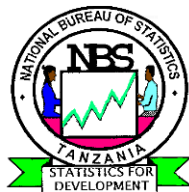




The United Republic of Tanzania

Data Quality Assessment Framework for Tanzania Mainland



National Bureau of Statistics
Ministry of Finance
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Abbreviations and Acronyms

CDOS	Concepts and Definitions for Official Statistics in Tanzania
CoP	European Statistics Code of Practice (Eurostat)
GSBPM	Generic Statistics Business Process Model
HR	Human Resources
ICT	Information and Communications Technology
MTEF	Medium Term Expenditure Framework
NBS	National Bureau of Statistics
NSS	National Statistical System
OCGS	Office of the Chief Government Statistician
QGSP	Quality Guidelines for Statistical Production in Tanzania
SMSG	Statistical Methods, Standards and Guidelines
TSMP	Tanzania Statistical Master Plan
GSBPM	Generic Statistical Business Process Model
STATCAP	Statistical Capacity Building

Contents

Abbreviations and Acronyms	1
Introduction.....	1
Links between the Framework and Other Policy Documents	2
How the Data Quality Assessment Framework was Developed	3
Using the Framework.....	5
Part 1: The National Statistical System	6
Part 2: Agencies responsible for the production and dissemination of official statistics	9
Part 3: Programme design (GSBPM phases 1 to 3).....	27
Part 4: Programme implementation (GSBPM Phases 4 to 7).....	35
Part 5: Post collection and evaluation (GSBPM Phases 8 and 9).....	44
Attachment 1: Overview of the Elements of the UN Generic National Quality Assessment Framework	48
Attachment 2: The Generic Statistical Business Process Model (GSBPM).....	49

Introduction

This document sets out a framework for assessing the quality of official statistics that are produced by the National Statistical System (NSS) of Tanzania. It is based on a [Generic National Quality Assurance Framework](#) (NQAF) that was produced under the auspices of the United Nations Statistical Commission and which was approved in 2012. This framework has been used because it is aligned with other international quality frameworks such as the IMF's [Data Quality Assessment Framework](#) (DQAF) and the [European Statistics Code of Practice](#) (CoP). It is also based on widely accepted definitions of quality as applied to official statistics as well as the [Fundamental Principles of Official Statistics](#), that were adopted by the United Nations Statistical Commission in 1994 and which were formally endorsed by the UN Economic and Social Council in 2013.

There is a general consensus that the quality of statistical information covers a number of different dimensions including aspects such as: relevance; accuracy; integrity; methodological soundness; timeliness; accessibility; and serviceability. These dimensions are overlapping and inter-dependent and the relative importance placed on any one of them depends on who is using the statistic and what it is to be used for. The Data Quality Assessment Framework includes aspects of all the dimensions listed above and is designed to be comprehensive. It will allow users of official statistics in Tanzania to understand how any particular statistic has been produced, what processes and mechanisms have been applied to ensure that it is fit for a specific purpose and what controls have been put in place to give the user confidence that it is as objective, accurate and reliable as possible. The Framework describes different standards and guidelines that have been applied to the organisation and management of the agency that has produced the statistics as well as the measures that have been put in place to ensure the quality of the production process.

Because data quality of official statistics depends on all aspects of the data production process as well as the organisation and management of statistical agencies and the National Statistical System as a whole, this Framework is comprehensive. It covers all levels of the National Statistical System, that is, from the governance of the system as a whole, through the management of the data producing agencies, to the controls applied to the collection of data, compilation of statistics, dissemination of different statistical products and the mechanisms used for archiving and evaluation.

Need for a Data Quality Assessment Framework

Official statistics that are produced and disseminated by any national statistical agency are used for many different purposes. It is important to ensure that users of the statistics are not at a disadvantage, compared with the producers. Just by looking at the statistic itself most users

do not have enough information to determine whether or not it is fit for any particular purpose. Without knowing how the statistic was compiled, what data sources were used, how they were collected, what concepts and classifications were applied and how the statistics were calculated, they are unable to say whether it can be used with confidence. In particular, in order to trust the statistics they need to be assured that proper scientific methods were used and that the published numbers are objective, reliable and timely. They also need to have confidence that the published statistics have not been manipulated in any way. The Data Quality Assessment Framework is designed to provide the information users need to make these judgements.

This Framework sets out how and under what conditions, data are collected, statistics are calculated and reports are made available to users. This publication provides users with a detailed description of how the statistical agency is managed, the rules that it operates under, the methods it uses and the procedures it applies to ensure that official statistics are of good quality. It also describes to what extent statistical practices in Tanzania are in line with international recommendations and good practice. It provides a general description that covers all official statistics and all statistical operations. More detailed information describing the processes and procedures used to produce particular sets of statistics and different time series of data – the metadata – is also published and users are invited and encouraged to consult this information to answer more specific questions.

Links between the Framework and Other Policy Documents

The Data Quality Assessment Framework is part of the overall governance of the National Statistical System of Tanzania and should be read in conjunction with other important national statements of statistical policy that govern and direct its activities. In particular it is linked with and builds on a number of other documents including the following:

- The Statistics Act 2002 and the proposed new Statistics Legislation
- The Tanzania Statistical Master Plan TSMP 2009/10 – 2013/14
- Concepts and Definitions for Official Statistics in Tanzania (CDOS), Second Edition, June 2011
- Statistical Methods, Standards and Guidelines (SMSG), February 2012
- A Handbook of Quality Guidelines for Statistical Production in Tanzania (QGSP), November 2012

Other frameworks and processes that have an important link to quality assurance and which are referred to in the Framework include the annual budgets, work plans and reports of the National Bureau of Statistics Human Resource Management Strategies, and policies governing areas such as the procurement and use of Information and Communications Technology (ICT).

How the Data Quality Assessment Framework was Developed

The Data Quality Assessment Framework has been developed from two important international generic models for statistical activities. The first is the Generic National Quality Assessment Framework (NQAF) prepared by an expert team and put together by the UN Statistics Division. The NQAF consists of 342 quality elements or statements that have an impact on the quality of official statistics. The elements are organised into 19 themes or topics that reflect different aspects of the statistical production process. Within each theme, the elements are categorised as operating at five different levels as follows:

- Actions and activities that apply at the level of the National Statistical System as a whole. These are mainly concerned with the coordination of statistical activities between different producing agencies.
- Actions and activities that concern the overall management of the agencies that are responsible for the collection, compilation and dissemination of official statistics. These are the activities that generally ensure the integrity of statistics.
- The design of specific individual statistical programmes or activities, covering activities such as identifying the need for different statistics, the design of the statistical programmes and the development of data collection instruments such as questionnaires and manuals.
- The implementation of individual statistical programmes or activities, covering aspects such as data collection, processing, analysis and dissemination.
- Activities within individual statistical programmes or activities at the post collection stage, that is, those mainly concerned with archiving and evaluation.

The second generic model or framework that has been used in Tanzania is the Generic Statistical Business Process Model (GSBPM). This model, which has been developed and approved by the UN describes all the different steps or phases that are involved in producing official statistics. It is generic in that it applies to different kinds of statistical processes, although not all phases are relevant in all cases. The model includes nine separate phases, each broken down into a number of steps. Phases 1 to 3 are concerned with the design of statistical programmes, phases 4 to 7 cover implementation and phases 8 and 9 involve archiving and evaluation. More information about NQAF is provided in Attachment 1 and about GSBPM in Attachment 2.

Both the NQAF and GSBPM are comprehensive covering all the main issues affecting official statistics and all stages of the statistical process. As a result, the generic framework is quite lengthy and cumbersome to use; it also includes a substantial amount of repetition. For example, a number of the same quality concerns apply to more than one theme or topic.

In order to simplify the generic framework and to make it more applicable to Tanzania, the different quality concerns have been reorganised and are now listed simply by the level they operate at. For example, measures to ensure that statistical activities are designed and carried out without any external interference apply at the level of the agency and, to some extent, the whole of the National Statistical System. Other concerns, for example, ensuring that different statistical processes use agreed standard classifications, operate at the level of individual programmes and activities.

The Tanzania Data Quality Assessment Framework, therefore, is divided into five main levels as follows:

- Part 1: The operation of the National Statistical System as a whole, focusing mainly on issues of coordination
- Part 2: The management of agencies responsible for the collection, compilation and dissemination of official statistics and the application of controls to ensure the integrity of statistics and other policies that apply to all their activities
- Part 3: The design of specific individual statistical programmes or activities, covering aspects such as the specification of needs, the design of the process and the development of the data collection instruments
- Part 4: The implementation of individual statistical programmes or activities, covering data collection, data processing, data analysis and the dissemination of the various final products
- Part 5: Activities within individual statistical programmes or activities at the post collection stage, focusing especially on archiving and evaluation.

Within each of these five parts, a number of elements are listed, covering different aspects of quality assurance, as follows.

- A brief description of the quality element;
- The NQAF quality element on which it is based;
- The document, guideline or process that sets out the standards that are required to be in place or be observed;
- Notes setting out how the element is assured, or what else needs to be done to put this in place.

Each part of the Framework, with the exception of the first, is divided into a number of sections that set out the main areas covered. These are related to the 19 topics listed in the NQAF, but with some modifications to fit the Tanzanian situation. A number of sections are repeated across all five parts, while some are specific to that particular level only. Overall there are 269 elements allocated across a total of 49 sections as indicated in Table 1.

Table 1: Design of the draft data quality assessment framework for Tanzania

Description of each part	Number of Sections	Number of Elements
1 The National Statistical System	1	9
2 Agencies responsible for the production and dissemination of official statistics	17	125
3 Programme design (GSBPM phases 1 to 3)	13	52
4 Programme implementation (GSBPM Phases 4 to 7)	10	61
5 Post collection and evaluation (GSBPM Phases 8 and 9)	8	22
Total	49	269

Using the Framework

Both the providers and users of official statistics will use the Framework in a number of different ways. For the producers of statistics, especially managers and staff responsible for different statistical processes, the Framework provides a means of assessing the quality of the different processes and products they are responsible for and identifying where improvements and changes are needed for harmonisation of data production process and systems. The Framework will be important in developing medium-term strategic plans as well as annual work programmes. It can also help identify priority areas where improvements and investments in quality are needed.

At the level of the National Statistical System, the Framework has an important role in building trust in official statistics and in strengthening coordination. Producers of statistics will apply the framework to ensure that their products are recognised as meeting the requirements of official statistics. This process will be formalised as and when proposed new Statistics Act becomes law.

This is a public document to assist the users of official statistics, to check that the quality standards of the agencies and processes are being met. Over time it will also be possible for users to make statistical agencies aware of areas where quality needs to be improved.

It is also important to note that the Framework will be subject to revision at least every three years, and more frequently as and when major changes are made. For example, when a new classification or standard is introduced, the Framework will need to be updated to reflect this. Changes will also be needed to reflect the process of continuous quality improvement, through investment in capacity, technological change and improvements in the efficiency and effectiveness of agencies.

Part 1: The National Statistical System

The first part of the Framework applies to the operations of the National Statistical System as a whole. The focus of concern is applying quality standards that promote the coordination of statistical activities between MDAs. The nine quality elements are mainly concerned with ensuring the integrity of the statistical system in Tanzania and promoting the extent to which users trust official statistics.

The National Statistical System

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
1: Coordination of the National Statistical System			
1.1 The National Statistical System, its objectives, how it is constituted and how it is coordinated is set out in legislation	1.1	New proposed Statistics Legislation	The new proposed Statistics Legislation includes this provision.
1.2 The role of the National Bureau of Statistics (for the Mainland) and the Office of the Chief Government Statistician (for Zanzibar) in coordinating the National Statistical System is set out in legislation	1.2	New proposed Statistics Legislation	The new proposed Statistics Legislation includes this provision.
1.3 There are formal and documented processes in place to coordinate the National Statistical System including: planning, implementing, regulating and evaluating the development, production and dissemination of official statistics and ensuring their quality	1.3	New proposed Statistics Legislation, TSMP Component A	The new proposed Statistics Legislation provides for coordination and accountability mechanisms.
1.4 There are formal and documented processes in place to ensure cooperation among the members of the National Statistical System	1.4	New proposed Statistics Legislation, TSMP Component A	The new proposed Statistics Legislation provides for coordination, accountability and cooperation mechanisms.
1.5 There are formal and documented processes in place to decide on priorities for the production of official statistics	1.5	New proposed Statistics Legislation, TSMP Component A	The new proposed Statistics Legislation provides for processes for deciding on priorities
1.6 There are formal and documented processes in place for setting guidelines for the production of official statistics, for promoting the harmonisation of statistical information and for avoiding the duplication of work within the National Statistical System	1.6	SMSG and CDOS; TSMP Component A	NBS has prepared CDOS to establish concepts, definitions and classifications for statistics and SMSG to set out guidelines and standards for statistical processes. These need to be extended to MDAs and other data producers
1.7 There are formal and documented processes in place for setting standards for statistical activities throughout the National Statistical System	1.7	SMSG and CDOS; TSMP Component A	NBS has CDOS in place to establish concepts, definitions and classifications for statistics and SMSG to set out guidelines and standards for statistical processes. These need to be extended to MDAs and other data producers

The National Statistical System (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
Coordination of the National Statistical System			
1.8 There are formal and documented processes in place to promote the sharing of technical knowledge and the implementation of good practice among the members of the National Statistical System	1.8	SMSG and CDOS; TSMP Component A	Support is being provided to NBS and MDAs under STATCAP supporting implementation of TSMP
1.9 There are guidelines in place to support the exchange of unit records or other data between members of the National Statistical System	1.10	MOUs in place with some data providers	MOUs need to be extended to other data providers

Part 2: Agencies responsible for the production and dissemination of official statistics

This part of the Framework is concerned with the organisation and management of agencies that are responsible for the collection, compilation, dissemination and archiving of official statistics. It sets out 125 separate quality elements, divided into 17 categories or sections. The categories covered are:

- 2.1 The management of relations with both data users and the providers of the source data;
- 2.2 The management of different statistical standards, both national and international;
- 2.3 Assuring the professional independence of statistical operations;
- 2.4 Assuring the impartiality and objectivity of statistical operations;
- 2.5 Assuring the transparency of statistical operations, so that users are able to understand how different statistics have been collected and compiled;
- 2.6 Assuring the confidentiality and security of statistical data obtained from individual respondents;
- 2.7 Assuring the commitment to improve the quality of official statistics throughout the agency;
- 2.8 Making sure that there are adequate resources for statistical operations;
- 2.9 Making sure that different statistical methods used throughout the agency are sound and in line with international recommendations and good practice;
- 2.10 Making sure that statistical operations are planned and carried out in a cost effective and efficient manner;
- 2.11 Managing the overall burden on respondents so that response rates are maintained at a high level and the information collected is as accurate and reliable as possible;
- 2.12 Making sure that official statistics are relevant and useful and that this remains the case in future;
- 2.13 Making sure that official statistics produced and disseminated by the agency are accurate and reliable;
- 2.14 Making sure that the agency disseminates official statistics as scheduled and with a minimal delay between the reference period and the time of dissemination;
- 2.15 Making sure that all official statistics are accessible and clear to all users;
- 2.16 Making sure that official statistics are coherent and can be compared between sources and over time;
- 2.17 Managing metadata, that is descriptions of the procedures, processes and methods used to collect, process, compile and analyse the data.

Agencies responsible for the production and dissemination of official statistics

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
2.1: Managing relations with data users and providers				
2.1.1	Statistical agencies have identified their main stakeholders (providers, users and others) and the relationships between the agency and its main stakeholders has been defined	2.1	TSMP Chapter 2	Consultation with stakeholders has been strengthened under TSMP.
2.1.2	There are formal and documented processes in place to consult stakeholders on their needs and concerns and they are kept informed on how these are being dealt with	2.3	New proposed Statistics Legislation, TSMP component A	Consultation with stakeholders has been strengthened under TSMP.
2.1.3	The agency has an external body that advises on setting overall statistical priorities	2.5	Statistics Act 2002	An Advisory Board has been established under the Statistics Act 2002, it is anticipated that a stronger external body will be established when the new proposed Statistics Legislation is in force.
2.1.4	Subject-specific user committees are in place	2.6	Mechanisms for consulting users are in place.	These are set up to discuss specific enquiries and other statistical activities, regular consultation needs strengthening
2.1.5	Appropriate strategies are in place to service user needs through a combination of print, electronic and other services to ensure users have appropriate access to the statistics they need.	2.8	Section 6.0 of the June 2010 Dissemination and Pricing Policy	The policy needs updating to incorporate more recent technological developments
2.1.6	A provider management policy is in place	2.9	Not yet in place	Need to develop a provider management policy
2.1.7	Consultations take place regularly with provider organizations including other government departments and industry associations	2.10	Some meetings take place on an ad-hoc basis	These need to be strengthened, especially for establishment surveys

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.1.8 The agency has access to records maintained by government departments, corporations, businesses and other organizations that could be used for statistical purposes	2.11	Statistics Act 2002	The Statistics Act 2002 includes this provision
2.1.9 Memorandums of understanding or other arrangements are in place with providers to ensure that administrative data are suitable for statistical purposes	2.12	MOUs in place with some data providers	MOUs need to be extended to other data providers
2.1.10 Continuing liaison with the main providers of administrative data is maintained to strengthen the statistical value and use of the data	2.13	There is regular, but ad-hoc contact with some providers	The consultation process needs to be extended and documented
2.1.11 Well-documented work plans and budgets are in place and these are shared with Ministry of Finance to ensure the mutual understanding of funding requirements and trade-offs	2.14	TSMP and annual budgets for NBS prepared under the MTEF	Annual budgets and work plans are published
2.1.12 There is a documented strategy to manage media relationships and to maintain regular contact with the media	2.15	June, 2010 June 2010 Dissemination and Pricing Policy	At present this is mainly done on an ad-hoc basis and a formal strategy needs to be developed
2.1.13 The agency responds to negative media reporting, as appropriate, to ensure fair reporting of its position.	2.16	Section 5 of the June, 2010 Dissemination and Pricing Policy	This is done as needed, but a formal strategy/guide is needed
2.1.14 Arrangements are in place to ensure that the media is able to play a role in disseminating statistics to a wide audience	2.17	Partly in place with some ad-hoc events	This should be part of the media strategy

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
2.2: Managing statistical standards				
2.2.1	In collaboration with other agencies, where relevant, the agency develops, reviews, promotes and implements standards for different statistical products and processes	3.1	CDOS	Concepts and Definitions for Official Statistics prepared by NBS.
2.2.2	The work to develop and update statistical standards is led by a person or unit with the appropriate level of seniority	3.3	Organogram for NBS	Department of Statistical Methods, Standards and Coordination in NBS and Standards and Methods Section in OCGS
2.2.3	The agency monitors the extent to which the different statistical processes use the relevant statistical standards.	3.4	Organogram for NBS	However, a formal monitoring system should be strengthened
2.2.4	Where relevant, staff are made aware of statistical standards and any changes	3.5	On an ad-hoc basis	There should be formal arrangements for informing the staff on some changes
2.2.5	Standards include a statement regarding the extent to which their application or use is compulsory or advisory	3.6	SMSG and CDOS	Either of the link documents should identify which standards are compulsory and which are advisory
2.3: Assuring the professional independence of statistical operations				
2.3.1	By law statistical agencies are required to develop, produce and disseminate statistics without interference from any government department, the private sector or any other persons or entities which may be considered as potential conflicts of interest	4.1	Statistics Act 2002	This is provided for in the current Statistics Act 2002
2.3.2	The statistical agency has a formal and documented process for dealing with actual, perceived, or potential conflicts of interest	4.3	Dealt with on an ad-hoc basis	This needs strengthening and expanding

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.3.3 The rules and procedures for appointing and dismissing the heads of statistical agencies are based on professional competence and are free from any political considerations	4.4	Statistics Act 2002	This is provided for in the current Statistics Act 2002
2.3.4 Processes are in place to ensure that the heads of statistical agencies are of the highest professional calibre and have sufficient standing to ensure adequate access to policy makers and other public bodies	4.5	Statistics Act 2002	This is provided for in the current Statistics Act 2002
2.3.5 The heads of statistical agencies have full control over any decisions on statistical methods, standards and procedures and on the content and timing of statistical releases	4.6	Statistics Act 2002	This is provided for in the current Statistics Act 2002
2.3.6 The responsibility for ensuring that statistics are developed, produced and disseminated in an independent manner rests with the head of the statistical agency	4.7	Section 5.0 of the June, 2010 Dissemination and Pricing Policy	This is provided for in the current Statistics Act 2002
2.3.7 Procedures are in place for regularly publishing statistical work programmes and for issuing periodic reports to describe the progress that has been made	4.8	TSMP and annual budgets for NBS prepared under the MTEF	Annual performance reports
2.3.8 Procedures are in place for ensuring that statistical releases are clearly distinguished from political or policy statements and are issued separately from them	4.9	Section 5.0 of the June, 2010 Dissemination and Pricing Policy.	Published statistical releases and publications
2.3.9 Statistical agencies are able to comment publicly on statistical issues, criticisms, misinterpretations and misuses of official statistics	4.10	Section 5.0 of the June, 2010 Dissemination and Pricing Policy	This is provided for in the new proposed Statistics Legislation

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
2.4: Assuring the impartiality and objectivity of statistical operations				
2.4.1	The statistical legislation specifies that statistical agencies should develop, produce and disseminate statistics following professional standards and treat all users in the same way.	5.1	Statistics Act 2002	This is provided for in the current Statistics Act 2002
2.4.2	NBS follow a code of ethics which governs statistical practices and its implementation is followed up.	5.2	Not yet in place	A formal code of ethics is needed and it is a requirement under the new proposed Statistics Legislation
2.4.3	Recruitment and promotion of the staff responsible for the development, production and dissemination of statistical information is based on relevant aptitude and expertise in statistics and/or other relevant subject matters	5.4	HR policies	NBS Scheme of Service
2.4.4	Statistics are produced on an objective basis, which is determined only by statistical considerations.	5.5	Statistics Act 2002	Annual and TSMP progress reports
2.4.5	Sources, concepts, methods, processes and data dissemination paths are chosen on the basis of statistical considerations and national and international principles and best practices.	5.6	TSMP, SMSG, CDOS, published metadata	GDDS Metadada, TSED TNADA and Methodology Reports but more documentation is needed
2.4.6	A policy for data dissemination exists and is made publicly known	5.7	June, 2010 Dissemination and Pricing Policy.	The policy needs updating to incorporate more recent technological developments
2.4.7	Information is made available to all users at the same time with no privileged access for governmental representatives	5.8	June, 2010 Dissemination and Pricing Policy.	Release calendar

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.4.8 In cases where privileged pre-release access is given, it is controlled and publicized	5.9	June, 2010 Dissemination and Pricing Policy.	Release Calendar
2.4.9 A release calendar is in place; dissemination dates and times are pre-announced	5.10	NSS Release Calendar	Calendar published in October for the following financial year. Release dates, but times are not announced in advance
2.4.10 Deviations from the release calendar are announced and justified to the users.	5.11	NSS Release Calendar	Documentation is needed
2.4.11 Major changes in statistical methods and data revisions are clearly explained to users	5.12	NBS web-site	Documentation is needed
2.4.12 Advance notice is given of major changes in methodology, source data, and statistical techniques	5.12	NBS web-site	Documentation is needed
2.4.13 Statistical releases and statements made in press conferences are objective and non-partisan	5.13	The June, 2010 Dissemination and Pricing Policy	All statistical releases by NBS and OCGS are clearly identified as such
2.4.14 Errors that are detected are corrected as soon as possible and users are informed about those errors that affect released data	5.15	SMSG, CDOS and the June 2010 Dissemination and Pricing Policy.	Documentation is needed
2.5: Assuring the transparency of statistical operations			
2.5.1 The terms and conditions under which statistics are developed, produced, and disseminated are available to the public	6.1	SMSG and CDOS; Statistics Act 2002	Metadata provided on the NBS web-site
2.5.2 There is a standard procedure for ensuring that respondents understand the legal basis for a survey and the confidentiality provisions for the data that are collected.	6.3	SMSG and CDOS; Statistics Act 2002	Documentation is needed

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
2.6: Assuring the confidentiality and security of statistical data				
2.6.1	The statistical legislation guarantees the privacy and security of information received from data providers	7.1	Statistics Act 2002	This is provided for in the current Statistics Act 2002
2.6.2	Where there are exceptions to the general confidentiality provisions, clear policies and procedures are in place and are made public to operationalize the exceptions.	7.2	No formal statement, but dealt with on a case by case basis	Documentation is needed
2.6.3	Appropriate codes of practice and standards ensure that statistical data about individual respondents remain confidential and are only released to users in line with statistical legislation and data dissemination policies	7.3	SMSG and CDOS; Statistics Act 2002	Documentation is needed
2.6.4	A formal data dissemination policy sets out under what circumstances microdata (i.e. statistical information relating to individual respondents) may be made available	7.4	June 2010 Dissemination and Pricing Policy	Need to be updated to reflect launch of the TNADA
2.6.5	Where microdata are disseminated, appropriate procedures and processes (e.g. anonymization) ensure that individual respondents cannot be identified from the data	7.5	Statistics Act 2002 and the June 2010 Dissemination and Pricing Policy.	Need to be updated and further documentation on the best practice
2.6.6	There are appropriate penalties for statistical staff or other personnel who have been found guilty of activities leading to the release of confidential data	7.6	Statistics Act 2002	This is provided for in the current Statistics Act 2002

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.7: Assuring the commitment to improve the quality of official statistics			
2.7.1	The commitment of the statistical agency and its staff to quality in statistics is clearly conveyed to stakeholders and includes information about trade-offs affecting the statistical work programme	8.1	The Vision and Mission of the NBS, Client Service Charter
2.7.2	A process of continuous improvement is promoted based on the documentation of methods and processes and the exchange of good statistical practices, as well as the monitoring, assessment and improvement of the quality of statistical operations	8.2	TSMF
2.7.3	A specific person or persons have been assigned with explicit responsibility for the management of quality within the agency.	8.3	Organogram of the NBS
2.7.4	Externally recognized processes or activities that focus on quality are followed by the agency	8.4	DQAF, NQAF
2.7.5	Guidelines for implementing quality management have been defined which describe how quality is to be assessed	8.5	A Handbook of Quality Guidelines for Statistical Production in Tanzania
2.7.6	The quality guidelines are made available to external users, at least in a summary version	8.6	A Handbook of Quality Guidelines for Statistical Production in Tanzania
2.7.7	Measures for conducting periodic quality reviews of key products to assess adherence to internal guidelines and international standards are in place	8.7	At present on an ad-hoc basis only as needed

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
2.7.8	Procedures exist for ensuring that the required documentation on quality is regularly updated.	8.8	A Handbook of Quality Guidelines for Statistical Production in Tanzania	Process for regular updating is needed
2.7.9	Staff training and development programmes are in place to ensure that the staff are aware of the agency's quality policy and have an understanding as to how quality may be achieved	8.9	Not yet in place	Need to formulate a policy and incorporate into the annual training programme
2.7.10	The agency's management ensures that sections and units have access to the necessary tools and technical support as needed to help implement their strategies for improving data quality	8.10	TSMP	Documentation is needed
2.7.11	Benchmarking of key statistical processes with statistical agencies elsewhere is carried out to identify good practices.	8.11	On an ad-hoc basis	A regular process is needed
2.7.12	All relevant statistical processes have built-in data quality checkpoints before proceeding to subsequent stages	12.2	SMSG, CDOS and A Handbook of Quality Guidelines for Statistical Production in Tanzania	This is only done for some processes and is not done routinely in NBS
2.8: Making sure that there are adequate resources for statistical operations				
2.8.1	Both financial and human resources are sufficient to implement the statistical work programme	9.1	NBS and MDAs annual budgets prepared under the MTEF	There are limitations in both human and financial resources for NBS, the Tanzanian National Statistical System remains dependent to some extent on aid and technical support from other countries
2.8.2	The available technological resources are sufficient to support the statistical production process	9.2	NBS and MDAs annual budgets prepared under the MTEF	Technological resources are being improved, but remain limited

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
2.8.3	Resource allocation is reviewed on a regular basis	9.3	NBS and MDAs annual budgets prepared under the MTEF	This is the practice of both NBS and MDAs, but Documentation is needed
2.8.4	Planning and management principles aim to make optimal use of available resources and are applied throughout the National Statistical System.	9.4	NBS and MDAs annual budgets prepared under the MTEF	Needs for more coordination strategies
2.8.5	A resource mobilization strategy and implementation plan is in place	9.5	NBS and MDAs annual budgets prepared under the MTEF	In place but needs to be streamlined into the MDAs
2.8.6	Standardization of statistical production and dissemination is pursued as a way to increase efficiency and savings	9.6	CDOS, SMSG, and the June 2010 Dissemination and Pricing Policy	Needs to be extended to the whole of the NSS
2.9: Making sure that statistical methods are sound and in line with international recommendations and good practice				
2.9.1	The overall methodological framework of the agency is consistent with international standards, guidelines and good practices.	10.1	SMSG and CDOS; TSMP	Needs to be extended to the whole of the NSS
2.9.2	Divergences from international standards are explained	10.2	SMSG and CDOS; TSMP	Needs to be extended to the whole of the NSS
2.9.3	Procedures are in place to ensure that standard concepts, definitions and classifications are consistently applied throughout the agency	10.3	SMSG and CDOS; TSMP	Processes to monitor and checks are in place but more documentation is required
2.9.4	The processes used for the development, collection, compilation and production of statistics are well documented and regularly reviewed to assess their efficiency and effectiveness	10.4	Metadata; Technical Reports	Documentation is needed

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.9.5 Measures are in place to ensure that the agency recruits staff from the relevant disciplines and they have the appropriate qualifications.	10.5	HR policies	Scheme of service
2.9.6 Training and development programmes are in place to ensure that staff acquire and update their skills and knowledge	10.6	TSMP; HR policies, Strategic Plans	Training Plan needs to be updated
2.9.7 The agency cooperates with the scientific community to improve methods and the quality of official statistics	10.7	On an ad hoc	Documentation is needed
2.9.8 Survey methods and the use of administrative records are periodically evaluated to review and improve quality	10.8	Major surveys are evaluated	Needs to be extended to administrative data sources
2.9.9 Processes are in place to allow senior management to ensure that good tools and processes have been used to produce official statistics	10.9	SMSG and CDOS; TSMP	Processes need to be strengthened and Documentation is needed
2.10: Making sure that statistical operations are cost effective and efficient			
2.10.1 Guidelines for assuring cost-effectiveness are available	11.1	Not yet in place	Practices are in place but guidelines need to be prepared
2.10.2 The agency uses standardized solutions as far as possible to increase effectiveness and efficiency	11.2	SMSG and CDOS; TSMP	Documentation is needed
2.10.3 The agency's use of resources is monitored both by internal and independent external measures.	11.3	Reports, TSMP and annual budgets, Strategic Plan for NBS prepared under the MTEF	Audit and Performance reports

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.10.4 Sample surveys are used instead of censuses when it is appropriate and possible.	11.4	SMSG and CDOS; TSMP	This is a practice of the NBS
2.10.5 The costs of producing the statistics are well documented at each stage of statistics production to assess their effectiveness.	11.5	SMSG and CDOS; TSMP	Documentation is needed
2.10.6 The costs of producing the statistics are regularly reviewed	11.6	NBS and MDAs annual budgets prepared under the MTEF	Documentation is needed especially on budget evaluation
2.10.7 Efforts are made to improve the statistical potential of administrative data and to limit recourse to surveys	11.7	SMSG and CDOS; TSMP	Efforts are being done to improve the routine data sources
2.10.8 Cost–benefit analyses are carried out to determine the appropriate trade-offs in terms of data quality	11.9	SMSG and CDOS; TSMP	This is only done for specific processes and is not done routinely
2.11: Managing the overall burden on respondents			
2.11.1 The respondent burden is managed	11.10	SMSG and CDOS; TSMP	Documentation is needed
2.11.2 The rights and responsibilities of respondents are spelled out	13.1	Statistics Act 2002	Documentation is needed
2.11.3 Mechanisms are in place to promote the value and use of statistics to respondents	13.2	June 2010 Dissemination and Pricing Policy	Documentation is needed

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.12: Making sure that official statistics are and remain relevant			
2.12.1 Strategic goals and work plans are prepared to take into account competing user needs and these goals and plans are made public on a regular basis	14.2	TSMP and Strategic Plan	Documentation and sharing strategy are needed
2.12.2 Agreements have been reached with the main users of the statistics about what will be produced and disseminated	14.3	Strategic Plan and TSMP	More user participation is needed
2.12.3 There is a good understanding of the interdependencies between individual statistical products and processes	14.9	TSMP, Strategic Plan and Annual Budget of NBS and MDAs	Documentation is needed
2.13: Making sure that official statistics are accurate and reliable			
2.13.1 Systems and processes are in place to assess and validate source data, intermediate results and statistical outputs	15.1	SMSG and CDOS	Documentation is needed
2.13.2 Procedures and guidelines are available on how to measure and reduce errors.	15.4	SMSG and CDOS	Documentation is needed
2.13.3 A revision policy is in place that documents the principles and procedures and it is made public.	15.5	Not in place	A revisions policy needs to be developed
2.13.4 Explanations about the timing, reasons for and nature of revisions are made available.	15.6	On an ad-hoc basis	A revisions policy needs to be developed
2.14 Making sure that official statistics are produced punctually and with a minimal delay			
2.14.1 The timeliness of the agency's statistics complies with IMF data dissemination standards or other relevant timeliness targets.	16.2	GDDS metadata	GDDS and Annual Performance reports

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.14.2 Action plans are developed and followed if the timeliness targets are not met	16.3	On an ad-hoc basis	Documentation may be needed
2.14.3 Procedures are in place to regularly monitor and evaluate the punctuality of every release according to the information in the release calendar	16.6	On an ad-hoc basis	M&E framework document but more documentation is needed
2.14.4 Divergences from pre-announced times are published in advance; a new release time is then announced with explanations on the reasons for the delays	16.8	June 2010 Dissemination and Pricing Policy Release calendar	Documentation is needed
2.14.5 User requirements are taken into account when the periodicity of the statistics is being decided.	16.9	TSMF Sector Working Groups	Need for mainstreaming into MDAs through MTEF
2.15: Making sure that official statistics are accessible and clear to users			
2.15.1 Processes are in place to ensure that the official statistics are released with readily accessible and up-to-date metadata	17.1	SMSG and June 2010 Dissemination and Pricing Policy	Documentation is needed
2.15.2 Statistics and the corresponding metadata are presented and archived in a form that facilitates proper interpretation and meaningful comparisons.	17.2	Metadata, June 2010 Dissemination and Pricing Policy	TSED, TNADA but further Improvements in the presentation of metadata are needed
2.15.3 Guidelines that describe the appropriate content and preferred formats and style are available to authors of statistical publications/databases.	17.3	Not in place	Guidelines on the content, formats and styles of statistical publications need to be developed
2.15.4 Staff training and development programmes are in place on writing about statistics	17.4	Some ad-hoc training has been done	More specific and targeted training is needed

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.15.5 Statistical agencies regularly prepare and publish metadata as well as quality reports	17.5	June 2010 Dissemination and Pricing Policy	Documentation is needed
2.15.6 Modern information and communication technology (ICT) is used for dissemination in addition to traditional hard copy when appropriate.	17.7	June 2010 Dissemination and Pricing Policy	The policy needs updating to incorporate more recent technological developments
2.15.7 Users are able to generate their own tables in the most appropriate formats	17.8	June 2010 Dissemination and Pricing Policy	The policy needs updating to incorporate more recent technological developments
2.15.8 The statistics are disseminated in ways that facilitate re-dissemination by the media.	17.9	June 2010 Dissemination and Pricing Policy	More documentation is needed
2.15.9 Users are consulted on a regular basis to find out about the formats of dissemination that they most prefer	17.10	Not in place	User satisfaction surveys have been carried out, but more documentation is needed
2.15.10 Catalogues of publications and other services are made available.	17.11	June 2010 Dissemination and Pricing Policy	This is the practice of NBS
2.15.11 There is a well-publicized information or user support service to handle requests for data and to provide answers about statistical results	17.12	On an ad-hoc basis	A central user support service is needed
2.15.12 The public is made aware that custom-designed outputs, statistics not routinely disseminated and longer time series can be provided on request when feasible	17.13	June 2010 Dissemination and Pricing Policy	Documentation is needed
2.15.13 The agency controls or monitors the access by researchers to microdata by providing them in a secure environment	17.15	June 2010 Dissemination and Pricing Policy	Those who access through the internet are required to register, so the NBS does monitor who accesses the data. However, further controls are needed

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.15.14 Remote access facilities are also available for accessing microdata, with appropriate controls	17.16	June 2010 Dissemination and Pricing Policy	Controls may need to be strengthened
2.15.15 Researchers are consulted regularly about the effectiveness of the microdata access arrangements.	17.17	On an ad-hoc basis	This needs to be done systematically
2.16: Making sure that official statistics are coherent and can be compared			
2.16.1 Procedures or guidelines are in place to ensure and monitor internal coherence and consistency of official statistics	18.1	SMSG and CDOS	Documentation is needed
2.16.2 Time series statistics are kept comparable over a reasonable period of time	18.3	SMSG and CDOS	Documentation is needed
2.16.3 There is a common repository of concepts, definitions and classifications available or other mechanisms for promoting coherence and consistency	18.4	CDOS	This may needs to be updated and extended to other data producers
2.16.4 It is possible to compare statistics derived from different sources or with different periodicities	18.8	SMSG and CDOS	This may needs to be updated and extended to other data producers
2.16.5 Cooperation and the exchange of knowledge between statistical units are promoted.	18.9	TSMP	Documentation is needed
2.17: Managing metadata			
2.17.1 The metadata management system of the statistical agency is well defined and is documented	19.1	SMSG, June 2010 Dissemination and Pricing Policy	This needs to be done systematically
2.17.2 Procedures or guidelines are in place for metadata maintenance and dissemination.	19.2	SMSG, June 2010 Dissemination and Pricing Policy	This needs to be done systematically

Agencies responsible for the production and dissemination of official statistics (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
2.17.3 Metadata are documented according to standards	19.3	SMSG	This needs to be done systematically
2.17.4 Staff training and development programmes are in place on metadata management and related information and documentation systems	19.5	Some training has been done for TNADA, but this is not in place generally	Training on the development and management of metadata is needed
2.17.5 There is a systematic way for archiving metadata which also ensures that they are accessible for reuse in the future	19.6	TNADA	This needs to be done systematically

Part 3: Programme design (GSBPM phases 1 to 3)

Parts 3, 4 and 5 of the Framework are concerned with quality measures applied to individual statistical programmes or operations. Part 3 deals with the design of programmes or activities, covering aspects such as the specification of needs, the design of the process and the development of the data collection instruments. It includes 52 quality elements divided into 13 sections. The main topics covered are as follows:

- 3.1 Managing relations with data users and providers;
- 3.2 Managing the standards that have been used for the design of the programme;
- 3.3 Assuring the confidentiality and security of the statistical data provided by respondents under the programme;
- 3.4 Making sure that the quality of the design of the statistical programme is improved over time;
- 3.5 Making sure that there are adequate resources for the statistical programme;
- 3.6 Making sure that the statistical methods used in the programme are sound and in line with international recommendations and good practice;
- 3.7 Making sure that the statistical programme is cost effective and efficient;
- 3.8 Managing the burden on respondents;
- 3.9 Making sure that the statistical programme is relevant to users;
- 3.10 Making sure that the statistics produced by the programme are accurate and reliable;
- 3.11 Making sure that the statistics produced by the programme are timely and available to users with a minimal delay;
- 3.12 Making sure that the statistics produced by the programme are accessible and clear to users;
- 3.13 Making sure that the statistics produced by the programme are coherent and can be compared with other sources and over time.

Programme design (GSBPM phases 1 to 3)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
3.1: Managing relations with data users and providers				
3.1.1	Processes are in place for consulting with user groups when new statistical programmes are developed or existing statistical programmes are reviewed	2.19	SMSG	Consultation processes are put in place when new statistical processes are being designed
3.1.2	Processes are in place for monitoring the relevance and practical utility of existing statistics to users	2.10	Not in place	Needs to be developed and put in place
3.1.3	Processes are in place for users to advise agencies about their emerging needs and priorities	2.21	SMSG	This is done routinely by NBS when new major surveys or censuses are planned, it is also part of the TSMP process
3.1.4	Processes are in place for maintaining close cooperation with the most important groups of users	2.24	TSMP Sector Working Groups	Consultation processes are in place
3.2: Managing standards for the design of statistical programmes				
3.2.1	Users and data providers are involved in developing and approving standards	3.7	TSMP Sector Working Groups	Consultation takes place when a new strategic or master plan is prepared
3.2.2	A statement of conformity to corresponding international or national standards is included in standards.	3.8	SMSG and CDOS	More documentation is needed
3.2.3	Divergences from the corresponding international or national statistical standards are documented and explained.	3.9	SMSG and CDOS	More documentation is needed
3.2.4	Where new standards are introduced, detailed links to previous standards are made available	3.11	SMSG and CDOS	Formal process for updating standards needs to be put in place together with the need for documentation

Programme design (GSBPM phases 1 to 3) (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
3.3: Assuring the confidentiality and security of the statistical data generated by the programme			
3.3.1 Statistical agencies identify in advance what data and microdata are to be disseminated and identify any risks that confidential data about individual respondents could be identified	7.7	SMSG Statistics Act 2002, June 2010 Dissemination and Pricing Policy	This is done to a limited extent, but is not fully documented
3.3.2 Appropriate procedures are identified in advance to ensure that data and microdata are anonymized	7.8	SMSG and June 2010 Dissemination and Pricing Policy	This is done to a limited extent, but is not fully documented
3.4: Improving the quality of the design of the statistical programme			
3.4.1 At the design stage, a quality assurance plan is prepared that describes the standards to be used, any formal obligations and quality control actions to prevent, monitor and evaluate errors and to control different stages of the statistical process.	8.12	SMSG	This is for major surveys and censuses and is part of the programme design stage
3.4.2 Trade-offs affecting quality are systematically examined	8.15	SMSG	This is done but more documentation is needed
3.5: Making sure that there are adequate resources for the statistical programme			
3.5.1 An assessment is made to ensure that the programme is feasible given the available resources	9.7	SMSG	This is done for major surveys and censuses and is part of the programme design stage
3.5.2 The programme makes as much use as possible of existing methods and tools	9.8	SMSG	As far as possible methods and tools are standardised within NBS
3.5.3 The programme uses data from existing sources, wherever appropriate	9.9	SMSG	This is done but more documentation is needed

Programme design (GSBPM phases 1 to 3) (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
3.6: Making sure that the statistical methods used are sound and in line with international recommendations and good practice			
3.6.1 The scope of the programme and other aspects such as the concepts, definitions, classification and basis of recording are in accordance with applicable international standards.	10.11	SMSG and CDOS	Documentation is needed
3.6.2 Explicit consideration is given to trade-offs between accuracy, cost, timeliness and provider burden	10.12	SMSG and CDOS	Documentation is needed
3.6.3 Alternative sources of data, including the availability of existing survey data or administrative records is explicitly considered so as to minimize new data collection	10.13	SMSG	Documentation is needed
3.6.4 There is proper justification for each question asked and appropriate pre-testing of questions and questionnaires takes place	10.14	SMSG	This is the practice
3.6.5 A systematic approach is in place for updating the survey frame to ensure adequate coverage of the target population.	10.15	SMSG	This is the practice of the NBS following each population census
3.6.6 There is proper consideration of sampling and estimation options and their impact on accuracy, timeliness, cost, respondent burden, and data comparability	10.16	SMSG	This is the practice
3.6.7 Where administrative records are used, it is verified that the population is consistent with the statistical output requirements; the classifications are appropriate; the underlying concepts are appropriate; and the records are complete and up to date	10.17	SMSG and CDOS	This is the practice of NBS but more documentation is needed

Programme design (GSBPM phases 1 to 3) (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
3.6.8 The data collection process is designed to reduce the respondent burden and to increase response rates	12.6	SMSG	Documentation is needed
3.6.9 The soundness of the use of administrative data sources is assessed	12.8	SMSG	This is done on an ad-hoc basis and a more systematic approach is needed
3.6.10 The data collection instruments (mainly questionnaires) are designed to minimize coding cost and time	12.9	SMSG	Documentation is needed
3.6.11 The questionnaire design allows for automated data capture	12.11	On an ad hoc	Documentation is needed
3.6.12 Data capture is designed to improve accuracy and timeliness by making use of automated data capture and data capture in the field where relevant	12.12	SMSG	This is being done where feasible, but more documentation is needed
3.6.13 Edit rules are streamlined in order to validate the data entered and allow for error corrections and quality improvement during the data capture exercise	12.13	SMSG	Documentation is needed
3.6.14 Follow-up activities are implemented to collect information for non-response adjustment	12.14	SMSG	This done only for major censuses
3.6.15 A sound methodology is in place for imputation that has been developed based on scientific principles	12.15	SMSG	This is done on an ad-hoc basis and a more systematic approach is needed
3.6.16 Staff involved in data collection are consulted before developing training materials	12.16	SMSG	Experienced field staff, but interviewers are not consulted

Programme design (GSBPM phases 1 to 3) (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
3.7: Making sure that the statistical programme is cost effective and efficient				
3.7.1	Clear and documented justification for each specific programme exists	11.12	SMSG and TSMP	Documentation is needed
3.7.2	Before contemplating a new data collection, a review of whether current data sources can be used is undertaken.	11.13	SMSG and TSMP	Documentation is needed
3.7.3	On-going review processes are in place to consider whether a particular programme is still operating in the most cost-effective way	11.14	TSMP and Mid-term Reviews	This is done when a new strategic or master plan is prepared or as part of a formal mid-term review
3.8: Managing the burden on respondents				
3.8.1	Mechanisms are in place to assess the necessity to undertake a new statistical survey.	13.6	SMSG	Documentation is needed
3.8.2	Surveys apply sound methods to reduce or distribute the response burden.	13.7	SMSG	Documentation is needed
3.8.3	Surveys apply statistical standards to make it easier to respond to them.	13.8	SMSG and CDOS	Documentation is needed
3.8.4	Respondents are provided with information about the survey and how the information they provide will be handled and used	13.9	SMSG	Documentation is needed
3.9: Making sure that the statistical programme is and remains relevant				
3.9.1	The survey objectives are fully documented based on the needs of the users	14.14	SMSG	This is a practice

Programme design (GSBPM phases 1 to 3) (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
3.9.2	User satisfaction is regularly measured and systematically followed up.	14.15	TSMP	User satisfaction surveys are carried out on a regular basis
3.10: Making sure that the statistics produced by the programme are accurate and reliable				
3.10.1	A quality assurance plan for the programme is prepared that sets out actions to prevent, monitor and evaluate non-sampling errors	15.7	Not in place	Needs to be developed
3.10.2	Where relevant, the revision policy follows standard and transparent procedures in the context of each survey.	15.8	No revision policy in place	This is done on an ad-hoc basis
3.11: Making sure that the statistics produced by the programme are timely and available to users with a minimal delay				
3.11.1	Explicit consideration is given to overall trade-offs between timeliness and other dimensions of quality during the programme design stage.	16.11	SMSG	Documentation is needed
3.11.2	The possibility and usefulness of releasing preliminary data is considered, taking into account the data's accuracy	16.12	SMSG	Documentation is needed
3.11.3	Contingency plans exist to deal with emerging problems that could delay the release of data.	16.13	SMSG	Documentation is needed
3.11.4	Realistic schedules are defined for the production processes	16.14	SMSG	Documentation is needed
3.11.5	The maximum acceptable amount of time that can elapse - between the end of the reference period and the availability of the data – is specified and is known to staff and users.	16.15	SMSG and June 2010 Dissemination and Pricing Policy	This is done on an ad-hoc basis and a more systematic approach is needed

Programme design (GSBPM phases 1 to 3) (cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
3.12: Making sure that the statistics produced by the programme are accessible and clear to users			
3.12.1 Consideration has been given to trade-offs between accessibility and confidentiality during the programme design stage	17.18	SMSG	Documentation is needed
3.12.2 A strategy has been developed and agreed with stakeholders for the release of data, metadata and, where possible, microdata from the data collection	17.19	Not in place	A strategy needs to be developed
3.12.3 Processes are in place to ensure that metadata are documented according to standardized metadata systems, and are regularly updated.	17.20	SMSG	NBS has standards for metadata or a systematic way of recording and archiving metadata. However, more documentation and guidelines are needed
3.13: Making sure that the statistics produced by the programme are coherent and can be compared with other sources and over time			
3.13.1 The common repository of concepts, definitions and classifications is consulted when designing a new individual statistical programme/domain	18.12	CDOS	Documentation is needed
3.13.2 Before a new statistical programme is designed, any major related statistics are analysed	18.13	SMSG	This is done on a regular basis and a more systematic approach is needed

Part 4: Programme implementation (GSBPM Phases 4 to 7)

Part 4 of the Framework covers the implementation phases of individual statistical programmes; it is concerned with activities such as data collection, data processing, data analysis and the dissemination of the various final products to users. It includes 61 different quality elements in 10 different sections as follows.

- 4.1 Managing relations with data users and providers, focusing mainly on dissemination;
- 4.2 Managing standards for the implementation of statistical programmes;
- 4.3 Assuring the confidentiality and security of statistical data when the results and micro-data are disseminated;
- 4.4 Improving the quality of the implementation of the statistical programme;
- 4.5 Making sure that the statistical programme is implemented in a cost effective and efficient way;
- 4.6 Making sure that the outputs from the statistical programme remain relevant to users;
- 4.7 Making sure that the statistics produced by the programme are accurate and reliable;
- 4.8 Making sure that the statistics produced by the programme are timely and available to users with a minimal delay;
- 4.9 Making sure that the statistics produced by the programme are accessible and clear to users;
- 4.10 Making sure that the statistics disseminated by the programme are coherent and can be compared with other sources and over time.

Programme implementation (GSBPM Phases 4 to 7)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
4.1: Managing relations with data users and providers				
4.1.1	User support services are in place so that prompt assistance is given to users to help them access and interpret the data.	2.25	June 2010 Dissemination and Pricing Policy	User support services are available from NBS but only on an ad-hoc basis.
4.1.2	Information on the methodology of statistical processes and the quality of statistical outputs is available and provided.	2.26	SMSG and CDOS	Metadata are prepared and available for some, but not all statistical processes. Need to extend to all statistical processes
4.1.3	Processes are in place for assuring the confidentiality of data from individuals, businesses or other entities in administrative records	2.27	Statistics Act 2002 and SMSG	Documentation is needed
4.2: Managing standards for the implementation of statistical programmes				
4.2.1	The agency uses appropriate conceptual frameworks, such as the SNA, that provide a basis for consolidating statistical information	3.12	SMSG and CDOS	Documentation is needed
4.2.1	The managers of statistical programmes are held accountable for applying appropriate statistical standards.	3.14	SMSG and CDOS	Documentation is needed
4.2.3	Plans for the development and application of new standards are communicated to managers responsible for statistical programmes well in advance.	3.16	SMSG and CDOS	This is not done systematically
4.2.4	Statistical programmes collect and retain information at the fundamental or most detailed level of each standard classification in order to provide maximum flexibility in aggregation and to facilitate reclassification as needs change	3.17	SMSG and CDOS	Documentation is needed

Programme implementation (GSBPM Phases 4 to 7)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
4.2.5 Statistical products are accompanied by, or make explicit reference to, readily accessible documentation on the statistical standards used	3.18	SMSG and CDOS	Documentation is needed
4.2.6 Periodic reports to senior management are prepared about the extent to which statistical standards are used by the statistical programmes/domains	3.19	SMSG and CDOS	This is done on an ad-hoc basis and a more systematic approach is needed
4.2.7 The statistical standards used are communicated to all potential data users and the public	3.20	SMSG and CDOS	This is done but a more systematic approach is needed
4.3: Assuring the confidentiality and security of statistical data			
4.3.1 Appropriate processes are in place to assess the risk that individual respondents can be identified from the public release of statistics or of microdata, and procedures are applied to eliminate or minimize this risk	7.9	SMSG and June 2010 Dissemination and Pricing Policy	Documentation is needed
4.3.2 Where there is a risk of identification of individuals from the public release of statistics or microdata, and this risk is considered to be above a minimum level, then, depending on the sensitivity of the data, the data or microdata are not disseminated	7.10	June 2010 Dissemination and Pricing Policy	Documentation is needed
4.3.3 All procedures that are taken to eliminate or adequately reduce the risk of identification are properly documented and made available as part of the metadata related to the statistical dataset	7.11	SMSG and June 2010 Dissemination and Pricing Policy	This is done on an ad-hoc basis and a systematic approach is needed
4.3.4 Users are made aware that procedures to eliminate the risk of identification have been implemented, and that this could lead to a loss of information	7.12	SMSG	Documentation is needed

Programme implementation (GSBPM Phases 4 to 7)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
4.3.5 Appropriate physical and information technology security procedures ensure the protection of unit records	7.13	SMSG and June 2010 Dissemination and Pricing Policy	Documentation is needed
4.4: Improving the quality of the implementation of the statistical programme			
4.4.1 Mechanisms are in place to assure the quality of the data collection and editing processes	8.16	SMSG	This is done but a systematic approach is needed
4.4.2 The costs of each stage of the production process are measured	9.10	SMSG and Program Budget	This is a practice
4.4.3 Appropriate management processes are in place to adequately monitor the quality of the data collection and data processing	10.19	SMSG	Documentation is needed
4.4.4 Adequate measures are in place to encourage accurate responses, to follow up on non-response, and to deal with missing data.	10.20	SMSG	Documentation is needed
4.4.5 Appropriate arrangements are in place to make both internal and external consistency checks of data, with corresponding correction or adjustment strategies	10.22	SMSG	Documentation is needed
4.4.6 Information on costs and efficiency of operations are assembled to inform future design decisions	10.23	SMSG	Documentation and a standardized way of costing are needed
4.4.7 Management information is available to manage and monitor all aspects of the collection phases	10.24	SMSG	Needs to be done a systematic manner
4.4.8 Contingency plans exist in case problems emerge	10.25	SMSG	Documentation is needed

Programme implementation (GSBPM Phases 4 to 7)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
4.4.9 For all major data collections, assessments are done in respect of: coverage of the population against the target population; the sampling error; non-response rates; and any other serious accuracy or consistency problems	10.26	SMSG	Documentation and a systematic way of doing this is needed
4.5: Making sure that the statistical programme is implemented in a cost effective and efficient way			
4.5.1 The use of information and communications technology is optimized for data collection, processing and dissemination	11.15	SMSG	It is done partially, there is a need to extend to all programs
4.5.2 Every effort is made to minimize the reporting burden, consistent with the principal purposes for which the statistics will be used	11.16	SMSG	This is done but a systematic approach is needed
4.5.3 Routine clerical operations are automated wherever possible.	11.17	SMSG	Documentation is needed
4.5.4 Training materials and manuals are carefully designed and are prepared so as to improve the skills of field staff	12.17	SMSG	This is a practice
4.5.5 The list of respondents' contact information is regularly updated	12.18	SMSG and CDOS	This is done for business establishments and some other programs
4.5.6 All the main statistical activities are communicated and advertised in order to increase awareness and trust among respondents.	12.19	SMSG	Documentation is needed
4.5.7 Staff involved in data processing are trained and are familiar with the principles of confidentiality of data	12.20	SMSG and Statistics Act 2002	This is a practice

Programme implementation (GSBPM Phases 4 to 7)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
4.5.8 The format of different databases is compatible with different statistical software that is used for compilation and data analysis	12.21	SMSG	This is a practice
4.5.9 Data capture and data collection instruments are tested and adjusted prior to the actual field operation or data collection process	12.22	SMSG	This is a practice
4.5.10 Unique record codes and identifiers are created for the purpose of record linkage with other sources of information	12.23	SMSG	This is a practice
4.5.11 Proper follow-up procedures are planned for filling data gaps and handling inconsistencies.	12.25	SMSG	Documentation is needed
4.5.12 Data editing is repeated after each stage of data processing, including imputation	12.26	SMSG	This is a practice but a systematic approach is needed
4.5.13 When weighting is required, a weight is associated to each sampled unit in the database after the data processing is completed.	12.27	SMSG	This is a practice but documentation is needed
4.5.14 Activity and cost indicators are produced and properly documented in order to be used in monitoring and managing both current and future collection processes	12.28	SMSG	This is done but a systematic approach is needed
4.5.15 Standard practices for responding to respondents' requests and complaints have been defined and are followed	13.10	Not yet in place	Needs to be developed

Programme implementation (GSBPM Phases 4 to 7)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
4.6: Making sure that the statistical programme is and remains relevant				
4.6.1	Editing and other statistical quality control measures are consistent with the needs of the most important users	14.16	SMSG	This is done but a systematic approach is needed
4.6.2	Statistical products are aligned with users' needs	14.17	SMSG	This is a practice
4.6.3	Users are informed about known gaps between the statistical concepts used in the statistical programme and the concepts that are of most interest to users	14.18	SMSG	This is done but a systematic approach is needed
4.6.4	Metadata are described and made available to users	14.19	SMSG	Documentation is needed
4.7: Making sure that the statistics produced by the programme are accurate and reliable				
4.7.1	Statistical procedures for analysis and compilation employ internationally recognized statistical techniques.	15.9	SMSG	This is a practice
4.7.2	Data sources are systematically checked, and the data that are used are compared with data from other sources.	15.10	SMSG	Documentation is needed
4.7.3	Results are compared with other sources of information in order to ensure their validity	15.11	SMSG	Documentation is needed
4.7.4	Periodic reports on data quality are prepared and published	15.12	SMSG	This is done but a more systematic approach is needed
4.7.5	Methods and tools for preventing and reducing non-sampling errors are in place and are used	15.13	SMSG	Documentation is needed
4.7.6	Sampling and non-sampling errors are measured, evaluated and systematically documented	15.14	SMSG	More on non-sampling errors needs to be done

Programme implementation (GSBPM Phases 4 to 7)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
4.7.7 Statistical discrepancies in intermediate data are assessed and investigated	15.15	SMSG	Documentation is needed
4.7.8 Preliminary and revised data are clearly identified.	15.16	SMSG and June 2010 Dissemination and Pricing Policy	Documentation is needed
4.7.9 Information on the size and direction of revisions for key indicators is provided and made public	15.17	June 2010 Dissemination and Pricing Policy.	Needs to be developed
4.8: Making sure that the statistics produced by the programme are timely and available to users with a minimal delay			
4.8.1 Agreements are made with data providers about the schedule for the delivery of data	16.16	Not yet in place	This needs to be developed and extended to all data providers
4.8.2 Procedures exist that ensure the effective and timely flow of data from providers.	16.17	Not documented	This is done on an ad-hoc basis and a more systematic approach is needed
4.8.3 When preliminary data are released, they are clearly identified as such, and users are provided with appropriate information to be able to assess the quality of the preliminary data.	16.19	June 2010 Dissemination and Pricing Policy	This is done but a more systematic approach is needed
4.8.4 A published policy exists that describes the revisions for those key outputs that are subject to scheduled revisions.	16.20	June 2010 Dissemination and Pricing Policy.	Needs to be developed
4.9: Making sure that the statistics produced by the programme are accessible and clear to users			
4.9.1 The mix of printed publications, electronic releases and data available on request is considered to be appropriate, given the needs of the principal users	17.22	June 2010 Dissemination and Pricing Policy	This is a practice

Programme implementation (GSBPM Phases 4 to 7)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
4.9.2	Statistics are presented in a clear and understandable manner	17.23	June 2010 Dissemination and Pricing Policy	This is a practice
4.9.3	Explanatory texts that accompany the data are reviewed for clarity and readability	17.24	June 2010 Dissemination and Pricing Policy	Documentation is needed
4.9.4	Meaningful comparisons are included in the publications when appropriate	17.25	June 2010 Dissemination and Pricing Policy	This is a practice
4.9.5	Users are informed about the methodology of the statistical processes and the use of administrative data	17.26	SMSG	Documentation is needed
4.9.6	Different levels of metadata detail are made available to users to meet their requirements	17.27	June 2010 Dissemination and Pricing Policy	This is done but a more systematic approach is needed
4.9.7	Policies are in place for archiving statistics and metadata	17.30	June 2010 Dissemination and Pricing Policy	Documentation is needed
4.10: Making sure that the statistics produced by the programme are coherent and can be compared with other sources and over time				
4.10.1	Specific procedures and guidelines are in place to ensure that outputs are internally coherent	18.14	SMSG	Documentation is needed
4.10.2	Changes in methods are clearly identified and measured to facilitate reconciliation	18.15	SMSG	Documentation is needed
4.10.3	Breaks in the series are explained and the methods for ensuring reconciliation over a period of time are made publicly available	18.16	SMSG	This is done on an ad-hoc basis and a more systematic approach is needed

Part 5: Post collection and evaluation (GSBPM Phases 8 and 9)

Part 5 of the Framework looks at how quality is maintained and improved for activities within individual statistical programmes at the post collection stage. These activities are mostly concerned with the archiving of data and metadata and evaluating programmes from time to time. There are 22 quality elements divided into 8 categories or sections as follows.

- 5.1 Evaluating the usefulness of the programme;
- 5.2 Evaluating the standards used for the programme;
- 5.3 Monitoring the use of micro-data, especially when these have been made available for further research and analysis outside the agency;
- 5.4 Evaluating the quality of the statistical programme;
- 5.5 Evaluating the relevance of the statistical programme;
- 5.6 Evaluating the accuracy and reliability of the data generated by the statistical programme;
- 5.7 Evaluating the timeliness and accessibility of the data generated by the statistical programme;
- 5.8 Evaluating the extent to which the statistics produced by the programme are coherent and can be compared with other sources and over time.

Post collection and evaluation (GSBPM Phases 8 and 9)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
5.1: Evaluating the usefulness of the programme			
5.1.1 It is possible for stakeholders to evaluate whether a statistical product is needed	2.28	User satisfaction surveys	This is done on an a regular basis, but a more systematic approach is needed
5.2: Evaluating the standards used for the programme			
5.2.1 Statistical standards are reviewed regularly and revised, if necessary, to ensure that they remain relevant, coherent and clear	3.21	CDOS	Documentation is needed
5.3: Monitoring the use of micro-data			
5.3.1 The use of microdata sets are monitored to identify whether data confidentiality may have been compromised and, if so, immediate action is taken to redress the situation	7.14	June 2010 Dissemination and Pricing Policy	This is not yet done, but is important
5.4: Evaluating the quality of the statistical programme			
5.4.1 Metadata and indicators of quality are provided to users to help them assess the quality of the released data	8.17	SMSG	This is done on an ad-hoc basis and a more systematic approach is needed
5.4.2 Where relevant, outside experts are called in to conduct quality reviews	8.18	SMSG	Documentation is needed
5.4.3 Mechanisms are in place to collect and follow up on users' reactions and feedback	8.19	TSMP and User satisfaction surveys	This is done but a more systematic approach is needed
5.4.4 User satisfaction surveys are implemented regularly, and their results are made public	8.20	User satisfaction surveys	Documentation is needed
5.4.5 The costs of the statistical production process are accurately assessed	9.12	SMSG	Documentation is needed

Post collection and evaluation (GSBPM Phases 8 and 9)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)
5.4.6 Cost-benefit analyses are conducted	9.13	SMSG	Documentation is needed
5.4.7 Follow up with users is carried out to seek their views on the extent to which the statistical outputs meet their needs	10.28	User satisfaction surveys	This is done but a more systematic approach is needed
5.5: Evaluating the relevance of the statistical programme			
5.5.1 Assessments are undertaken to find out if there were any problematic aspects of the questionnaire design and its implementation.	13.11	Ad hoc	This is done on an ad-hoc basis and a more systematic approach is needed
5.5.2 Where relevant, post-collection evaluations are carried out to obtain feedback that can be used in the planning for future such collections.	14.20	SMSG	This is done but a more systematic approach is needed
5.5.3 Action plans are prepared and implemented to improve relevance and meet emerging needs	14.21	SMSG	Documentation is needed
5.6: Evaluating the accuracy and reliability of the data generated by the statistical programme			
5.6.1 Any errors that are discovered in published statistics are corrected at the earliest possible date and are publicized	15.18	SMSG	This is a practice
5.6.2 An analysis of revisions is performed and used to improve the statistical process.	15.19	Not yet in place	Needs to be developed
5.6.3 Sampling and non-sampling errors are analysed from time to time and improvement actions are taken as a result	15.20	SMSG	This is done partially, a more systematic approach is needed

Post collection and evaluation (GSBPM Phases 8 and 9)(cont'd)

Quality Element	UN NQAF Element	Link to existing policy, guidelines or practice	How the quality element is assured and recommendation (if any)	
5.7: Evaluating the timeliness and accessibility of the data generated by the statistical programme				
5.7.1	Indicators of timeliness and punctuality are calculated regularly and are monitored, published and followed up	16.21	SMSG	This is done on an ad-hoc basis and a more systematic approach is needed
5.7.2	Assessments are carried out from time to time to ensure that the arrangements for disseminating official statistics are meeting user needs	17.31	TSMP and User Satisfaction Survey	Documentation is needed
5.7.3	User-oriented quality reports are made available to keep users informed about the quality of the statistical outputs	17.32	Not in place	Needs to be developed
5.8: Evaluating the extent to which the statistics produced by the programme are coherent and can be compared with other sources and over time				
5.8.1	Effects of changes in methods on published statistics are assessed and appropriate information is provided to users	18.17	SMSG and CDOS	This is the practice, but more documentation is needed
5.8.2	Statistical outputs are compared with other data sources and divergences are identified and explained to users	18.18	SMSG and CDOS	This is done but a more systematic approach is needed
5.8.3	Quality reports include a section on internal consistency and comparability over time and make comparisons with other subject matter areas	18.19	SMSG and CDOS	This is done on an ad-hoc basis and a more systematic approach is needed

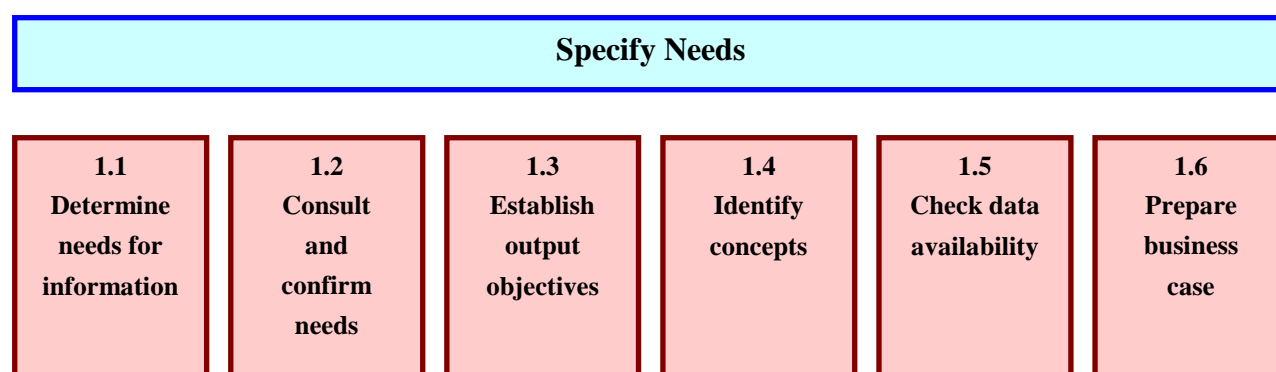
Attachment 1: Overview of the Elements of the UN Generic National Quality Assessment Framework

NQAF Topic		National Statistical System	Agency level	Programme design	Programme implementation	Post-collection evaluation
				GSBPM 1 - 3	GSBPM 4 - 7	GSBPM 8 - 9
NQAF1	Coordinating the NSS	1.1 - 1.10				
NQAF2	Relationships with data users and providers		2.1 - 2.18	2.19 - 2.24	2.25 - 2.27	2.28
NQAF3	Managing statistical standards		3.1 - 3.6	3.7 - 3.11	3.12 - 3.20	3.21
NQAF4	Professional independence		4.1 - 4.10			
NQAF5	Impartiality and objectivity		5.1 - 5.15			
NQAF6	Transparency		6.1 - 6.5			
NQAF7	Statistical confidentiality and security		7.1 - 7.6	7.7 - 7.8	7.9 - 7.13	7.14
NQAF8	The quality commitment		8.1 - 8.11	8.12 - 8.15	8.16	8.17 - 8.20
NQAF9	Adequacy of resources		9.1 - 9.6	9.7 - 9.9	9.10	9.11 - 9.13
NQAF10	Methodological soundness		10.1 - 10.10	10.11 - 10.18	10.19 - 10.27	10.28
NQAF11	Cost-effectiveness		11.1 - 11.11	11.12 - 11.14	11.15 - 11.17	11.18 - 11.19
NQAF12	Soundness of implementation		12.1 - 12.5	12.6 - 12.16	12.17 - 12.28	
NQAF13	Managing the respondent burden		13.1 - 13.5	13.6 - 13.9	13.10	13.11
NQAF14	Relevance		14.1 - 14.10	14.11 - 14.15	14.16 - 14.19	14.20 - 14.21
NQAF15	Accuracy and reliability		15.1 - 15.6	15.7 - 15.8	15.9 - 15.17	15.18 - 15.21
NQAF16	Timeliness and punctuality		16.1 - 16.10	16.11 - 16.15	16.17 - 16.20	16.21
NQAF17	Accessibility and clarity		17.1 - 17.17	17.18 - 17.21	17.22 - 17.30	17.31 - 17.32
NQAF18	Coherence and comparability		18.1 - 18.9	18.10 - 18.13	18.14 - 18.16	18.17 - 18.19
NQAF19	Managing metadata		19.1 - 19.6			

Attachment 2: The Generic Statistical Business Process Model (GSBPM)

The Generic Statistical Business Process Model provides a consistent and comprehensive framework for describing and analysing statistical processes and identifying where improvements are needed. As such, it will provide the basis for the detailed implementation plan for the framework. At the first and second levels it is made up of nine phases, each of which involves a number of sub-processes. These are as follows. The information is based on the UNECE publication Generic Statistical Business Process Model Version 4.0 published in April 2009¹.

Phase 1: Specify needs

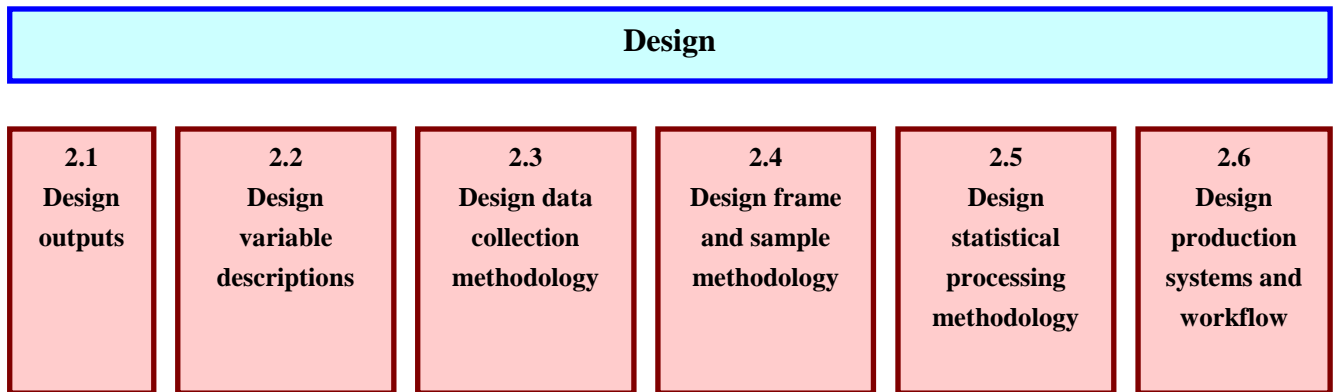


This phase is triggered when a need for new statistics is identified, or feedback about current statistics initiates a review. It determines whether there is unmet demand, externally and / or internally, for the identified statistics and whether the statistical organization can produce them. It involves the following steps:

- Determining the need for the statistics, based on the needs of users;
- Establishing the high level objectives of the statistical outputs;
- Identifying the relevant concepts and variables for which data are required;
- Checking if current collections or other processes can meet these needs;
- Making the case for the resources that will be needed.

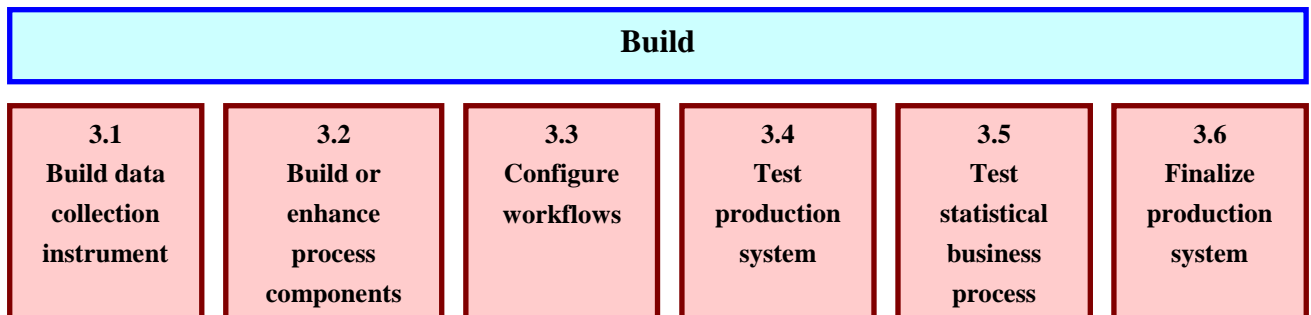
¹ See: <http://www1.unece.org/stat/platform/display/metis/The+Generic+Statistical+Business+Process+Model>

Phase 2: Design



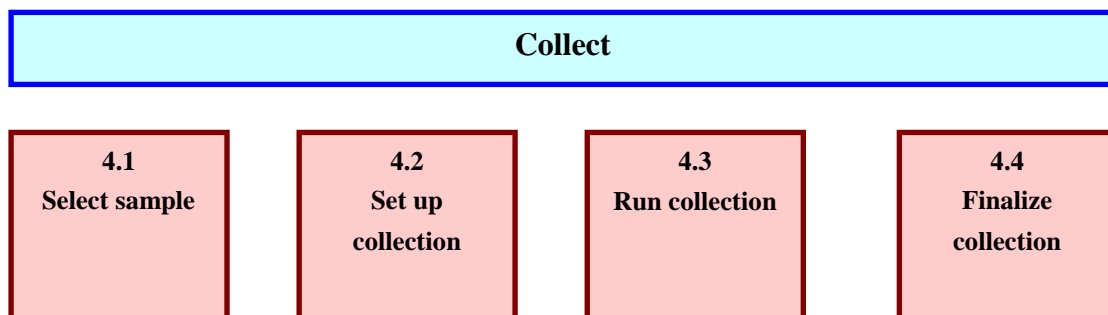
This phase describes the development and design activities, and any associated practical research work needed to define the statistical outputs, concepts, methodologies, collection instruments and operational processes. For statistical outputs produced on a regular basis, this phase usually occurs when the activity is first developed and whenever improvements are identified.

Phase 3: Build



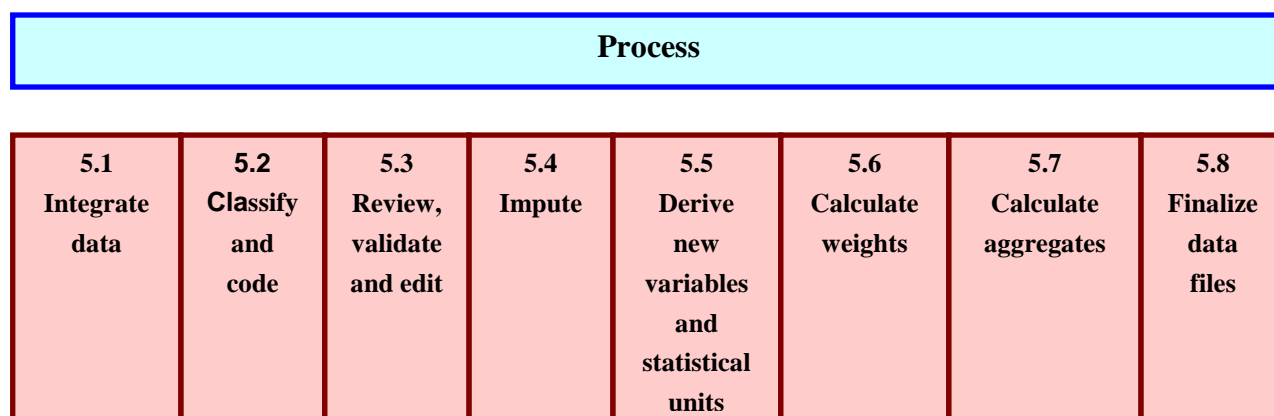
This phase builds and tests the production systems to the point where they are ready for use. For statistical outputs produced on a regular basis, this phase usually occurs for when the activity is first developed and when there is any major change in methodology.

Phase 4: Collection



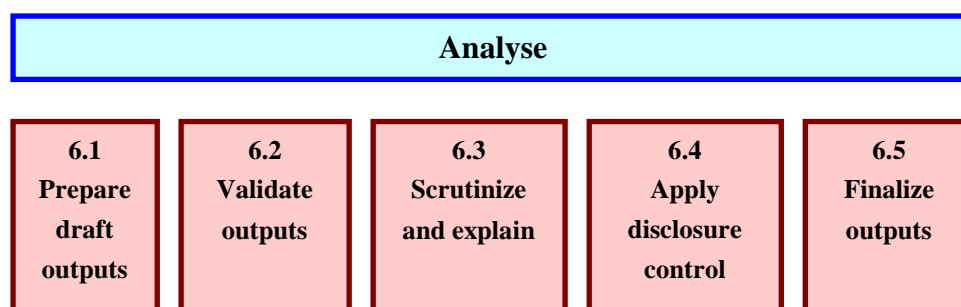
This phase collects all necessary data, using different collection methods (including making use of data derived from administrative and statistical registers and databases), and loads them into the appropriate data processing environment. It does not include any transformations of collected data, as these are included in phase 5 (Process).

Phase 5: Process



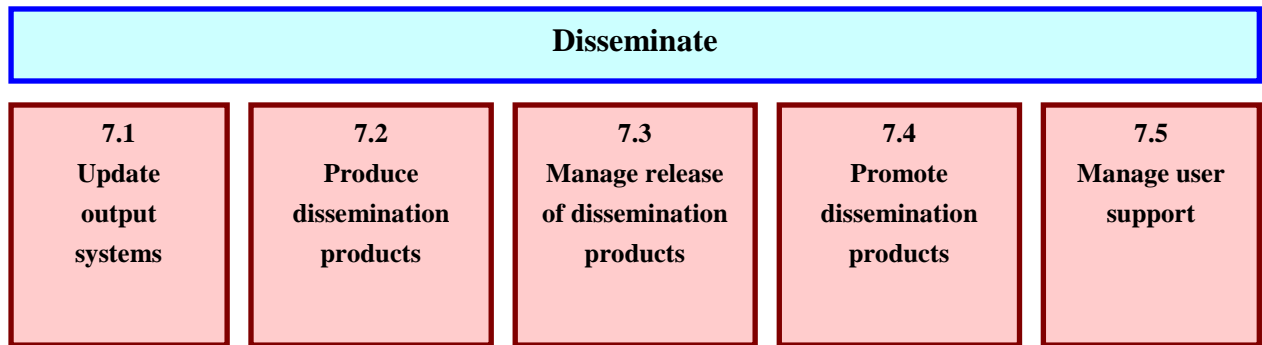
This phase describes the cleaning of the raw data and their preparation for analysis. It is made up of sub-processes that check, clean, and transform the data and may well be repeated several times. In practice, Phases 4 and 5 may proceed in parallel and may involve an iterative process.

Phase 6: Analyse



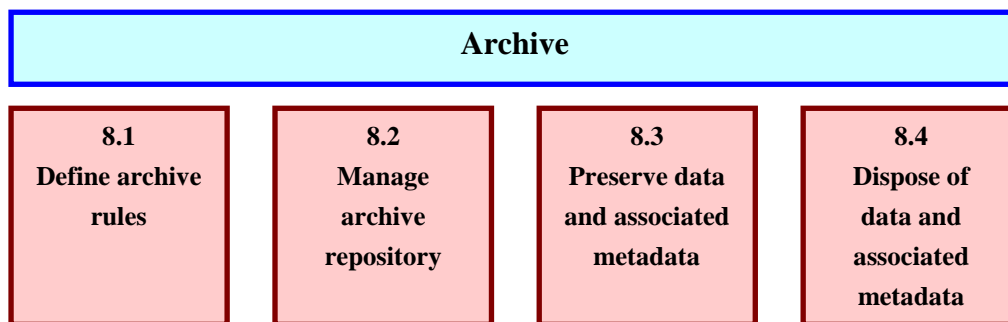
In this phase, statistics are produced, examined in detail and made ready for dissemination. It includes the sub-processes and activities that enable analysts to understand and interpret the statistics produced.

Phase 7: Disseminate



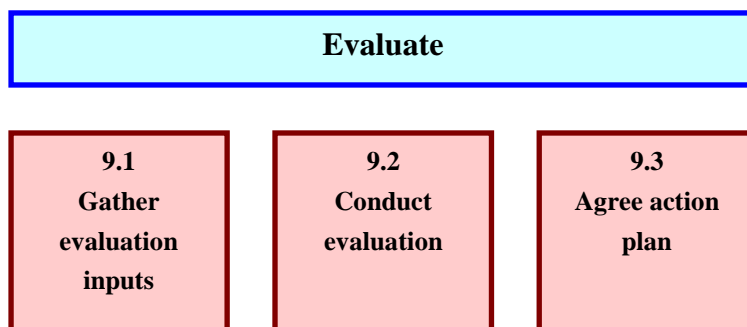
This phase manages the release of the statistical products to user and customers.

Phase 8: Archive



This phase manages the archiving and disposal of statistical data and metadata. Given the reduced costs of data storage, it is possible that the archiving strategy adopted by a statistical organization does not include provision for disposal, so the final sub-process may not be relevant for all processes. In other cases, disposal may be limited to intermediate files from previous iterations, rather than disseminated data.

Phase 9: Evaluate



This phase manages the evaluation of specific statistical processes, as opposed to the more general process of statistical quality management. It logically takes place at the end of the

process, but relies on inputs gathered throughout the different phases. For well-established and regular statistical processes evaluation may not be carried out every time the statistics are generated, but will need to take place from time to time. For other processes evaluation is very important, providing the information needed for planning next time.

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