

Building the System of National Accounts - strategy

Statistics Explained

This article is part of a [set of background articles](#) explaining in some detail how statistics producers, such as national or international statistical institutes, may build a coherent [system of national accounts \(SNA\)](#), especially in developing countries. The articles are based on the official Eurostat handbook [Essential SNA - Building the basics](#) and they focus particularly on the early stages of the implementation.

The [National strategies for the development of statistics \(NSDS\)](#) and the main phases of their elaboration are presented in the first section of this article. In the second section, the [national accounts](#) implementation strategy and the main actions undertaken to achieve it are presented.

National strategies for the development of statistics (NSDS)

The Partnership in Statistics for Development in the 21st Century (PARIS21) was founded in November 1999 by the United Nations, the European Commission, the OECD, the IMF and the World Bank, in response to the UN Economic and Social Council resolution on the goals of the UN Conference on Development. PARIS21's goal is to develop a culture of evidence-based policy making and implementation which serves to improve governance and government effectiveness in reducing poverty and achieving the Millennium Development Goals. PARIS21 pursues this goal by encouraging and assisting low-income, least developed countries to design, implement, and monitor a **National Strategy for the Development of Statistics (NSDS)**. An NSDS is expected to provide a country with a strategy for strengthening statistical capacity across the entire national statistical system (NSS).

Figure 1: What is Paris 21? - Source: Paris 21

Statistics are important since they are used to support policy-making aimed at economic growth, the allocation of resources, monitoring national progress and making government activities more transparent.

	Countries currently implementing a strategy		Countries currently designing a strategy or awaiting adoption		Countries with strategy expired or without strategy and currently planning an NSDS		Countries without a strategy nor planning one		TOTAL
	No.	%	No.	%	No.	%	No.	%	
AFRICA	27	67.5%	12	30.0%	0	0.0%	1	2.5%	40
ASIA and PACIFIC	17	58.6%	6	20.7%	5	17.2%	1	3.5%	29
LATIN AMERICA and CARIBBEAN	2	22.2%	3	33.3%	4	44.5%	0	0.0%	9
EUROPE	3	100.0%	0	0.0%	0	0.0%	0	0.0%	3
TOTAL	49	60.5%	21	25.9%	9	11.1%	2	2.5%	81

Figure 2: Summary table of NSDS status for the International Development Association (IDA) countries (situation at October 2012) - Source: Paris 21, Oct 2012

In many developing countries, the statistical system is fragile and under increasing pressure, mainly due to growing requests from national and international users and the limited technical and human resources available, often devaluing the reliability and integrity of the data provided. Furthermore, as part of government administration, the national statistical office has to work on tight budgets while still ensuring efficiency and productivity.

A crucial condition for ensuring that statistical activities are managed efficiently under these circumstances is to have a clear picture of further development and integrate this into strategic planning.

A number of initiatives and systems that promote best statistical practices and serve as a framework for strategic planning have been developed over the past few years by international organisations. They are meant to help countries to build a realistic statistical strategy. Among these, it is important to highlight the following examples.

- [Fundamental principles of official statistics](#) , adopted by the United Nations Statistical Commission, setting out guidelines on the fundamental values and principles to be followed for producing useful, high-quality statistics deemed reliable by data users.
- Drafting and promoting by the [International Monetary Fund \(IMF\)](#) of the [Data quality assessment framework \(DQAF\)](#) , which provides a more detailed structure for assessing the quality of statistics, from the institutional framework to the [dissemination of data](#) .
- [The PARIS21 Statistical capacity building indicators \(SCBI\)](#) , based on the DQAF, help countries to identify strengths and weaknesses in their national statistical systems and facilitate communication and coordination among development partners by providing common yardsticks for countries' statistical capacity needs (see Figure 3).
- Other international, regional, and sectoral frameworks contribute to the building capacity and output of the National statistical system (NSS), including the [Multi-annual integrated statistical programme \(MISP\)](#) developed by the statistical office of the [European Union](#) , Eurostat, in cooperation with Eastern European countries and members of the Commonwealth of Independent States.

The main tools put in place by PARIS21 to help countries to implement an NSDS are:

- The **mobilization and leveraging** of resources (both national and international) for implementing NSDSs;
- The establishment of **country-level statistical sub-groups** to co-ordinate statistical system support;
- **Partnership** initiatives (e.g.: Partner Report on Support to Statistics - PRESS) to coordinate donor support to statistics;
- The **co-ordination of all stakeholders** within the National Statistical System (statistical units in sector line ministries, central bank, central statistical office, etc.);
- The production of **statistical advocacy materials** promoting the increased use of statistics in decision-making and the need for a well-financed NSDS integrated into wider development policy frameworks;
- **Peer reviews** focused on strategic planning and National Statistical System governance;
- Production of **guidance and documentation** on strategic statistical planning;
- Provision of **technical assistance** to address issues such as statistical legislation, national statistics councils, training, human resources, etc.;
- Support for special situations in **fragile/crisis** states and **small island developing states**.

Figure 3: Tools offered by PARIS21 to prepare an NSDS - Source: Paris 21

Elaborating an NSDS

The National strategies for the development of statistics (NSDS) approach has been adopted as a new benchmark for planning the strengthening of statistical capacity in response to evolving user needs and priorities. An NSDS is expected to provide a country with a strategy for strengthening its statistical capacity across the entire national statistical system (including national accounts). The NSDS provides a vision for where the NSS should be in five years and sets milestones for getting there, offering a comprehensive and unified framework for user needs and statistical capacity assessment and for priorities decision.

Except for the few countries that are not in the midst of an NSDS process (most of them being countries in special situations, such as fragile states or small island economies), the main concern countries have for the immediate future is how to implement an NSDS, through a continuous, flexible and well-managed strategic planning process that will both build statistical capacity and generate the data needed to support their progress.

Before putting in place an NSDS, an analysis of the strengths and weaknesses of the national statistical system has to be carried out. The analysis is focused on:

- institutional framework and decision-making processes regarding official statistics (including producer

coordination instruments and confidentiality protection);

- statistical infrastructure (dissemination, networks with users and respondents, statistical registers, analytical capacity, etc.);
- capacity to carry out household and business surveys such as regular data collection;
- access to administrative data;
- capacity to integrate different data sources (e.g. for national accounts or the Millennium development goals indicators);
- staff and their skill level;
- capacity to develop IT tools for statistics;
- capacity to participate in international activities and to integrate activities funded by international donors into national programmes;
- user confidence in the integrity of the national statistical office (NSO) (and in other producers), and in the quality of the results produced.

The main phases for the drafting of the NSDS are the following.

1. *Phase I: Launching the process (NSDS Design road map)*
This first phase is crucial for the drafting of the NSDS. In some countries, the decision to implement the NSDS has to be taken formally by the government, for example, through a decision of the cabinet or the minister with responsibility for statistics. Once the decision has been taken, the agencies leading the preparation of the NSDS will have to draw up a programme, or road map, that will set out in detail what needs to be done, by whom, and when and how it will be financed.
2. *Phase II: Assessment of the current status of the National statistical system*
Once the legal framework has been set, several domains of the NSS have to be assessed. The main areas to be analysed are: user needs, the legal and institutional framework, cooperation, coordination arrangements, existing gaps (methodological or in data quality) in statistical data compilation and finally the statistical capacity to implement new activities.
3. *Phase III: Developing the vision and identifying strategic options*
Based on the statistical assessment, the desired results are agreed and priorities set out.
4. *Phase IV: Preparing the implementation plan*
This phase defines the resources to be allocated for the implementation and the main actions that will be undertaken by the statistical office.
5. *Phase V: Implementation, monitoring and evaluation*
The most important consideration is that the NSDS be seen as a continuously evolving process. To be effective, the statistical system must remain flexible and respond to new demands for data and changing environments. Mechanisms for monitoring and evaluating progress, reviewing the strategy and making modifications (if needed) must be developed to ensure the success of the NSDS over time.

Advocacy for statistics

The success of an NSDS in developing countries is influenced by the advocacy work of managers of the statistical offices.

A well-designed, well implemented and well-financed NSDS will lead to better use of statistics, better decision-making and better development outcomes. NSDS is a great opportunity for statistical advocacy, in particular at its design stage. It is during this phase that very important questions (ownership, actors involved, political support, technical and financial assistance) arise and that need for advocacy action is at its highest. The level of engagement of political leaders will vary upon the political set-up and decision-making process. However, the sooner the political leaders are involved in the process, the better.

The statistical advocacy is a means of convincing policymakers, media, civil society, and representatives of multilateral and bilateral agencies of the importance of statistics in the wider context of development and, in particular, of the necessity for developing countries to have a NSDS as tool for improving NSS.

The main steps to elaborate the advocacy strategies for statistics are detailed below.

1. Deciding the goals for which the advocacy is needed

There could be a number of changes and improvements needed in the statistical office, but the approach will be most effective if it focuses on a few (maybe five or six) of the most desirable for the implementation of the NSDS. These outputs represent the basis for the advocacy strategy.

Some examples of possible goals are:

- elaborate an NSDS;
- implement the action plan developed in the frame of NSDS;
- obtain funds for the development of social statistics as presented in the NSDS;
- produce good quality, timely statistics across NSS;
- develop skills and capacity of staff across NSS;
- develop NSS work plans and financing strategy;
- improve uses of statistics, etc.

2. Identifying the social, political, economic and institutional factors to achieve the goals proposed

The analysis of the current situation in the statistical office and in the country offers the possibility to identify the positive and negative factors that may have an impact on reaching the objectives. Figure 4 presents some possible factors.

3. Identifying the organisations and individuals (internal and external) that can help the change or the improvement

In many cases, putting in place of the desired changes or improvements requires additional staff or funds.

The NSO can apply directly to the Minister of Finance and donors to obtain additional funds and/or indirectly through the media and civil society groups interested in statistical improvement.

4. Deciding the messages for the organisations' and individuals' sensitisation

The type of organisation to which the request for funds is being made influences the content of the messages that the NSO should elaborate and transmit. There are a wide variety of messages that could be put across - Figure 5 presents a selection of them.

5. Defining the ways to deliver the messages

The best ways of getting these messages across to their audiences are decided by taking into account the particular profile of each audience and the ways in which they can support the objectives of the statistical office. Possibilities for the best approaches in each case are displayed in Figure 6.

Positive factors	Negative factors
MDGs and PRSPs have increased demand for monitoring information	Limited resources available to government
Donors becoming more interested in statistics to demonstrate effectiveness of aid; and to monitor budget support	Most donors not supporting statistics
Minister of Finance needs to demonstrate that development (and aid) is working	
High profile statistics (e.g. Consumer Price Index) have raised media and public interest in statistics	Demand for statistics generally low
etc.	etc.

Figure 4: Factors impacting the proposed objectives - Source: Advocating for the National Strategy for the Development of Statistics, Paris 21, OECD, May 2010

Who can influence the change?	Messages
Minister of Finance	<ul style="list-style-type: none"> - Investment in statistics will pay for itself many times over by improving the efficiency of resource allocation - Statistics are needed to manage the way that results of government policy are presented and analysed - Statistics are useful for the social policy of the government - Statistics are important for development planning at the local levels (villages, traditional areas)
Donors	<ul style="list-style-type: none"> - Better statistics will improve allocation and monitoring of aid - Statistics are needed to present, measure and analyze the results of policies
Media (and civil society)	<ul style="list-style-type: none"> - Better statistics will improve means to hold government accountable for its policies

Figure 5: Messages for SNA advocacy - Source: Advocating for the National Strategy for the Development of Statistics, Paris 21, OECD, May 2010

Message to	Messages delivered	
	Directly	Indirectly
Minister of Finance	Demonstrate impact of good statistics (good and bad examples) Deliver quality statistics, subject to budget limitations	Regular media coverage Donor interest in statistics
Donor group	Meeting with DAC donor group Individual donor meetings Make sure donor representatives see statistics that are produced	Regular media coverage
Media (and civil society)	Press releases Interviews with journalists Press briefing/ training sessions Posters, leaflets User-friendly publications	

Figure 6: Ways to transmit the messages - Source: Advocating for the National Strategy for the Development of Statistics], Paris 21, OECD, May 2010

The strategic approach provides a way of thinking and acting which is useful for the managers when developing the statistics advocacy necessary to elaborate and implement a successful NSDS.

Within the NSDS, the implementation or the development of national accounts represents the core objective. As part of the general strategy, the SNA strategy is based on existing conditions; however, it has a decisive impact on the development of the entire statistical system. Its main role within the SNA is to serve as the coordinating framework for statistics because:

- it ensures consistency of definitions and classifications used in different fields of statistics;

- the methodological demands of national accounts require statistics to be developed (for example, in response to the need for estimating the growth rate of the economy based on **GDP** at constant prices, a price system is implemented and developed in the statistical system);
- it provides an accounting framework and ensures the numerical consistency of data from different sources (statistical and administrative); thus errors in the statistical indicator calculations can be detected;
- requests to harmonise the SNA will determine the nature of the revisions and improvements made to all related statistical systems, such as financial statistics or **balance of payments statistics** .

The 2008 SNA implementation strategy

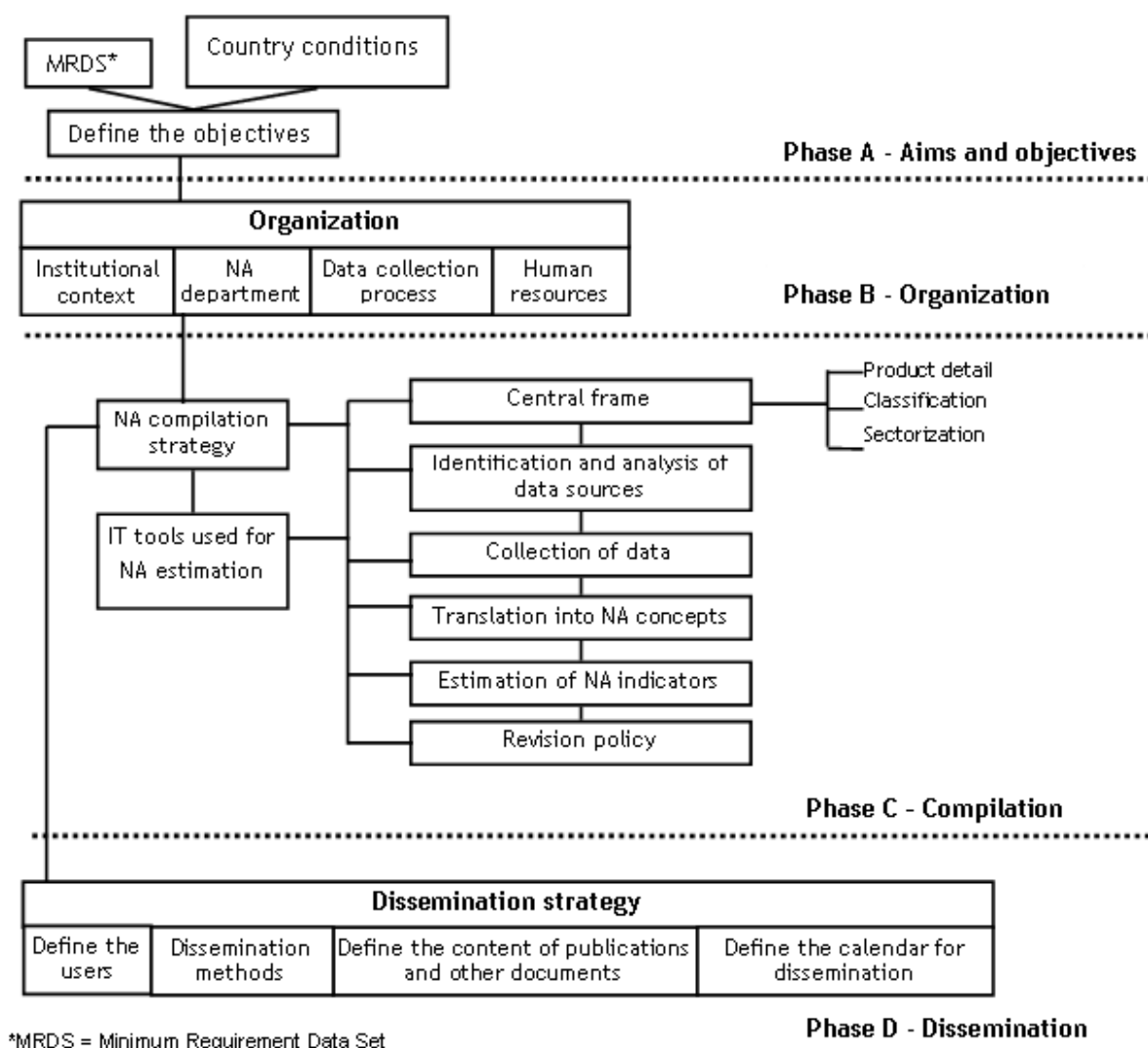


Figure 7: The SNA implementation strategy

The **2008 System of National Accounts** serves as the general conceptual framework for the compilation of national accounts. The ways of implementing the system vary greatly and depend on the general strategy adopted for the statistical system. A strategy for implementing the SNA comprises the following phases (presented in Figure 7):

1. Phase A: Aims and objectives
2. Phase B: Organisation
3. Phase C: Compilation
4. Phase D: Dissemination.

Phase A: Aims and objectives

The first stage of the strategy entails the definition of the aims and objectives for implementing the 2008 SNA. The general aim is the implementation of SNA while the objectives refer to the specific results to be achieved during a defined period (3-5 years).

The decision about which objectives a country wants to achieve should be based on an in-depth analysis of the local situation. It is helpful to present some important factors to be taken into consideration when deciding which objectives to achieve:

- the country's statistical capacity for providing the data sources required for compiling national accounts;
- the human resources (number and level of knowledge) capable of implementing and developing national accounts;
- the possibility of using financial data (i.e. business accounts) from the formal sector and the ability to translate this information into national accounts indicators by activity or institutional sector;
- the structure of the economy, especially the extent of the informal sector and the ability to cover it with existing data sources.

Generally, implementation of SNA starts with the compilation of GDP by production and expenditure, because some of the data sources needed exist in almost all countries, and the result, the GDP, represents the most important national accounts indicator.

The decision on whether to implement the SNA is based on the following considerations.

- Availability of data sources supporting its implementation. The first estimates of national accounts indicators will refer to a period in the past for which data has to be taken as it is, because the sources cannot be improved or new ones introduced. Only after 2-3 years, when the needs for national accounts have been clarified, based on the experience obtained, can improvements to data sources be made. Data sources and users' needs will also determine the breakdown of national accounts indicators by industry, institutional sectors, or by geographical region.
- Institutional capacity of the unit in charge of implementing the SNA.
- Needs of national and international users for national accounts indicators.

For many countries, full implementation of the SNA is not feasible due to the unavailability of some (or many) of the elements just described. Furthermore, implementation of the SNA involves the data collection and [processing](#), which may not coincide with a country's policy priorities at a given moment. For all of these reasons, countries implementing the SNA for the first time will have to decide what targets they want to achieve; to facilitate this task, they can refer to the six 'milestones' adopted by the [UN Statistical Commission](#) (see Figure 8).

Phase of implementation	General description	National accounts indicators	Phase of implementation	SNA related data and development
Pre-SNA phases	Basic data (production etc)		Basic data (production etc.) -Balance of Payments (BOP) of goods and services; - Monetary stock statistics - Price indices (consumer, producer, wholesale)	
Phase 1	Basic indicators of GDP at current and constant prices	- Final expenditures on GDP; - GDP by industry	-Supply and Use worksheets ; -Other BOP transactions (income transfers, capital and financial); -Government Financial Statistics (GFS) transaction accounts.	
Phase 2	GNI and other primary indicators	External account of primary income and current transfers; -Capital and financial accounts for the rest of the world	- Capital stock statistics; - BOP stock statistics; -GFS stock statistics; -Monetary and other financial flow statistics.	- Quarterly National Accounts (QNA); - Regional accounts; - Satellite accounts for environment and other country priority for satellite accounts; - Input-output analysis
Phase 3	Institutional sector accounts: first steps	- Production account for all institutional sectors; -Generation of income; - Allocation of primary income; - Secondary distribution income; - Use of incomes; - Capital accounts and financial accounts for general government	Same as for phase 2	Same as for phase 2
Phase 4	Institutional sector accounts: intermediate steps	- Generation of income; - Allocation of primary income; - Secondary distribution income; - Use of incomes; - Capital accounts for all institutional sectors other than government	Same as for phase 2	Same as for phase 2
Phase 5	Institutional sector accounts: last of the transactions	Financial accounts for all institutional sectors other than general government accounts.	Same as for phase 2	Same as for phase 2
Phase 6	Other flows, accounts and balance sheets	-Other changes in assets accounts for all institutional sectors; -Balance sheets	Same as for phase 2	Same as for phase 2

Figure 8: Milestones for national accounts implementation

The milestones represent the six phases for full implementation of the SNA. A country has reached a particular milestone when it is able to produce a combination of key tables, defined for each milestone. The specific results of SNA implementation reflect the country's ability to produce national accounts data. Three data sets have been

developed to assess the scope of national accounts implementation according to the [1993 SNA](#) . The first set is a defined benchmark called the minimum requirement data set (MRDS). The MRDS is a set of annual accounts that essentially groups together the accounts recommended in milestones 1 and 2. The second set is the recommended data set, which are annual accounts 'recommended' for compilation by all countries plus some 'recommended' quarterly accounts; these are recommended because of their importance in assessing developments of an economy. The third data set is the desired data set, which comprises useful data that should be compiled if possible. In addition, the recommended data set and the desirable data set facilitate scope assessments beyond the threshold of the benchmark.

The data sets of the scope and compliance measures used for the 1993 SNA have also been developed to assess the scope and compliance for the 2008 SNA. However, the need for more timely information to facilitate appropriate policy responses highlights the importance of also including the compilation of quarterly national accounts, which require some adjustments to the scope measure as reflected by the required data set measure.

The MRDS defined for the 2008 SNA implementation take into account the present requirements of the users by including quarterly accounts for the nominal and volume measure of GDP by industry or by expenditure components and the quarterly compilation of the integrated accounts and net lending for the total economy and the rest of the world. The MRDS also include the compilation of annual institutional sector accounts and net lending for the corporate, government, households and non-profit institutions serving households sectors; the quarterly compilation of these sectors is recommended. The data sets to assess the scope of the 2008 SNA implementation MRDS are presented in Figure 9.

NAQ Table number	Indicators	Annual accounts	Quarterly accounts
GDP, value added and employment			
	Nominal and volume measure of GDP by industry or by expenditure components	Minimum Requirement	Minimum requirement
1.1	Expenditures of the GDP in current prices	Minimum requirement	Optional Minimum Requirement
1.2	Expenditures of the GDP in constant prices	Minimum requirement	Optional Minimum Requirement
2.1	Value added and GDP in current prices by industry	Minimum requirement	Optional Minimum Requirement
2.2	Value added and GDP in constant prices by industry	Minimum requirement	Optional Minimum Requirement
2.3	Value-added components by industry, current prices	Minimum requirement	Recommended
	Employment by industry	Minimum requirement	Recommended
Integrated accounts and tables, including integrated satellite accounts			
1.3/4.1	Accounts for the total economy (until net lending)	Minimum requirement	Minimum requirement
	Supply and use table	Recommended	Desirable
5.1	Cross-classification of output/value added by industries and sectors	Recommended	
	Tourism accounts, environmental accounts and other socio-economic accounts	*	
Purpose classification of expenditures			
3.1	General government final consumption (and other) expenditure by purpose in current prices	Recommended	
	General government final consumption expenditure by purpose at constant prices	*	
3.2	Individual consumption (and other) expenditures by purpose in current prices	Recommended	
	Individual consumption expenditures by purpose at constant prices	*	
	Purpose classification of intermediate and final consumption across all sectors		
Institutional sector accounts (until net lending)			
4.2	Rest of the world accounts (until net lending)	Minimum requirement	Minimum requirement
4.3	Non-financial corporations sector accounts (until net lending)	Minimum requirement	Recommended
4.4	Financial corporations accounts (until net lending)	Minimum requirement	Recommended
4.5	General government sector accounts (until net lending)	Minimum requirement	Recommended
4.6	Household sector accounts (until net lending)	Minimum requirement	Recommended
4.7	Non-profit institutions serving households sector accounts (until net lending)	Minimum requirement	Recommended
Financial accounts			
4.1-4.7	Financial accounts for all sectors	Recommended	Desirable
Balance sheets and other changes in asset accounts			
	Balance sheets, revaluation and other volume changes in asset accounts for all sectors	Recommended	Desirable

Note: Minimum requirement indicates an adequate scope of implementation of the 2008 SNA, when relevant. Recommended: recommended for compilation by all countries. Desirable: Useful statistics that should be compiled, if possible. *Other data sets that would count in assessing the degree of 2008 SNA implementation. Tables shown without a number are not included in the annual United Nations questionnaire (NAQ). For the Institutional sector accounts the Household accounts and the non-profit institutions serving households could be presented together.

Figure 9: Scope of the implementation of 2008 System of National Accounts, Data sets - Source: Report of the Intersecretariat Working Group on National Accounts (ISWGNA) to the forty second session (2011) of the United Nations Statistical Commission

Implementation of the 2008 SNA has different objectives depending on the milestone that a country wants to achieve. The following list presents possible objectives for a country that is starting to compile national accounts:

1. Estimating gross domestic product (GDP) by expenditure and production approaches, by industry, producing

main results of:

- the value in current and constant prices of the gross domestic product (GDP) and its elements, as estimated by production and expenditure;
- production, intermediate consumption and **gross value added (GVA)** by industry.
This objective corresponds to milestone 1 and allows the country to meet part of the MRDS (Tables 1.1, 1.2, 2.1, 2.2 and 2.3) (see Figure 9).

2. Estimating the rest of the world accounts, which means fulfilling Table T4.2.
3. Estimating **gross national income (GNI)** and other primary indicators such as: compensation of employees, mixed income, taxes on production.
4. Employment by industry.
These objectives (2, 3 and 4) correspond to milestone 2 and enable the country to achieve the bulk of the minimum requirement data set.
Further development of national accounts involves new objectives.
5. Estimating supply and uses tables (SUTs) and production account and generation of income account by institutional sector.
6. Estimating the full sequence of accounts for institutional sectors; estimating accounts for the rest of the world.
7. Estimating the **financial accounts** for institutional sectors.
8. Estimating balance sheets.

The objectives presented are in order of increasing complexity: the first requires the least amount of data, incorporating a small number of identities (total GDP by production is equal to GDP by expenditure; GDP by production and expenditure is equal to GDP by income) and revealing a limited number of statistical discrepancies (if any) (by way of example, the difference between the value of GDP by production and by expenditure). The more complex the objectives become, the more data is required to compile them. But, complex objectives give a realistic description of the socio-economic structure and development of a country, and they are more suitable for policy and analytical purposes. In particular, they differ in their ability to integrate production analyses with income, financial, fiscal and monetary as well as with social and environmental analyses and policies based thereon.

The decision about which objectives a country wants to achieve should be based on an in-depth analysis of the local situation. It is helpful to present some important factors to be taken into consideration when deciding which objectives to achieve:

- the country's statistical capacity for providing the data sources required for compiling national accounts;
- the human resources (number and level of knowledge) capable of implementing and developing national accounts;
- the possibility of using financial data (i.e. business accounts) from the formal sector and the ability to translate this information into national accounts indicators by activity or institutional sector;
- the structure of the economy, especially the extent of the **informal sector** and the ability to cover it with existing data sources.

Generally, implementation of SNA starts with the compilation of GDP by production and expenditure, because some of the data sources needed exist in almost all countries, and the result, the GDP, represents the most important national accounts indicator.

Phase B: Organisation

Building national accounts for the first time is a demanding task that requires important and constant resources.

The national accounts implementation strategy should not only take into consideration institutional conditions, but also the capacity to provide the financial and human resources as explained below.

Institutional context

The strategy for implementing national accounts is mainly based on a country's political will. Consequently a guarantee of long-term support from the government is essential.

After the legal groundwork has been laid, it is necessary to establish which institution will be in charge of implementing and developing national accounts. There are countries where national accounts are compiled by the national statistical office, others by the Central Bank or by other administrative agencies.

The situation in each country and its institutional history are decisive for entrusting an institution with the responsibility of implementing national accounts. In a large percentage of countries, the national accounts are the responsibility of the national statistical office. The main explanation for this is its proximity to the statistical data sources and the coordinating role generally assigned to the statistical office, by statistical legislation.

Organisational aspects

Regardless of which institution is in charge of compiling national accounts, the crucial issue is the organisation of the activity. It is obvious that such a task requires that the entire national accounts process be properly organised, starting with data gathering, data analysis, translation to national accounts concepts and compilation of the main indicators.

'Efficient' organisation for ensuring the right conditions for SNA implementation refers to:

- the organisation of the national accounts department and deciding the main tasks to be performed for the compilation of national accounts that the statistical office and other administrative institutions are involved in (for example, the preparation of government accounts by the Ministry of Finance or the financial accounts drawn up by the Central Bank);
- mobilising and developing human resources;
- organising and establishing cooperation within the statistical office and with other administrative institutions for data collection or exchange.

Organising the national accounts department

In a small statistical office, it may be advisable to place the national accounts at the heart of its economic statistics. The basic data needed for national accounting are wide ranging, such as the output of different activities, labour market statistics, household statistics, company business accounts, etc. Implementation of national accounts requires the following.

- The existence of basic conditions: the [Statistical business register](#) , and [classifications](#) ;
- The elaborating of important statistics, such as economic statistics, household statistics, prices, etc.;
- The establishment of proper coordination and cooperation between different departments in the statistical office. Cooperation should be directed not only at ensuring the data sources needed for compiling national accounts, but also for laying the groundwork for developing statistics in the office. Thus, the national accounts department may be quite small, relying on the participation of specialists from other departments where necessary;
- The establishment of cooperation with other administrative institutions in order to access the data required for compiling national accounts.

Countries in phase zero of implementing the SNA should pay special attention to making sure the department is organised so as to make efficient use of human resources. The organisation will take into consideration the main objectives, primarily focusing on reaching the next phase, phase 1, the capacity to compile GDP data by production and expenditure.

The typical tasks of a national accounts department are listed below.

- Collecting statistical and administrative data sources.

- Translating the statistical and administrative data sources into concepts of national accounts. This task may be done by the national accounts department in cooperation with other departments of the statistical office and with experts from other institutions such as the Central Bank (for the financial sector and rest of the world) and the Ministry of Finance (for government statistics.). It is important to note that very often the staff of the national accounts department are the most important and knowledgeable users of statistical and administrative data.
- Elaborating national accounts indicators.
- Preparing publications and other documents for the dissemination of national accounts.
- Making proposals and taking actions to improve data sources and compilation methods to meet SNA requirements as far as possible.

Implementation of the SNA is quite complex; to ensure efficient and coordinated coverage of methodological issues, a certain level of specialisation among staff members is necessary.

Staff specialisation is determined by the main tasks of national accounts department. Depending on the objectives set, the tasks may refer to: elaboration of GDP by production and expenditure approaches, at current and constant prices, compilation of GDP by income approach, elaboration of the SUTs, estimation of institutional sectors accounts, etc.

Proper integration of the SUTs and the sector accounts undoubtedly demands a certain level of knowledge of SNA methodological requirements, compilation practice, economic characteristics, etc. from those in charge. In this context, national accountants should be very well acquainted with the theoretical and practical problems involved in the compilation process. Sometimes, a person can combine specialisation in the compilation of a transaction (for example estimating production and intermediate consumption of public administration with the estimation of the final consumption of government). For other difficult tasks, such as balancing, [reconciliation](#) and final estimation of national accounts indicators, it is advisable to assign experts with experience and wide-ranging knowledge of methodological requirements and the characteristics of the economy. A list of possible expert specialisations is shown in Figure 10.

TASKS	REQUIREMENTS	ENVISAGED NUMBER OF STAFF
Production, intermediate consumption and gross value added by main activity at current and constant prices (agriculture, mining, manufacturing industry, electricity, construction, transport, communication services, financial services, other services)	The experts may be responsible for one (such as agriculture, or manufacturing industry, or construction, etc.) or several related branches (such as construction and raw materials, construction industry, or agriculture and food industry, etc.)	3-5
Government indicators	The expert may be responsible for drawing up production, intermediate consumption, GVA of public administration and final consumption of government statistics	1
Household Final Consumption	Specialization relating to household budget surveys and unincorporated enterprises	1
Gross Fixed Capital	The person in charge of the construction sector may also be responsible for the drawing up the GFC; the person in charge of drafting agricultural and industry indicators may also be responsible for estimating change in inventory.	1
Balancing the system and final estimations	Coordinating the activity, experience and good knowledge of national accounts	2

Figure 10: Possible specialisations and staff numbers in a national accounts department

The list is based on the typical tasks of the national accounts department. The number of persons depends on the objectives set for the implementation and development of the SNA, the capacity of the statistical office (including

staff expertise) and the current situation of a country (population size, capacity of the administrative units to provide data, etc.).

The organisation of the work inside the national accounts department is based on staff number and tasks regarded as having an important impact on the results. An example of the work flow is presented in Figure 12.

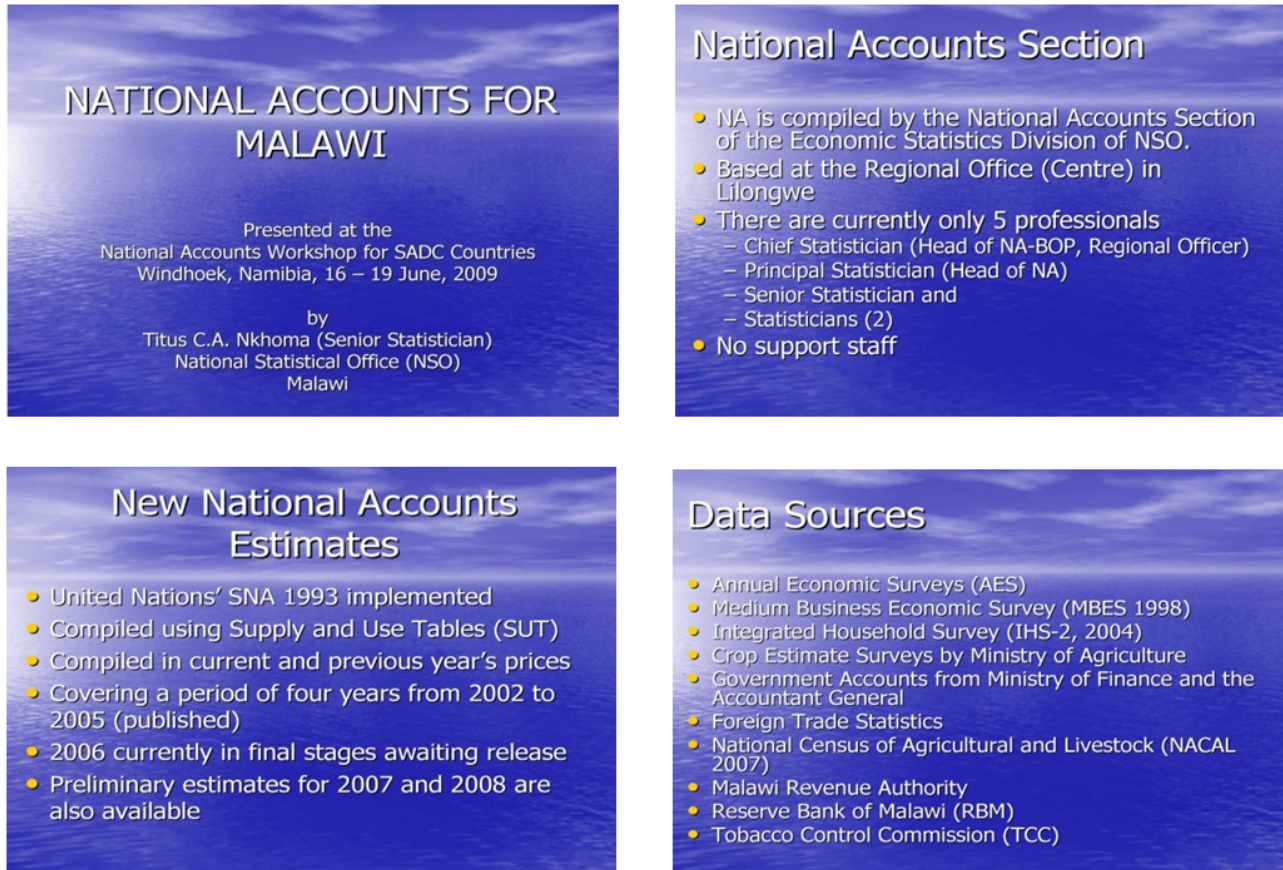


Figure 11: National accounts for Malawi - Source: National Accounts Workshop for SADC countries, 16-19 June 2009, Windhoek, Namibia

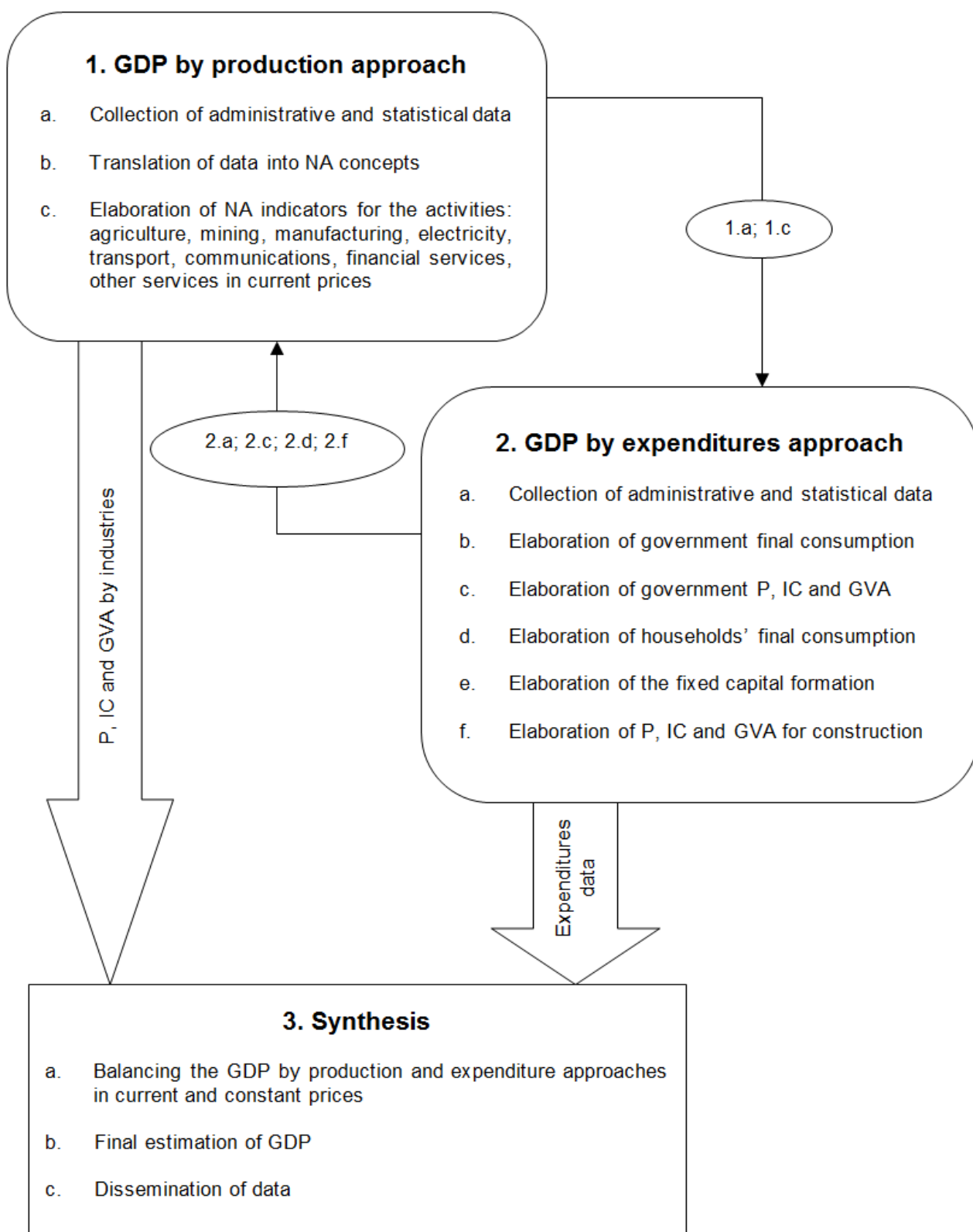


Figure 12: Example of a work flow inside the national accounts department

Due to a lack of human and/or financial resources, it is possible that the necessary staff cannot be mobilised in developing countries wishing to meet the MRDS. Under such conditions, it is important to adapt compilation of national accounts to available staff. One example is presented in Figure 11.

Human resources

The compilation of national accounts requires that the staff involved possess special abilities in different domains: statistics, national accounts methodology, economics, etc. For these reasons, the persons in charge should have the following profile:

- a university education, wherever possible, in economics or statistics;
- work experience in different economic domains;
- ability to understand and apply the SNA methodology;
- good knowledge of economic legislation and economic phenomena in the country;
- good knowledge of the economic and social indicators existing in the statistical and administrative system.

To obtain this high level of professional capability the staff should be permanently trained and supported by the institution management.

Participation in training programmes organised by international or regional organisations and training seminars and workshops on the organisation and management of national accounts and basic statistics (including economic, environment and financial statistics) as well as their application for evidence-based policy making is necessary for building statistical capability in the field of national accounts.

One fundamental principle of official statistics states that 'To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data' (see [the Fundamental principles of official statistics](#)).

In line with this principle and the need to develop a system of national accounts, the professional independence of national accountants must be ensured. This independence refers to:

- the definition of the system and its adaptation to the country;
- the methods used for estimating national accounts;
- access to information, especially when it is protected (fiscal sources, defence information, etc.);
- the treatment and measurement of 'special' aspects of the economy, such as illegal activity (illegal labour, drug production, etc.) that are in fact the weak points of political power;
- responsibility for the main indicators, such as GDP, economic growth rate or revenue distribution, especially when the values are different from government forecasts or expectations.

Organising data collection

Once the SNA implementation strategy objective has been set and the national accounts department organised, the next step is to establish formal relationships for ensuring availability of the data required for compiling national accounts. Data collection for national accounts requires internal and external cooperation with the statistical office.

Statistical data sources are usually provided by different departments within the statistical office (responsible for industrial statistics, foreign trade, agriculture, demographics, education, health, prices, etc.) or even by other institutions. An efficient flow of information from them to the national accounts department has a decisive impact on the quality and [timeliness](#) of national accounts estimations. On the other hand, the methodological requests for the compilation of national accounts are the starting point for developing the overall statistical system.

Collection from administrative data sources depends on the capacity of the statistical office and its relations with

other institutions: data may be collected by a different department (if resources allow for a special department) or by national accountants themselves (it being for them an additional task to their usual workload). Special formal relations based on agreements, protocols or memorandums with administrative institutions ensure access to their data. Even in the event of statistical legislation explicitly stipulating that the statistical office must have access to administrative data, it is necessary to have protocols or memorandums that establish the specific conditions under which data may be collected.

For example, the Ministry of Finance, is one of the most important providers of administrative data, and it can supply data on VAT (monthly, for each economic agent, by main activity, etc.), on capital gains tax, income tax, business account data, income and expenditure of local and central government, etc. Thus it is of the utmost importance that the statistical office should agree a cooperation protocol outlining, in principle:

- the data to be delivered
- the level of detail of the data (individual, aggregated, by region, etc.) and the frequency (monthly, yearly, etc.)
- the data collection method (access to data base, electronic format, paper, etc.).

In this kind of cooperation protocol not only should administrative data be included, but also delivery of statistical indicators by the statistical office. It may be possible that the Ministry of Finance is also interested in having detailed statistical information (such as, for example, household expenditure in order to formulate its policy on subsidies). Thus, the protocol would include data exchange between the two institutions.

INSTITUTION 1
Cooperation protocol

INSTITUTION 2

INSTITUTION 1, address, represented by <name of leadership institute>, <function of leadership institute>
INSTITUTION 2, address, represented by <name of leadership institute>, <function of leadership institute>

Conclude the Protocol, aimed at cooperation in the field of official national accounts statistics with international standards

Here the general considerations regarding the importance of the protocols for each of party will be mentioned

Legal framework: *law / regulation on the organization and functioning of the each institution party in the protocol*
<INSTITUTION 1> and <INSTITUTION 2> agreed to the following:

The objective of the Protocol

Main goal of the protocol

Duration Protocol

Mentioned the duration, in connection with the activities that has to be done

Obligations of parties

Mentioned each activity, with precisely results that have to be done by each party

Notifications/Communication

Mentioned type of communication (written, by telephone, fax, email)

Annexes

Mentioned all the annexes like components of the protocol

Types of annexes:

- *description and structure of data files which are changed between partners*
- *working group responsibilities*
- *nomenclatures for data transmission*
- *deadlines for data transmission*

Figure 13: General structure of a cooperation protocol

Cooperation is important for the statistical office because it allows access to administrative data and at the same time strengthens its position in the economy as the main provider of economic and social indicators.

Phase C: Compilation

The compilation process should take into account resources (e.g. resources for compiling good economic and social statistics, price statistics, for maintaining a reliable business register or for compiling national accounts), policy (continuity and stability in the compilation process, priorities for some parts of national accounts, professional independence), professional skills of the staff (e.g. skills in analysing data and making plausible economic assumptions) and access to statistical and administrative data sources. The compilation process is based on three elements.

- *Accounting identities*, which means exploiting as far as possible the multitude of accounting identities existing in the system, such as: supply is equal to demand (both at current and constant prices); paid taxes should be equal to received taxes, etc. Accounting identities ensure consistency and can act as a plausibility check and permit residual estimates.
- *Assumptions*, essential for combining and completing the basic data set. Many types of assumptions are used, such as: fixed ratios, transition schemes, specific conventions, expert opinions, historical trends and ratios, analogies, etc. Plausible assumptions can remedy to a great extent the absence of data and are preferable to implausible data.
- *Plausibility checks*, which are very important for the reliability of national accounts statistics. Types of plausibility checks are:
 - comparison of different data sources and different estimates;
 - investigation of all 'abnormal' developments and ratios (numerical, conceptual, institutional, economic) by seeking a plausible explanation.

The national accounts compilation strategy is based on:

- definition and organisation of the different phases;
- development of the necessary IT tools.

Definition and organisation of the different phases

The compilation process has its own scope, detail, methods used and working methods, reflected in the design of the phases to be followed. Briefly, the main phases are:

1. Designing the central framework
2. identifying data sources
3. collecting data
4. translating data into national accounts concepts
5. elaborating estimates
6. data revision.

The schematic presentation of the decisional tree to establish the compilation routine for national accounts shown in Figure 14 helps to address the definition and organisation of general compilation phases.

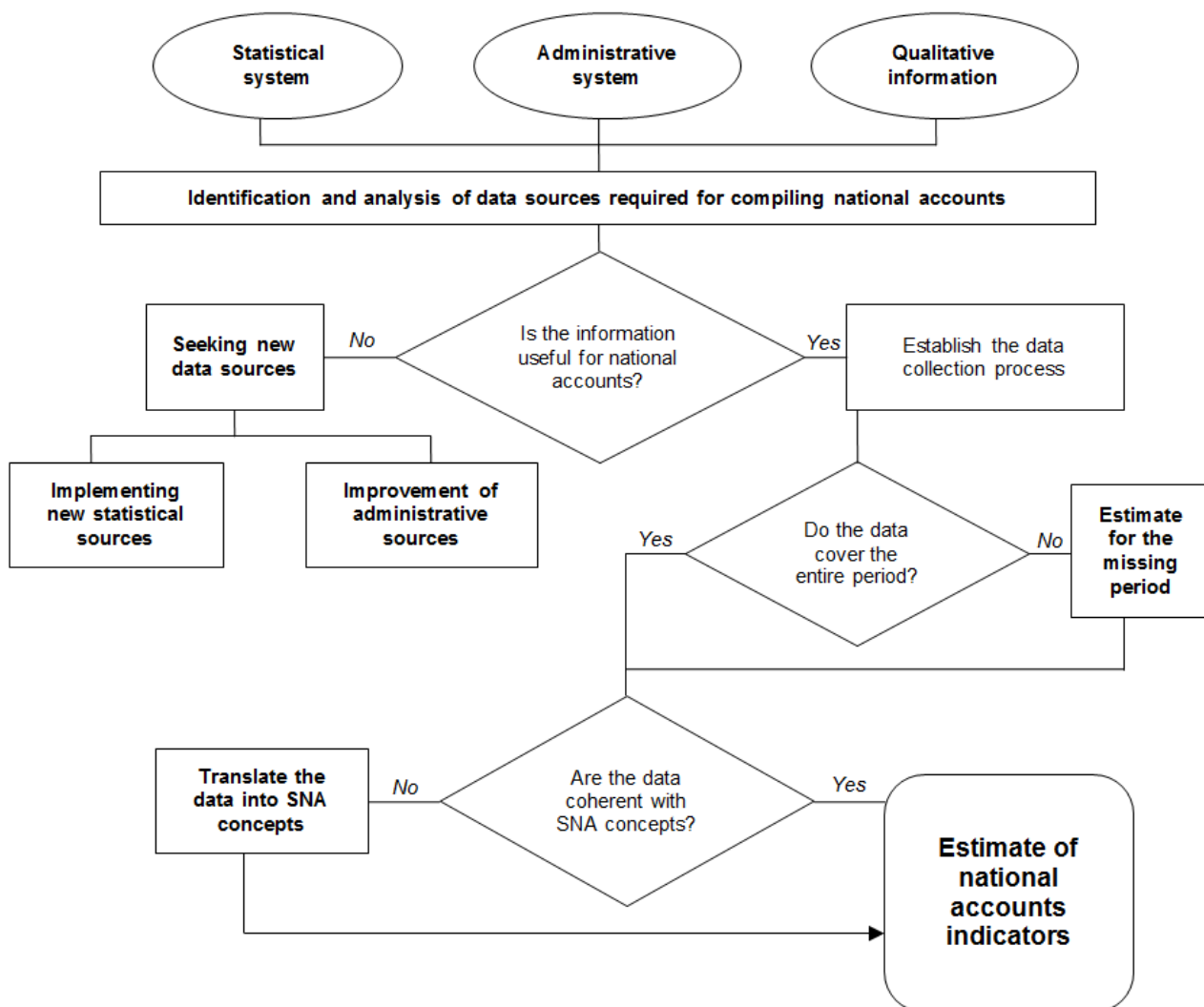


Figure 14: Workflow of national accounts compilation

Designing the central framework

The central framework for compiling national accounts refers to the determination of the four classifications used in the system:

- product detail
- economic activities
- transactions, other flows and stocks
- sectorisation of the economy.

Classification details are based on the strategy aims, objectives set and the country's current situation. The central framework is established according to the development level of the statistical system (including the human resources capability) and the specific needs of the country. The availability of statistical and administrative data reduces or increases the detail of the classifications adopted.

One important activity in this phase is the identification of the key sectors of the economy. If in a country, agriculture, the oil industry or tourism is the main activity, it should be reflected in detail in the estimates made and in the breakdown by industry or institutional sector.

Identifying data sources

The data sources used for compiling national accounts may be specific statistics (statistics on producer sales and production costs, on investment, on employment, wages and salaries, on household expenditures, on consumer prices, on producer prices and interest rates, on imports and exports, etc.) or administrative records (government revenue and expenditure, financial statements of non-financial and financial units, balance of payments, etc.).

In order to identify available information, the existing data sources have to be analysed with respect to national accounts requirements. If the data sources identified are useful for the implementation objectives of the national accounts, the process of collecting data can start.

Data sources may not include all the information needed for implementing the national accounts strategy. For example, statistical information concerning construction and investments may not be available. In this case, depending on the type of information required and the objectives established, two options exist:

- to carry out a rough estimate of the national accounts indicators using poor data sources and indirect information; or
- to halt implementation of SNA until the necessary data sources become available.

It is recommended that countries in phase zero of the SNA implementation define their future actions based on the following.

- Start estimating GDP by production and expenditure (corresponding to the requirements of phase 1), even if the lack of information may affect the quality of the initial results.
- Ensure at the same time that the necessary data sources are developed. To do so national accountants must propose and promote:
 - improvement of the existing statistical data sources to obtain the required information;
 - implementation of new statistical surveys that will provide the missing information;
 - development of collaboration with administrative institutions to improve or develop their data sources.

In the process of compiling national accounts, qualitative information is also relevant. For example, articles in newspapers or specialised magazines may provide qualitative information on developments in the economy (e.g. sales of furniture or software) or specific events (e.g. a large direct investment project or the reorganisation of a national insurance system). This information can be used to complete existing data and to check the consistency of different data.

Collecting data

Data collection requires structured and organised activity, which directly affects the quality of estimates. The main activities that should be organised and carried out are:

- agreements on data delivery: what data will be delivered, in what detail and with what frequency, when and in what format, etc.;
- checks on the data delivered: timeliness, detail and [completeness](#) ;
- data storage in automated systems (spreadsheets or databases) for compiling national accounts;
- searches for other relevant quantitative and qualitative information, e.g. by reading specialised journals, newspaper articles and annual reports of various large companies, organisations, foundations, or by asking corporations, institutions and experts directly.

As part of the compilation strategy, an efficient circuit of data collection internal and external to the statistical office must be established. The main steps in this process are:

- decide what data is to be used for compiling national accounts;
- decide the level of detail of this data;
- how the data will be delivered to the national accounts department: on paper, in electronic format (CD-ROM, by email, etc.) or direct access to the databases of other departments;

- establish the deadline for receiving data.

It is very important for national accountants to respect their own dissemination calendar. For this reason, some of the statistical and administrative data may be provided to national accounts department before being published. It is the case, for example (as statistical source), of the Structural Business Survey: after validating data and achieving final results, the detailed information (with the agreed content and format) may be sent to the national accounts department to be included in the compilation process. At the same time, the department in charge of the Structural Business Survey carries on with the task of disseminating the results of the survey.

Good cooperation between different departments of the statistical office and administrative institutions on the one hand, and the national account department, on the other, will ensure the right conditions for implementation of the SNA.

Translating data into the concepts of national accounts

Statistical and administrative data sources, in the majority of cases, are not consistent with national accounts concepts. Statistical indicators generally convert administrative information into indicators with content not very different from that used in national accounts. However a major difference between economic statistical indicators and national accounts is often product breakdown. Figure 15 provides an example.

In household budget surveys product breakdown can be very limited or rather different from national accounts requirements. Household consumption is collected through various household surveys using the COICOP classification. In order to be used in national accounts, a reclassification to ISIC rev.4 should be carried out. It should be noted that for some COICOP products and groups of products, more than one ISIC activity is needed. Value estimation for each activity is made using other indirect sources or expert knowledge. For example, household 'meat' consumption should be classified under ISIC codes 01 'Agriculture, hunting and related services activities' and 15 'Manufacture of food products and beverages' based on population consumption habits.

COICOP		ISIC rev 4	
Code	Description	Code	Description
0.1.1	FOOD		
0.1.1.1	Bread and cereals	1	Agriculture, hunting and related service activities
		15	Manufacture of food products and beverages
0.1.1.2	Meat	1	Agriculture, hunting and related service activities
		15	Manufacture of food products and beverages
0.1.1.3	Fish and seafood	05	Fishing, operation of fish hatcheries and fish farms
		15	Manufacture of food products and beverages
0.1.1.4	Milk, cheese and eggs	1	Agriculture, hunting and related service activities
		15	Manufacture of food products and beverages
0.1.1.5	Oils and fats	15	Manufacture of food products and beverages
0.1.1.6	Fruit	1	Agriculture, hunting and related service activities
		15	Manufacture of food products and beverages
0.1.1.7	Vegetables	1	Agriculture, hunting and related service activities
		15	Manufacture of food products and beverages
0.1.1.8	Sugar, jam, honey, chocolate and confectionery	15	Manufacture of food products and beverages
0.1.1.9	Food products n.e.c.	15	Manufacture of food products and beverages
0.1.2	NON-ALCOHOLIC BEVERAGES		
0.1.2.1	Coffee, tea and cocoa	15	Manufacture of food products and beverages
0.1.2.2	Mineral waters, soft drinks, fruit and vegetable juices	15	Manufacture of food products and beverages

Figure 15: Conversion tables from COICOP to ISIC – an example - Source: Correspondence of tables of classification, United Nations

For the most part, translating administrative concepts to national accounts concepts is to be performed by national accountants themselves. This applies especially to business accounts, VAT data, personal income tax data, financial statements of financial institutions, revenues and expenditures of general government, and BoP indicators, to name a few. This translation is based on a system of bridge tables at macro-economic levels, and specific adjustments called the intermediate system.

Elaborating estimates

The important phase of the compilation process is estimating national accounts indicators. Several activities are carried out during this complex phase.

- Checking data sources, with respect to:
 - the evolution of the variables over time;
 - consistency of the values and trends of the ratios between different variables in a single data source;
 - plausibility of values and volumes;

- conceptual differences with national accounts indicators;
 - weightings used for grossing up survey results.
- Elaboration of the first estimates of national accounts indicators. If the chosen target is to reach the first milestone (see Figure 8), estimates will focus on GDP and its components at current and constant prices.
 - Inclusion of additional or more complete data and second estimate of indicators. Assumptions play an important role at this stage: they are used to fill gaps and imperfections in the basic data set according to the analysis of economic relationships.
 - Balancing procedures and reconciling data to identify data deficiencies and assist in making the appropriate adjustments to ensure consistency of results. Balancing involves checking the economic consistency of the estimates. This depends on the available accounting framework and national accountants' experience and ability to perform plausibility checks in combination with timeliness for data dissemination.
 - Elaboration of the [final estimates](#) of national accounts indicators.

If statistical discrepancies have been identified during the balancing process and their causes determined, adjustments can be made to the intermediate data or estimation methods. The adjusted data will then be integrated again, leading to a revised set of statistical discrepancies. This data will then be reconciled and reintegrated and so on until all the discrepancies are eliminated. The core of balancing and reconciling data will always depend on the availability and quality of information used and the expertise of the accounting team.

Data revision

In the process of compiling national accounts three important revisions can be made: 1. routine revisions, 2. benchmark revisions and 3. methodological revisions.

1. *Routine revisions* (or current revisions) encompass all changes in national accounts estimates for a particular period from the first to the final estimate. These revisions are in principle based on the availability of new information from data sources used to achieve full comparability in volume and prices changes with the previous year and for all indicators.
2. *Benchmark revisions* (or major regular revisions) are revisions of data sources or methods used for estimation of national accounts indicators. These can affect GDP and can cause discontinuity in time series. It is recommended that, as standard practice, benchmark revisions be carried out every five years.
3. *Methodological revisions* (or major occasional revisions) are normally due to changes in principles of national accounting.

These revisions have several implications for the dissemination of national accounts data as detailed explanations about major changes have to be presented with the data. An example is presented in Figure 16.

Methodological revisions 1995-2004 in Slovenia

In the period since 2000 three methodological revisions have been conducted in Slovenian national accounts and they covered the period back to 1995. Their main purpose was to improve the compilation of GDP according to ESA95 methodology and criteria on exhaustiveness. The main revision points were improvements of data sources and methods.

The main points in methodological or benchmark revisions of March 2003 and April 2004 were: delimitation of market and non-market units together with improvement of institutional sectorization; introduction of new methodology for the estimation of housing services of owner-occupiers; estimation of the consumption of fixed capital (including for public roads, bridges, etc.) by the perpetual inventory method for the general government sector; and improvements of GDP exhaustiveness adjustments and other improvements of methods. With these methodological revisions, all data for the period since 1995 were revised and published.

The last methodological revision was published in September 2005; its main reason was the change in the bookkeeping of financial intermediation services indirectly measured (FISIM), which were allocated to the final users of these services. At the same time, measurement of volume changes at constant previous year prices was introduced.

Also the results of this methodological revision were published for the whole 1995-2004 period.

Table shows the effects of three methodological revisions on nominal GDP level and on the estimate of GDP volume growth rate for 1999, 2000 and 2001. The effects on data for years which are shown in the table are not the same for all years, mostly due to overestimated GDP level for 2000 and 2001 before the revision.

Table with GDP revisions, 1999-2001

	1999	2000	2001
1. Quarterly accounts, mio SIT	3,637,437	4,045,469	14,566,191
Volume growth rates (%)	4.9	4.8	3.0
2. Annual accounts, April 2002, mio n.c.	3,648,401	4,035,518	4,566,191
Volume growth rates (%)	5.2	4.6	3.0
2.1 First methodological revision, March 2003, mio n.c.	3,839,852	4,222,404	4,740,122
Change to the previous GDP nominal level (%)	+5.2	+4.6	+3.8
2.2 Second methodological revision, April 2004, mio n.c.	3,874,720	4,252,315	4,761,815
Change to the previous GDP nominal level (%)	+0.9	+0.7	+0.5
2.3 Third methodological revision, September 2005, mio n.c.	3,918,974	4,300,350	4,799,552
Change to the previous GDP nominal level (%)	+1.1	+1.1	+0.8
Volume growth rates (%)	5.4	4.1	2.7

n.c. = national currency SIT

Figure 16: Example of the methodological revisions impact on GDP - Source: Gross National Income Inventory, Statistical Office of the Republic of Slovenia, 2008

Conclusions

Implementing and developing the compilation of national accounts should take into consideration the following ideas.

- It is not a strict chronological sequence of given steps. In practice, the steps are intertwined, interact strongly, can occur in somewhat different chronological sequences and have recursive loops.
- The compilation process is adapted and adjusted according to data sources, new economic, social and/or political conditions existing in a country and new international requirements in the field of statistics.

Developing IT tools for compiling national accounts

The computer systems used in the framework for compiling national accounts should be flexible and able to cope with the following tasks.

- Store detailed data used for compiling national accounts, relating to groups of economic agents, i.e. industries and sectors in electronic worksheets in their original format.
- Use the worksheets to convert the intermediate data obtained from different sources (censuses, surveys, administrative data sources, and intermediate statistical data) from their specific format to the format of the national accounts and record all adjustments made to the data, thus creating a complete compilation history.
- After conversion to the national accounts format, calculate appropriate national accounts aggregates. Faithful to the principle of the industry and sector orientation, the information for the total economy should be obtained only through aggregation of the resident sectors and industries.
- Check data compatibility across industries and sectors by identifying statistical discrepancies in national accounts identities.
- Provide helpful tools for the final data reconciliation process, e.g. by including data links between worksheets and the central framework tables, so that the impact of adjustments to the data in the worksheets is reflected immediately in the central SNA tables, where remaining statistical discrepancies can be checked.
- Generate working tables that are helpful during the reconciliation process, e.g. transaction matrices in which, for each transaction, other flow or stock, the resources and the uses (or assets and liabilities) of different sectors may be confronted.
- Store final estimates of national accounts and disseminated versions. This enables national accountants to set up a systematic analysis of the reliability of published data.

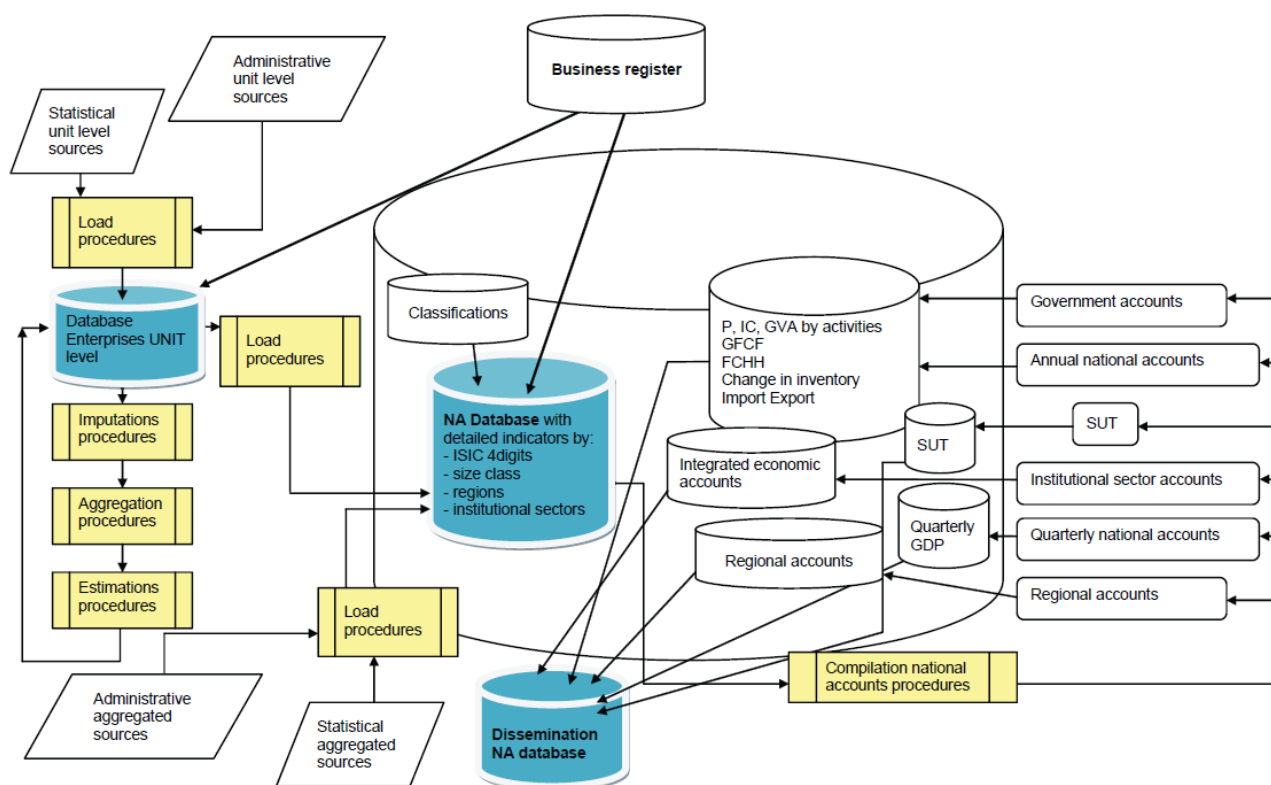


Figure 17: Organisation scheme of IT activity for national accounts compilation

The need for common tools for implementing the SNA worldwide has led to the development of specialised software in national accounts among international organisations and developed countries. Advanced countries have developed tailor-made computer systems based on relational database packages such as: Access, Oracle, SAS, dBase, etc.

There are other known IT tools for compiling national accounts.

- **ERETES** (Equilibres ressources emplois, Tableaux entrées-sorties) is a database software developed by a French consultancy firm at the University of Lyon, in cooperation with the [Institut national de la statistique et des études économiques \(INSEE\)](#) and Eurostat. This software is installed or being installed in approximately 27 countries¹ becoming very popular among developing countries and least developed countries. The system is offered free of charge to users by the co-owners (Eurostat and the French Ministry of Foreign Affairs).
- **IAS** (Integrated Accounts System) is a software program developed by a group associated with the [Institute of Social Studies \(ISS\)](#) in the Netherlands and used in Caribbean countries like Aruba and the Netherlands Antilles.
- **SNAPC** (System of National Accounts on a Personal Computer) is the product of Statistics Sweden and is used in Southern Africa countries and others (e.g.: Belize, Namibia, Laos, Lesotho, South Africa, Zimbabwe, Jamaica and Kenya).

ERETES and IAS include three elements:

- the use of database software (SYBASE, ORACLE and PROGRESS)
- selection of SNA and compilation attributes (transaction categories, sector and industry categories, identification of current or constant prices, data source, etc.)
- worksheets and tables where data conversion and reconciliation takes place.

¹Algeria, Benin, Burkina Faso, Botswana, Brazil, Cameroon, Cape Verde, Central African Republic (RCA), Colombia, Ivory Coast (RCI), Ecuador, Gabon, Ghana, Guadeloupe, Guiana, Madagascar, Mali, Morocco, Martinique, Mauritania, Niger, Nigeria, Peru, Reunion, Senegal, Togo, Tunisia.

Selection of attributes and the design of tables determine how national accounts are compiled. Conditions in each country, statistical capability and available resources determine the strategic decision of whether to use IT tools for compiling national accounts.

Phase D: Dissemination

The main objective of compiling the SNA is to provide comprehensive knowledge of an economy and its structure. The dissemination of national accounts results is an activity as important as the compilation of indicators. Presenting national accounts indicators to the public, adding an analysis, providing useful economic interpretations and understanding the methodology used are an important part of national accountants' tasks.

A dissemination strategy is based on good practices in official statistics adopted by the EU and the UN. The main principles of a statistical dissemination strategy are:

- Statistics must be relevant for users, comprehensive and as detailed as possible in statistical terms, while complying with requirements regarding legislation, confidentiality and quality, and produced in a cost-effective way
- Statistics must be accurate, reliable, consistent and comparable in space and time
- Statistics must be up-to-date and disseminated in a timely and punctual manner
- Statistical information must be released according to a pre-announced schedule and presented in a clear and understandable form to all users
- The confidentiality of disseminated statistical data must be ensured
- Data must be made available on an impartial and objective basis to all users.

Figure 18: Principles of a statistical dissemination strategy - Source: Dissemination Policy, INE, Portugal, 2008

The main steps involved in defining the dissemination strategy are summarised in the following sections: user identification, providing quality data that meets users expectation and establishing a calendar for dissemination.

User identification

Five major user categories stand out by area of activity:

- all levels of government
- international agencies
- the private sector
- research institutions

- the public, including the media.

They can be grouped into two categories with respect to the intensity of statistical use:

- *general data users* : journalists, students, teachers, small businesses who have simple data requirements but from a great range of information;
- *analysis users* : government departments, local authorities, researchers, international organisations with complex data requirements on detailed variables, time series and regional breakdowns.

The demand for national accounts data is different for each category of user. The value of GDP and the growth rate of the economy is the information most utilised by general users. Policy makers, government, researchers, international organisations are interested in the details of national accounts indicators, by activity and institutional sector. To meet these different demands, dissemination of national accounts is made using different channels.

- Press releases, used in general by the media and the general public with the presentation of the main national accounts indicators, such as GDP, its main components and growth rate.
- Detailed information on national accounts by industry or institutional sector is usually presented in the Annual Yearbook of each country. This information can be used by researchers, students or international organisations.
- A special publication with time series of national accounts indicators, with detailed data, accompanied by metadata and sometimes by a short economic analysis based on these indicators. This publication is used for different purposes by government, researchers, academic media or international organisations.
- Electronic dissemination that offers the opportunity to reduce the costs of dissemination and make information more usable and accessible. However, to move to an environment in which documents are disseminated in electronic format, a number of challenges would have to be overcome (such as ensuring that these documents are authentic, permanently maintained, and equally accessible to all individuals).

Providing quality data that meet users expectations

Users expect quality information. If this cannot be provided the user will stop asking for data and try to find it elsewhere. Quality is normally defined in terms of [accuracy](#) , relevance, timeliness, consistency and availability in no specific order.

The IMF uses the Data Quality Assessment Framework (DQAF) in its data modules of the Reports on Observance of Standards and Codes (data ROSCs) as a tool to evaluate the quality of country practices in producing macroeconomic statistics. The DQAF comprises six dimensions:

- Prerequisites of quality includes organizational aspects;
- Assurances of integrity covers objectivity in collecting, processing and disseminating statistics;
- Methodological soundness analyses the standards adopted in the compilation process;
- Accuracy and reliability covers the data sources and statistical methods used in compiling the statistics;
- Serviceability deals with fitness for use criteria, such as periodicity and timeliness, temporal and internal consistency;
- Accessibility presents how effectively data and information about data are disseminated to users.

Figure 19: Data Quality Assessment Framework (DQAF) and Reports on Observance of Standards and Codes - Source: Dissemination Standards Bulletin Board, IMF

The dissemination of national accounts should be integrated into the general statistical dissemination strategy, having as its main objective to provide data of the expected quality for users. This should take into consideration:

- the details of information disseminated according to target audience;
- presentation of results in a comprehensive structure;
- provision of all necessary methodological explanations, to help users understand national accounts concepts;
- national accounts represent a special overview of the economy and the dissemination of data without economic analysis and interpretation of the results is not advised, even if this imposes additional work on national accountants. The analysis will help users not familiar with these indicators to understand better national accounts and their possibilities to reflect the economic phenomena.

Establishing a calendar for dissemination

For data to be useful, it is widely recognised that it should be available in a reasonable and timely manner. Such an expectation, especially in the field of national accounts is not easy to fulfil. Compilation is not simply computer processing: national accounts compilers need very diverse raw data from statistical and administrative systems available at different periodicity; after data is collected, this information needs to be converted into national accounts and the consistency of the entire system to be verified. This process has a large impact on the timeliness of dissemination.

Timetable for revising and finalizing the accounts in Slovenia

National accounts data for year t are revised and finalized in four steps and final data for year t are usually published in September of year $t + 3$ or 33 months after the end of the year.

The four steps and the time in which GDP estimates and main national accounts aggregates for year t are first published, routinely revised and finalized are:

- $t + 70$ days: first complete GDP estimate and main national accounts aggregates on the basis of quarterly accounts;
- $t + 9$ months: first complete annual accounts estimate of GDP and main national accounts aggregates;
- $t + 21$ months: first revision of annual accounts estimate of GDP and main national accounts aggregates;
- $t + 33$ months: final revision of annual accounts estimate of GDP and main national accounts aggregates.

As the national accounts estimates start with quarterly accounts it is important that after the introduction of the expenditure approach at current and constant prices on quarterly basis in 2000 the quality and reliability of quarterly accounts have significantly improved. The main basis for the first complete annual accounts estimate of GDP in $t + 9$ months are complete and exhaustive data sources of GDP by the production approach as data sources for all institutional sectors are available in May each year.

Already in the first routine revision of annual accounts ($t + 21$ months) the majority of data from supply and use tables is already incorporated and this is particularly important for the product structure of gross fixed capital formation. It is also important that in this revision all statistical and other data sources for the expenditure approach are available and used in the compilation. Because of this changes between the first routine revision and the last step of finalizing annual accounts estimate in $t + 33$ are usually small.

Figure 20: Example of the dissemination calendar - Source: Gross National Income Inventory, Statistical Office of the Republic of Slovenia, 2008

As general framework for their dissemination strategy, countries intending to implement the SNA are recommended to adopt the International Monetary Fund's 'Special data dissemination standards' (SDDS) and 'General data dissemination standards' (GDDS) .

The main purpose of the SDDS, established and promoted by the IMF in 1996 is to monitor the standards used to guide countries in the dissemination of economic and financial data. Several dimensions are monitored in the SDDS: a 'data' dimension (relating to coverage, frequency and timeliness of data), an 'access' dimension, an 'integrity' dimension and a 'quality' dimension (see Figure 21). The SDDS prescribes that countries disseminate key macroeconomic data covering the real, fiscal, financial, and external sectors.

Data Dimension (coverage, periodicity, and timeliness)

- Dissemination of 18 data categories, including component detail, covering the four main macroeconomic statistical sectors, with prescribed periodicity and timeliness.
- **Access Dimension**
- Dissemination of advance release calendars providing notice at least one quarter ahead of approximate release dates, and notice at least one week ahead of the precise release dates;
- Simultaneous release of data to all users.

Integrity Dimension

- Dissemination of the terms and conditions under which official statistics are produced and disseminated;
- Identification of internal government access to data before release;
- Identification of ministerial commentary on the occasion of statistical release;
- Provision of information about revision and advance notice of major changes in methodology.

Quality Dimension

- Dissemination of documentation on statistical methodology and sources used in preparing statistics;
- Dissemination of component detail and/or additional data series that make possible cross-checks and checks of reasonableness.

Figure 21: Dimensions and Elements of the Special Data Dissemination Standard - Source: The IMF's Data Dissemination Initiative After 10 Years, IMF 2008

The GDDS followed the SDDS and was developed in 1997 to assist those IMF's member countries that are not in a position to subscribe to the SDDS, to develop nevertheless a sound statistical system as the basis for timely dissemination of data to the public. The purposes of the GDDS are to encourage member countries:

- to improve data quality;
- to provide a framework for evaluating needs for data improvement and setting priorities in this respect;
- to guide member countries in disseminating comprehensive, timely, accessible, and reliable economic, financial, and socio-demographic statistics to the public.

Together, these three priority areas constitute a solid basis on which to formulate long-run policies for statistical development.

Other articles

- [Building the System of National Accounts](#) (online publication, overview of all articles)

Dedicated section

- [International statistical cooperation](#)

Publications

- [Essential SNA - Building the basics](#)
- [Guide to Statistics in European Commission - Development Co-operation](#)

External links

- Bos, F., MPRA

[Compiling the national accounts demystified](#) , 2007; Chapter III: The compilation process; Chapter V: How to improve compiling national accounts

[Use, misuse and proper use of national accounts in statistics](#) , 2007; Chapter IV: Tool for communication and decision making

- IMF

[General Data Dissemination System \(GDDS\)](#)

[Special Data Dissemination Standard \(SDDS\)](#)

[The IMF's Data Dissemination Initiative After 10 years](#) , IMF 2008; Chapter I: International data dissemination standards; Chapter III: The general data dissemination system: what has been accomplished after 10 years and where do we go from here

- OECD

[Quality framework and guidelines for OECD statistical activities](#)

[The future dissemination of OECD statistics: a policy proposal](#) , 2006

- Paris 21 Secretariat

[A Guide to Designing a National Strategy for the Development of Statistics \(NSDS\)](#) , 2004

[Advocating for the National Strategy for the Development of Statistics](#) , OECD, May 2010

- United Nations

[2008 SNA](#) , European Commission, IMF, OECD, UN, World Bank, 2009

[A systems approach to national accounts compilation](#) , Studies in Methods, Series F, No.77, UN 1999; Chapter I: The compilation approach

[Best practices in designing websites for dissemination of statistics](#) , United Nations Statistical Commission and Economic Commission for Europe, UN 2001

[Communicating with the Media - A guide for statistical organizations](#) , UNECE, UN 2004; Chapter I: Principles, objectives and management issues in data dissemination; Chapter II: Organizational aspects of dissemination

[Correspondence of tables of classification](#)

[Fundamental principles of official statistics](#)

[Global assessment of the availability, periodicity, timeliness and dissemination of high-frequency indicators](#) , UNSD paper presented at the Workshop on International Economic and Social Classifications, Mali, January 2010

[Making Data Meaningful - Part I - A guide to writing stories about numbers](#) , UNECE, UN, 2009

[Making Data Meaningful - Part II - A guide to presenting statistics](#) , UNECE, UN 2009

[Making Data Meaningful - Part III - A guide to communicating with the media](#) , UNECE, 2011

[National Accounts: A practical introduction](#) , Studies in Methods, Series F, No.85, UN 2003; Chapter XIV: Data collection, compilation and estimation methods: a summary

[National Accounts Workshop for SADC countries](#) , 16-19 June 2009, Windhoek, Namibia

[Report of the Task Force on National Accounts](#) , UN Economic and Social Council, March 2001 (E/CN.3/2001/7)

[Uses of Macro Accounts in Policy Analysis](#) , Studies in Methods, Series F, No.81, UN 2002; Chapter IV: Policy analysis beyond the economic core; Chapter V: Administrative and other policy uses of national accounts by international organisations and countries