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# National Statistical System Assessment

# EGYPT

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# Acronyms

ACRONYM	INSTITUTION
<b>AfDB</b>	African Development Bank
<b>CAPMAS</b>	Central Agency for Public Mobilization and Statistics
<b>CBE</b>	Central Bank of Egypt
<b>CCSPC</b>	Consultancy Committee for Statistical Planning and Coordination
<b>CDC</b>	Cairo Demographic Centre
<b>CEDARE</b>	Centre for Environment and Development for the Arab Region and Europe
<b>COMESA</b>	Common Market for Eastern and Southern Africa
<b>CPI</b>	Consumer Price Index
<b>EEAA</b>	Egyptian Environmental Affairs Agency
<b>ENP-SOUTH</b>	European Union Neighbourhood Policy – South countries
<b>FAO</b>	Food and Agriculture Organization
<b>GSBPM</b>	Generic Statistical Business Process Model
<b>HCM</b>	Higher Committee for Migration
<b>IPI</b>	Industrial Production Index
<b>IDSC</b>	Information and Decision Support Centre
<b>IMF</b>	International Monetary Fund
<b>MOED</b>	Ministry of Economic Development
<b>MOE</b>	Ministry of Education
<b>MOF</b>	Ministry of Finance
<b>MOHP</b>	Ministry of Health and Population
<b>MOI</b>	Ministry of Interior
<b>MOMM</b>	Ministry of Manpower and Migration
<b>MOP</b>	Ministry of Planning, Monitoring and Administrative Reform
<b>MOSS</b>	Ministry of Social Solidarity
<b>MOU</b>	Memorandum of Understanding
<b>NAD</b>	National Accounts Department
<b>NCCM</b>	National Council for Childhood and Motherhood
<b>NCDA</b>	National Council for Disability Affairs
<b>NCST</b>	National Centre for Statistical Training
<b>NDP</b>	National Development Plan
<b>NIC</b>	National Information Centre
<b>NSDS</b>	National Strategy for the Development of Statistics
<b>NSS</b>	National Statistical System
<b>NSWP</b>	National Statistical Work Programme
<b>PARIS21</b>	Partnership In Statistics for Development in the 21 <sup>st</sup> Century
<b>PPI</b>	Producer Price Index
<b>PSRC</b>	Population Studies and Research Centre
<b>ROSC</b>	Report on the Observance of Standards and Codes – IMF
<b>SDDS</b>	Special Data Dissemination Standard (SDDS) – IMF
<b>SDG</b>	Sustainable Development Goals
<b>UN-ECA</b>	United Nations Economic Commission for Africa
<b>UN-ESCWA</b>	United Nations Economic and Social Commission for Western Asia
<b>WHO</b>	World Health Organization
<b>WPI</b>	Wholesale Price Index

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The team is also highly indebted to respondents from various government ministries and departments, academic and research institutions, development partners and non-governmental organisations who were interviewed by the assessment team. The responses provided are very critical to the whole assessment process.

# Executive Summary

## 1. Introduction

Egypt has a long history of conducting population censuses dating back to 1882 when it was conducted by a special taskforce. In order to institutionalise this process, a Statistical Authority with about 800 employees was established in 1911 under the Ministry of Treasury. A number of changes took place until 1964 when the Central Agency for Public Mobilization and Statistics (CAPMAS) was established under Presidential Decree no. 2915. CAPMAS was established as the official source of national data. Although statistical information in Egypt is considered centralised, almost all government ministries and agencies have statistics units that collect and disseminate data for use by their respective ministries and at times even beyond.

Like many other countries, Egypt has experienced a dramatic surge in the supply and demand for statistics. This increase is partly the result of a number of socio-economic transformations but also the introduction of a medium-term vision of development such as “Egypt 2022” seeking to achieve “sustainable and containment growth”.

The increase in the number of players supplying and using statistics has weakened the co-ordination mechanisms of statistical information in the country.

## 2. Rational for the NSS Assessment

In order to strengthen co-ordination of the national statistical system in Egypt and to be in line with international frameworks such as the Fundamental Principles of Official Statistics and the African Charter on Statistics, the President of the Central Agency for Public Mobilization and Statistics submitted a request to PARIS21 and other partners to carry out an independent evaluation of the national statistics system of Egypt. An inter-agency team comprised of PARIS21, AfDB, UN-ECA, and UN-ESCWA was set up and undertook an assessment mission from 13-17 September 2015 focusing on legal and institutional set-up and statistical processes within social and economic statistics. During the mission, the team held a series of face-to-face interviews with staff from CAPMAS including from regional offices, government ministries and agencies, and partner organisations. The mission also reviewed a number of documents and made observations about the running of the Egyptian statistical system that would guide decisions of the assessment.

### 3. Main findings

The following are the main findings of the assessment:

#### Positives

- Statistics are accorded a high profile in Egypt. CAPMAS as an institution is well respected politically and has technical independence.
- Use of official statistics for policy formulation, decision-making and programme implementation and evaluation is quite high.
- CAPMAS enjoys a very low turnover of staff with only three positions reportedly not filled.
- CAPMAS and other government agencies producing official statistics have well-qualified staff. CAPMAS itself has close to 4 200 personnel of which 46% are professionals (i.e. they have higher education and are not necessarily statisticians).
- The law on statistics establishes a co-ordination committee comprising CAPMAS and other agencies.
- Almost every ministry has a corresponding technical unit within CAPMAS.
- A number of statistical capacity building programmes exist. For instance, summer internship programmes are provided to university students every year. Furthermore, CAPMAS has a National Training Centre providing statistical training to all personnel working in statistics across government institutions including CAPMAS employees.
- The government of Egypt provides most of the funding for statistical activities, e.g. the population censuses are almost fully funded by the government. This is also true for on-going statistical activities.
- Most statistical processes follow international standards and methodologies.
- Some co-ordination exists between CAPMAS and a number of ministries. These include the Ministry of Planning regarding the production of national accounts and the Ministry of Tourism regarding the production of tourism statistics.
- Preparation for the 2016 Population, Housing and Establishment Census is well underway.
- CAPMAS is well represented at governorate level with about 60 regional offices across the country.
- Internship programmes have been sustained for some years thereby exposing future statisticians to processes of official statistics.
- Egypt is one of the few countries in Africa already compiling quarterly national accounts and producing GDP estimates at sub-national (governorate) level.

- There is a strong will by CAPMAS leadership to embrace institutional and organisational changes.

## Challenges

- CAPMAS is operating under a 1964 presidential decree (No. 2915) which may not adequately represent the requirements of a modern statistical system.
- There are more players in the statistics arena than before and a need to redefine the role of CAPMAS as regulator of the national statistical system in the country.
- Most CAPMAS staff members are nearing retirement age and the institution risks losing most of its experienced staff as about 70% of the staff is over 50 years of age.
- CAPMAS is currently operating on an annual based plan. This is short-term operation plan thereby limiting development and implementation of a medium- to long-term vision.
- There are still gaps in terms of harmonisation of statistical activities across the national statistical system.
- Although the law establishes a committee to coordinate statistics activities, it was so big that it undermined its efficiency so that it no longer convenes.
- Every ministry has a corresponding technical unit within CAPMAS, but there is no dedicated unit responsible for co-ordinating the entire national statistical system checking on standards, harmonisation of statistical concepts and definitions, quality assurance, etc.
- Despite high levels of government funding, gaps still exist hindering the implementation of some planned activities.
- Final national accounts figures are produced by the Ministry of Planning. Although co-ordination exists between CAPMAS and the Ministry of Planning in the production of national accounts, the arrangements may produce discrepancies in the estimates of certain components of GDP.
- Trade statistics were produced in accordance with international standards and methodologies but there is room for minor improvements such as: a) improving the means of obtaining data from some sources, b) improving the accuracy of trade quantities by carrying out special surveys covering major importers, and c) including informal external trade statistics in external trade.
- The sampling frame for industrial statistics has not been updated for some time and thus do not reflect socio-economic developments that have taken place in recent years.
- While price statistics (CPI and PPI) are produced in accordance with recommended standards, there is a need to review the weights following

differences in final household consumption estimates derived from the Household Income and Expenditure Survey (HIES) and the ones being used for GDP estimates and Supply Use Tables. The weights being used in the PPI may also need updating as the industry-sampling frame has not been updated for some time.

- Gaps exist in the production of tourism statistics, as domestic tourism and detailed information on local destinations, such as Fayoum, by foreign visitors are not covered.
- The master sample frame used for selecting the sample for household surveys was designed in 2009 based on the results of the 2006 Population, Housing and Establishment Census. For each new household survey, the sampled segment of households is updated during the listing exercise. There is a risk of repeatedly drawing the same households and respondents, which may increase the response burden on the sampled households.
- Concepts and statistical process used for surveys are consistent with international standards; however, non-harmonised statistical concepts and definitions between sources (household-based sample surveys and administrative records) generate gaps and discrepancies in social indicators.
- Methodological procedures for household surveys are well documented and sampling errors are estimated. In most cases, however, these sampling errors are not published. Furthermore, non-sampling errors are rarely estimated and presented in reports.
- Procedures for taking into account users' needs are carried out on a non-systematic basis (case-by-case for each statistical operation).
- National stakeholders expressed a strong need for developing digital mapping facilities to support the collection of data and improve sampling design for household and establishment surveys.
- There is no national dissemination strategy for the entire national statistics system thereby leaving users to research themselves about when, where and how to find the data they need.
- There is a shortage in statistics related to vocational training performed by specialised training institutes. The needs for vocational training are not well known and need to be comprehensively assessed.
- There is a shortage in relevant environmental statistics that measure climate change on a regular basis.

## 4. Key recommendations

### Short-term

1. CAPMAS should consider reviewing the national statistical legislation with a view to its modernisation and to take into account international frameworks such as the Fundamental Principles of Official Statistics, the African Charter on Statistics, and to officially establish a National Statistics System.
2. For a more effective national statistics system, CAPMAS should reinstate meetings of the Coordination Committee but with a smaller number of ministries (maximum 30 representatives), that should include core ministries such as education, health, etc.
3. In order to strengthen strategic direction of statistics in the country, CAPMAS should develop a medium-term (5-10 years) corporate plan.
4. Various sectors should develop plans for the development of statistics in order to strengthen the capacity of sector statistics in the medium-term period.
5. To strengthen co-ordination across the national statistics system, CAPMAS should co-ordinate the production of a National Strategy for the Development of Statistics (NSDS) incorporating its corporate plan and sector strategies for the development of statistics.
6. CAPMAS should lead the embracing of a data revolution in the country by involving more players in the field of statistics, using technology and innovation and incorporating institutional and organisational innovations.
7. CAPMAS should urgently start recruiting and training younger personnel before the majority of the current crop of experienced staff retires.
8. In order to ensure the relevance of statistical products, CAPMAS and other producers of statistics should clearly identify and respond to a set of data to monitor the national development plan.
9. In order to harmonise and standardise statistical concepts and definitions across the NSS, CAPMAS should co-ordinate the production of a compendium of statistical concepts and definitions to be used across the NSS.
10. CAPMAS should develop a Statistics Quality Assurance Framework to be used to assess the quality of statistics across the National Statistics System.
11. As done previously, CAPMAS should schedule a Post-Enumeration Survey (PES) to assess the coverage and quality of the 2016 Population Census results.

## Medium-Term

12. Although no specific shortfalls were identified with national accounts figures, the Ministry of Planning and CAPMAS should consider moving the production of final national accounts figures to CAPMAS in line with best practices.
13. CAPMAS should be ready to establish new statistical domains to respond to the Sustainable Development Goals (SDGs).
14. CAPMAS and other partner agencies involved in the production of industrial statistics should update the sampling frame by updating the Business Information Register through a census of small- to large-scale enterprises.
15. CAPMAS should build more capacity in its regional offices to better respond to the statistical requirements of the governorates and guide their use.
16. CAPMAS should initiate a committee of development partners chaired by CAPMAS leadership aimed at sharing statistical programmes, feedback on statistical services and sharing developments from across the globe.

# Chapter 1: Background

## 1. INTRODUCTION

With an estimated 89 million inhabitants in 2015, Egypt is the most populous country in North Africa and the Arab World, the third-most populous in Africa (after Nigeria and Ethiopia), and the fifteenth-most populous in the world. The great majority of its people live near the banks of the Nile River, where the only arable land is found. Egypt enjoys one of the oldest traditions for carrying out statistical activities in the Mediterranean region. The first ever population census in modern times was carried out in 1882, followed by 12 comprehensive population censuses. The CAPMAS is currently actively preparing the new population census for 2016.

## 2. THE ROLE OF STATISTICS IN NATIONAL DEVELOPMENT

Statistics play a huge role in national development in Egypt. They are used extensively in government policy and in the development, implementation and monitoring of programmes. For instance, based on poverty results, the last two Five-Year Development Plans, covering the period 2002-2012, have given top priority to Upper Egypt, which was identified as the most deprived region in the country. Indeed, more than one-third of total public investments over the last decade have been allocated to governorates in Upper Egypt. In addition, a 'poverty map' drawn to determine the most vulnerable areas and groups led to two innovative programmes, namely 'Geographic Targeting' and 'Supporting Most Vulnerable Families'. These programmes target the poorest villages and families across Egypt, using an integrated and empowering approach based on reallocating resources, public expenditure and policy interventions to reach the neediest people in the poorest areas<sup>1</sup>. Statistics are also extensively used by the private sector, civil society organisations, research and training institutions and the media. Because of their extensive use, statistics enjoy a high profile in government.

The National System of Official Statistics in Egypt refers to all statistical programmes in various governmental agencies and the statistics they regularly produce. As the principal statistical agency of the government of Egypt, CAPMAS is entrusted with carrying out population and economic censuses along with regular sample-based surveys in various economic and social fields.

CAPMAS is responsible for designing, organising and conducting all household and establishment censuses and surveys and for disseminating the results. Other ministries

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<sup>1</sup> Achieving the Millennium Development Goals, Midpoint Assessment, Ministry of Economic Development, Cairo, Egypt 2008.

collect data based on administrative records for their own sector and activities with the collaboration of CAPMAS and publish their own periodic statistical reports. These ministries also transmit their data to CAPMAS, which in turn publishes summary tables in a series of thematic statistical bulletins, reports and studies.

### **3. OBJECTIVES OF THE EVALUATION**

Egypt is one of the few countries in the region that has not yet developed a NSDS. The rising needs for statistical information resulting from the country's medium-term development vision, such as "Egypt 2022" which seeks to achieve "sustainable and containment growth," will require stronger statistical co-ordination and the production of statistics that are timely, thorough, responsive to emerging statistical needs, and more sustainable.

Furthermore, the increased number of players within the field of statistics has necessitated stronger co-ordination mechanisms.

The objective of the NSS assessment is to analyse the legislative and regulatory framework, and institutional and organisational set-up in Egypt. It also seeks to assess statistical processes being followed in the production, management and use of statistics. The findings of this assessment will provide a basis for further strengthening statistical capacity, including but not limited to the drafting of the first NSDS. The assessment will further determine compliance of statistical processes with regional and international frameworks, assess the relevance of statistics produced within the statistical system, both at higher levels of policy formulation as well as at sub-national levels, and understand the planning process in the country.

### **4. METHODOLOGY OF THE EVALUATION**

The assessment was carried out by a multi-agency team comprised of PARIS21, UN-ESCWA, UN-ECA, and the AfDB, which visited Cairo from 13-17 September 2015. CAPMAS managers organised consultations and interviews with representatives of all national stakeholders involved in statistical activities, and representatives of some international organisations operating in Egypt.

The assessment sought to cover three main domains as follows:

- A. The legislative, methodological and organisational set-up
- B. The production, dissemination and use of economic statistics
- C. The production, dissemination and use of social statistics

The assessment covered the legal and administrative mandate of CAPMAS within the National Statistical System in terms of the collection of data, coverage, compilation, analysis, dissemination, confidentiality, co-ordination, user guidance/support,

organisational set-up, reporting mechanisms of the statistical system, response to statistical inquiries, and the use and misuse of statistical information. The assessment also reviewed potential overlaps regarding the collection and compilation of statistics.

CAPMAS management organised a series of meetings with most prominent institutional partners involved in the production, use and dissemination of economic and social statistics. Representatives of government agencies, non-governmental organisations, semi-public and private organisations, and international and regional organisations were invited to CAPMAS headquarters to meet the assessment team. A list of the institutions and individuals met are provided in Annex II.

The assessment took a further look into the following components of the NSS:

- **Co-ordination of the NSS:** Governance of the NSS; statistics in national development policy; strategic planning on statistics; and relationship with stakeholders.
- **Managing the institutional environment:** Compliance with international and regional principles such as the UN Fundamental Principles of Official Statistics, the African Charter on Statistics, the Strategy for the Harmonization of Statistics in Africa, and the Common African Position in terms of independence, professionalism, integrity of the institution, and responding to users' needs.
- **Dissemination, communication and use of statistics:** Over and above the specific data dissemination mentioned above, the assessment determined the overall characteristics of data, including accessibility, availability, communication, use of statistics across the NSS, and their relevance to policy formulation, monitoring and evaluation.
- **Regional collaboration:** Egypt's role at regional and sub-regional level in terms of a) co-ordination; b) hosting of (sub) regional bodies; and c) providing technical expertise to other countries.

## Chapter 2: Main Findings

### INSTITUTIONAL, LEGISLATIVE FRAMEWORK AND ORGANISATIONAL SET-UP

#### INSTITUTIONAL ENVIRONMENT

Egypt has a long tradition of producing statistics and the first census in modern times was carried out in 1882 by a special task force. In 1911, the Statistical Authority was established under the Ministry of Treasury with around 800 employees. This was renamed the Statistical and Census Authority under the Republic Presidency in 1957 and regional offices were established. In 1964, the Statistical and Census Authority was replaced by the Central Agency for Public Mobilization and Statistics (CAPMAS) under a presidential Decree (No. 2915). CAPMAS is a unique statistical organisation as, unlike in other countries where the mandate of the National Statistics Office is limited to the production and dissemination of statistics and statistical information, the scope of CAPMAS is extensive and includes public mobilisation. Under this responsibility, CAPMAS mobilises the country's human, material and production resources and develops plans to ensure the best use of these resources in times of peace and war, disasters and crises.

While the Statistics Act is silent on the profile of the president of CAPMAS, by tradition the head of CAPMAS has always come from the military<sup>2</sup>.

#### STAKEHOLDER CONSULTATIONS

In order to keep stakeholders informed, CAPMAS undertakes statistical advocacy programmes including but not limited to periodic stakeholder workshops, African Statistics Day Celebrations (annual event to create greater awareness about the role of statistics to society), functional websites, billboards, the use of social media (Facebook and Twitter), etc. However, awareness of statistics remains low, suggesting the need to enhance further statistical advocacy.

In addition to national stakeholders, CAPMAS deals with more than 40 regional and international authorities and organisations through seminars, workshops, conferences, technical support, data exchange, training, partnerships and twinning programmes, etc. This enables CAPMAS and its staff to keep abreast of industry trends as well as new developments in the organisation and management of statistics.

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<sup>2</sup> The CAPMAS presidents are: Major General (Staff) Abobakakr El-Gendy (2005 to date); Major General (Staff) Ihab Alaoui (1995-2005); Major General (Staff) Farouk Said Abdel Azim (1991-1995); Major General (Staff) Awad Mukhtar Halodeh (1981-1991); Major General (staff) Gamal Asker (1964 -1981).

## STATISTICAL LEGISLATION

Overall, it is internationally agreed that strong legislation in the field of statistics (Statistics Act as it is known in some countries) is a fundamental prerequisite for an effective NSS (IMF, 2003).

The 1964 Presidential Decree merged the Statistical and Census Authority and Public Mobilization Department to form CAPMAS as an independent authority. Presidential Decree no. 2915 stated the goal, objectives and governance of CAPMAS and provided for the establishment of Central Statistics Departments in each ministry and administrative authority. This provision is significant as it enables state organs to collect, manage, use and disseminate statistics in their areas of jurisdiction. The decree also provided for CAPMAS to supervise and inspect computers in all sectors. This provision empowers CAPMAS to co-ordinate the establishment of databases across the public sector and facilitates the sharing of statistical data and information.

Box 1: As pointed out by Dennis Trewin (2002), “sound legislation is crucial to a good statistical system as it:

- *Provides legitimacy and transparency to statistical operations,*
- *Is necessary to provide public confidence in the statistical system – however, it is not sufficient; that depends on the actions of Ministers and senior people in the statistical system,*
- *Provides for continuity of arrangements as key personnel change often with different ideals and backgrounds.”*

Weaknesses identified in the statistical legislation include the following:

- The Statistics Act is old and precedes the UN Fundamental Principles of Official Statistics and the African Charter of Statistics. It does not include the latest developments in statistical organisations and management.
- It does not distinguish between policy making for and management of the organisation. Ideally, the two should be separate.
- The act does not provide mechanisms for regular data user-producer interaction that is essential for enhancing the relevance of statistics and their use.
- Strategic planning is not provided for in the presidential decree and so CAPMAS has not designed a plan with a medium- to longer-term time horizon. Instead, it undertakes short-term work programmes (one year). Strategic planning addresses the alignment of staff and other organisational resources (moving them in the same direction) to achieve results. Ample evidence shows that organisations undertaking strategic planning perform better than those who do not. Accordingly, the leading action point of the Marrakech Action Plan for Statistics

(2004)<sup>3</sup> recommended that each developing country should design a NSDS. Design of the NSDS is also the overarching strategy of the Reference Regional Strategic Framework for Statistical Capacity Building in Africa (RRSF) (2007)<sup>4</sup>.

## CO-ORDINATION OF THE NATIONAL STATISTICAL SYSTEM

The statistical system in Egypt is generally considered centralised, but in practice it is decentralised with statistical units in most ministries and governmental agencies collecting and disseminating data in their respective areas of jurisdiction. However, those statistics not included in CAPMAS' programme are published with its approval. Hence, CAPMAS is not only the main national agency responsible for publishing official demographic, social and economic statistics, but is also the co-ordinator of the national system.

Co-ordination of a national statistical system is essential for fostering mutual reinforcement of organisations, which are young, vulnerable and generally under-resourced; achieving synergy; avoiding working at cross-purposes and destructive rivalries; and avoiding the production of conflicting data. CAPMAS' co-ordination role is underscored by the provision in the Statistics Act for the establishment of a Consultancy Committee for Statistical Planning and Coordination. The committee looks at the technical study of statistical programmes and censuses, decides which to conduct, and co-ordinates the implementation of these programmes to prevent duplication and integrate the results and data. The committee advises the president of CAPMAS and discusses co-ordination between ministries and data producers to avoid duplication in statistical production.

This Committee was supposed to meet at least once a month. It was reported that this Committee has not been effective and was ultimately disbanded by the president of CAPMAS due to, among other things, its large size that rendered it less effective.

## ORGANISATIONAL SET-UP

CAPMAS is headed by a president. Three departments directly support the work of the president, namely:

- Central Administration of the CAPMAS President
- Central Administration of Lawful Affairs
- Advisory Committee of Statistical Coordination.

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<sup>3</sup> The Action Plan was endorsed at the 2<sup>nd</sup> Roundtable on Managing for Results held in Marrakech, Morocco to improve national and international statistics so as to meet the measurement challenges without which baselines cannot be established and progress cannot be measured.

<sup>4</sup> The framework was endorsed by the Conference of African Ministers for Finance, Planning and Economic Development in 2007. Its main objective was to provide strategic direction and appropriate mechanisms for guiding and accelerating the development of sustainable statistical capacity in Africa to support managing for results, and the implementation of the Marrakech Action Plan for Statistics in Africa.

In addition, CAPMAS is divided into five Sector Departments, namely:

- The Secretariat
- Population Statistics and Censuses
- Economic Statistics and Mobilization
- Information technology
- Fifty Regional Offices (4 Regional offices, 31 main offices and 15 branch offices distributed in 4 Regions covering 27 Governorates).

The departments' work is co-ordinated where possible. A number of commendable internal co-ordination mechanisms and activities are in place. These include the following:

- **CAPMAS newsletter.** A quarterly newsletter is published providing a platform for sharing knowledge and information about conferences, workshops, and activities carried out by CAPMAS.
- **"The Monthly Training Day" meeting.** This meeting is conducted on a monthly basis and chaired by the president of CAPMAS. All sector heads and managers attend along with staff from almost all units. CAPMAS activities from the previous month are presented, e.g. complete and in-progress tasks, external missions, conferences, and workshops related to statistical work. It is conducted on the last Tuesday of every month.
- **"The Scientific Day" meeting.** The scientific day meeting is also a monthly event in which innovations and/or academic papers on statistical issues are presented to CAPMAS staff. The president attends as do representatives from all units, young statisticians, Master and Ph.D. students.

CAPMAS is commended for giving space to young statisticians to grow professionally. This is consistent with the Young Statisticians Programme, a flagship and African legacy programme of the 57th Congress of the International Statistical Institute held in Durban, South Africa in 2009. The programme aims to create a literate society in Africa.

- **Staffing:** CAPMAS has a total staff of 4 140 employees at its Cairo headquarters and in its regional offices. Of these, 55% are female and 45% are male. It was reported that there is minimal staff attrition, something that is a problem in many other National Statistics Offices in Africa. CAPMAS prioritises staff motivation through training programmes, social and health benefits.
- **A National Centre for Statistical Training (NCST)** is run in-house to meet the statistical capacity needs of CAPMAS as well as other state bodies (ministries, departments and agencies). This follows recommendations of the RRSF on Statistical Capacity Building in Africa. The remit of the NCST includes, among other things:

- o Strengthening the abilities of CAPMAS and state institution employees in the production and use of statistical data.
- o Preparation of qualified statistical workers able to produce and analyse data.
- o Developing the skills of workers in statistics and other supporting fields.
- o Spreading statistical awareness.
- o Supporting and developing research based on statistics in Egypt.
- o Conveying scientific development in the field of statistics.

Three basic training programmes are run by the training centre targeting employees in government, public and business sectors. The Summer Programme for University Students, which targets students of statistics, economics and political science, computer science, engineering, arts, geography, commerce and other subjects, in order to spread statistical awareness, and define applied aspects of statistics that students can exercise after graduation and upon entering the labour market. A Specialised Training Programme is also offered, covering different aspects of statistics e.g. statistical sampling, analysis with a variety of statistical packages; and any other programmes according applicants' needs. The media is also provided with some ad hoc basic training in statistics.

### NATIONAL ACCOUNTS:

Statistics on Egypt's national accounts are compiled by the Department of National Accounts (DNA) in the Ministry of Planning (MOP) in accordance with the main concepts, categories, definitions and other methodological principles of the System of National Accounts – SNA1993 and part of SNA2008. In parallel, the National Accounts Division (NAD) at CAPMAS compiles supply and use tables (SUTs), input-output tables (I-O tables) and social accounting matrices (SAM).

The DNA compiles the full sequence of accounts, excluding the financial accounts, by institutional sectors annually, and calculates and publishes the official Gross Domestic Product (GDP) estimates, utilizing the production approach at current and constant prices. GDP estimates are also derived from expenditure components by measuring the household's final consumption expenditures as a residual between the official GDP (production) and GDP (expenditure). GDP by income categories are calculated through the production and generation of income account. Consequently, GDP estimates are not derived by reconciling the production and the expenditure approaches.

The GDP estimates at constant prices are compiled from a wide range of deflators and extrapolators. Producer's Price Indices (PPIs) are used as deflators to derive constant price estimates for agriculture, mining, manufacturing, water and electricity. For the other activities, the DNA uses various volume and price indicators to compile the required deflators.

The DNA also compiles quarterly GDP estimates from the production side at current and constant prices based on the quarterly indicators compiled by CAPMAS and from other administrative records including those of the Ministry of Finance, which provides quarterly data related to government finance statistics.

Details of the national accounts and related statistics are determined to meet the requirements of the special data dissemination (SDD) and to meet requests received from different government agencies such as the Ministry of Tourism (MOT) and MOP. For example, the DNA compiles tourism satellite accounts in collaboration with the MOT and works on deriving GDP estimates at governorate level.

The main data sources used by the DNA are CAPMAS, the MOF, and administrative records from public agencies entrusted with specific activities such as crude oil, gas, electricity, tourism etc. CAPMAS conducts economic surveys, which cover large establishments; therefore, in collaboration with CAPMAS and based on Labour Force Statistics the DNA uses different techniques to obtain estimates for small and informal

activities. Recently, CAPMAS conducted an economic census and the DNA used its results to revise estimates related to small establishments. Measures taken by the DNA to identify potential data sources to compile national accounts or data validation processes are not adequate and there are many administrative data that have not been utilised effectively. As recommended by the UN-ECA Guidebook on the Use of Administrative Data in National Accounts, other administrative data should include a) building permits; b) hotel occupancy; c) electricity sales; d) sales of manufactured goods; e) indicators on postal and telecommunications; f) net tonne kms and passenger kms (road, water and air), g) cargo handled in ports; and h) social security records<sup>5</sup>.

The DNA derives aggregated estimates for households' final consumption, which is a major expenditure component of GDP, residually. The final expenditure of Non-Profit Institutions Serving Households (NPISH) was estimated separately and not included in the final consumption of households' estimates. The estimates, surprisingly, would be three times more than the final households' expenditures calculated from the Household Income and Expenditure Survey (HIES). The mission found that no adequate measures were taken to identify at least the major reasons causing the apparent differences between the two estimates.

Most of the data necessary for the financial and non-financial institutions sector accounts are obtained from the establishment's surveys conducted by CAPMAS. These surveys are based on a representative sample drawn from a master sample of establishments. Therefore, the samples should provide results representative of economic activities but not institutional units, given that the establishments included in the master sample are not linked to their institutional units.

The DNA takes wide range of measures to ensure the accuracy of data sources as well as national accounts statistics; but these measures are not implemented in an integrated and comprehensive framework ensuring consistency of national accounts statistics with the SUTs and the rest of the country's economic statistics. Also, no measures have been put in place to identify exactly the weaknesses in data sources and to treat the causes of inconsistencies and discrepancies.

The NAD at CAPMAS compiled the SUTs at current prices for three years based on methods and sources consistent with international standards and practices. However, the obligation to use the official estimates of GDP aggregates published by the MOP, limits the NAD's capacity to utilise more appropriate methods and techniques in the process of balancing the SUTs, and thus reduces the chances of identifying data gaps and inconsistencies in the source data. The NAD has also produced I-O tables for the years 2008/2009 and 2010/2011 and is now compiling them for 2012/2013. A SAM for

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<sup>5</sup> Guidebook on the Use of Administrative Data in National Accounts. Compilation, Application and Practices Relevant to African Countries, UN-ECA, 2014

2010/2011 is being produced. The NAD is still working on compiling the SUTs at constant prices based on the available price and volume indicators.

A permanent working group on co-operation between CAPMAS and the MOP was established with the objective of achieving co-ordination, and discussing pertinent issues related to the compilation of national accounts and the necessary source data. Despite current co-ordination mechanisms between the two departments, there are differences in methods and data sources used to derive estimates for some economic activities. Nevertheless, these do not lead to differences in the level of GDP because the SUT aggregates cannot deviate from the official GDP estimates. Beside this permanent working group, similar working groups are formed on ad hoc basis with different stakeholders to discuss issues related to coordination, the flow of primary data and to detailed users' needs of national accounts statistics.

National accounts are compiled using excel sheets, that are suitable at the moment and satisfy current requirements. Unfortunately, it was not possible to assess whether source data and detailed national accounts statistics are kept in a well-structured database that can be used to reinforce statistical analysis for validation purposes and the dissemination process.

Many of the staff appointed to the DNA were not able to gain adequate expertise equal to their older peers at the time of their appointment and no effective measures have been taken to build their capacities even though the majority of older staff are retiring in the course of the coming few years.

## **THE PRODUCTION PROCESS OF NATIONAL ACCOUNTS**

National accounts are compiled at the MOP by 19 qualified staff with in-depth experience. Most staff accumulated experience in other areas of economic statistics such as surveys, price statistics, and foreign trade statistics from their previous assignment in the NAD at CAPMAS. In parallel, SUTs are compiled at CAPMAS by 13 staff who have developed their skills in a few years to compile SUTs, I-O tables and SAMs according to prevailing international standards and practices.

This dual system is associated with several administrative and practical impediments, which could be avoided if the accounts were done solely by the organisation producing the greater share of required primary statistics; in this case, CAPMAS. The removal of these impediments would improve the Egyptian authorities' capacity to benefit from available data sources, as well as human and financial resources in both departments.

The main advantage of consolidating the work under CAPMAS is finding solutions to some of the persistent problems facing national accounts statistics, especially those

related to exhaustiveness and inconsistency between these and other economic statistics.

The SUT framework is one of the best to improve exhaustiveness of GDP estimates. However, under the present situation the compilers of SUTs and national compilers at the MOP are not able to use its advanced features to avoid using the residual approach to reconcile the GDP estimates by the three approaches. Using the appropriate procedures and techniques to balance the SUT would help CAPMAS identify data gaps and reveal inconsistencies between various statistics. Identifying gaps and inconsistent data would allow compilers to investigate the causal factors, and determine the appropriate methods and techniques to improve systematically the quality of the data sources, and subsequently the quality of GDP estimates.

The System of National Accounts (SNA) is the starting point for integrated economic statistics because it serves as a conceptual and accounting framework assuring the consistency of concepts, definitions and classifications in different, but related, fields of economic statistics. Therefore, not having CAPMAS compile the national accounts reduces access to these features integrating different economic statistics. If the national accounts were re-located to CAPMAS, it would be possible to achieve coherence and consistency of the annual and quarterly national accounts with other annual and short-term indicators. For example, the SNA framework on compiling economic statistics can ensure that quarterly estimates for manufacturing at current and constant prices are consistent with PPI, IPI, exports and comply with the results of annual and quarterly manufacturing surveys.

Compilation of national accounts at constant prices depends primarily on the quality of price statistics produced by CAPMAS, in particular the PPI, CPI and External Trade Price. Estimates are also based on price and volume indicators collected by the DNA from different data sources.

It became clear after the meetings with government and public agencies operating in various economic activities that they own a wide range of administrative data that can be very useful in deriving estimates of various economic activities. This administrative data can be instrumental in crosschecking national account estimates for validation. One explanation may be the remoteness of the DNA from CAPMAS, where the SNA was not used efficiently as an accounting framework because the national accounts team had limited access to these data sources.

The estimates for GDP by expenditures final components are not derived for each item independently, as the final consumption expenditure is derived as a residual item to reconcile the GDP by expenditure components with GDP by production approach. This procedure does not adequately guarantee that the resulting value is representative of the value of final expenditure on private consumption because calculation of this item assumes residually that other components of final expenditures

are representative and accurate. Accordingly, calculation errors that might occur during the estimation of the other components will be included by default in the value of the private final consumption. The SUTs can help in improving the quality of the components of final expenditures even if other items are estimated residually, given that the estimation is done at the commodity level. Therefore, if a commodity is a capital good and used for production it cannot be considered as private final consumption but as capital formation; and even if this commodity is an intermediate good such as construction material it cannot be included in private final consumption. Therefore, the SUT framework is considered the appropriate approach for deriving GDP estimates according to the three compilation methods.

Despite progress made in compiling national accounts in Egypt compared to other countries in the region, it remains a considerable challenge to obtain a comprehensive statistical framework that conforms to the requirements of the SNA. CAPMAS recently carried out a census of establishments, which helped staff compiling the national accounts to improve the coverage, in particular, estimates related to SMEs. This census contributed to reducing the problems compilers usually face due to the lack of a comprehensive framework meeting the requirements of the SNA 2008. The systematic implementation of the SNA 2008 requires a statistical frame representative at both the institutional and economic activity levels that can be used to conduct surveys. The frame should also cover all the units that have not been legally licensed establishments as "non-money market funds" or "private social security funds", and that can be established by certain institutions such as labour unions.

Even though the Excel software is used for the compilation of national accounts and satisfies the requirements, there is an increasing need to adopt an information system to store basic economic data, organize the accountants' work (workflow), and reconcile the data enabling the calculation of the GDP according to the three traditional approaches (production, expenditures and income).

## **EXTERNAL TRADE STATISTICS (ETS)**

CAPMAS has consistently produced Foreign Trade Statistics on a monthly and annual basis. External Trade Statistics (ETS) are compiled by the Trade Statistics Department within CAPMAS according to the methodological provisions of the Statistical Commission of the United Nations International Trade Statistics: Concepts and Definitions. The ETS are based on national nomenclatures that are generally compliant with the Harmonized Commodity Description and Coding System (HS 2012 nomenclature). The estimates for shuttle trade are included in the External Trade Statistics.

The compilation of the ETS is based on the following monthly data sources:

- Imports data from the Egyptian Customs Authority through import declaration forms;
- Merchandised export data from the General Organization for Export and Import Control (GOEIC);
- Exports and imports of petroleum and related products from the Ministry of Petroleum;
- Ministry of Electricity and Power provides data regarding the exports and imports of electricity;
- The Central Bank for monthly exchange rates of foreign currencies.

ETS consolidates the flow of exports and imports based on a “general” foreign trade accounting system, under which all goods entering and leaving the economic territory of the country are recorded. Measurement of the value of exported goods is made at Free on Board (FOB) prices (the value of good, including insurance and shipping costs at the Egyptian border) and imported goods at CIF (Cost, Insurance and Freight) prices (the value of the good, including insurance and shipping costs at the Egyptian border).

Data are reconciled, to the extent possible, with the ITRS data compiled by the Central Bank of Egypt for the balance of payment. A mirror exercise is done to compare data with the country’s trading partners. Resulting from the implementation of the general trade system, data discrepancies were minimized to a large extent.

Monthly data with a cumulative total are available 49 days after the reporting month and preliminary annual data and 50 days after the reporting year. Monthly ETS for the previous year are revised in the 1st quarter of the following year. Data are published monthly, quarterly and annually in selected publications by CAPMAS, the MOP and the Central Bank, and are posted on the website along with regularly updated metadata.

Further improvements to the ETS are possible with respect to the calculation of price index, volumes of exports and imports, and the estimation of seasonally adjusted ETS. In this vein, all ETS should be compiled in a discrete manner.

The customs authority does not use the ASYCUDA software to generate trade data and thus it was not possible to link with their database online. Data are obtained on a monthly basis through emails from customs and the GOEIC, and hardcopy from the Ministry of Petroleum and Ministry of Electricity and Power.

Monthly price and volume indices are compiled for exports and imports of merchandised goods. The major problem usually facing the compilers is related to the quantities. However, they use several statistical methods to avoid and overcome these problems.

## INDUSTRIAL STATISTICS

CAPMAS collects the required data regarding most market economic activities through industrial surveys conducted annually and quarterly. The surveys cover establishments with ten or more employees and the DNA at the MOP took the responsibility of deriving the required estimates for establishments with less than ten employees. Unfortunately, the surveys exclude establishments with less than ten employees, thus not meeting a strong demand from the users' community.

The main problem facing CAPMAS in conducting the survey is the absence of an updated sampling frame (the master sample) that can be used to draw representative samples in a manner that meet the requirements.

Due to the absence of a comprehensive business register in Egypt, CAPMAS uses statistical frames created from the results of economic censuses conducted on average every ten years. The last economic census was conducted in 2014 and the regional offices at CAPMAS updated the statistical frame by including all production units classified at 3-digit ISIC Rev.4 according to their legal status.

The surveys mentioned above are mainly designed to compile national accounts statistics and the questionnaires used are designed according to SNA terminologies. Some of the questionnaires may include additional sets of questions to meet the needs of other data users, especially those interested in environment and energy statistics. Most of the questionnaires are designed to collect very detailed data on production, commodity structure, intermediate consumption, the number of employees by different categories and their compensation, capital formation, other kinds of income and expenders, and changes in financial assets and liabilities.

The procedures and actions taken by CAPMAS to research and measure the burden placed on the respondents are not systematic in a way that can help examine how the details in the questionnaires affects the keenness of respondents, timeliness, accuracy and the exhaustiveness of the surveys' results.

CAPMAS conducts annual and quarterly surveys covering mining, manufacturing and electricity and water to obtain industrial statistics. Recently a special committee was set up to find suitable solutions to update the statistical frame for establishments operating in mining and manufacturing activities. Five different agencies make up the committee: CAPMAS, the Ministry of Industry and Trade, the General Authority for Industrial Development, the Industrial Modernisation Centre, the Industry Union, and the Trade Union. This initiative is commendable to overcome the various administrative, technical, and methodological obstacles hindering the establishment of a comprehensive, well-structured and up-to-date statistical frame that will facilitate the conduct of surveys representing all industries in Egypt.

Comprehensive validity checks are undertaken, including feedback, before final results are produced.

CAPMAS also compiles a monthly industrial production index, which functions as volume indicator for mining, manufacturing, electricity and water. The index covers the activities operated by establishments with ten and more employees. However, it is not exhaustive since it cover only establishment with ten and more employees. The census covered small industries but the design of the IPI and PPI only covers establishments with more than ten employees and therefore these statistics do not reflect the price and volume changes regarding small industries (less than ten employees).

Private users' needs are not taken into account when producing industrial statistics. CAPMAS may introduce new mechanisms to survey the potential data needs of the private sector in order to consider their needs when designing and conducting future surveys in parallel to satisfying the SNA requirements.

Finally, the mission did not identify any adequate measures in place to ensure that the results of industrial surveys are consistent with the other relevant indicators produced by CAPMAS such as the PPI and IPI.

## CONSUMER PRICE INDEX (CPI)

The scope, coverage and calculation of the Consumer Price Index (CPI) in Egypt comply with international recommendations. It is produced on a monthly basis and covers all governorates in Egypt and both urban and rural private households regardless of income or level of expenditure. Data regarding the rent are collected including energy and water usage throughout urban and rural centres. Prices are collected through a purposive urban/rural stratified sample of 14 442 outlets. The urban stratum is further stratified into six regions: Cairo, Alexandria, Suez Canal cities, Frontier governorates, Urban Upper Egypt and Urban Lower Egypt. Rural strata in turn are classified into Rural Upper Egypt and Rural Lower Egypt.

The sample of goods and services is kept up-to-date except in calculating the weights. The coverage of goods and services does not correspond to the final consumption expenditures of households in the SNA because the estimate of household consumption from the household expenditures survey is one-third of the national account estimate.

Expenditures for owner-occupied-dwellings are covered and estimates of rental value of owner-occupied-dwellings are included.

Weights used are derived from the household expenditure survey (HIES) 2008-2009. All goods and services commonly purchased by the target population for consumption purposes are included as are retail taxes, charitable donations and statutory

contributions such as employee provident funds and consumer savings, and investments that are built in the price. The CPI has 12 sections that are built up from 43 groups, 97 classes, 174 sub-classes, 479 detailed commodity groups, 964 goods and services. The final consumption expenditures of households used for calculating the weights for the CPI are obtained from results of the HIES. The gross final consumption expenditures obtained from the HIES are significantly less than the households final consumption expenditures obtained from national account estimates. Usually the differences between the two estimates are not great, therefore, CAPMAS is recommended to investigate the case in order to make sure that the targeted population of the CPI is covered as recommended by the CPI manual.

Actual transaction prices are used including subsidised products and controlled prices for some goods and services. The prices of products are collected based on product specifications, which include price-determining characteristics.

All adjustments and treatments regarding missing items, seasonal products, new products, and quality changes are in line with international accepted practices.

Several validity checks are applied during the collection process. Calculations are reviewed by statisticians in the Price Division for reasonableness and consistency with external information.

Data are disseminated on the urban consumer prices index, a Modified Laspeyres index (January 2010=100). The national CPI for urban and rural areas as well as the whole country are published on monthly basis.

## **PRODUCER PRICE INDEX (PPI)**

The Producer Price Index (PPI) is compiled by the Department of Price Statistics of CAPMAS in accordance with the IMF's Manual on Producer's Price Index. Items are classified into eight main sections according to ISIC Ver. 4:

- Agriculture, forestry and fishing;
- Mining and quarrying;
- Manufacturing;
- Electricity, gas, steam and air conditioning supply;
- Water supply, sewerage, waste management and remediation;
- Transportation and storage;
- Accommodation and food service activities;
- Information and communications.

The PPI for manufacturing does not cover small establishments because the weights were calculated based on surveys that do not cover small establishments.

Weights used for the compilation of the PPI are based on the output value obtained from industrial production statistics. Monthly, quarterly and cumulative price indices are calculated using the modified Laspeyres' formula. The present weight reference period is 2010. The valuation of products is done at basic prices which exclude any taxes on products but include subsidies.

The compilers of national accounts need to be cautious when using the PPI as a deflator for the output of these activities since the PPI is calculated at basic prices while the output in these activities are derived at producers' prices.

## ENERGY STATISTICS

The Industry and Energy Statistics Directorate at CAPMAS compiles energy statistics. It collects energy supply data mainly from the Ministry of Petroleum and the Ministry of Electricity. In addition, it collects energy consumption data through a yearly questionnaire on electricity and energy statistics distributed to different commercial and industrial enterprises.

The Ministry of Petroleum and the Egyptian Environmental Affairs Agency, which is also a member of the national team for energy balance, provide data on oil and gas that are compliant with agreed international definitions.

The energy statistics team at CAPMAS produces energy publications and the Egyptian national energy balance. The energy balance for the year 2011-2012 and 2012-2013 was constructed with the technical assistance of MEDSTAT and ESCWA projects. This work is commendable but there are a few remaining gaps related to the reporting and presentation of some flows.

It is clear that the energy statistics in Egypt have become available and progressed a long way in the past few years but they still need some refinement in terms of data quality and disaggregation.

The national energy balance team needs to meet regularly with all members present, from CAPMAS, the Ministry of Petroleum and the Ministry of Electricity and Energy, for continuous consultation and co-ordination. The team may also develop an information system to collect, manage and process energy data. This system may be a powerful tool to construct a comprehensive energy balance and extract various economic and efficiency indicators.

## TOURISM STATISTICS

The mission observed a satisfactory level of collaboration between CAPMAS and the Ministry of Tourism in the compilation of tourism statistics. However, the two institutions

may find it more productive to improve certain areas especially statistics on domestic tourism and details on local destinations for foreign visitors.

## ENVIRONMENT STATISTICS

The Egyptian Environmental Affairs Agency (EEAA) is responsible for collecting and analysing environmental data. It was created in 1994 by Decree #4, which was modified in 2009 by Law #9. Nevertheless, the EEAA does take into account emerging requests from users to measure resilient environmental issues by compiling specific data on smog resulting from incineration of agricultural waste. The agency produces statistical monitoring in various field of environment such as air quality, noise pollution, quality of freshwater in the Nile River and lakes, and water coastal quality in the Red and Mediterranean seas. It also produce statistics related to solid and hazardous waste, Industrial pollution abatement and biodiversity monitoring program.

The agency shares its statistical products with CAPMAS to produce a variety of technical reports based on specific statistics by environmental field. The data quality is crosschecked by the specialised department in CAPMAS to ensure methodological soundness and consistency with related thematic statistics. The analytical methodology for producing reports is not formalised so far.

The ministry through EEAA separately prepares and issues all environmental reports (State of Environment Report, Environmental Indicators Report and Annual Report for Ministry's achievements). The Ministry is currently preparing for cooperation with CEDARE in the field of capacity building.

Daily reports on air pollution are published through the EEAA Internet site, supported by 3-day forecasts.

The Ministry of Environment has published several reports that include environmental data and statistics, including an annual report on the environment in Egypt. The reports are drafted in Arabic, and the first English version was issued in 2004.

Finally, the General Department of Environment Statistics prepares and publishes an annual report on environmental statistics and indicators, using the DPSIR model as a causal framework for describing the interactions between society and the environment, developed by the European Environment Agency (EEA). The components of the model are: driving forces, pressures, states impacts, and responses.

The coordination between EEAA and CAPMAS enhanced by using CAPMAS surveys on use of natural resources by the different sectors and the environmental expenditures by government and business to include in environmental reports.

## AGRICULTURE STATISTICS

The Ministry of Agriculture (MOA) carries out an agriculture census every ten years covering farms across the country. CAPMAS provides technical support while the Ministry of Interior provides security to fieldworkers. All farms are surveyed by interview using hardcopy questionnaires. About 25 000 surveyors are recruited for fieldwork that lasts for three months. Questionnaires are subsequently checked by field supervisors and transferred to regional offices for coding and data entry, and transmission to headquarters.

During the survey design phase, the MOA submits the farm questionnaires to the users' community, including CAPMAS and specialised researchers for comments and validation. Potential requests by users are integrated into the questionnaire when feasible. The characteristics of agriculture farms and crop yield are gathered during the interview from farm owners, in accordance with international methodological standards set by the Food and Agricultural Organization (FAO).

The MOA can also develop specific surveys and questionnaires in order to respond to special requests from policy makers and international partners such as the FAO or COMESA. Despite its limited resources, the ministry carries out forecasts of agricultural production twice a year.

The MOA and CAPMAS do not implement an evaluation system of the quality of agricultural statistics by the users.

Data related to the agricultural labour force are gathered by the labour force survey carried out and disseminated by CAPMAS. CAPMAS subsequently provides data files and statistical results to the Ministry of Agriculture.

## WATER & IRRIGATION STATISTICS

The main producer of water and irrigation statistics is the Ministry of Irrigation, which is in turn the main user of these statistics. Data based on internal administrative records are not disseminated to the public.

Data on water resources are gathered regularly by the ministry's local departments at the Mohafazat level. Data are stored locally and transmitted to the ministry only when requested by the Planning Department. Data received are processed and archived on a computer in the ministry using a standard spreadsheet.

The quality of data is checked upon receipt of regional data by comparison with previous time series, and identifying outliers. Verification with the local data provider is carried out if errors are detected, and corrected data is stored in the spreadsheet.

Specific data are transmitted to CAPMAS on request for the purpose of publication in the Statistical Yearbook. The yearbook includes data on the production and consumption of water by sector, and the number of quality-monitored water points in the country.

The annual statistical bulletin on sanitation and drinking water includes statistics on the volumes of clean water produced and consumed and the average water consumption per capita.

The Annual statistical bulletin on Irrigation and Water Resources include statistics on the levels and the discharges of the Nile, drainage projects, water requirements, water wells and agricultural drainage re-used in agriculture, and on re-used sanitation wastewater in agriculture. CAPMAS produce both the Annual statistical bulletin on Sanitation and Drinking Water and the Annual statistical bulletin on Irrigation and Water Resources.

## **INFORMATION TECHNOLOGY**

The main producers of information technology statistics beside CAPMAS are the Chamber of Information Technology and Communications (CIT), the National Telecommunication Regulatory Authority (NTRS), the Information Technology Industry Development Agency (ITIDA, the Ministry of Communications and Information Technology (MCIT) and some other agencies. The agencies are also considered the main users of statistics related to information technology produced by CAPMAS. The data are published by different agencies in their annual reports and special bulletins. CAPMAS collects the data from these agencies for the purpose of publication in the Statistical Yearbook and other special statistical purposes in accordance with internal recommendations and classification systems.

CAPMAS produces most of the statistics required by the main users, but there is still a need for additional statistics covering the economic activity in this sector, especially for developing specific satellite accounts. The main problems facing the data collection process are the statistical frame and the low response rate by the companies operating in the sector. The frame is not updated efficiently and it does not include small establishments. The agencies responsible for planning and monitoring activities related to this sector need to produce more statistics on infrastructure and usage of ICT. In this regard, CAPMAS conducts regularly special surveys to cover the bulk of these needs.

### OVERVIEW

In the area of social statistics, CAPMAS is responsible for designing, organising and conducting all household and establishment censuses and surveys, disseminating the results, and carrying out a descriptive analysis of survey results. Other line ministries involved in social issues collect data on their own sectors and activities with the collaboration of CAPMAS and publish their own annual statistical reports. These ministries also transmit their data to CAPMAS, which in turn publishes summary tables in a series of thematic statistical bulletins, reports and studies.

Social statistics in Egypt are generated by two main sources: a) household-based statistics collected through personal interviews at the household level, and b) administrative records managed by ministerial departments.

Household interviews are carried out either through comprehensive data collection operations covering the entire resident population of Egypt, or through sample surveys that cover a scientifically selected segment of households that should represent the entire resident population. Comprehensive operations are typically Population Censuses that Egypt has been carrying out on a decennial periodicity since the end of the 19th century. In Egypt, the Population Census also covers houses and economic establishments. The latest Population Census was carried out in 2006 and CAPMAS is actively preparing the 14th census for September 2016. In addition, CAPMAS conducts a large number of sample surveys specialised in socio-economic themes and issues, including household standards of living and the labour force.

The second major source of social data is the compilation of administrative records maintained by five ministries responsible for collecting, analysing and disseminating sector statistics:

1. The Ministry of Education (MOE) collects and disseminates a mass of data on school education, covering the number of students and teachers and school amenities, for all levels of school education and all types of schools.
2. The Ministry of Higher Education (MOHE) compiles and disseminates statistics on public and private universities, higher technical institutes and higher-level vocational training centres.
3. The Ministry of Manpower and Migration (MOMM) compiles and disseminates statistics on the labour market and migration.
4. The Ministry of Social Solidarity (MOSS) compiles and disseminates statistics on social protection and care.

5. The Ministry of Health (MOH) compiles and disseminates statistics on activities carried out by health institutions and services, human and financial resources, inpatients and outpatients, vital events, morbidity and mortality.

Identification of users' needs is carried out on a non-systematic basis and according to the type of user. Users are consulted on a case-by-case basis and for each new survey. The remarks and needs expressed by the users are taken into account after a lengthy and heavy administrative procedure.

The concepts and statistical process used for surveys are consistent with international standards; however, complying with international recommendations does not prevent errors from occurring throughout the process and implementation phases.

A master sample based on the 2006 Population Census was designed in 2009. The master sample is used as a sampling frame from which specifically designed samples are drawn for carrying out all household surveys. For each survey, the list of sampled households is updated at the beginning of fieldwork. However, several limitations are noticeable in this approach: first, the post-enumeration survey (PES) of the 2006 census identified some underestimation of the population particularly in the border governorates; second, since its inception, the number and distribution of households selected to be part of the master sample has not been updated, despite the updating procedure that occurs before each survey; finally, there is a high risk of increased burden on respondents who could be sampled for several successive surveys.

The sampling draw of households is carried out by CAPMAS for each survey with the technical assistance of the external experts who designed the master sample.

Sampling errors are calculated for a limited number of household surveys carried out by CAPMAS. Non-sampling errors - except for the response rate - are rarely estimated for household surveys,

Baseline concepts and harmonised methods are applied to all household-based sample surveys carried out by CAPMAS, thus ensuring internal consistency between thematic household surveys. However, conceptual harmonisation is lacking between household and establishment surveys, and statistics based on administrative records. Non-harmonised statistics generated by different and non-consistent sources create a risk of gaps and discrepancies in producing reliable indicators.

## POPULATION STATISTICS

Egypt has a long history of conducting population censuses. The most recent comprehensive population statistics were gathered through the Population, Housing and Establishment Census carried out by CAPMAS in 2006. Although a post-

enumeration survey found out that the size of population had been underestimated, mainly due to underreporting in the border areas, a master sample of about 1 million households/families was drawn from the census in 2009 to serve as a basis for sample thematic surveys. It is likely that this master sample is affected by the under count identified in the results of the 2006 census.

The mission noted that there is no comprehensive assessment of population statistics in the country. The procedures (and processes) for producing current population estimates are not described. For instance, fertility and mortality rates are produced using vital registration data and these are not consistent with those estimated from household surveys including the demographic and health surveys (about half the rates in infant mortality). In addition, the reported estimates are generally not consistent with the age and sex structure reported in the last census.

Current estimates of population are based on the 2006 census population and the number of annual births and deaths (natural growth). Estimates are established on the 1<sup>st</sup> of January and the 1<sup>st</sup> of July every year since 2007.

National population projections are based on the Component methodology. Three hypothesis for fertility rates are used: high, medium, low, based on the results of the latest Demographic and Health Surveys. Mortality rates are based on the 2005-2007 average number of deaths (vital statistics) and the mid-year population estimates on 1<sup>st</sup> July 2006. Five-year life tables are calculated using MORTPAK software from 2006 to 2031. Single and five years population projections are established using SPECTRUM software, life expectancy at birth, and the three fertility scenarios, by single and five years age groups and sex.

Population projections at the Governorate level are established based on the average population percentage distribution as observed in the last four population censuses (1976, 1986, 1996 and 2006) using the ratio method.

Based on lessons learned from the 2006 census, the data collection methodology of the 2016 Population, Housing, and Establishment Census (data collection is scheduled from 23 November to 17 December 2016 across the whole country) has been fundamentally improved through the following innovations:

- The three census questionnaires (population, habitat, and establishments) were pre-tested during three pilot tests between early 2012 and February 2015 and adjusted accordingly, by adding about 20% more questions to the census form;
- A sample of 10% of households will be interviewed with a “long questionnaire” and 90% with a “short questionnaire”; the “long questionnaire” was pre-tested during a fourth pilot test in early 2015, by capturing data on electronic tablets in parallel to paper questionnaires in urban and rural areas in two governorates;

- Use of digital maps by all enumerators, supported by a Geographic Information System (GIS) for all enumeration areas in the country;
- Universal use of the system of “blocs” during data collection in rural and urban areas;
- The headcount of the population starts immediately after the completion of the field listing of households and buildings;
- The reference period for recording internal migration is extended to November 2006;
- Some households are requested to respond to the census questionnaire on line through the Internet;
- All hardcopy questionnaires are captured by optical scanning devices and optical character recognition (OCR) for data entry and storage;
- Field guidelines and manuals have been drafted for all phases of the statistical process, that provide detailed instructions to fieldworkers: enumeration, field control, data entry, data processing, validation rules, advocacy and training;
- A reference to the 2016 census has been introduced in school text books;
- Quality control procedures are implemented in parallel to all phases of data collection in the field by an independent team of highly-qualified staff who report directly to CAPMAS upper management;
- The fourth pilot is carried out on the basis of a de jure and in addition for each individual “presence status” is to be identified. However, the census will not collect data on the Egyptian population living abroad. Demographic characteristics of this population are currently compiled by the Ministry of Foreign Affairs through the Egyptian Consulates. A better co-ordination between CAPMAS and the Ministry of Foreign Affairs should be supported and strengthened for providing a global picture on the Egyptian population living inside and outside the republic.

A high-level co-ordination committee was created for the 2016 census to ensure that all available facilities are used to get the best results and to coordinate efforts. This committee includes the CAPMAS president and representatives from concerned ministries such as the Ministry of Foreign Affairs, Ministry of Interior, Ministry of Defence, Ministry of Planning, etc. as well as a representative from the parliament. This committee is not responsible for reviewing or validating census procedures

CAPMAS has organized a wide range of consultations with the primary users and stakeholders to review and approve the census questionnaires thus ensuring sound methodology and relevance of the census’ purpose and documentation.

## VITAL STATISTICS

The administration for vital statistics is under the responsibility of the Vital Registration System reporting to the Ministry of Interior. Data on births and deaths are collected by medical staff of the Ministry of Health (MOH) responsible for recording vital events, throughout its 281 health centres across Egypt. When a vital event is declared, a certificate is established in several copies by the MOH. The Information Centre of the MOH provides CAPMAS with an electronic file of births and deaths. However, copies of birth or death certificates are not forwarded to CAPMAS,

Officially, coverage of birth events is estimated at 97% nation-wide, and 99% for death events nation-wide. Some variations in the coverage rate may be observed according to the governorates. However, the mission had no information about an independent evaluation of the coverage and quality of collected vital events. In addition, a crosscheck between different sources of vital statistics remains a crucial step for undertaking reliable estimates of population dynamics.

Establishing the parameters of population change requires bringing together data from population census and household surveys on one part and administrative records on the other. The limited technical capacity to process, evaluate and adjust fertility rates by age (based on births distributed by mother's age), and mortality data (based on deaths by age) and to update fertility rates by age and life tables, hinders the possibility of estimating population dynamics based on statistical evidence rather than on theoretical modelling.

It is also unlikely that coverage rates of death events reveal higher than coverage rates of birth events, as stated officially. Lessons learned from international experience strongly suggest that ensuring high coverage of death registration is notably more difficult than ensuring high coverage of birth registration. Incentives for individuals, families and households to register births are high; where there are weaker incentives for low-resource people to declare neonatal and infant deaths.

There is a strong need to support the collection and dissemination of statistics on mortality by cause of death at the national and the Governorate levels. Data on causes of death are recorded by the Ministry of Health through medical records following the WHO ICD-10 standard. However, due to insufficient training of field personnel, the quality of this data needs to be improved. In addition, the data need to be processed electronically for compilation at the Governorate and national levels. More detailed and up-dated data on infant and maternal mortality need also to be collected and disseminated.

Vital statistics are published semi-annually and annually. Annual reports provide regular statistics on in this field, however there are limited human and financial resources devoted to statistical activities in the MOH, thus weakening the geographic

coverage of vital events and the quality of data collected. The publication of vital statistics is usually supported by a short descriptive analysis.

Although, a Memorandum of Understanding (MoU) between the MOH and CAPMAS currently governs the compilation and regular transfer of data between the two institutions, a more systematic co-ordination between the three administrations involved in vital statistics (Ministry of Interior, Ministry of Health, and CAPMAS) would address discrepancies between the concepts and definitions of vital events adopted by the three administrations.

## LABOUR FORCE STATISTICS

Labour statistics are generated mainly from the Labour Force Survey (LFS) and the report is produced by CAPMAS on quarterly basis. This is a national household sample survey conducted every year in four quarterly rounds (January, April, July and October). As of January 2012, two questionnaires are used to collect data: a short questionnaire is used the 1<sup>st</sup>, 2<sup>nd</sup>, and 4<sup>th</sup> quarters, and a long questionnaire is used in the 3<sup>rd</sup> quarter. The sample size for each quarter is 22 890 households, totalling 91 580 households over the year. The sample is a two-stage stratified cluster sample self-weighted by the proportion of urban to rural areas and the population size of each Mohafazat. The reference period is defined as the week preceding the interview. In line with ILO standards, occupation is classified according to ISCO88 in four digits, and economic activities are classified according to ISIC Rev. IV in six digits adapted to the local context. Only de jure civilian households are surveyed, thus excluding armed forces. The survey collects data on each member of the household aged six or above on age, gender, relationship to the head of household, educational status, marital status (for persons aged 18 and above), and work status during the reference period. Employment is defined as any economic activity performed by individuals over 15 years of age, for at least one hour during the previous week. The long questionnaire includes questions on housing conditions and migration.

CAPMAS does not undertake or publish estimates of standards sampling and non-sampling errors for the LFS.

Starting in October 2015, CAPMAS is testing the effectiveness of electronic tablets to carry out household and individual interviews. About 300 tablets were procured and will be used by field interviewers for the 1st Quarter in 2016. Quality control and consistency check algorithms are performed during the data entry phase. Once validated in the field, household questionnaires are uploaded on line to the central database.

The process for data entry is a semi-decentralised process: the questionnaires are scanned in the regional offices of CAPMAS in the governorates, and uploaded to the

department responsible for data entry at the central level, for further checking and particularly for crosschecking the coding of the semi-open responses related to education level and economic activities.

Data entry is processed using business software such as ORACLE and CSPRO. Data analysis is carried out with statistical packages such as SPSS, STATA, and R<sup>6</sup>, a free programming language and software environment for statistical computing and graphics.

LFS results are disseminated quarterly by CAPMAS through the Labour Force Bulletin. The bulletin includes data on the size of the labour force, employment and unemployment, its characteristics and geographic distribution. The latest issue of the Labour Force Bulletin covers the 3rd quarter of 2015 (July-September).

Labour force statistics cover the characteristics and distribution of the economically active population, and employed persons aged 15 and above: employment status (paid workers, employers, unpaid family workers, and unpaid workers), the establishment where the person works, occupation, actual number of hours worked during the reference week, registration in social and health insurance, work location, type of contract with the employer, average monthly wage. Characteristics of unemployed persons are: between 15 and 64 years of age, type of unemployment, previous main activity and occupation, last continuous period of unemployment, and the main reason for unemployment.

In Egypt, the work force includes the whole population, but excludes the following categories: children below 6 years of age, persons above 65 years who do not work or have no desire to work or to seek for work, and totally disabled persons. Persons included in the work force are divided into two main categories: those in the labour force, and those out of the labour force.

The labour force is defined as those individuals aged 15 and above who are actually contributing, physically and mentally, to any economic activity relevant to the production of commodities or services (the employed). In addition, it includes persons who are physically able to work, willing to work, and actively seeking for work, but who could not find work (who are unemployed) during the reference period. In summary:

- The employed are individuals aged 15 and above who are performing any economic activity for at least one hour during the week preceding the interview, whether within an economic establishment or not.
- The unemployed are individuals aged 15-64 years, who are physically able to work and actively seeking work, but did not find work during the week preceding the survey. The unemployed are divided into two categories: previously employed persons, and the newly unemployed

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<sup>6</sup> R is a free programming language and software environment for statistical computing and graphics.

who are seeking work for the first time, including graduates who have not started their working life yet.

Persons not considered to be in the labour force are defined as individuals aged 6-64 who are physically able to work but did not express the desire to work and have not sought work during the survey period. This group also includes individuals in compulsory military service, hospitalised persons who are not engaged in work, prisoners, persons who are temporarily suspended from work, and students performing public service.

Labour force statistics collected by CAPMAS through household sample surveys comply with ILO standard methodology and definitions. CAPMAS has made a particular effort to implement the ILO recommendations from the 19th International Conference of Labour Statisticians held in October 2013 in the 2016 round of the LFS.

In addition to carrying out quarterly Labour Force Surveys, CAPMAS collects data on employment, wages and working hours in both the private sector (firms with ten or more employees) and all public sector establishments during July every year.

Non-household based statistics on employment are generated by the compilation of administrative records maintained by public entities. The information centre of the Ministry for Administrative Development regularly collects statistics on employees in the government and public sector: number of employees and their background characteristics (age, sex, education, occupation, economic activity, etc.) CAPMAS compiles these data and publishes it at the beginning of January every year.

In terms of methodology, quality controls are performed during the data collection phase by field staff using the "Call Back" procedure. The survey results are systematically crosschecked with other data sources for data consistency. No imputation procedures and no sampling and non-sampling errors are implemented for the survey.

CAPMAS consults the users of labour force statistics on an ad-hoc basis for the preparation and implementation of each round of the LFS. Users are asked to present their needs and comments on the methodology, survey instruments, and expected output. The results of the LFS are also presented to the users' community for information. However, there is no permanent institutional consultation procedure for this type of statistics. The survey output is disseminated to users who are registered on a distribution list managed by CAPMAS.

The Ministry of Manpower publishes a quarterly Bulletin of the Egyptian Labour Market in collaboration with CAPMAS and the Information and Decision Support Centre (IDSC). The bulletin provides estimates of the labour force and the unemployed, state employees, contracts negotiated by the Ministry of Power for Egyptians to work abroad, work permits issued to foreigners working in Egypt, and the demands for

labour in small enterprises funded by the Social Fund for Development. The data are gathered through the 27 statistical offices of the ministry ensuring coverage of the entire country.

The Ministry of Manpower also publishes an annual report entitled "Activities in Figures" that includes statistics on employment and new job opportunities, vocational training, labour relations, occupational health and safety, trade unions and various social funds. The report is published in both hard copy and CD-ROM format. The jobseekers database records are updated on a quarterly basis.

The two sources described above (household surveys and administrative records) generate data following different methodologies and definitions, and the data are disseminated separately. It is therefore difficult to match the data from the two sources due to lack of consistency.

The 2003 law provides for the annual publication of eight analytical reports. However, due to lack of financial resources, the department produces only one report annually.

Although CAPMAS keeps the users' community informed of all changes in the methodology or definitions, it is not infrequent to hear scepticism from the users about the robustness of employment/unemployment rates published by CAPMAS. The unemployment rate is generally perceived to be too low.

The use of an outdated master sample is creating an unreliable sampling design that may be explaining rapid changes appearing in the tables output.

## CHILDHOOD STATISTICS

Childhood statistics focus on the four main areas of children's rights contained in the Convention of the Rights of the Child in 1989 (CRC) and identified by UNICEF grouping: Survival, Development, Protection and Participation. Therefore, in order to monitor the implementation of the CRC at the national level, data producers should cover these comprehensive areas for all children aged less than 18 years. The National Council for Childhood and Motherhood (NCCM) was established for this purpose in coordination and cooperation with the actors in this field such as the Ministries of Education, Health, Social Solidarity, Interior, Justice, Culture, and civil organizations. In addition, the NCCM cooperates with CAPMAS in the field of information exchange and carrying out related household surveys.

A statistical database is established in the NCCM to host all data related to childhood. The main challenges observed by NCCM in forming this comprehensive database are:

- Shortcomings in the coverage of all children's rights areas where there are gaps in the indicators related to disability, orphan-hood, family disintegration.

- Available indicators are limited to measuring quantities and volumes but not quality of the data. For example, educational indicators cover the number of schools and the number of students enrolled in school, but do not provide any indication on the quality of the educational process itself.
- Available indicators are provided at a high level of aggregation that does not reflect real differences in the relevant service provided, such as classroom capacity indicators.
- Coordination between the various actors in the field of exchange and integration of child-related indicators still has not reached the optimum level. For example, statistics on pre-university education in Egypt are not comprehensive but limited to indicators provided by the Ministry of Education. Statistics on education services provided by Al-Azhar University, military schools, and nursing schools, should also be included in the database.

In order to expand the statistical scope to the other aspects of childhood, a number of statistical operations were carried out in the following areas:

***Child labour:***

A first child labour survey was carried out in 2001 on a sample of 20 thousand households covering all forms of child work, by the NCCM in collaboration with CAPMAS.

In 2010, CAPMAS in collaboration with ILO and the Ministry of Manpower and Immigration carried out a national survey of child labour on a sample of 33 thousand families. For better understanding this issue, a technical committee composed of CAPMAS, NCCM, the Cabinet Information Centre and UNICEF reviewed and approved the form and methodology of the survey. Data collection in the field lasted three months, and the results of the survey showed that about 9.4% of children between 5 and 11 years are working more than 43 hours per week. The results of the survey have been validated by the ILO experts. A similar survey carried out in the agriculture sector showed that 80% of working children are engaged in agricultural activities.

The survey results were published by the end of 2010 in hard copy and on the Internet. However, the results were not crosschecked with data generated by other sources. The survey findings are currently used as a reference for developing a program for children welfare.

***Street children:***

In cooperation with CAPMAS, and others partners, the NCCM carried out the first pilot survey of street children in 2007 in four governorates: Cairo, Giza, Qalubia and Alexandria. These governorates were selected because they host the largest number of street children. The same survey was conducted in Cairo in 2009. Subsequently, the Ministry of Social Solidarity in collaboration with the National Centre for Social and Criminological Research, and others partners, organised a survey on street children in all governorates in 2014. The results of these surveys are difficult to compare given the different concepts and methodology used in each survey

## HEALTH STATISTICS

By virtue of the official decree, #455, approved at the beginning of 2015, the Ministry of Health and Population (MOHP) is the main provider of health statistics in Egypt. The decree mandates the MOHP to manage its administrative records to produce statistics and initiate thematic household and establishment surveys on health issues. However, despite strong requests expressed by policy makers, the MOHP is currently lacking adequate financial resources to carry out statistical surveys in the field.

The MOHP gathers health statistics with an internal statistical information system that exhaustively covers the national territory through 281 health centres. Data collection is conducted by medical staff who are not always properly trained in health statistical standards. The Ministry of Health applies the WHO international standards ICD-10 for recording health events and statistics.

Inter-census population estimates and population projections are established by CAPMAS based on the results of the 2006 census, and referring to fertility and mortality parameters derived from vital events gathered by the MOHP and demographic modelling.

The MOHP produces an annual Health Services Statistical Bulletin to meet the needs of its national partners (the Ministry of the Interior, the Vital Registration Authority, CAPMAS, the Ministry of Education, research centres, and universities) and international partners (WHO Annual).

Health statistics and health indicators are made available according to a pre-established schedule of statistical publications. Statistical results are disseminated in hardcopy publications, in electronic format on CDs and on line on the MOHP website. New data releases are disseminated regularly to a distribution list.

A MOU is currently under discussion between CAPMAS and the MOHP aiming to set up a co-operation framework harmonising the statistical process and avoiding methodological inconsistencies, redundancies and/or gaps.

In parallel, CAPMAS gathers and disseminates health statistics through its Statistical Yearbook. Data are compiled by CAPMAS from five different sources:

- The MOHP Annual Report on health activities in the governmental sector (health facilities, personnel, equipment, budget);
- The annual data collection based on a questionnaire sent by the Mohafazat Health Department to all local health care centres;
- Reports provided by the Specialised Medical Councils on health care services provided to citizens travelling abroad;
- The reports of the public health emergency centres;
- The annual report of the Health Insurance Authority for health services provided to beneficiaries of the health insurance system.

## DISABILITY STATISTICS

Measuring the scope and magnitude of disability in the population is a concern that CAPMAS addressed using the 1996 and 2006 population censuses. A narrow concept of disability restricted to one question on full disability was adopted. This approach has certainly led to an underestimation of disability. Respondents were asked to identify whether in their household individuals are “healthy” or suffer from disability (i.e. a physical, neurotic or mental problem for the last 6 months or more). The respondents were asked to choose one type of handicap from a set of 11 categories, and for the type of handicap chosen the respondents had to choose one cause of handicap from a set of 8 causes. This led to a headcount of 284 188 persons characterised as disabled representing 0.48% of the population in 1996, and 474 949 disabled persons representing 0.65% of the population in 2006.

As a member of the Washington Group on Disability, CAPMAS decided recently to improve the methodology for measuring disability. An expanded definition of disability was adopted for the upcoming 2016 population census. In line with the Washington Group recommendations, the household questionnaire will include 6 short questions that give the respondent the possibility to choose from 2 out of 15 handicaps, and 8 causes of handicap. The disability module will be included in the long census form that will be addressed to 10% of the census households. This new approach is being tested during the fourth round of pre-testing of the 2016 census questionnaire.

Furthermore, in 2014 CAPMAS undertook a joint project with the National Council for Disability Affairs to realise a pilot project for a headcount of disabled persons in the Menoufa Governorate, before expanding the exercise to the whole country. The project aims to identify the nature of disability and the needs of persons with disabilities for health, social, educational, and other government services. The questionnaire included questions on demographic, social, economic, educational,

and labour characteristics of disabled persons. In line with the recommendations of the Washington Group, respondents were asked to self-report on their own disabilities (sight, hearing, walking, memory, self-care, and communication), on the causes of disability, on any assistance device used, on services provided to the disabled person, and on evidence of disability status.

Data were gathered on a sample of 1 million households drawn from the 2009 master sample managed by CAPMAS. The surveyors visited all sampled households, and then collected data only on households where a disabled person was identified. Data were collected using hardcopy questionnaires only.

The 2014 survey indicated that about 61 324 individuals reported being disabled, representing 1.7% of the population of Menoufa Governorate (66.5% males and 33.5% females). This level of incidence seems to be higher than the results of the 2006 population census; however, it remains too low in comparison with international benchmarks, and female disability is probably underreported.

## EDUCATION STATISTICS

Education statistics in Egypt are based on administrative records collected by the Ministry of Education (MOE) Information and Computer Centre, at the school level. The data cover the numbers of students (by age, gender and grade), teachers (age, gender, degree and speciality) and amenities in all types of schools (public and private) and for each of the three stages of the education system in Egypt – primary, preparatory and secondary (general and technical) – as well as for the medium-level vocational training schools and centres. There are no formal procedures for checking the quality of the data internally.

Data collection is handled at school level by a dedicated staff through the ministry internal communication system every year before the end of October. The ministry determines the types of statistics to be edited including on schools, students and lessons.

The MOE gives access to education data through its annual publications in hardcopy, as well as on its Internet website, generally during the month of October. An annual press conference is organised by the MOE for sharing information with the public. The compilation of education statistics generally follows the International Standard Classification for Education (ISCED 2011).

The Ministry of Higher Education (MOHE) compiles and disseminates statistics on public and private universities and higher technical institutes, and higher-level vocational training centres.

The above information on education is complemented by information on education characteristics of the population collected through household surveys undertaken by CAPMAS. Data discrepancies between the two data sources are common requiring an explanation on the differences in methodologies.

## STANDARDS OF LIVING STATISTICS

Statistics on standards of living and poverty in Egypt are established by CAPMAS through its regular Household Income and Expenditure Survey programme (HIES). The first national HIES was carried out in 1958/59, followed by a series of surveys conducted every five years.

As of 2008-2009, CAPMAS reduced the periodicity from five to two years in order to meet the challenging rapid changes in the standards of living in the country. At the same time, a major change was made in the survey methodology by shifting from a randomly selected sample of households for each round to the selection of a panel of households that are surveyed throughout the whole reference year.

The eleventh HIES carried out in 2012-2013 provides the latest figures concerning the distribution and characteristics of household by standards of living. Poverty lines are also provided through the survey. These quantitative estimates are produced to support the decision-making process at official level and inform researchers on the changes occurring in Egyptian society. Detailed results are provided to the main official users that include the Ministry of Planning for the production of national accounts, the Ministry of Finance for the production of the Consumer Price Index (CPI), the Ministry of Health, the Ministry of Social Solidarity, the Social Development Fund, NGOs, and international organisations (United Nations, World Bank, World Food Programme).

Survey results include information on the average consumption of individuals and households by their demographic, social and economic characteristics, on the scope of poverty and the distribution of households along poverty lines, on changes in consumption patterns, on household consumption required for the national accounts, on distribution of household by source of income, and on distribution of households by type of assets.

CAPMAS is currently collecting data in the field for the twelfth HIES (2015-2016) for which fieldwork started in January 2015 and continued monthly throughout the year to take into consideration seasonality. For this survey, CAPMAS has drawn a sample of 25 000 households; of which about half are a panel of households from the previous survey, and the other half are new sample households drawn from the 2009 master sample. The combination of a panel of households from the previous survey with an equal number of new households allows for measuring the changes in the standards

of living during the last two or three years and for identifying new patterns of income and consumption in the newly introduced households.

The data collection process was significantly improved by the introduction of laptops for data entry by the surveyors during the interview. A self-documented questionnaire is pre-loaded with automated quality checks. The completed questionnaires are checked by the field supervisor then uploaded to headquarters after validation. Sampling errors are calculated for each survey but non-sampling errors are not estimated. The results of the current HIES are expected during 2016.

Two poverty lines (poverty and extreme poverty) are calculated in accordance with the UN and World Bank definitions. Each of these poverty lines is established at the national level, and for rural and urban areas. In 2013 the national poverty line was estimated at 3 920 Egyptian Pounds and the national extreme poverty line at 2 570 Egyptian Pounds.

Although the methodology to build national and regional poverty lines appears robust, the mission found out that some discrepancies exist between the volume of household consumption recorded by the HIES at the household level, and the estimates of household consumption established by the national accounts (see related paragraph in the Economic Statistics section above). The gap is currently estimated at 1-3 and it seems to be widening. The HIES managers and the national accounts experts are indeed aware of these differences and the reasons behind them, and are deploying commendable efforts to adjust the methodologies for reducing the gap. However, as long as the gap remains, doubts on both sides will undermine the reliability of data.

The main users of the survey results are the Ministry of Planning and Administrative Reform, Ministry of Finance, Ministry of Health and Population, the Ministry of Social Solidarity, the Social Development Fund, academics and researchers, the United Nations agencies, the World Food Programme, and the World Bank.

## **SOCIAL SECURITY STATISTICS**

Social security statistics are typically based on administrative records. The Ministry of Social Solidarity (MOSS) collects and manages data on social services, benefits, social security activities, including pensions and benefits, social development, vocational development centres for youth without school qualifications, vocational social training centres for the disabled, charities and non-governmental and civil society organisations.

## GENDER STATISTICS

Requirements for gender statistics are identified when the CAPMAS Centre on Gender Statistics attends workshops organised by the Ministry of Gender, UN-ESCAW, UN Women, and other international conferences addressing gender participation in economic activities and MDG indicators. CAPMAS consults with national organisations (National Council of Women, DHS, Researchers, etc.) and UN agencies to confirm the needs for statistics and discuss the definitions, concepts and methodology for designing surveys and data collection tools. The National Council for Women provides data to CAPMAS in order to supplement the needs for gender statistics and to meet international requirements.

CAPMAS carried out a household survey on violence against women in all governorates of Egypt, except those at the country's frontiers, to supplement administrative records on violence against women. The statistical results are analysed by a team of researchers from CAPMAS and the Population Studies and Research Centre (PSRC). The National Council for Women contributed to the analytical report on gender issues, including women's participation in economic activities, and on violence against women; the report is drafted together with UN-ESCAW and other UN agencies.

The assessment team noted that the methodology used in the process of data collection and analysis complied with international standards (codes, classification, etc.). The survey findings are published on the CAPMAS website, through press releases, and shared with researchers and academics.

## JUDICIAL STATISTICS

Justice statistics in Egypt are mainly generated through two sources: the Ministry of Justice, which collects administrative data from judicial courts countrywide, and CAPMAS through tailor-made questionnaires submitted to the justice system to collect administrative data. Furthermore, the Ministry of Justice registers demographic statistics on marriages and divorces using standard forms as a regular procedure for internal management.

The main users of justice data include the Ministry of Justice, civil society organisations, NGOs, research institutions, individuals and international organisations. Data is released on annual basis.

The Ministry of Justice gathers manually data of judicial events at all levels of the judicial system countrywide. However, the ministerial authorities intend to up-grade the whole statistical process (data collection, compilation, and dissemination) by computerising all the phases of the process. In order to achieve this objective,

adequate financial resources will be required for building computer capabilities, equipment, and staff training. The Ministry is also preparing a co-ordination agreement with CAPMAS to specify the exchange of harmonised statistics and avoid inconsistencies.

## CROSSCUTTING ISSUES

### GEOGRAPHIC INFORMATION SYSTEM

In 1989, CAPMAS established GIS capabilities to meet the geographical location needs of national statistics. A strong impulse expanding the scope and implementation of this technology was given recently by CAPMAS management, by establishing a General Directorate for Digital Mapping. Extensive efforts were deployed to support the use of digital maps throughout the statistical process for surveying households and establishments and for providing knowledge and information on the delivery and access to public services.

The objectives assigned to this project are to generate numerical maps with boundaries at the 1/5000 scale; and to provide digital map applications to be used for all sectors of public services: education, health, sanitation, etc.

Based on the results of the 2006 Population Census, a comprehensive atlas of Egypt was produced displaying population characteristics at the smallest geographical level (23 000 enumeration areas) as defined by the census.

Digital maps will cover the entire area of the country by the end of 2016. All field surveyors, controllers and supervisors will be equipped with detailed digital maps (in hard copy) for data collection in the field at 1/500 scale in urban and rural areas, thus identifying all types of buildings. In addition, one out of two field workers will be equipped with an electronic digital map uploaded on their electronic tablets.

The GIS applications are numerous. The results of the 2016 population census will be displayed using the atlas format at governorate level. A national ID will be assigned to each public building in the country; the World Food Programme is implementing this instrument for the management of its resources and services. It will help public services (health, education, transport etc.) monitor their input and output, and measure the attraction zones. The Ministry of Domestic Trade requires digital maps for improving the identification and sampling of small and micro-enterprises in the informal sector. The Ministry of Housing would use digital maps for identifying renewal in peri-urban areas and informal settlements.

The General Department for Digital Mapping is sensitive to all requests expressed by users. It provides training on the use of digital maps in universities to students and researchers. Private users may benefit from these capabilities for a symbolic fee that would cover the cost for producing the electronic or hardcopy media.

A map of poverty in Egypt is currently available to all users, with distribution by area of residence (urban/rural) and governorate, for the years 2008/09, 2010/11, and 2012/13.

National stakeholders have expressed a strong need for developing digital mapping facilities supporting the collection of data and improving sampling design for household and establishment surveys.

## QUALITY CONTROL

CAPMAS management has established an independent department responsible for ensuring higher quality standards for data collected through its sample surveys. The Quality Control Department reports directly to the president of CAPMAS. It can carry out its mission during the data collection phase of all surveys, without prior notification, nor interference from other departments.

Quality control is carried out during all phases of the statistical process including the sampling design, the questionnaire design, data collection, and data entry. Corrective actions from lessons learned are documented for strengthening capacities.

At least 20% of questionnaires filled out by enumerators and surveyors in the field are controlled by the Quality Control Department. Work performance and output quality of all field staff are systematically assessed during the data collection phase for all surveys. As an example, 3 out of 18 households interviewed by one surveyor in the LFS are re-interviewed by independent surveyors who report back to the Quality Control Department. Information gathered through these second interviews is crosschecked with the initial questionnaire completed by the assigned surveyors. Any detected inconsistency is therefore subject to verification that might imply a call-back procedure of the concerned household.

In order to promote knowledge sharing, field staff is requested to present its findings from field experience and corrective actions undertaken. The report is reviewed twice every month and outstanding field workers are rewarded every month.

## NORMS AND METHODS USED

The following are some of the norms and methods currently being used by CAPMAS and other partner agencies in Egypt to undertake statistical activities in line with international recommendations:

- CAPMAS uses the International Standard Industrial Classification of All Economic Activities ISIC Rev. 3 to classify economic activities. Two digits have been added to accommodate national circumstances, and there are 4 additional digits in manufacturing.
- Industrial products are classified by the national nomenclature of industrial products based on PRODCOM.

- Central Product Classification (CPC), version 1.1 is used for the Producer Price Index (PPI).
- The Classification of Individual Consumption by Purpose (COICOP) is used to classify individual and household final consumption compiled a two digits level.
- The Classification of the Functions of the Government (COFOG) is also applied.
- The 2011 International Standard Classification of Education (ISCED-2011) is used to classify education statistics and indicators.
- The definitions of labour and employment used in Egyptian statistics are close to ILO recommendations. CAPMAS is currently implementing the recommendations of the 19<sup>th</sup> International Conference of Labour Statisticians held in 2013.
- Occupations are classified according to the International Classification of Occupation ISCO-88.
- Poverty lines are calculated in accordance with the UN and World Bank definitions. Two poverty lines are established: the proportion of the population below US\$1.25 and US\$2 per day, and the proportion of the population living on less than 50% of the median daily income.
- In addition, poverty line and extreme poverty lines in national currency are calculated based on household consumption as measured by the HIES. The population distribution by income percentile is also provided.

### **INTERNATIONAL DEVELOPMENT PARTNERS: UNESCO, UNFPA AND UNICEF**

The following are some of the observations and comments relating to statistics in the country by development partners interviewed during the mission:

- UNESCO collects education data as well as population projections directly from line ministries responsible for education services.
- UNESCO shared its concern that national education statistics have some quality issues, which seriously need to be verified. The data provided simply “do not add up”.
- UNICEF shared its concern over the lack of accuracy of some population statistics related to individual characteristics of the population, particularly in the border Mohafazats. In addition, figures on enrolment rates were deemed unreliable because the number of children enrolled in primary education supplied by the Ministry of Education, and the number of children enrolled in school reporting to the El-Azhar Academy, are not consolidated. Infant Mortality Rate is also thought to be under-reported.

- UNFPA uses statistics gathered mainly through the Egypt Demographic and Health Surveys (EDHS). EDHS provides the most reliable source of information related to UNFPA's area of work.

In view of the above, the following recommendations were made to CAPMAS by the development partners:

1. There is a need to review the mandate of CAPMAS in order to strengthen its central role in the NSS to co-ordinate the users and producers of statistics, to harmonise the content and to improve the quality of statistics.
2. CAPMAS needs to improve access to users of statistics through the establishment of a single Internet-based location for data.
3. There is a need to resolve the difficulties related to data availability, as well as the discrepancies of data produced by CAPMAS and other data producers.
4. It is important that international organisations support CAPMAS as the central producer of national statistics and in its role assisting line ministries for producing administrative records.

## DATA REVOLUTION

1. Data revolution is already taking place in Egypt. There are notable changes in institutional, organization and technological changes. For instance, CAPMAS was already convening a Consultancy Committee for Statistical Planning and Coordination. This was an inclusive committee that was overseeing statistical activities across the NSS. However, due to its size, the committee was discontinued.
2. Within CAPMAS, use of organizational innovations has been noted including but not limited to improved data management during various data collection exercises, and setting standards across the national statistical system. CAPMAS has also created a unit involved in innovation and providing advice to the president of CAPMAS.
3. Efforts have also been undertaken to bring on board technological innovations across the national statistical system including technical infrastructure such as good intranet connectivity within CAPMAS, mobile data collection and use of visual analytics during data dissemination through web-based dissemination and hard copies data dissemination. Use of geospatial data for the 2016 census is another step in the use of technology.

## Chapter 3: Recommendations

This chapter presents a number of recommendations to CAPMAS, partner agencies and other players in the statistics arena in Egypt resulting from the above findings.

### INSTITUTIONAL, LEGISLATIVE FRAMEWORK AND ORGANISATIONAL SET-UP

#### *Short-term recommendations*

1. For better effectiveness of the NSS, CAPMAS should reinstate the meetings of the Consultancy Committee for Statistical Planning and Coordination but with a smaller number of ministries, i.e. a maximum of 30 representatives that include core ministries such as education, health and planning.
2. In order to strengthen strategic direction of statistics in the country, CAPMAS should develop a medium-term (5-10 years) corporate plan;
3. Under the co-ordination and guidance of CAPMAS, Sector Plans for the Development of Statistics (SPDS) should be developed by various sectors in order to strengthen the capacity of sector statistics in the medium-term period;
4. To strengthen co-ordination across the NSS, CAPMAS should co-ordinate the production of a National Strategy for the Development of Statistics incorporating its corporate plan and sector strategies for the development of statistics;
5. CAPMAS should call for periodic meetings with stakeholders specifically to discuss issues pertaining to the Statistics Act and how to enforce it;
6. There is a need for linkages between e-initiatives undertaken by CAPMAS to improve the statistical process and dissemination of statistical results, with e-initiatives taken by other national stakeholders;
7. CAPMAS should initiate independent and regular User Satisfaction Surveys to establish the quality of statistical services across the NSS.

#### *Medium-term recommendations*

8. CAPMAS should consider reviewing the national statistical legislation in view of its modernisation and to take into account international frameworks such as the Fundamental Principles of Official Statistics, and the African Charter on Statistics, and officially establish a NSS. Some of the areas that may be considered for revision include:

- Providing for a National Statistical Council. Such a Council should be responsible for setting policies, protecting the independence of CAPMAS, etc.;
  - Improving statistical co-ordination between data users and producers, among data producers, and between data producers and research/training institutions. In this connection, it is recommended that a Statistics Coordination Department be established to foster both international and external coordination;
  - Entrenching a provision for “Confidentiality of Data” and defining such confidentiality;
  - Providing for dissemination of micro-data to bona-fide researchers and academics after meeting a number of criteria.
9. CAPMAS should lead the embracing of a data revolution in the country by involving more players in the statistics arena, increasing the use of technology and innovation, and incorporating institutional and organisational innovations;
  10. In order to ensure the relevance of statistical products, CAPMAS and other producers of statistics should clearly identify and respond to a set of data needed for monitoring the national development plan;
  11. The current process of upgrading the CAPMAS website should be continued while soliciting views from various users;
  12. CAPMAS should be ready to establish new domains of statistics to respond to the SDGs;
  13. There is a need to improve the way statistics are communicated so that they “tell a story”. This will require CAPMAS to build greater capacity for data analysis as well as to collaborate with researchers and analysts who have better analytical skills;
  14. There is a need to improve technical co-ordination of official statistics in the country. In order to attain this:
    - I. CAPMAS should formally establish an NSDS Co-ordination Unit to oversee all institutional related matters. The co-ordinator of this unit may be the head of a Co-ordination Department once established;
    - II. CAPMAS should establish Technical Working Groups to feed into the work of the Co-ordination Unit;
    - III. The Co-ordination Unit should guide the production of co-ordination tools such as the Code of Practices for Statistical Personnel, Compendium of Main Concepts and Definitions, Classification and Norms, Data Quality Assurance Framework, etc.
  15. Strong capacity building mechanisms should be further developed and maintained. CAPMAS is therefore recommended to:

- I. As a matter of urgency start recruiting and training younger personnel before the majority of the current crop of experienced staff retires;
- II. Negotiate for better remuneration for its employees in order to attract highly qualified personnel;
- III. Conduct a regular Staff Satisfactory Survey about the work environment, promotion, salary, management, etc.;
- IV. Invest in upgrading household and establishment survey methodology for improving data coverage, data quality and data internal consistency;
- V. Establish an online data warehouse, as a one-stop gate, through which users can easily access basic and detailed statistics related to all domains. Data should be auto-documented with relevant metadata and procedures for assisting users in terms of search engine, data analysis and data presentation;
- VI. Initiate the development of a national dissemination strategy that should provide the framework for easy access to data by users through advanced means of dissemination and supported by adequate funding at the national level.

## ECONOMIC STATISTICS

### *Short-term recommendations:*

#### NATIONAL ACCOUNTS:

16. The short-term recommendations for national accounts are:

- I. End the existing dual system of national accounts by transferring the unit responsible for the production of national account statistics to CAPMAS for several reasons. It is widely practiced by most countries on the merits of comprehensiveness and efficiency. Second, the DNA is one of the main users of economic and social statistics produced by CAPMAS and therefore CAPMAS can use the SNA conceptual and accounting framework to integrate all economic statistics. Finally, situating this unit at CAPMAS helps to avoid many practical and administrative bottlenecks that exist in the current statistical work;
- II. Derive the official GDP estimates according to the three traditional approaches from the SUT framework since the figures will be based on reconciled estimates of supply and use at a more detailed level than the current practice. This requires collaboration with the DNA staff to agree upon the most appropriate methods and sources to be used for deriving the required estimates;

- III. Compile the SUT at constant prices as this would improve the quality of GDP estimates and would furnish a wide range of implicit deflators that can be used for various purposes. CAPMAS may utilise the available volume indicators in deriving the constant estimates by extrapolating the values from the base year using appropriate volume indicators when no appropriate price indices to be used for deflation exist. Volume indicators could be identified by assessing the wide range of administrative data that CAPMAS has access to;
- IV. Use the SUT framework to derive more appropriate estimates for the informal sector. Informal activities could be defined and measured during the balancing process of the SUT while analysing the discrepancies between supply and use.

#### **INDUSTRIAL STATISTICS:**

17. More collaboration is needed between the stockholders concerned in establishments operating within the mining and manufacturing sectors for obtaining an updated statistical frame that can be used for annual and quarterly surveys. In this respect and through consultation and collaboration with major stakeholders, CAPMAS should prioritise constructing and maintaining a comprehensive statistical business register and promote the use of national identification for companies.
18. CAPMAS is also recommended to expand the Industrial Survey to include small industries with less than ten employees. This will improve the coverage of industrial statistics and will meet the needs of users who are more particularly interested in small industries.

#### **Medium-term recommendations:**

#### **NATIONAL ACCOUNTS:**

19. The medium-term recommendations for national accounts are:
  - I. CAPMAS should focus future efforts on constructing a statistical business register that comprises the main types of statistical units needed for the various economic surveys. It would be instrumental in enabling CAPMAS to achieve integration of economic statistics and in implementing the SNA2008 efficiently. The definition of statistical units in the register shall include enterprises (local kind-of-activity unit), establishments, kind-of-activity unit (KAU) and local unit. The type of statistical unit that should be used by a particular economic survey will depend on the desired indicators. Enterprise

- is used for financial data, national accounts and institutional sectors, while KAU is used for production data. If the need arises to have indicators at the regional level then the local unit or establishment is used;
- II. The DNA and CAPMAS should consider the use of IT tools to manage the whole compilation process. One widely used IT tool is ERETES that is a flexible application, easy-to-use and affordable. This tool is currently used by statistical agencies in 30 countries; it supports the production of coherent, harmonised, and reliable statistics worldwide. The ERETES Community network also enables users to discuss, share concerns and find common solutions for the compilation of reliable national accounts. The software is constantly being improved and regular in-situ training is offered.

### EXTERNAL TRADE STATISTICS:

20. The medium-term recommendations for external trade statistics are:
- I. CAPMAS and the Ministry of Trade should base the implementation of ETS on the International Merchandise Trade Statistics Concepts and Definitions 2010 (IMTS 2010) developed by the United Nations to cope up with the requirements of the implementation of SNA2008 and BOP 6th edition;
  - II. CAPMAS and the Customs Authority should strengthen their co-operation on the quality and reliability of the cargo customs declaration data, and CAPMAS should strive to have direct access to the databases of the four data providing agencies;
  - III. Improve trade statistics by developing a methodology providing better estimates of informal trade.

### INDUSTRIAL STATISTICS:

21. The medium-term recommendations for industrial statistics are:
- I. CAPMAS should consider minimizing the length of the questionnaire to reduce the burden on respondents;
  - II. CAPMAS should increasingly use business accounting terms and structures in designing the questionnaires to enable respondents to easily understand the terms used;
  - III. CAPMAS should regularly make crosschecks amongst industrial statistics to ensure consistency and reliability of the relevant estimates. These should include quarterly versus annual industrial statistics and quarterly versus annual GDP estimates, especially related to mining and manufacturing. The monthly IPI and PPI produced by CAPMAS should be also be consistent with the results of annual and quarterly I-O tables produced by CAPMAS, particularly output data of mining and manufacturing activities;

- IV. CAPMAS should revise the surveying methodology to periodically widen (for example every five or ten years) the coverage to include companies with less than ten employees;
- V. Increasing the dialogue with data users and investigating the potential users would help CAPMAS in designing and conducting more efficient surveys that can serve more data users, especially data users from the private sector. Serving the data needs of the private sector would improve their participation in the surveys and improve the private-public partnership in improving the statistical system.

## PRICE STATISTICS

22. The medium-term recommendations for price statistics are:

- I. CAPMAS and the National Accounts Directorate should co-ordinate their efforts with regard to the suitable pricing of the products to ensure consistency in the valuation between national accounts implicit deflators and PPIs.

## ENERGY STATISTICS:

23. The medium-term recommendations for energy statistics are:

- I. The Ministry of Energy and CAPMAS should collaborate to produce a Strategy for the Development of Energy Statistics;
- II. CAPMAS and its partner agencies involved in energy statistics should fully apply the relevant international standards with respect to collection and dissemination of energy statistics and in particular when building a future energy balance for Egypt;
- III. CAPMAS and its partner agencies involved in energy statistics should provide focused training to staff through courses on the basics of energy industries (oil and gas, electricity, renewable energy, etc.), energy economics and energy policies in order to enhance their knowledge and capacity to provide analytical and political perspectives of the energy data rather than from a national accounts perspective;
- IV. CAPMAS should make more use of administrative records provided by electricity utilities and government oil and gas providers;
- V. CAPMAS should replicate the survey that was done on energy end use, in the transport, industry and services sectors.

### **ENVIRONMENT STATISTICS (ADMINISTRATIVE RECORDS)**

24. The EEAA, in collaboration with CAPMAS, should strive to produce a Strategy for the Development of Environmental Statistics.
25. A Statistics Unit within the EEAA should be established and strengthened to deal with environmental statistics in collaboration with CAPMAS.
26. The coordination between EEAA and CAPMAS should be enhanced by using CAPMAS surveys on the use of natural resources by the different economic sectors.
27. Environmental expenditures by government and businesses should be included in environmental reports.

### **TOURISM STATISTICS**

28. The MOT and CAPMAS should collaborate to produce a Strategy for the Development of Tourism Statistics.
29. CAPMAS and the MOT need to secure more funds to conduct further surveys to capture data on domestic tourism and the local destination of foreign visitors.

### **AGRICULTURE STATISTICS**

30. The Ministry of Agriculture, in collaboration with CAPMAS, should strengthen its capacity of production of agricultural statistics;
31. The Ministry of Agriculture, in collaboration with CAPMAS, should design a Strategy for the Development of Agriculture Statistics in line with the Strategic Plans for Agricultural and Rural Statistics (SPARS) Guidelines.

### **WATER & IRRIGATION STATISTICS (ADMINISTRATIVE RECORDS)**

32. The Ministry of Water Resources and Irrigation, in collaboration with CAPMAS, should design a Strategy for the Development of Water Resources Statistics to clearly identify users and their needs and promote the formulation of a water resource policy.

### **INFORMATION TECHNOLOGY**

33. CAPMAS should improve its collaboration with the specialised agencies in order to determine the appropriate methods and sources for producing as much as possible the required statistics.
34. CAPMAS should undertake necessary steps for investigating the requirements of all users.

## SOCIAL STATISTICS

From the above findings and analysis, the following recommendations are made:

### *Short-term recommendations*

## POPULATION STATISTICS

35. These are the recommendations for population statistics in Egypt:

- I. A comprehensive assessment of population statistics from censuses and civil registration should be undertaken;
- II. CAPMAS should continue carrying out Post-Enumeration Surveys (PES) shortly after completing data collection for the Population, Housing, and Establishment Census, in order to assess population coverage and quality of data collected;
- III. CAPMAS should undertake an assessment of the relevance and effectiveness of the 2009 Master Sampling Plan based on the 2006 population census in order to draw lessons for the 2016 population census;
- IV. CAPMAS together with its partner agencies in population statistics should, at the current stage of preparation of the 2016 population census, design an analysis plan of the census results;
- V. CAPMAS should scale up its methodology for population projections to take into account internal and international migrations;
- VI. CAPMAS should carry out population projections based on the results of the 2016 population census at the Mohafazat level, for planning purposes;
- VII. CAPMAS should lead the process of interfacing and using statistics from sectoral departments through a unified framework of rules and procedures ensuring the consistency of definitions and nature of data;
- VIII. CAPMAS should develop a repository of statistical procedures and design of surveys to be formulated as standard operating procedures (SOPs);
- IX. CAPMAS should facilitate its co-ordination with the Ministry of Foreign Affairs to provide a global picture on the Egyptian population living inside and outside the republic.

## VITAL STATISTICS

36. The following recommendations are being made in relation to vital statistics in Egypt:

- I. Carry out an independent assessment of the national civil registration and vital statistics system, that would include the validation of the quality and coverage of vital statistics based on a crosscheck of statistics generated by household based data (population census and household survey

- undertaken by CAPMAS), and administrative records maintained by the Ministry of Health, the Ministry of Interior, and the Vital Registration Authority;
- II. CAPMAS should co-ordinate the process of developing a Strategy for Strengthening Civil Registration and Vital Statistics (CRVS) in Egypt in collaboration with the department of vital registration, the MOI, and the MOH;
  - III. CAPMAS should provide regular training sessions to MOH staff to harmonise the understanding of basic statistical concepts and data collection methodology throughout the statistical process and particularly improving the quality of statistics on causes of death with correct medical certification, in line with WHO standards (ICD-10);
  - IV. Capacity should be enhanced at both MoH and CAPMAS in producing vital statistics reports that are consistent with the UN Principles and Recommendations on Vital Statistics (Rev. 3).

## LABOUR FORCE STATISTICS

37. The mission recommends the following to CAPMAS to improve labour force statistics:

- I. Develop a Strategy for the Development of Labour Statistics with the Ministry of Manpower and Immigration;
- II. Update the sampling frame based on the results of the 2016 Census of Population, Housing and Establishments;
- III. Estimate sampling errors and non-sampling errors for each quarter round of the survey, and for the overall calendar year;
- IV. Develop imputation algorithms for imputing values to missing data;
- V. Carry out an in-depth analysis of the survey results that goes beyond the usual descriptive analysis;
- VI. Promote the use of electronic data entry in the field using hand held tablets by all field surveyors and survey management for data quality checks, validation and transmission to CAPMAS headquarters;
- VII. Adapt data collection methodology and particularly the drawing of the sample in order to diminish the burden on the respondent households who are repeatedly selected;
- VIII. Document the findings of each survey round and lessons learned in the field for the purpose of building knowledge and improving the methodology and the quality of survey results;
- IX. Find ways to reduce the burden of surveys on household respondents;
- X. Provide training and technical assistance to staff in the employment agencies for quality improvement of statistics on employment;

- XI. Improve co-ordination with MOMM to reduce methodological differences and data discrepancies between household-based employment statistics and employment statistics;
- XII. Improve co-ordination with the Ministry of Higher Education to improve the coverage and quality of statistics on vocational training.

## CHILD LABOUR

38. The mission recommends that the National Council for Childhood and Motherhood (NCCM) undertake the necessary actions to ensure the availability of an integrated and comprehensive database on childhood. This could be achieved by gathering information regularly on issues such as family disintegration, street children, disability, and violence against children. The comprehensiveness of the database should be achieved in collaboration with CAPMAS and all stakeholders.
39. CAPMAS should include a supplementary module on child labour in the 2017 round of the Labour Force Survey, for validating the 2010 Child Labour Survey results. An adequate methodology should be developed for measuring child labour and assessing the status of children living and working in the streets.
40. The mission recommends engaging a permanent dialogue between producers and users of childhood statistics, and develop a data collection statistical tool adapted to measuring childhood wellbeing.

## HEALTH STATISTICS

41. CAPMAS should collaborate with the Ministry of Health to develop a Strategy for the Development of Health Statistics that should:
  - I. Strengthen co-ordination mechanisms between CAPMAS and MOHP through the agreement and implementation of the MOU;
  - II. Review and/or revise legal frameworks to specify responsibilities of partner departments;
  - III. Compile data on causes of death at all ages at the Governorate and national levels;
  - IV. Strengthen medical staff capacities by training them on using the required international standards set by WHO, and familiarising them with statistical procedures.

## DISABILITY STATISTICS

42. The mission recommends the following to CAPMAS in relation to disability statistics:

- I. Include the disability module in the long questionnaire form of the 2016 population census, as an alternative to undertaking a separate and costly survey on disability;
- II. Disseminate disability statistics to all stakeholders, with a particular focus on decision-makers;
- III. Prioritise the provision of special training on disability issues to census field personnel (surveyors, controllers, etc.) responsible for collecting data on disabilities;
- IV. Carry out a national awareness campaign encouraging household respondents to overcome their reluctance to provide faithful information on the characteristics of persons living with disability in their household;
- V. Carry out the estimation of the sampling and non-sampling errors occurring in the 2014 Disability Survey in the Menoufa Governorate in order to assess the quality of the data collected and hence obtain a better estimation of the incidence of disability.

#### **EDUCATION STATISTICS**

43. CAPMAS should lead and engage with the Ministry of Education to develop a Strategy for the Development of Education Statistics to strengthen co-ordination mechanisms, capacity building, mapping users and supporting the use and dissemination of education statistics.

#### **STANDARD OF LIVING STATISTICS**

44. CAPMAS together with the MOP should conduct a thorough assessment of the methodologies used for estimating households' consumption in the national accounts (residue method), and in the HIES. The assessment should be carried out by a team of independent experts who would review both methodologies, and find adequate solutions. It is crucial to re-establish mutual trust in the methodologies, and produce robust and comparable results.
45. CAPMAS should systematically integrate innovative measures in data collection techniques that include, but are not limited to: the use of hand held electronic devices for data collection, and the use of digital maps with GPS capabilities to assist fieldwork personnel exploring the assigned enumeration areas and to correctly identify sampled households.

#### **GENDER STATISTICS**

46. CAPMAS should work with the National Council for Women to develop a Strategy for the Development of Gender Statistics and other national partners in order to

ensure harmonisation of methodologies, concepts and definitions, to avoid duplications in efforts, to consider issues of coverage, capacity building, resource mobilisation, meeting user needs, and to set a vision for gender statistics in the medium-term.

### JUDICIAL STATISTICS

47. CAPMAS should support the Ministry of Justice to develop a Strategy for the Development of Justice Statistics in order to improve co-ordination, harmonisation and standardisation of concepts and definitions, capacity building and to integrate innovations and resource mobilisation.
48. Support the computerisation of the statistical process through all levels of the judicial recording procedures.

### GEOGRAPHIC INFORMATION SYSTEM STATISTICS

49. CAPMAS should continue to further strengthen the capabilities of GIS services to produce accurate digital maps at the smallest scale and to update the information needed for an effective GIS service;
50. CAPMAS is further encouraged to support the generalisation of the use of GIS for household and establishment surveys at the data collection and quality control stages, but also for displaying the results of all surveys undertaken within the national statistical system.

### INTERNATIONAL ORGANISATIONS

51. CAPMAS should initiate and chair a committee of development partners aiming to share statistical programmes, feedback on statistical services and developments from across the globe;
52. CAPMAS should undertake a Country Report on Support to Statistics (CRESS) to determine support that is being provided to statistics.

### *Medium-term recommendations*

### CAPACITY BUILDING

53. CAPMAS should develop a corporate plan including proposals to develop a human resource strategy aimed at:
  - I. Strengthening analytical capabilities to provide documented interpretation of results and technical support to users;

- II. Training staff in CAPMAS and partner ministries on sampling methodologies, database management, GIS, household survey design, new technologies for data collection and dissemination, strategic management;
- III. Providing guidelines for sampling methodology for household surveys;
- IV. Providing guidelines for using administrative records for statistical purposes;
- V. Providing guidelines for carrying out household surveys;
- VI. Providing guidelines for calculating sampling and non-sampling errors for household surveys.

## **ACCESS TO DATA**

54. CAPMAS should establish a unified data warehouse covering all statistical sectors and expand the provision of standardised Public Use Files (PUF) to all statistical surveys.
55. A data dissemination policy including micro-data dissemination policy should be developed by CAPMAS and applied across the national statistical system.

## **MEETING USERS' NEED**

56. CAPMAS should establish a regular and systematic consultation process with users as a substitute to ad-hoc consultation for new surveys.
57. CAPMAS should further strengthen analytical capabilities to provide documented interpretation of results and technical support to the users.
58. CAPMAS should work in collaboration with the Ministry of Planning to map out indicators required for monitoring the National Development Plans.
59. CAPMAS should enhance capabilities of staff across the NSS in making statistical stories out of statistical reports.

## **DATA REVOLUTION**

60. CAPMAS should continue making institutional, organizational and technological changes to reflect a modern statistical institution. These should include but not limited to reviewing the statistics law, undertaking a functional review of CAPMAS and other main producers of statistics, developing an NSDS using the sectoral approach that includes CAPMA's cooperate plan, and promote open data policy.
61. Partnerships with other stakeholders should also be enhanced to share data across the national statistical system through more modern mechanisms.
62. CAPMAS and other stakeholders across the NSS should continue participating in international meetings regarding Data Revolution to keep updated of upcoming recommendations

## Chapter 4: Conclusions

Statistics enjoy a high profile in the government and amongst other stakeholders in Egypt. CAPMAS is supported at the highest political levels as the main institution responsible for producing and disseminating official statistics in the country. As a result, it receives the biggest chunk of funding from the government. CAPMAS has built trust amongst various stakeholders in and outside the country as a credible institution that produces statistical information with integrity and professionalism. It is not surprising therefore that the World Bank Statistical Capacity Building Indicator gives Egypt a score of 91.1 out of 100.

Although the statistical system in Egypt is considered centralised with CAPMAS as the source of official national data under the presidential decree, almost all government ministries and agencies have statistics units that collect and disseminate data for use by their respective ministries and at times even beyond. Such a situation has exposed challenges to statistics co-ordination in the country. Unfortunately, none of the sectors that produce statistics has medium-term plans for the development of statistics. This is further exacerbated by the lack of a National Strategy for the Development of Statistics that could help set medium- to long-term statistical vision and goals for the country's statistical system. As such, co-ordination mechanisms are critically required at national level amongst all producers of statistics.

Although the current Statistics Law has most of the requirements needed to guide statistical operations, the law is old and outdated therefore has not kept up with the management requirements of a modern national statistical system such as officially recognizing the national statistics system, strategic planning and having a statistics council.

An updated Statistics Law will ensure adequate grounds for statistics operations and co-ordination. It is evident that the current crop of staff within CAPMAS and other statistics units in government ministries is well qualified and experienced in their respective statistical domains. However, succession gaps are very vivid across most statistics units and departments within CAPMAS and government ministries as most of the current staff are nearing their retirement age. Thus, there is a requirement for urgent and comprehensive capacity building mechanisms while also recruiting new and qualified personnel to meet users' needs.

Data needs, including those at granular level, are continuously increasing in Egypt. However, the lack of systematic mechanisms to engage with users impedes efforts to

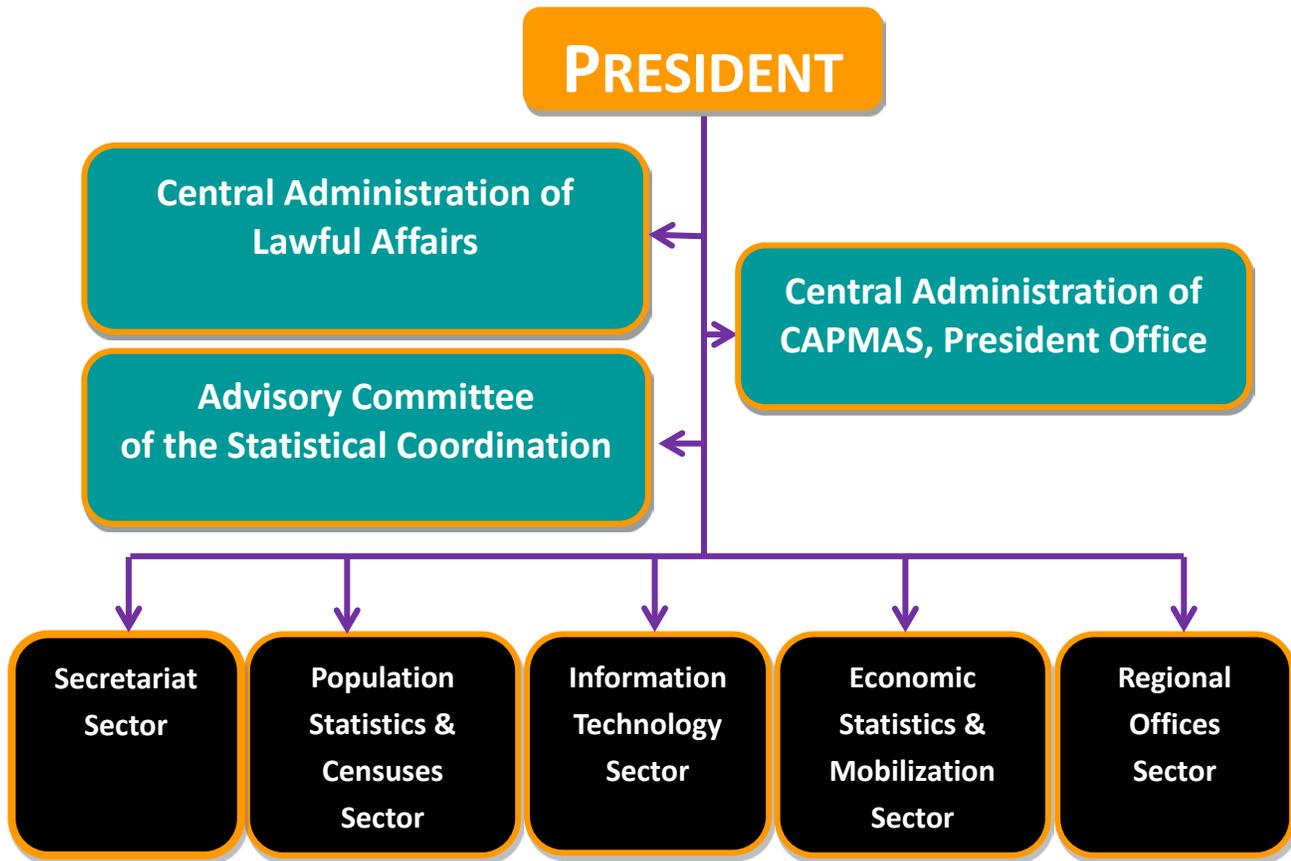
meet their needs. The current effort to upgrade the CAPMAS website incorporating visualisation and other interactive mechanisms is an effort worth pursuing further. Leadership at both institutional and political level has demonstrated a keen interest to embrace a data revolution by incorporating the use of new technologies and innovations, as well as organisational and institutional innovations. This process will be spurred on by CAPMAS moving from short-term planning to medium-term strategic planning. A corporate plan for CAPMAS will be a starting point to develop intra co-ordination mechanisms and set an agreed vision and set of goals. The corporate plan will be developed in parallel with sector plans for the development of statistics all of which will form building blocks of the National Strategy for the Development of Statistics that will improve survey programmes, administrative data and statistics literacy through capacity building, co-ordination, resource mobilisation, user-producer interaction, embracing other sources of data, private-public partnerships and developing a country-led data revolution.

## Annexes

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- I. Organisational Structure of CAPMAS
- II. Organisations and individuals interviewed
- III. Documents reviewed
- IV. Short bio of members of the Assessment Team

## I. Organisational Structure of CAPMAS



## II. Organisations and persons interviewed

	<b>INSTITUTION</b>	<b>NAME OF PERSONS</b>	<b>DEPARTMENT/RESPONSIBILITY</b>
1	CAPMAS	Gen. Abo-Bakr El-Gendy	President
2	CAPMAS	Prof. Hussein Abdel-Aziz Sayed	National Co-ordinator
3	CAPMAS	Prof. Zeinab Khedr	Team Leader for Social Statistics
4	CAPMAS	Ms. Amal Fouad	Assistant to Social Statistics Team Leader
5	CAPMAS	Mr. Felip Fahmy	Assistant to Social Statistics Team Leader
6	CAPMAS	Ms. Awated Hussein	Team Leader for Economic Statistics
7	CAPMAS	Dr. Mohamed Ramadan	Assistant to Economic Statistics Team Leader
8	CAPMAS	Ms. Mostafa Abdel Mohsen	Economic Statistics Team
9	CAPMAS	Ms. Amira Gamal El-Dein	Team Leader for Legislative and Organizational Set-up
10	CAPMAS	Dr. Yosr Radwan	Assistant to Team Leader for Legislative and Organizational Set-up
11	CAPMAS	Mr. Mohamed Abdel Ghaafar	Legislative and Organizational Set-up
12	CAPMAS	Ms. Souad El-Houary	Population Statistics
13	CAPMAS	Ms. Salwa Yousef	Population Statistics
14	CAPMAS	Mr. Ahmed Khabsha Mohamed	Population Statistics
15	CAPMAS	Ms. Leila Yousef	Population Statistics
16	CAPMAS	Ms. Ayman Saleh,	Child Labour, Disability, Gender
17	CAPMAS	Ms. Wafa' Maged	Child Labour, Disability, Gender
18	CAPMAS	Ms. Fatma El-Ashry	Child Labour, Disability, Gender
19	CAPMAS	Ms. Rawia Wagih (Co-ordinator)	Sampling Department
20	CAPMAS	Ms. Fatma El-Ashry	Labour Force Survey
21	CAPMAS	Mr. Ahmed Maher	Labour Force Survey
22	CAPMAS	Ms. Azza Hosny	Labour Force Survey
23	CAPMAS	Ms. Sousan Ali Moussa,	National Accounts
24	CAPMAS	Ms. Faiza Emam	National Accounts
25	CAPMAS	Mr. Ahmed Fathy Ahmed,	National Accounts
26	CAPMAS	Ms. Asmaa Samih Abdel Wahab,	National Accounts
27	MoP	Ms. Amal Ayoub Hakim	National Accounts

28	MOP	Mr. Hany Ragab Bayoumi	National Accounts
29	CAPMAS	Ms. Azza Hosny (Co-ordinator)	Population Census and GIS
30	CAPMAS	Ms. Manal Fathy Abdel Aziz	Population Census and GIS
31	CAPMAS	Mr. Abdel Hamid Sharaf	Population Census and
32	CAPMAS	Mr. Ahmed Kamel	GIS
33	CAPMAS	Mr. Mennatallah Anwar	GIS
34	CAPMAS	Ms. Amal El-Shayeb	Industrial Statistics
35	CAPMAS	Mr. Emenhotb Mekhael	Energy Statistics
36	CAPMAS	Mr. Abeer Mohamed Eid	Energy Statistics
37	CAPMAS	Ms. Mona Mohamed Abdel Ftough	Consumer Price Statistics
38	CAPMAS	Ms. Souad Mohamed Mostafa,	Consumer Price Statistics
39	CAPMAS	Mr. Ahmed Abdo	Consumer Price Statistics
40	CAPMAS	Ms. Mona Mohamed Abdel Ftough	Producer Price Statistics
41	CAPMAS	Ms. Souad Mohamed Mostafa,	Producer Price Statistics
42	CAPMAS	Mr. Reda Gerges	Producer Price Statistics
43	CAPMAS	Mr. Moustafa El-Ghareb	Finance and Administration
44	CAPMAS	Ms. Magda Edris	Information Technology
45	CAPMAS	Mr. Emad Ghada	Young Statisticians
46	CAPMAS	Mr. Hussein Mahmoud,	Regional Offices
47	CAPMAS	Mr. Mahmoud Riad	Regional Offices
48	CAPMAS	Ms. Faten Mohamed Abdel Jabbar,	Trade Statistics
49	CAPMAS	Ms. Magida Hassan Abu El-Kheir	Trade Statistics
50	CAPMAS	Mr. Ousama Saad Bahgat,	Trade Statistics
51	CAPMAS	Ms. Tahani Abdel Hasib	Trade Statistics
52	CAPMAS	Mr. Tarek Ahmed Rashad,	Coordination Committee for NSS
53	CAPMAS	Ms. Ihab Mahmoud Jad	Coordination Committee for NSS
54	CAPMAS	Ms. Mountaha	Human Resources Department
55	CAPMAS	Mr. Tarek Fouad	Human Resources Department
56	MOP	Prof. Nehal El-Megharbel	
57	MOJ	Mr. Salah El-Shazly	
58	Motherhood and Childhood Council	Ms. De'a Abdel-Latif Mahmoud,	
59	Motherhood and Childhood Council	Ms. Mirvat Abdel-Aty Mohamed	
60	MOE	Ms. Malak Sobhy Mohamed	Co-ordinator
61	MOE	Ms. Amal Abdel Aziz	
62	MOE	Ms. Manal Mohamed Morsy	
63	Ministry of Higher Education	Ms. Ashjan Abdel-Karem Badawi	
64	Ministry of Higher	Ms. Manal Kamal Awdah	

	Education		
65	Ministry of Manufacturing, Trade and Small Enterprises (MOTSE)	Ms. Nermeen Abu-Ata	
66	MOTSE	Ms. Muna El-Abideeni	
67	MOTSE	Mr. Ahmed Al	
68	MOTSE	Mr. Samir El-Gema	
69	MOTSE	Ms. Semah Ali	
70	CAPMAS	Ms. Amina Azouz	Co-ordinator, Head of Agriculture statistics department
71	MOA	Mr. Yousry Bekhet	
72	MOA	Ms. Naglaa Mohamed	
73	MOA	Mr. El-Shafi'	
74	MOA	Mr. Masaad Masood	
75	Ministry of Social Solidarity (MOSS)	Ms. Samah Mohamed	Co-ordinator
76	MOSS	M. Mohamed Moatamad	
77	MOSS	Ms. Zeinab Zaky	
78	MOSS	Ms. Wafaa Kamal	
79	CAPMAS	Ms. Samah Mohamed Hamad	Co-ordinator, Statistician, Environment Department
80	MOE	Mr. Mohamed Mou'tamad	
81	MOE	Ms. Zeinab Zaki Khalil	
82	MOE	Ms. Wafa Kamal Mohamed	
83	Information and Decision Support Centre (IDRC)	Mr. Zakariah Abdel-Samih	
84	Chamber of Commerce	Mr. Esmat Salah El-Din Deryana	
85	Civil Society Organisations	Ms. Talaat Abdel-Kouah	
86	Ministry of Tourism	Ms. Shams Abdel-Monem Shafik, Ms. Mouna El-Sakhy, Ms. Resha Al-Sherif	
87	Media and Press	Mr. Sami Abdel-Aziz	
88	Media and Press	Mr. Hani El-Houty	
89	Media and Press	Ms. Mouna Abdel-Kader	
90	Statistical Commission of the League of Arab States	Ms. Huda Abu-Leyle	
91	UNICEF	Mr. Manar Abdel-Maged	Knowledge Management and

			Statistical Officer
92	UNESCO	Mr. Nazar Hassan	Senior Science and Technology Specialist
93	UNFPA	Ms. Anja Sletten	Programme Officer

### III. Documents Reviewed

1. Statistical Yearbook, CAPMAS, 2014
2. GIS Brochure, CAPMAS, 2014
3. Poverty Map Brochure, CAPMAS, 2014
4. Filled out Assessment Questionnaires, CAPMAS and line ministries
5. Draft Questionnaire, 2016 Population Census, CAPMAS
6. Labour Force Survey, Methodology guideline, CAPMAS
7. Household Income and Expenditure Survey, Methodology guideline, CAPMAS
8. CPI Data Releases
9. Press Releases e.g. Balance of Payments Performance During July/March 2014/2015
10. MDGs Progress Reports
11. CAPMAS Annual Progress Reports
12. CAPMAS Website
13. International references and websites
14. CAPMAS Brochure on National Centre for Statistical Training, 2014
15. Presidential Decree of 1964 establishing CAPMAS
16. Egypt in figures 2015 (CD)
17. Guide to CAPMAS publications (Arabic)
18. Study on system of subsidies in Egypt, CAPMAS 2013 (in Pdf and hardcopy, in Arabic)
19. Detailed statistics on budget linked to subsidies (in hardcopy, in Arabic)
20. Statistical Abstract, Egypt, June 2015
21. Producer Price Index June/July 2015
22. A Regional Hub and A Global competitor, 2014
23. Men and Women in Egypt, CAPMAS, 2014 (hardcopy in Arabic)
24. Statistics on schools, 2014-2015, (hardcopy in Arabic)
25. CAPMAS activities in Gender, 2014, (hardcopy in Arabic)
26. List of Publications available on the Central Bank of Egypt on website: [www.cbe.org.eg](http://www.cbe.org.eg)
27. List of publications by 24 Ministries available on CAPMAS website: [http://www.msrintranet.capmas.gov.eg/New%20folder/HTMLPage\\_mah.htm](http://www.msrintranet.capmas.gov.eg/New%20folder/HTMLPage_mah.htm)

#### **IV. Short bio of members of the evaluation team**

##### **Professor Ben KIREGYERA**

Professor Kiregyera is an internationally renowned statistician and was the first African to win the prestigious Prof. P.C. Mahalanobis Award for Statistics (conferred by the International Statistical Institute). He has been at the forefront of statistical renaissance and associated statistical architecture in Africa. Professor Kiregyera was the first Director of the African Centre for Statistics at the UN Economic Commission for Africa (2007-2009) and First Chairperson of the Board of Directors of the Uganda Bureau of Statistics (1999-2007). He led a team of international consultants that designed the Reference Regional Strategic Framework for Statistical Capacity Building in Africa and is one of the founders of the National Strategy for the Development of Statistics, also writing the initial guides on this strategy. He has published widely on statistical development in Africa and is the author of a recent book "Emerging Data Revolution in Africa: Strengthening the Statistics, Policy and Decision-making Chain" that captures Africa's statistical development trajectory.

##### **Mr. Shelton KANYANDA**

Shelton Kanyanda is an expert in national statistical systems including statistics strategic planning. He has over 15 years of experience in strengthening and co-ordinating national statistical systems particularly from a developing country perspective. Currently, Shelton is the PARIS21 Programme Co-ordinator for Africa supporting statistical capacity building in Anglophone Africa. Prior to joining PARIS21, Shelton held the position of chief statistician at the National Statistics Office in Malawi working on household surveys and industrial statistics.

##### **Mr. Joseph T. ILBOUDO**

Joseph Ilboudo is an economist statistician. He is currently chief of the Statistical Development Section at the African Centre for Statistics of the United Nations Economic Commission for Africa (UNECA). His former roles have been as statistical expert at Eurostat, Central Bank Officer, head of the regional statistical programme of the West African Economic and Monetary Union (UEMOA), Principal Programme Officer in charge of statistical harmonisation of Economic Community of West African States (ECOWAS).

##### **Mr. Omar HAKOUZ**

Omar Hakouz is an expert in economic statistics with more than twenty years of experience in economic statistics compilation and national accounts. He is currently a Regional Advisor on Economic Statistics and National Accounting Methodologies at

the United Nations Economic and Social Commission for Western Asia (UN-ESCWA). He worked for the International Monetary Fund (IMF) for more than 4 years as a national account statistics advisor for three countries, namely: Syria, Lebanon and Libya. Prior to that, he worked for the Department of Statistics (DoS) in Jordan, where he held different positions including the Director of Economic Statistics Directorate. Mr. Hakouz has a wide practical experience in the compilation of national accounts, conducting economic surveys, price statistics, quarterly national accounts, households' surveys and compilation of input/output tables. He holds a BA degree in Economics (major)/ Finance (as a minor) from Yarmouk University in Jordan.

**Mr. Majed HAMOUDEH**

Majed Hamoudeh, a national of Jordan, is a statistician working with UN-ESCWA in Beirut since 2004. He has assumed a number of positions at ESCWA starting as an economic affairs officer working on trade and industrial policies, international trade negotiations, economic analysis and trends and regional integration. In 2010, Mr. Hamoudeh became the ESCWA focal point for handling trade and industrial statistics. He worked on building the regional capacity to produce reliable, accurate and timely statistics through focused training on the relevant international standards and recommendations. He is currently leading the work to promote statistics of international trade in services in the region. Before joining the United Nations, Mr. Hamoudeh worked with the government of Jordan as Director of the International Trade Policy Department at the Ministry of Industry and trade, and Head of Marketing Research and Information at Jordan's Export Development Corporation.

**Mr. Fessou LAWSON**

Fessou Lawson is an economist and financial statistician and currently NSDS Program Co-ordinator in the African Development Bank. He is an expert in statistical capacity building in Africa with many years of experience in team leadership in designing country statistical profiles and diagnostic and programming in over 20 regional member countries. His expertise includes results-based monitoring and assessment processes, country policy and institutional assessment (CPIA), resource mobilisation, and performance-based allocation of resources to member countries of the African Development Fund (ADF).

**Mr. Bahjat ACHIKBACHE**

A demographer, statistician and economist by training, with a strong academic background in socio-economic development issues, Bahjat Achikbache has over 35 years of experience in social and population statistics, national socio-economic information system reforms, and household surveys (data collection, processing, dissemination, and analysis of results). He has built invaluable knowledge in assessing national statistical systems with a particular focus on educational and health

information systems, in designing and conducting population censuses, standard of living household surveys and labour market surveys, for the production of reliable, high quality and comparable indicators in line with international statistical standards.

**Mr. Isidore KAHOUI**

Isidore Kahoui is an economist statistician with a strong academic background in statistics and economic development issues. He has over ten years of experience in national statistics and socio-economic analysis and regional integration issues (data collection, processing, dissemination and analysis of results). He has an extensive knowledge of assessment and planning in economic research, design and processing of economic surveys, development of databases and other issues related to regional economic integration in Africa. Mr. Kahoui also has significant experience in the adaptation of models developed by UNDP to estimate the cost of MDGs. He joined ECA in 2007 and is the focal point co-ordinating statistics for the SRO-NA Data Centre.

**M. Salem SEBBAR**

Salem Sebbar has a strong academic background in statistics and economics. He holds a PhD in business administration and in economics. Before joining the United Nations, he worked as senior consultant in a private business and economics research and consulting firm and, concurrently, as a university professor and research director in business administration and economics for ten years. From 2004 to 2010, he worked with UNIFEM/UN Women as programme manager in charge of economic rights programmes; from 2010 to 2014, he worked as multi-country operations director before joining ECA North Africa in December 2014.

**Mr. André NONGUIERMA**

André Nonguierma holds an Engineering Degree in Environment and a M.Sc. in Applied Remote Sensing and Management. He brings more than 20 years of professional experience in the field of geospatial information science and technology. His professional career is focused mainly on leveraging geospatial data, information, and analytics to support strategic decision-making across a range of applications from the public sector to academia and the private sector. He is currently the Chief of the Geo-information and Sectoral Statistics Section at the United Nations Economic Commission for Africa fostering the development of policies and strategies on spatial information infrastructure (SDI) and their linkages with other national e-strategies such as the statistical development strategies. He has published several scientific papers and continues to carry out research activities on SDI, GIS, spatial analysis, remote sensing applications, space technologies and earth observation applications for various socio-economic sectors.

