least, one respondent mentioned the importance of "the verification of the scope of surveys on the basis of user needs".

94. Successful examples are given as follows:

- In one country, statistical models were prepared based on administrative data, which significantly reduces the number of businesses with fewer than 50 employees that have to report;
- In another country, 1,500 enterprises less had to report in 2011 compared to 2010;
- In a third country, enterprises with less than 10 persons are no longer surveyed in the annual services survey as these data now come directly from tax records.

F. 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*."

1. Introduction

95. Reliable official statistics depend on public cooperation and goodwill to provide accurate and timely information requested in surveys. Such cooperation and goodwill is maintained by protecting the confidentiality of information provided by

respondents. Key aspects of confidentiality protection include the secure storage, transmission, and maintenance of information, avoiding disclosure of identifiable information, through for example, the anonymization of data when providing access to microdata for purposes of secondary use such as for statistical research.

96. Under this principle, it is important to make a clear distinction between the disclosure of identifiable individual data on the one hand and providing access to microdata from official statistics: making available non-identifiable individual responses, that is, anonymized individual (non-aggregated) information, on the other hand.

2. Survey responses

How well developed are practices to prevent disclosure of individual data? (2012 and 2003)

97. According to this survey, confidentiality protection is part of the culture in statistical agencies in almost all countries and is "considered the foundation of the credibility in official statistics" as one respondent put it.

98. Eighty-seven per cent of the countries responded that practices to prevent disclosure of individual data were highly developed (no individual data is ever disclosed), and 13 per cent responded that practices were developed (usually individual data is not disclosed, but there have been exceptions). Not a single respondent assessed such practices as being undeveloped in their country. These figures show an improvement from ten years ago, when 77 per cent and 21 per cent of respondents reported in the "highly developed" and the "developed" category, respectively. In 2003, two per cent had even assessed such practices as "undeveloped".

99. A large majority of respondents mentioned that confidentiality of the data was guaranteed in the statistical law. Furthermore, various practices are mentioned that are in place to guarantee that individual data will not be disclosed. The main mechanisms mentioned were:

- During data collection and data processing:
    - No entry of individual names of persons or enterprises in the databases;
    - Personal data and questionnaires are kept secure and are destroyed after some time.
- For publication of aggregated data:
    - Suppression of information if the number of respondents allows for easy disclosure of individual data;
    - Standard software applied for checking tabulations and microdata against disclosure, and use of other special software;
    - Review by authorized staff of all data prepared for dissemination for possible indirect disclosure.
- 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;

- Release of individual data only as anonymized microdata for research purposes;
- Limiting geographic details, limiting the number of variables, recoding and (sub) sampling.

- General security measures within the office:
  - Ethics of the profession and/or internal regulations, including requiring that staff take an "oath of office" and training of staff on confidentiality rules and practices.

100. These reported practices are very similar to what was reported ten years ago. In a special case, one respondent mentioned that the statistical office has always denied occasional police requests for migration arrival cards from the statistical office.

101. Very few countries reported occasions where individual data have been disclosed or were used for non-statistical purposes. One case that was mentioned involved a big transaction of an airplane in a small country/economy, which "cannot be anonymized". Similar circumstances were mentioned by other small countries as potential confidentiality breach situations. Two other exceptions that were brought up are that "individual data can be disclosed only when statistical agencies request the data for sampling to develop a survey" and data disclosure for administrative purposes "e.g. individual data for general elections".

102. The list of circumstances and examples of individual data disclosure provided in this survey round is short compared to the list that was compiled ten years ago.

103. Given the importance of this principle, an excerpt of the relevant paragraphs from the 2004 report is provided here[4]:

"While most countries reported either that they never released identifiable individual data or that such releases were rare exceptions, circumstances and procedures for the authorized release were given as follows:

- *Whenever the individual who provided data consents to the use for other purposes;*
- *Individual data are used as evidence in a court of law;*
- *Government entities ranging from federal institutions such as tax collection bodies to state representatives, courts and local authorities have the legal right of access to identifiable individual data;*
- *Data that permits identification of respondents may be transmitted without the consent of the respondents for the purposes of scientific research, pursuant to procedures established by the government;*
- *Individual data can be disclosed in emergency situations such as a public health crisis;*
- *Individual data can be disclosed, in some cases, with the agreement of the High Statistical Council. However, it is not possible to disclose individual data related to families or individuals.*

[4] E/CN.3/2004/21, paragraphs 60 – 63.

Examples of the authorized release of identifiable individual data were given as follows:

- *Population census data was exploited for establishing a voters' register. The lifting of confidentiality was dealt with by a presidential decree which authorized it;*
- *"The one known occasion was that when a serious public health problem had arisen all over Europe. This had to do with the import of beef meat and animals foodstuffs from a certain country".*

On the other hand, one country reported that, by law, more than 20 organs of the State had the right to demand and receive identifiable information.

Examples of the unauthorized release of identifiable individual data were given as follows:

- *In the past there have been cases of data being exchanged for cash to supplement low salaries;*
- *There have been isolated cases where data was stolen."*

104. A single example on unauthorized release of identifiable data was reported in the current survey: "There were cases, in the past, in which sanctions on workers had to be applied when they misused the statistical information".

Does the NSO ever release identifiable unit record information outside its own organization? (Question only introduced in 2012)

105. Seventeen per cent of respondents confirmed that they may release identifiable data outside their own organization. The cases and circumstances described by the respondents include the following examples of when unit records may be released:

- When the consent of the respondent is given;
- When printing forms for dispatch;
- When assisting other agencies to conduct their own collections;
- When cooperating with regional statistical offices in a decentralized system to avoid overlap and reduce the response burden;
- When cooperating with other organizations or individuals (that are allowed by the law to obtain the same information directly from the respondent) to reduce response burden;
- For carrying out the work between Eurostat and the national statistical offices of EU member states;
- "For public assistance for poverty or economic hardship alleviation and reduction";
- For research purposes.

106. Most of these cases are prescribed in the law and are often at the discretion of the chief statistician.

Do staff sign a (legal) confidentiality agreement on appointment? (Question only introduced in 2012)

107. In approximately 80 per cent of the countries, staff have to sign confidentiality agreements on appointment.

Are sanctions prescribed in case of a confidentiality breach? If so, have they been applied when breaches occurred? (Both new in 2012)

108. Sanctions are prescribed in more than 90 per cent of countries, however, implementation is reportedly astonishingly low, with just over half of the respondents stating that they have been applied when breaches occurred. No examples or comments were asked in this question; however some countries provided details with reference to this question as general comments for this principle. These general comments suggest that a substantive number of countries reported that sanctions have not been applied because no breaches have occurred.

Is there a practice for granting access to microdata from official statistics for statistical purposes (for example, to researchers)? If yes, based on what? (2012 and 2003 with a different wording)

109. Such practices exist in almost 90 per cent of the countries. There are no comparable figures available from 2003 as this question was posed slightly differently as an open question, although many countries did report in 2003 that this matter was still under discussion in their country then.

110. Out of the 109 countries that have such practices, 64 reported that microdata access was provided for in the law, 51 reported that it was (also) based on a "contract basis" and 19 countries reported (also) "other practices" as the basis[5].

111. The 2012 questionnaire did not ask for further details for granting access to microdata but some practices were shared as general comments for principle 6. Some of these are:

- Microdata 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;
- Many countries grant on-site access only.

112. More practices were reported in 2003[6] as further details for granting access to microdata were specifically asked.

G. Principle 7: Legislation

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

1. Introduction

113. Openness in the production of official statistics is important for maintaining trust and credibility in both statistical agencies and the data they produce. In many countries, the production of statistics is governed by statistical legislation that sets out the authority and powers of a statistical agency, its position in the national

[5] Duplicate answers possible.
[6] E/CN.31/2004/21, paragraphs 65 – 68.

administration and its obligations, such as publishing the results of collections and protecting the confidentiality of information collected from respondents (see also principle 6).

2. Survey response

Do you have a general statistical law? (2012 and 2003)

Does the national statistical office have a clear mandate to collect data from physical and legal persons? (Question only introduced in 2012)

Does the law (or other relevant legal framework) guarantee professional independence of the national statistical office? (Question only introduced in 2012)

114. Almost 95 per cent of countries responding had a general statistical law providing the authority and rules under which the national statistical office operated. Of the seven countries that do not have a general statistical law, the majority of the statistical systems involved are regulated by government decrees, orders and regulations. Two of these indicate that a general statistical law was being drafted.

115. Ten years ago, slightly over 90 per cent of the countries reported having a statistical law. Then, many countries reported that their statistical law was under revision or stated that their statistical law was very old or too general, and needed to be modernized. This is not prominently mentioned in the current survey, possibly because such revisions may have been carried out to the satisfaction of the national statistical offices.

116. In general, statistical laws regulate, inter alia, the organization of the national statistical system as a whole and the functions, rights and responsibilities of the statistical entities within a decentralized system (if applicable), in particular of the national statistical office. More details are covered under this principle below.

117. Ninety-eight per cent of respondents also confirmed that their statistical law or other legal framework provides a clear mandate for the national statistical office to collect data from physical and legal persons.

118. Approximately 90 per cent of the respondents also confirmed that their statistical law or other legal framework guarantees the professional independence of the national statistical office.

Which producers of (official) statistics are covered by the law? (Question only introduced in 2012)

119. In more than 20 cases, the law only covers the national statistical office. However, in most countries, the statistical law covers the whole or many relevant parts of the statistical system. Thus, in all countries this includes the national statistical offices but may extend to the following institutions:

- Statistical services in line ministries;
- Statistical services in the central bank;
- Other government agencies;
- Custodians of administrative data;
- Statistical offices of regions, provinces, states, governorates or municipalities;

- Chambers of commerce;
- Statistical research and training centres;
- Private institutions, for example, "private entities providing services of public interest which are essential to achieve the objectives of the system itself".

Generally, are respondents obliged by law to respond to statistical enquiries from the national statistical office? (2012 and 2003) In surveys with mandatory response, are there fines for non-response and are they applied? (Question only introduced in 2012)

120. In many countries, the law regulating official statistics promulgates an obligation for physical and legal persons to provide the national statistical offices with statistical information. In fact, a total of 86 (i.e 68 per cent, up from 64 per cent in 2003) reported that their respondents are always required to respond to official surveys. Thirty-one national statistical offices (25 per cent compared to 29 per cent in 2003) answered that respondents are obliged to respond to statistical inquiries "in many cases" and five offices (four per cent as compared to 6 per cent in 2003) reported that this is "sometimes" the case. Four countries reported that respondents are never required to respond to official surveys.

121. The comments provided indeed show a very similar picture to 2003, whereby in most of the countries, the general statistical law provides for both mandatory and non-mandatory participation of respondents with the requirement either:

- Specified in the general statistical law or in other legal provisions, ordering certain statistics, issued by the legislature or the Government;
- Left to the national statistical office to decide on the status of an inquiry on a case-by-case basis.

122. Distinctions between mandatory and non-mandatory participation in statistical inquiries are being made along various lines:

- Most countries that report to have both mandatory and voluntary participation distinguish between enterprise and household surveys; participation in the first is usually mandatory and participation in the latter is typically voluntary;
- Some countries have defined a "national statistics programme" and participation in statistical inquiries that are part of this core set is mandatory, while participation in any additional survey is voluntary.

123. One country stated that its "statistical law gives a clear preference to voluntary surveys" and "statistical surveys based on the canvassing of respondents may not be ordered unless the same purpose is unlikely to be achieved through volunteering of information by the data subjects."

124. On the other hand, participation in population and housing censuses seems to be mandatory in almost every country. Some national statistical offices specified that participation in any inquiry that involved either the private life of a person (for example personal health) was voluntary.

125. Fines exist in more than 90 per cent of countries with mandatory surveys, though they have been applied in only one-third of the countries in the recent past. Fifty-seven per cent reported that despite the fact that fines exist, they have not been applied in the recent past. Reasons provided for not enforcing fines are:

- It is preferable to build a relationship with data providers rather than create animosity by applying fines;
- To protect the image of the organization so respondents would cooperate;
- "Because legal battles are too lengthy and cumbersome".

In a statistical survey, are respondents informed about the nature of the survey and their rights? (2012 and 2003)

126. Same as in 2003, practically all respondents reported that their office informed respondents about the nature of the survey and about their rights. This was done in various ways, following both tradition and regulations:

- Awareness campaigns prior to censuses and large surveys, which usually make use of all media, in particular radio, television and newspapers as well as the distribution of leaflets;
- Advance letters pre-announcing the survey questionnaire or the interviewer visit;
- Face-to-face and telephone interviews, whereby interviewers introduce themselves and explain the nature of the survey as well as the respondent's obligations and rights; the importance of the proper training of interviewers was stressed;
- Questionnaires that, in almost all countries, when mailed to respondents include an explanatory text on the front page about the survey and the respondent's obligations and rights; usually the questionnaires are also accompanied by a letter to the respondents.

127. This communication usually also explains confidentiality rules and how the results will be published.

To whom/what office within the Government does the head of the national statistical office report? (2012 and 2003)

128. The position of the national statistical office within the government structure is an important part of the legal environment in which it operates. This question or concern is closely related to some aspects under principle 2 (access to policy authorities and public administrative bodies; and rules for the appointment and dismissal of the head of the national statistical office. See page 11).

129. The positions and terms of reporting vary a great deal among countries. Most often, national statistical offices report to the following:

- (Deputy or Vice) Prime Minister, chancellor or the President;
- Cabinet or Council of Ministers;
- Ministry in charge of planning or development;
- Ministry in charge of economic affairs, industry and/or trade;
- Ministry in charge of finance or the comptroller general;
- Ministry of the Interior;
- Parliament;
- Planning and/or development commission/council/authority.

130. The list is very similar to what was reported in 2003. Newly mentioned in 2012 is that in a few countries, the cabinet designates the Minister responsible for the statistical office, and the designation changes over time; two national statistical offices indicated that they report to "no person or office within the government".

131. Categories reported in 2003 but not in 2012 were:

- Ministry of Statistics;
- Statistics Council;
- Ministry in charge of information and communication;
- Various ministries depending on the subject area i.e. reported to several ministries at the same time.

132. The above organizational structures or arrangements vary not only in terms of the position of the national statistical office within the overall government structure, but also in terms of the strength of the relationship between the national statistical office and the "parent body". While some national statistical offices have a high degree of administrative independence, others are actually part of a ministry. In addition, the person to whom the head of the national statistical office reports within a ministry or other supervisory body varies considerably, and might be the minister himself or herself, a permanent secretary in the ministry, a general director, the director of a department or advisers.

H. Principle 8: National coordination

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

1. Introduction

133. Official statistics are broad in scope and are often produced by many different government agencies in a country. Usually, there is a central or national statistical office that produces the greater share of official statistics, but sometimes there is more than one statistical agency handling different areas of statistics. In all cases, the majority of official statistics are produced by government departments as a by-product of their activities, and sometimes by separate statistical units within the departments.

134. 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. This is closely linked to some aspects of principle 5, for example on reducing the response burden (see page 20).

2. Survey responses

Are there any other producers of official statistics besides the national statistical office in your country? (2012 and 2003)

135. Both in 2012 and 2003, more than 90 per cent of the respondents reported that in addition to the national statistical office there are other producers of official statistics in the country, although the national statistical offices are the dominant producers of official statistics in most. Examples given of the other producers of

official statistics that are responsible for statistics in their own spheres of concern include:

- Central banks;
- Line ministries and departments, including those for education, health, immigration, customs, and treasury, to name but a few;
- Sub-national offices, which sometimes produce statistics for their regions.

136. Countries reported various relationships between the national statistical office and the other producers of official statistics, including cases where:

- Other entities collect statistics subject to clearance, supervision or guidance from the national statistical office;
- Line ministries and other agencies produce official statistics within their field of work;
- Line ministries and agencies in some countries, produce official statistics independently from the national statistical office;
- Other institutions are "marginal producers" compared to the national statistical office; the work of these institutions is well integrated with programmes of the national statistical office;
- A decentralized system exists whereby many agencies, but only those within the federal government, produce some portion of official statistics.

Are there organizational arrangements to coordinate data collection for statistics at the national level? (2012 and 2003)

137. In 2012, 87 per cent of the respondents indicated that organizational arrangements are in place to coordinate data collection and avoid duplication of statistics at the national level. This is similar to 2003, when 86 per cent indicated to have organizational arrangements. Coordination is implemented in different ways:

- By regulations, agreements or laws;
- Through supervisory, advisory or technical committees;
- As specified in the annual or multi-annual plan for data collection.

138. In many cases, the national statistical office plays a major role in coordinating data collection, as the examples below indicate:

- Joint data collection is undertaken by the national statistical office and other agencies, including provincial agencies to avoid duplication;
- The national statistical office approves questionnaires or/and methodology;
- The national statistical office has "clearing house" responsibilities for any planned data collection by other agencies;
- Contact is maintained with other organizations at both high and operational levels to maintain coordination;
- Personnel from the national statistical office are posted to line ministries and departments that collect data and send it to the national statistical office.

Are there organizational arrangements for setting statistical standards (terminology, definitions, classifications, geographical classifications, methods, sampling frames, etc) at the national level? (2012 and 2003)

139. Eighty-six per cent of the countries indicated that they had organizational arrangements for setting statistical standards at the national level. This is an increase from 80 per cent in 2003. Arrangements were specified as follows:

- The national statistical office compiles, publishes and promotes the consistent use of statistical standards, terminology, definitions, classifications, methods and nomenclature;
- Statistical legislation establishes and specifies common standards, or specifies the body that has the responsibility for doing so;
- Adherence to the nationally adopted standards is required by all producers of official statistics in the country;
- A central body (the national statistical office or another body cooperating with the national statistical office) or a committee is assigned this responsibility by law;
- National statistical boards/councils/committees carry out the coordination role;
- Joint committees of the national statistical office and other agencies are established for surveys in specific subject matter fields;
- Formal organizational arrangements are not in place, although the other agencies use classifications, concepts and other standard elements which the national statistical office develops and promotes;
- Standards are set through consultations with producers and users.

I. 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*."

1. Introduction

140. In order to facilitate international comparisons of statistics, as well as to achieve efficiency and quality in their production, international statistical standards (i.e. frameworks, concepts, and classifications) should be used as much as possible in the production of official statistics. However, compromises are usually required in the application of international standards to suit the conditions and requirements of the users within each country.

2. Survey responses

141. Table 3 below provides an overview of the degree to which international standards in economic, demographic, social and environment statistics have been applied.

Table 3: Application of international standards[7]

	Do you apply international standards?				
Statistical field	*Number of respondents*	*Yes, as they were recommended*	*Yes, adapted to national circumstances*	*Both are applicable*	*No, not at all*
National accounting and other economic statistics	126	68	68	10	-
Censuses and demographic statistics	125	69	64	8	-
Social statistics	124	64	68	8	-
Environment statistics	121	51	61	5	14

Do you apply international standards in national accounting and other economic fields? (2012 and 2003)

142. The application of international standards in national accounting and economic statistics in general includes general frameworks such as the System of National Accounts, as well as associated standards and classifications that also have other applications in the statistical system and elsewhere.

143. A higher percentage of countries apply international standards as recommended for national accounting or economic statistics in 2012 compared to 2003 (54 per cent in 2012 compared to 42 per cent in 2003). Both the 2008 and 1993 System of National Accounts are widely used and several countries reported that efforts to convert from the 1993 to the 2008 system are being made. For European countries, the adoption of the European System of Accounts (1995) is mandated by the European regulation. Thus, the adoption of the international standards is almost universal in Europe since the European System of Accounts (1995) is consistent with the System of National Accounts.

144. The underlying classification standards often have additional statistical and non-statistical applications, which add considerable national requirements to their formulation and implementation. Nonetheless, most countries use activity classifications, product classifications, classifications of expenditure, occupational classifications, health classifications and others that are either identical to or based on the most important international standard classifications. For some of these classifications, notably activity and product classifications, regional classifications have emerged that serve the more detailed needs of specific groups of countries. However, in almost all cases, these regional classifications are based on the international standards. For classifications that are not directly derived from international standard classifications, the ability to convert data to international standard classifications is still a highly desired goal, underlining their important central role.

Do you apply international standards in censuses and demographic statistics? (2012 and 2003)

145. Since its early years, the United Nations has issued a series of international recommendations on population and housing censuses to assist countries in planning and carrying out improved and cost-effective censuses, under the title *Principles and Recommendations for Population and Housing Censuses*, last revised in 2008.

[7] For these three questions, multiple answers were possible. The original options in the questionnaire were "Yes, as they were recommended", "Yes, adapted to national circumstances" and "No, not at all".

146. For both 2000 and 2010 census rounds, many countries reported that they followed the United Nations recommendations or related recommendations issued by regional organisations, for example, the Caribbean Community (CARICOM), the Conference of European Statisticians, the Economic Commission for Latin America and the Caribbean (ECLAC), the Southern African Development Community (SADC), the Pan American Health Organization (PAHO), and the Secretariat of the Pacific Community (SPC). Furthermore, most countries used related international classifications, such as activity classifications, occupational classifications and health classifications. For the 2010 round of censuses, countries also included requirements on data for monitoring and evaluating the Millennium Development Goals. Also, some countries reported the inclusion of regional generic items in the questionnaire.

Do you apply international standards in social statistics? (2012 and 2003)

147. Countries reported that they applied international standards where such standards existed, adapting them to national circumstances as necessary. For example, respondents reported that they followed international recommendations, standards and classifications in the areas of education statistics (United Nations Educational, Scientific and Cultural Organization i.e. UNESCO), labour statistics (International Labour Organization i.e. ILO)), health statistics (World Health Organization i.e. WHO) and poverty statistics (World Bank).

Do you apply international standards in environment statistics? (Question only introduced in 2012)

148. About 90 per cent of the countries that produce environment statistics reported that they applied international standards. Of these, more than 50 per cent apply the international standards with some adaptation to national circumstances, including accounting for limitations in the available data. Widely used international standards or frameworks include the Classification of Environment Protection Activities (CEPA), the Classification of Resource Management Activities (CReMA), the United Nations Framework for the Development of Environment Statistics (FDES), the United Nations Framework Convention on Climate Change (FCCC) and the System of Environmental-Economic Accounting (SEEA). Other countries further mentioned the use of International Union for Conservation of Nature (IUCN) standards and guidelines, Selected Nomenclature for Sources of Air Pollution (SNAP) and the sustainable development indicators.

149. European countries adopt European Union regulations, and use the OECD/Eurostat Environmental Protection Expenditure and Revenue Joint questionnaire, as well as the European System for the Collection of Economic Information on the Environment (SERRIE). However, many developing countries reported that their systems are weak or not yet functional for environment statistics, but they would like to strengthen or start compiling these statistics, and would therefore benefit from assistance.

J. Principle 10: International cooperation

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

1. Introduction

150. The sharing of information and practices, as well as cooperation in the joint development of statistical standards, international statistical activities and so forth is an essential ingredient for the continuous improvement of the quality and range of official statistics in all countries and for the efficiency of their production. In general, such cooperation is facilitated by various international activities supported by international statistical organizations, other agencies and professional associations.

151. Technical cooperation either organized bilaterally between countries or through international organizations and activities, is important for the development of a wider range and better quality of official statistics in the developing countries.

2. Survey responses

Has the national statistical office been engaged in any international cooperation projects in the last five years? (2012 and 2003)

152. From the 2012 survey, practically all of the respondents confirmed that their offices have been involved in international cooperation projects in the last five years. Fifty per cent indicated that they had been involved as recipients only, 10 per cent indicated that they had been involved as donors only, and 38 per cent indicated that they had been involved both as donors and recipients. There are now more countries involved both as donors and recipients compared to the results in 2003 when only 29 per cent were involved in both the giving and receiving aspects of cooperation. Table 4 below gives the 2012 survey results.

Table 4
Involvement in international technical cooperation in the last five years

		As a donor		
		Yes	*No*	*Total*
As a recipient	Yes	48 (38%)	64 (51%)	112 (89%)
	No	12 (10%)	2 (2%)	14 (11%)
Total		**60 (48%)**	**66 (52%)**	**126 (100%)**

153. In approximately 80 per cent of the countries, there is a special unit, or in some cases a high-level committee within the national statistical office that is responsible for organizing international cooperation activities. A few countries mentioned that cooperation activities are organised through government departments other than the national statistical office. Furthermore, international cooperation activities in some countries are organised through senior management or a liaison officer.

In your country, has international cooperation in statistics contributed to improving your system of official statistics? (2012 and 2003)

154. In the 2012 survey, all countries except one indicated that international cooperation had contributed to improving their statistical systems. The exception was a "donor-only" country that mentioned that this was not applicable.

155. Additional comments made include the following:

- International cooperation is very important and enables national statistical offices to share good practices, new concepts and methodologies and apply best experiences. International cooperation, for example, helped some countries to implement the code of good practices or improve statistics;
- International cooperation results in better quality and more comparable data;
- Bilateral consultations, expert group meetings and seminars provide benefits to both developed and developing countries;
- Many modern technical cooperation projects do not fit in the donor-recipient scheme, for example, not only recipient countries benefit from international cooperation, but experts from the donor countries get new insights too;
- Better coordination of international efforts is needed. International cooperation includes sharing data with international organisations, however, multiple requests of the same information by different agencies negatively impact countries by consuming scarce resources, including time and efforts. As an example, it was mentioned that the United Nations can contribute to improve coordination by centralizing data collection for the whole United Nations System. It was also mentioned that international organisations should facilitate and make technical assistance and training available to those national statistical offices with limited capacities when requesting them to report statistics.

K. Awareness of the Fundamental Principles

156. Application of the Fundamental Principles necessitates knowledge of them, and the key persons who should be aware of their existence are the chief statisticians themselves.

Have you previously been informed about the Fundamental Principles? If yes, how have you been informed? (2012 and 2003)

157. Almost all of the chief statisticians reported that they were aware of the Fundamental Principles; this is an increase from 2003 when almost 90 per cent replied in the affirmative. More than two-thirds[8] learned about them through the report of the Statistical Commission of 1994 in which the Fundamental Principles were adopted. Other sources of information were presentations at meetings and conferences (63 per cent, up from 50 per cent in 2003), the websites of the Statistics Division and the regional commissions (59 per cent, up from 36 per cent in 2003) as well as various other sources such as Afristat, internal training and own research (12 per cent as compared to 19 per cent in 2003).

[8] Multiple answers were possible for this question.

Are the directors of statistics of other entities that produce official statistics in your country aware of the Fundamental Principles of Official Statistics? (2012 and 2003)

158. Since many statistical systems are decentralized, it is necessary to ensure that the directors of statistics of other entities that produce official statistics in countries are aware of the Fundamental Principles.

159. Seventy-seven per cent of the directors of national statistical offices said that the directors of statistics of other entities were aware of the Fundamental Principles. This is a major improvement from 2003, when barely over half of respondents were able to confirm this.

160. Six per cent said the other directors were not informed and 17 per cent said they did not know whether the directors of other entities were aware of the Fundamental Principles. On the positive side, some respondents indicated that they were taking steps to disseminate the Fundamental Principles in their countries.

161. Many respondents mentioned that a fairly centralized system ensures that the other producers of official statistics know about the Fundamental Principles. More decentralized systems use existing coordination mechanisms to spread awareness of the Fundamental Principles, though many respondents have actively made their colleagues aware through flyers and letters.

Is the person or office in the government to whom the national statistical office reports aware of the Fundamental Principles? (2012 and 2003)

162. More than 80 per cent of the respondents reported that their superiors knew about the Fundamental Principles. In 2003, only two-thirds replied in the affirmative.

163. The most important ways of keeping the superior office or official informed are:

- In many countries, the Fundamental Principles are either an integral part of the general statistical law or the law at least refers to the Fundamental Principles;
- The Fundamental Principles are referred to in the law, in published and unpublished reports, strategy and policy papers, in publications, and at meetings;
- Some national statistical office staff explicitly informed their superiors, using various events, such as the World Statistics Day;
- One national statistical office reported that the officer they reported to in the Ministry was actually a statistician and was well aware of the Fundamental Principles.

164. Some chief statisticians mentioned that their superiors were probably more aware of the European Code of Practice, which is linked to the Fundamental Principles. Others mentioned that their superiors were new in their positions and therefore not yet aware, still others in autonomous institutions stated that they did not have a superior to report to. Very few chief statisticians reported that their superiors were completely unaware of such principles.

IV. Implementation of the Fundamental Principles 2003 – 2012, and beyond

165. Progress in the implementation of the Fundamental Principles can be measured (or attempted to be measured) through various methods. This report described the 2012 responses and compared them, wherever possible, to the 2003 results at an aggregated level. Comparisons of the replies of countries that responded in both the 2012 and 2003 surveys are possible but have not been included in this report.

166. Another way to analyse the trend was through retrospective questions asked in the 2012 questionnaire. The results of these questions are described below.

Overall, do you think the implementation of the Fundamental Principles of Official Statistics has improved in your country over the past ten years? (Question only introduced in 2012)

167. Almost all respondents stated that the implementation of the Fundamental Principles has improved over the past ten years. A little less than two-thirds assessed this improvement as "a lot or in many ways" and a little more than one-third assessed it as "somewhat or in some ways". This is consistent with the findings presented in table 2 (page 5), where for most principles the implementation is shown to have shifted from "largely implemented" to "fully implemented". Only four countries mentioned that there was no change in the past ten years, three of which are developed countries with highly developed statistical systems.

Overall, do you think the implementation of the Fundamental Principles of Official Statistics will improve in your country over the next ten years? (Question only introduced in 2012)

168. Again, almost all respondents stated that the implementation of the Fundamental Principles will (even further) improve over the next ten years. About two-thirds assessed this improvement as "a lot or in many ways" and a little less than one-third assessed it as "somewhat or in some ways". This is despite the already reported high implementation rates for many principles. Five countries – all with highly developed statistical systems – do not expect any change over the next ten years.

In your opinion, how can international organizations help improve the implementation of the Fundamental Principles of Official Statistics in your country? (Question only introduced in 2012)

169. The answers to this question fall into the following few categories:

- Advocacy at the political level;
- Organization or facilitation of workshops, seminars, and presentations on the Fundamental Principles in various contexts, in which all producers of official statistics in a country and government officials and other users participate;
- Compilation of the best practices in the implementation of the Fundamental Principles;
- Technical assistance.

V. Concluding remarks

170. On the basis of this self-assessment survey, it seems that a lot of improvement has been made in the implementation of the Fundamental Principles over the past ten years, and that the Fundamental Principles of Official Statistics are remarkably well implemented. This is evident from the overall assessment of the implementation of each principle, the replies to more detailed questions under each principle as well as the qualitative analysis of the details and comments provided for each principle or question.

171. *Confidentiality* (principle 6) and *Legislation* (principle 7) continue to be the best implemented principles and, on the other hand, *National Coordination* (principle 8) and *Prevention of Misuse* (principle 4) continue to be the least implemented principles.

172. Chief statisticians expect the implementation of the Fundamental Principles to even improve further in the next ten years and suggest that advocacy at the political level, further training for the management and all other staff working in official statistics, the compilation of the best practices and technical assistance in general, will help achieve this.