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Measuring Sustainable Development in the Arab Region

A review of country experiences and recommendations for monitoring and evaluation post-2015

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MEASURING SUSTAINABLE DEVELOPMENT IN THE ARAB REGION

A REVIEW OF COUNTRY EXPERIENCES AND RECOMMENDATIONS FOR MONITORING AND EVALUATION POST-2015

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LIST OF ACRONYMS

AFSD	Arab High-level Forum on Sustainable Development
AGEDI	Abu Dhabi Global Environmental Data Initiative
ASDIF	Arab Sustainable Development Indicator Framework
ASDR	Arab Sustainable Development Report
CAMRE	Council of Arab Ministers Responsible for the Environment
CSD	United Nations Commission for Sustainable Development
DESA	United Nations Department of Economic and Social Affairs
ESCWA	United Nations Economic and Social Commission for Western Asia
FAO	Food and Agriculture Organization (of the United Nations)
FDES	Framework for the Development of Environment Statistics (of the United Nations)
GDP	gross domestic product
GNI	gross national income
GNP	gross national product
GSDR	Global Sustainable Development Report
HLP	High-Level Panel of Eminent Persons on the Post-2015 Development Agenda
IEAG	Independent Expert Advisory Group on the Data Revolution
IMF	International Monetary Fund
JCEDAR	Joint Committee for Environment and Development in the Arab World
MDGs	Millennium Development Goals
OECD	Organisation for Economic Co-operation and Development
OWG	Open Working Group (on Sustainable Development Goals)
SDGs	Sustainable Development Goals
SDIAR	Sustainable Development Initiative in the Arab Region
SEEA	System of Environmental and Economic Accounts (of the United Nations)
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNICEF	United Nations Children’s Fund
UNSD	United Nations Statistics Division
USAID	United States Agency for International Development

Executive summary

This report was prepared by Robert Smith of Midsummer Analytics in response to a request from ESCWA. As the organization responsible for leading the Arab region's response to the outcomes from Rio+20, ESCWA is coordinating the development of the ASDR, the main contribution to the AFSD meeting and link to the GSDR being developed by DESA. The aim of the report is to assess sustainable development monitoring in the Arab region and make recommendations on how to effectively monitor development in the post-2015 era.

Our research addressed the following questions:

What are the key elements of the emerging global framework for monitoring and evaluating progress on the proposed SDGs? What are the main sets of indicators, indices or approaches being considered at the global level for measuring progress on sustainable development?

What is the experience in the Arab region with monitoring the MDGs and sustainable development? What are the key gaps/barriers/constraints?

What are the likely implications for the Arab region of the SDGs, including key challenges, likely gaps/needs and potential opportunities?

Can best practices and experience in other regions as well as emerging initiatives and approaches (such as the data revolution) provide lessons for the Arab region?

What are the options for addressing key challenges/gaps and enhancing sustainable development monitoring and evaluation in the Arab region?

Monitoring of the MDGs in the Arab region

The Arab region has been only moderately successful in monitoring and evaluating the MDGs. None of the countries we reviewed produces official statistics for more than 27 of 45 of the MDG indicators for which national statistics might be expected to exist. The remaining indicators must be compiled by international agencies using non-official statistics or cannot be compiled at all.

The quality of data underlying indicators compiled using official statistics is medium at best and only medium-low in some countries. Without significant international assistance, monitoring of the MDGs in the region would fall far short of the ideal. On average, only around one third of the MDG indicators could be measured in the region using official statistics alone. That more than this is possible in most Arab countries is the result of efforts by international organizations.

There appears to be a gap between the region's capacity to monitor the MDGs and the views of officials. In their self-assessments, Saudi Arabia and Morocco ranked themselves largely "good" on a scale of good/average/poor. We would rate them "average" at best.

Our review of capacity in the region to monitor the MDGs leads us to question its readiness for monitoring after 2015. The OWG (the United Nations body charged with developing the initial SDG proposals) has proposed a set of 17 goals.[1] If the MDG ratio of indicators-to-goals holds for the SDGs, measuring the SDGs could involve 145 indicators. Today, even the best performing countries in the region produce statistics for fewer than 30 of the MDG indicators.

[1] See https://sustainabledevelopment.un.org/focussdgs.html.

Monitoring of sustainable development in the Arab region

Our review of countries and experts in the Arab region in reporting sustainable development indicators leads to several conclusions regarding its preparedness for the post-2015 era.

To be effective in monitoring the SDGs, nationally generated data (as opposed to that produced by international organizations) will be required for most of the indicators. Given that most Arab States have produced data for fewer than half of the MDGs, it is unrealistic to assume that the Arab region is ready to compile the SDGs.

Without still more assistance from the international community than provided for the MDGs, the region will face difficulties meeting monitoring and evaluation expectations after 2015. Such assistance can help to fill data gaps in the short term but will not create the capacity needed for countries to become self-sufficient in measuring sustainable development. Careful thought must be devoted to ensuring that assistance results in real, sustainable capacity building. Regional cooperation may be the best approach, as it builds capacity entirely within Arab countries.

Based on our research, only seven Arab countries[2] have prepared formal reports on sustainable development indicators. With only about a third of the countries in the region having any experience with sustainable development measurement, the level of preparedness for the post-2015 agenda is clearly low overall.

Nearly every country has prepared one or more MDG reports since 2000. With the support of the international community, the region is capable of investing considerable effort in monitoring and evaluating development issues. However, when left to its own devices, as in the case with sustainable development reporting, the outcome is modest. Problems include data gaps, difficulty in accessing data and lacklustre institutional support.

A feature of the region is the heterogeneity of reporting approaches. Each country studied used a unique set of indicators to measure sustainability, effectively eliminating the possibility for comparison between countries. It is worth comparing this heterogeneity with the homogeneity that is the hallmark of macroeconomic statistics. GDP and the related suite of national accounts aggregates are measured with great consistency across and within countries. The analytical value of the resulting time series cannot be overstated.

The ASDIF has had little impact. Only two of the countries reviewed made use of the ASDIF in defining their indicator sets. Few of the experts we interviewed mentioned the ASDIF without prompting. This is so despite the efforts of ESCWA, the United Nations Environment Programme (UNEP) Regional Office for Western Asia and the League of Arab States to promote the ASDIF, including the publication of three volumes of detailed methodological guidance on preparing the ASDIF indicators (United Nations Environment Programme and others, 2012a, 2012b and 2012c), the creation of a regional working group on sustainable development indicators, numerous meetings and declarations on the topic since the mid-2000s and preparation of a short version (44 indicators) of the ASDIF to simplify implementation.

One probable factor in the failure of the ASDIF to gain more traction is that indicators were something of an afterthought when the SDIAR was launched in the early 2000s. The ASDIF was never adopted as the official indicator set for monitoring progress on the SDIAR. Another factor may be that the ASDIF lacks a clear conceptual underpinning, with a wide range of indicators that share little in common.

[2] Egypt, Iraq, Jordan, Morocco, Saudi Arabia, Tunisia and Qatar.

The data revolution and the Arab region

The focus on data that will flow from the call by the United Nations to capitalize on the global "data revolution" to help achieve sustainable development will offer the region many opportunities, as well as highlighting the challenges it faces in terms of monitoring and evaluation. Specific opportunities for the region include:

- The region requires an overall review of statistical capacity, practices and outputs to identify strengths and, especially, weaknesses that are preventing it from effectively monitoring and evaluating sustainable development. Such a review could be funded as part of the data revolution. A plan could then be developed to identify and prioritize the investments needed to improve the internal capacity of countries to report on the SDGs. Any regional action plan should stress the need to build national statistical capacity.
- Statistics are most useful when compiled using concepts, methods and definitions that are common from country to country. The global data revolution should provide the Arab region with many opportunities to share concepts, methods and definitions with countries and organizations from other regions.
- The Arab region is already a leader in some aspects of the data revolution. In particular, the AGEDI is a world-class effort devoted to improving data for environmental monitoring and using, among others, remote sensing techniques. The data revolution offers an opportunity to build upon the success of the AGEDI by broadening and deepening the region's capacity to collect, analyze and apply remotely sensed data in decision-making.

A report by the United Nations on the data revolution identified shortcomings that prevent more effective national, regional and global monitoring and evaluation of development. Because the Arab region as a whole reflects many of the problems identified in the report, it is both a good candidate to benefit from the data revolution and at a weak starting point for doing so. For the region to benefit from the global data revolution, it urgently needs its own data revolution.

The more difficult challenges regarding statistics that confront the region include:

- Addressing the lack of transparency in data collection and reporting is key to the region's chances of benefitting from the post-2015 agenda, but difficult in the face of cultural and institutional forces that are not always oriented toward transparency;
- Monitoring and evaluating the SDGs may require a doubling – or more – of the reporting burden vis à vis the MDGs, a burden the region has had difficulty bearing. The sheer scale of the data revolution may overwhelm certain countries. The region will have to establish realistic priorities for what can and cannot be achieved;
- The Arab region faces many development challenges and, given other more pressing matters such as security, poverty and education, Governments may be unwilling to devote resources to improving statistics. Many countries may need to look beyond their borders to fund statistical capacity-building. The data revolution promises to be a source of new funds for this. Managed well, those funds can be used to build real national statistical capacity.

Recommendations

Recommendation 1. Building upon extant structures, measures should be taken to strengthen governance for sustainable development in the Arab region.

Recommendation 2. A new set of sustainable development indicators should be developed. The set should contain fewer than 30 indicators and be within the capacity of most Arab States to compile.

Recommendation 3. Given the emergence of the extended concept of wealth as a rigorous and increasingly accepted means of defining sustainable development, consideration should be given to basing the revised set of sustainable development indicators on the extended concept of capital.

Recommendation 4. A full assessment of Arab regional statistical systems should be undertaken to reveal in detail the level of preparedness for the post-2015 monitoring and evaluation agenda. Conducting it in the near future would allow the region to plan an improved response to the post-2015 agenda.

Recommendation 5. The role of national statistics offices in measuring sustainable development should be strengthened. Good examples from the region and beyond should be examined.

Recommendation 6. Sustainable development indicator sets in the Arab region should be modified as little as possible from one report to the next so that long time series of the indicators may be compiled for analytical purposes.

Recommendation 7. Statistics offices and other credible national and international institutions in the Arab region should do all in their power to insist on transparency in the collection of information by Governments.

Recommendation 8. Arab States should try to produce regular sustainable development indicator reports; an annual or biennial frequency would be ideal.

Recommendation 9. The United Nations SEEA and the FDES should be promoted in the Arab region as the basis for improving environmental data.

Recommendation 10. Consideration should be given to creating, either at the regional level or in specific States, independent offices with responsibility for advancing sustainable development. Existing international offices, such as the one in Canada, offer a variety of models that could be built upon.

Recommendation 11. Consideration should be given to rationalizing the process of statistical capacity-building in the Arab region through international donor assistance. Donors should coordinate their efforts to ensure that consistent statistical concepts, definitions and methods are used across their assistance programmes. The national statistics office should be the target of this assistance in all cases, unless there is a compelling reason for involving a policy ministry.

Recommendation 12. Arab States and regional organizations should join the Global Consensus on Data proposed by the Secretary-General's Independent Advisory Expert Group on the Data Revolution and participate in its efforts to define principles and standards to leverage the data revolution for sustainable development. In doing so, the existing principles of official statistics (see Annex XI) should be taken as the starting point.

Recommendation 13. The Arab region and its States should embrace the innovations of the data revolution where it is to their strategic advantage to do so. In areas where it is already advanced, such as remotely sensed data, the region can – and should – play a leading role. In other areas, the region should learn from others and adopt new technologies where most appropriate.

Recommendation 14. Arab States and regional organizations should support the call by the IEAG on the data revolution to create a global partnership for sustainable development data and consider establishing a parallel regional forum (or assign that role to the Arab High-level Forum on Sustainable Development).

Recommendation 15. The Arab region and its States should take advantage of the opportunity provided by the post-2015 agenda to seek and/or provide additional financial resources to build capacity for monitoring and evaluation of sustainable development. In particular, the region should ensure that it is well represented at the upcoming international conference on development financing and prepared to discuss funding needs for statistical capacity-building.

I. INTRODUCTION

This report has been prepared by Midsummer Analytics in response to a request from the United Nations Economic and Social Commission for Western Asia (ESCWA) for a study of Arab regional experience with sustainable development monitoring and evaluation.

As the organization responsible for leading the Arab region's response to the outcomes from Rio+20, ESCWA has coordinated several reports and meetings at the regional level. It helped to establish the AFSD, which first met in April 2014, and to develop the Arab Strategic Framework for Sustainable Development 2015-2025 and a regional approach to the global SDGs that will replace the MDGs from the end of 2015.

Ahead of the next meeting of the AFSD, in April 2015, ESCWA is coordinating the development of the ASDR, which will be the main contribution to the AFSD meeting and link to the GSDR being developed by DESA to inform meetings of the United Nations High-level Political Forum on Sustainable Development in New York. A prototype edition of the GDSR was published by DESA in July 2014 (United Nations, 2014b).

The ASDR forms part of the Rio+20 follow-up programme for ESCWA and has several objectives:

- To enhance the science-policy interface and improve access to information by decision-makers in the Arab region by bringing together regional findings of global and regional scientific assessments and development reports;
- To review progress in the Arab region on sustainable development (1992–the present) and explore future trends in key thematic areas (to 2050);
- To engage Arab countries by building national capacities, exploring success stories and enabling countries to review priorities and step up efforts to achieve sustainable development;
- To assess trends and gaps in implementation: science and technology, finance, institutions, and monitoring/accountability (including statistics and data).

This is one of several reports commissioned by ESCWA as input for the ASDR, which will address the following issues:

- Technology development and transfer needs;
- Financing for sustainable development;
- The institutional framework for sustainable development;
- Sustainable development monitoring and evaluation (this report);
- Mapping and needs assessment in social development;
- Governance in light of the recent and ongoing political uprisings;
- Gender mainstreaming in the context of the SDGs.

The objective of this report is to provide a concise assessment of sustainable development monitoring and evaluation in the Arab region and discuss the implications of the post-2015 agenda. The report presents a series of recommendations intended to identify actions required in the region to prepare it to effectively undertake development monitoring and evaluation after 2015. Our research addressed the following questions:

1. What are the key elements of the emerging global framework for monitoring and evaluating progress on the proposed SDGs? What are the main sets of indicators, indices or approaches being considered at the global level for measuring progress on sustainable development?

2. What is the experience in the Arab region with monitoring the MDGs and sustainable development? What are the key gaps/barriers/constraints experienced by stakeholders in the Arab region?

3. What are the likely implications for the Arab region of the SDGs, including key challenges, likely gaps/needs and potential opportunities at the national and regional levels?

4. Can best practices and experience in other regions (such as Europe) as well as emerging initiatives and approaches (such as the data revolution) provide lessons for the Arab region?

5. What are the options for addressing key challenges/gaps and enhancing sustainable development monitoring and evaluation in the Arab region at the regional and national levels?

We relied primarily on the review of relevant publications and online resources on sustainable development monitoring and evaluation in the Arab region and globally. This was complemented by interviews with experts familiar with national and regional efforts to monitor and evaluate sustainable development. Annex I contains a list of interviewees and interview questions.

The report is structured as follows:

Following this introduction, chapter 2 addresses the Arab experience with monitoring the MDGs. The resources available for the study did not permit an exhaustive evaluation. We chose, therefore, to focus our evaluation on selected countries (Egypt, Iraq, Jordan, Morocco, Saudi Arabia and Tunisia) that were active in monitoring and evaluation of the MDGs and of sustainable development more generally.

Chapter 3 considers the experience of the region in monitoring and evaluating sustainable development. It focuses on the degree to which the ASDIF has been adopted by Arab countries. Findings from interviews with Arab sustainability experts are used extensively in this chapter.

Chapter 4 discusses the "data revolution" for sustainable development, considering its implications for the Arab region. It is based largely on recommendations in a recent report of the Secretary-General's Independent Expert Advisory Group on the Data Revolution.[3] A summary of conclusions is presented at the end of chapters 2-4 on the implications of recent Arab monitoring and evaluation experience for its readiness to implement the post-2015 development agenda. For ease of reference, all recommendations are presented in chapter 5. Since it is expected that some readers will look at chapter 5 alone, it repeats some of the conclusions of earlier chapters when necessary to provide context.

An Executive Summary provides an overview of the report and summary of recommendations.

Box 1. A word on terminology

"Monitoring and evaluation" refers to the use of indicators to report on progress towards national and/or regional development objectives. We use the term in relation to the MDGs and to general efforts to pursue sustainable development. For convenience, we also use the term "measuring" in place of "monitoring and evaluation".

[3] See www.undatarevolution.org.

II. MONITORING THE MDGS IN THE ARAB REGION – A REVIEW OF THE EXPERIENCE OF SELECTED COUNTRIES AND CONCLUSIONS FOR THE POST-2015 ERA

In this chapter, we review the experience of the Arab region in monitoring of the MDGs and draw conclusions from this experience regarding the region's readiness to measure the SDGs after 2015. Our review is based entirely on material available on the Internet.

A. MONITORING AND EVALUATION OF THE MDGS – GLOBAL AND REGIONAL EXPERIENCE

Reliable and robust data are critical for achieving the MDGs and holding Governments and the international community accountable for progress towards them. The MDGs have been a motor for improving statistical systems at the national and international levels, but reliable statistics for monitoring development remain inadequate in many countries. Data gaps, poor quality, non-compliance with methodological standards and lack of sub-national data are among the major challenges faced in MDG monitoring.

The eight MDGs, established in 2000, are measured through a set of 60 indicators, the majority of which are intended to be compiled and reported at the country level.[4] They have been the subject of an intense global effort since 2000. The United Nations Statistics Division (UNSD) maintains a large and comprehensive database of MDG indicators that covers every Member State of the United Nations.[5] It contains estimates for the period from 1990 to 2014 and draws upon data from a variety of sources.

In the best cases, the data underlying the indicators are drawn directly from published national (official) statistics. However, in many cases indicators are compiled on the basis of non-official data collected and analyzed by international agencies. Most health-related indicators fall into that category.[6] In other cases, modelled data must be used because no observed data are available. In a substantial number of cases, it is impossible to obtain any data required to compile the indicators.

As a result, the global MDG database remains substantially incomplete for many countries. For any given country, one finds indicators for which no values are published, others for which values are available but only sporadically and usually just a few for which values are available for more or all of the time series from 1990 to 2014. Where estimates are available, concerns about the quality of underlying data are common, especially in the case of non-official statistics.

The MDG statistical database serves as the data source for the preparation of global and regional MDG progress reports.[7] Such reports have been prepared at the global level annually since 2002 and regionally at several points since the start of the initiative. Their preparation is undertaken by the UN in collaboration with a variety of global and regional development organizations.

In the Arab region, progress reports were prepared in 2005, 2007 (for youth), 2010 and 2013 with the United Nations and, in most cases, the League of Arab States as lead authors. The latest Arab regional report not only considers progress toward meeting the MDGs, but also considers priorities for the region after 2015. The United Nations also prepares national MDG progress reports in collaboration with the authorities in many countries.

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[4] Some of the MDGs are global in nature and are compiled exclusively by international agencies.

[5] See http://mdgs.un.org/unsd/mdg/Default.aspx.

[6] United Nations, 2014.

[7] See www.un.org/millenniumgoals/reports.shtml.

The various global, regional and national MDG reports are diverse in content and structure and, for the most part, pay relatively little attention to monitoring and evaluation issues. Their emphasis is, appropriately, on the progress made in achieving the goals themselves. Until recently, most reports mentioned the need for improved monitoring and evaluation only briefly. However, in the most recent global report two pages were devoted to a discussion of the need for improved data to monitor and evaluate development progress.[8] The report drew the following conclusions:

1. In many developing countries, the need to track the MDGs has given national statistical systems the opportunity to develop their capacity to produce and deliver improved official statistics.

2. The international community has helped by improving methodologies, producing guidelines and defining priorities and strategies to support countries in data collection, analysis and reporting.

3. Internationally funded household surveys, such as USAID's Demographic and Health Surveys and Multiple Indicator Cluster Surveys of the United Nations Children's Fund (UNICEF), have enabled developing countries to produce statistically sound and internationally comparable estimates in the areas of health, education, child protection, and HIV and AIDS.

4. At the same time, basic data for monitoring development are missing. Data on births and deaths, the number and quality of jobs, poverty and agriculture, among others, are still missing in many developing countries. On top of this, existing data are under-utilized. Limited efforts have been made to fully analyze and effectively use the new data sources created as a result of the MDG process, such as those mentioned above.

As the 2015 deadline for the MDGs approaches, the international community has started to work on a post-2015 development agenda. The report of the United Nations High-Level Panel of Eminent Persons on the Post-2015 Development Agenda has called for a "revolution" to produce better, timelier, more accessible, and more disaggregated data to help eliminate poverty and achieve sustainable development. For this to happen, the Panel notes, national ownership and increased commitment of financial and human resources to the statistical system are needed, along with support from the international community. New information technologies must be harnessed to improve data at the same time as investments are made in existing data infrastructure, such as the registration of births and deaths, health and education information systems, and survey systems. Open access to data and its effective use in analysis is essential. More is said on this "data revolution" and its implications for statistical development in the Arab region in Chapter 4.

Arab regional MDG reports have also said little about the quality of statistics for monitoring and evaluation. The most recent Arab report, which not only assesses progress on achieving the MDGs but also looks forward to the post-2015 era, contains just two paragraphs on the need for improved statistics (United Nations and League of Arab States, no date). Such limited treatment seems at odds with the report's contention that expanding the available measures of development should be a "top priority" post-2015. The only two areas mentioned for improvement are measures of poverty and of the "quality of services".

National MDG progress reports are available from UNDP and ESCWA for all countries in the Arab region. All except Comoros and Libya have prepared reports at least twice since 2000.

Again, these reports generally say little about statistics for monitoring and evaluation. Some reports (for example, those in Qatar) make no mention at all of challenges related to statistics. Most reports at least note that statistics for monitoring and evaluating need improvement. Some reports address specific areas of weakness but most simply note that existing statistics are inadequate and need to improve.

[8] United Nations, 2014a.

A few reports, particularly those produced in the mid-2000s, offer simple qualitative assessments of national capacity for monitoring and evaluation in the form of a self-assessment evaluation matrix. These assessments grade the country as either good, average or weak in terms of data-gathering capacity, the quality of survey information, statistical tracking, the integration of statistics into policy. While useful, these self-assessments are limited by the fact that not all countries have completed them and that most countries which have done so have included them in only one report, eliminating the possibility of assessing the degree to which the MDG process might have had a positive impact on monitoring and evaluation capacity.

Tunisia is an exception. In its 2013 report (Tunisia and United Nations, 2014), it notes the need for more relevant and disaggregated data. The Tunisian National Statistics Council took advantage of the MDG process to set up a working group to look at reforming the statistical system to better respond to the MDGs as part of its National Statistics Programme for 2007-2011. The programme recommended that Tunisia adopt international definitions and methods in its statistics and that additional effort be put into producing statistics required for specific MDGs, notably those related to sanitation. Even this limited effort to address issues of data quality sets Tunisia apart from other countries in the region.

B. MDG MONITORING AND EVALUATION IN SELECTED ARAB COUNTRIES

Our review of data in the global MDG statistical database maintained by UNSD revealed significant gaps in the capacity of six selected countries in the Arab region[9] to compile the MDG indicators.

Only 42 per cent of the 45 MDG indicators that could be expected to be compiled by national Governments are compiled for all six of the countries using their official statistics. The remaining 58 per cent either rely on statistics compiled by international agencies (24 per cent) or cannot be compiled (34 per cent). Of the indicators that can be compiled in all six countries using official statistics, there is no single indicator for which statistics exist on an annual basis in every country. On the contrary, many of the indicators are based on statistics that exist for only a few points in time between 1990 and 2014. Such sparse datasets limit the ability to analyze and understand trends in the evolution of the indicator.

To portray more fully the development monitoring and evaluation capacity of the Arab region, we assessed monitoring and evaluation of the MDGs in each of the six countries under the following criteria:

1. The number of MDG indicators for which official statistics might be reasonably expected to exist and for which official statistics actually do exist in the country, according to UNSD's global MDG indicator database.

2. The number of national MDG progress reports the country has produced and the degree to which issues related to the statistics available for monitoring and evaluation are discussed in those reports.

3. Our own rating of the country's overall capacity to monitor and evaluate MDG progress based on official statistics.[10] The assessment was based on our judgment of national capacity using a five-point scale that considered the following: (a) regularity of data production; (b) length of available time series; and (c) date of the most recently available data point. To score five out of five, the data available for a given indicator had to be produced at a regular interval for at least the past 10 years and the most recent data point had to be within the past four years. The available official data for each indicator were evaluated using this

[9] Egypt, Iraq, Jordan, Morocco, Saudi Arabia and Tunisia. They were chosen because they: (1) are geographically representative of the Arab region; (2) are relatively developed economically and socially and could be expected to have reasonable capacity to undertake MDG and SD monitoring; and (3) have all produced MDG and sustainable development indicator reports. It was beyond the scope of this study to assess every country in the region.

[10] The capacity for monitoring and evaluation based on data produced by international agencies was not considered relevant to the countries' capacities to respond to the MDGs, so the availability of estimated or modelled data was ignored in our assessment (as were indicators for which no data at all are available).

score and an average score out of five across all of the indicators was calculated. Although somewhat subjective, we believe our rating offers a valid sense of the current MDG monitoring and evaluation capacity of the selected countries. It should be understood that the ratings considered only the quantity and timeliness of the statistics available and not other quality attributes (such as accessibility or accuracy), which were beyond the scope of this study. We believe that our ratings (below) would have been lower in most cases had overall data quality been assessed.[11]

1. *Egypt*

- Official statistics available for 26 of 45 indicators;
- Produced MDG progress reports in 2002, 2004, 2008, 2009 and 2010;
- Most recent report notes the importance of sound data for monitoring but devotes no discussion to the quality of the data available in Egypt;
- Overall rating of national MDG monitoring and evaluation capacity – **Medium (3.4/5)**.

2. *Iraq*

- Official statistics available for 27 of 45 indicators;
- Produced MDG progress reports in 2005, 2010, 2011 and 2013;
- Most recent report neither notes the importance of sound data for monitoring nor devotes any discussion to the quality of the data available in Iraq;
- Overall rating of national MDG monitoring and evaluation capacity – **Medium-low (2.3/5)**.

3. *Jordan*

- Official statistics available for 26 of 45 indicators;
- Produced MDG progress reports in 2004 and 2010;
- Most recent report notes the importance of sound data for monitoring but devotes no discussion to the quality of the data available in Jordan;
- Overall rating of national MDG monitoring and evaluation capacity – **Medium (3.2/5)**.

4. *Morocco*

- Official statistics available for 27 of 45 indicators;
- Produced MDG progress reports in 2003, 2005, 2007 and 2009;
- Most recent report pays nearly no attention to statistical quality. The need for gender statistics is noted and the fact that Morocco is embarking on a programme to put the United Nations System of Environment-economic Accounting in place is noted. The report contains Morocco's self-assessment of its capacity to monitor and evaluate progress on the eight goals. Except for Goal 4, Morocco ranks its capacity as good. It ranks itself as a combination of good and average for Goal 4, even though it produces no statistics for any of the four related indicators, and as good for Goal 7 on environmental sustainability, even though it produces statistics for only three of the 10 related indicators and the most recent statistics for the indicator on water resources dates from 2000;

[11] According to Statistics Canada (2002), the dimensions of statistical quality are relevance, accuracy, timeliness, accessibility, interpretability and coherence.

- Overall rating of national MDG monitoring and evaluation capacity – **Medium (3.6/5)**.

5. *Saudi Arabia*

- Official statistics available for 21 of 45 indicators;
- Produced MDG progress reports in 2002, 2005, 2006, 2008, 2009, 2010, 2011 and 2013;
- Most recent report states that "in the context of monitoring progress made towards achievement of MDGs, Saudi Arabia has established comprehensive databases for socio-economic development indicators and developed adequate mechanisms for the process of monitoring them. These databases and mechanisms are subject to regular updating" (Saudi Arabia and UNDP, 2013). The report assesses the capacity of Saudi Arabia to monitor and evaluate progress on the MDGs as high, except for Goals 6 and 7, for which monitoring capacity is ranked as medium. This assessment stands in contrast with the availability of official statistics. Of the 45 indicators for which national monitoring might be expected, Saudi Arabia produces official statistics for just 21, the lowest of any in our selected group. Of the statistics that are produced, those for several indicators are not up to date and/or are infrequently measured. Condom use (indicator 6.2), for example, was measured just once, in 1996. The proportion of total water resources used (indicator 7.5) has been measured twice since 1990, most recently in 2005. Even labour productivity (indicator 1.4), a core economic measure produced by nearly every statistics office, is measured sporadically with large gaps in the 1990-2014 time series;
- Overall rating of national MDG monitoring and evaluation capacity – **Medium-low (2.9/5)**.

6. *Tunisia*

- Data for 27 of 45 indicators;
- Produced MDG progress reports in 2004 and 2013;
- Most recent report makes a clear statement regarding the need to reinforce statistical capacity and refers to a national plan for doing so;
- Overall rating of national MDG monitoring and evaluation capacity – **Medium (3.4/5)**.

C. Conclusions for the post-2015 agenda based on Arab experience with MDG monitoring

We conclude that the region has been only moderately successful in its efforts to monitor and evaluate progress on implementation of the MDGs. None of the countries we reviewed produces official statistics for more than 27 of 45 of the MDG indicators for which national statistics might reasonably be expected to exist. The remaining indicators must either be compiled by international agencies using non-official statistics or cannot be compiled at all.

The quality of the data underlying those indicators that can be compiled using official statistics is medium at best and only medium-low in some countries, according to our rating scale.

We cannot be sure that our selected countries are fully representative. There may be countries in which official statistics are more complete. However, the opposite is more likely to be true. Our selected countries are well developed and have produced MDG reports and sustainable development indicator sets of some sort in the past 10 years. It is therefore reasonable to assume that they reflect the higher end of the capacity of countries in the region. While other well developed Arab countries are likely to have capacity similar to that of our selected countries, numerous less developed countries are likely to have lower capacity.

Without significant international assistance, monitoring of the MDGs in the region would fall far short of the ideal. On average, about one-third of the MDG indicators in the region could be measured using official statistics alone. That more than this is possible in most Arab countries today is the result of efforts by international organizations, including ESCWA, to fill the gaps in statistics through internationally-funded surveys, non-official national statistics and modelling.

Our assessment shows that there may be a gap between actual capacity to monitor the MDGs and the views of regional officials. In self-assessments contained in national MDG reports by Morocco and Saudi Arabia (see above), both countries ranked themselves largely "good" on a scale of good/average/poor. Our rating would place them in the "average" category at best.

Perhaps officials in those countries were thinking not in absolute terms, but rather in comparison with their regional peers. If so, it might be reasonable for Morocco to rate itself highly, since it does compare well with its peers (at least among our selected countries). However, Saudi Arabia's self-assessment remains overstated. Its capacity to monitor the MDGs using official statistics is the second lowest among the selected countries in terms of the number of indicators it can compile on its own and in our rating of its overall capacity to report on the MDGs.

Our review of MDG monitoring in the region leads us to question its readiness to monitor and evaluate progress on the SDGs after 2015. The United Nations Open Working Group (the body charged with developing the initial proposal for the SDGs) has proposed an initial set of 17 goals, more than twice the number of MDGs. If the MDG ratio of indicators to goals holds, measuring the SDGs could involve 145 indicators. Even if the final number of SDGs is reduced, measurement of more than 100 indicators on an annual basis is likely to be required. Given that the best performing countries in the Arab region produce official statistics for fewer than 30 of the MDG indicators, that would seem to present a significant challenge.

One question we are unable to answer is the extent to which regional capacity to monitor the MDGs has improved since 2000.[12] The United Nations states that availability of statistics globally for monitoring the MDGs has increased since their creation. It notes, for example, that "in 2012, 135 countries had data for at least two points in time for 16 to 22 indicators; in contrast, only four countries had this data coverage in 2003".[13] There is no reason to believe that improvements of this sort have been absent in the Arab region. However, it is worth asking to what extent the increase in data availability is due to investment by countries themselves in their core statistical capacity rather than the efforts of the international community to fund and implement new surveys. At least some of the increase is due to the latter, as several large international surveys figure prominently in the data sources quoted in UNSD's global MDG database, including the above-mentioned surveys funded by UNICEF and USAID. This question and its implications for the creation of sustainable statistical capacity is explored further in the next chapter.

[12] This point was not addressed in any of the MDG reports we reviewed, so answering this question would have required a review of statistical outputs beyond the scope of this study.

[13] United Nations, 2013.

III. MONITORING SUSTAINABLE DEVELOPMENT IN THE ARAB REGION – A REVIEW OF SELECTED COUNTRIES AND CONCLUSIONS FOR THE POST-2015 ERA

In this chapter, we review the experience of the Arab region in monitoring and evaluating sustainable development. Our review is based on desk research and personal interviews with experts knowledgeable about the efforts – national and regional – to measure sustainable development in the Arab region. The list of experts and interview questions are in annex I.

An important goal was to determine the extent to which countries in the Arab region are familiar with and making use of the indicator set associated with the SDIAR. An initiative of the League of Arab States, it is a pan-Arab framework dating from 2004 setting out agreed-upon objectives for sustainability in the region. A set of indicators for measuring progress toward sustainability in the region, the ASDIF, was developed shortly after the SDIAR. In this chapter, a description of the SDIAR and ASDIF is followed by our review of selected Arab countries, a summary of the views of Arab experts regarding the measurement of sustainable development in the region and our conclusions regarding the monitoring and evaluation of Arab sustainable development after 2015.

A. THE SUSTAINABLE DEVELOPMENT INITIATIVE IN THE ARAB REGION AND THE ARAB SUSTAINABLE DEVELOPMENT INDICATOR FRAMEWORK

The SDIAR was endorsed by the Arab League Summit at its sixteenth regular session in Tunisia in 2004. It was conceived in the wake of the 2002 Earth Summit (Rio+10) in recognition of the fact that, although the Arab region had done much to achieve sustainable development since the first Rio summit, challenges remained. They included: the lack of peace and security; weak institutions; on-going poverty; illiteracy; population growth; debt; water scarcity; limited agricultural land; lack of research capacity and an underdeveloped civil society.

The initiative asserted the commitment of the Arab countries to implement Agenda 21 and the development objectives included in the Millennium Declaration and the outcome of the Rio+10 summit. It provided a framework for the implementation of programmes and activities using available resources in the Arab countries, in regional and international organizations and financial institutions, and covered the following areas:

(a) Peace and security;
(b) Institutional framework for sustainable development;
(c) Poverty alleviation;
(d) Population and health;
(e) Education, awareness, scientific research and technology transfer;
(f) Resources management;
(g) Production and consumption;
(h) Globalization, trade and investment.

The SDIAR[14] was accompanied by an action plan that called for, among other things, the creation of indicators to track progress in the areas touched upon by the initiative.

Beginning in 2003, UNEP led efforts to define environmental indicators for the Arab region on water, energy, health, agriculture, biodiversity and coastal/marine environments. In collaboration with the Arabian Gulf University, guidelines for the development and use of those indicators were developed.

[14] The remainder of this sub-section draws heavily upon the author's personal communication with Dr. Adel Abdel Kader, former Regional Coordinator for Early Warning and Assessment of the UNEP Regional Office for Western Asia, 23 December 2014.

In the mid-2000s, the League of Arab States requested that the indicators be expanded to cover the social and economic dimensions of sustainable development. In collaboration with UNEP and ESCWA, the League of Arab States organized several meetings to this end. Initially, participants identified 250 sustainable development indicators based on those from the CSD. In 2007, a core list of 84 indicators, organized into 14 themes and 43 sub-themes, was agreed upon at a meeting in Kuwait. That list (see annex II) was CAMRE.

The parties to the SDIAR agreed that implementation of the indicators would be voluntary. Six countries (Egypt, Morocco, Qatar, Saudi Arabia, Syria and Tunisia) volunteered to test the feasibility of compiling them. No formal reports were prepared as a result and the conclusions were, it seems, not fully satisfactory.[15] The majority of the indicators proved difficult to compile based on existing statistics in the test countries.[16]

Based partly on the outcome of the tests and on further discussions among regional stakeholders, requests were made to prepare guidance documents for the compilation of the 84 indicators (which would remain voluntary) and a shorter set of 44 indicators that would be compulsory for all countries in the region (see annex III).

The requested guidance documents for the 84 indicators were prepared in three volumes in Arabic and English by UNEP, ESCWA, the League of Arab States and AGEDI, and published in 2012 (UNEP and others, 2012a, b and c).

The set of 44 indicators, although ostensibly mandatory, has been implemented only in three countries (Palestine, the Sudan and Yemen), and only partially (in the form of simple Excel spreadsheets).[17] No country regularly produces data on implementation of the 44 indicators. Under CAMRE, a standing Working Group on Environment and Sustainable Development Indicators is responsible for overseeing the mandatory implementation of the ASDIF.

At a meeting in October 2014, the Working Group met (along with its sister group on regional networking)[18] and decided that, given the low uptake of the set of 44 indicators, it would not meet again until at least half of the countries in the region had met their obligation to compile and report the 44 indicators.

The meeting was useful, however, in highlighting the challenges, constraints and opportunities faced by Arab countries in their efforts to compile sustainable development indicators. Common challenges mentioned included:

(a) Channels of communication with relevant agencies are often restricted due to time-consuming bureaucratic procedures, geography (reaching distant provinces) and poor coordination;

(b) Data are incomplete, fragmented, inconsistent, difficult to access and poorly formatted;

(c) Agencies sometimes refuse to release their data, citing privacy concerns;

[15] We are aware of PowerPoint presentations that were prepared showing the results of some or all of these tests around 2008 or 2009 but were unable to locate the related files. Thus, we can say little about the outcome of the tests other than that they appeared not to be positive. We also understand that Qatar and Oman prepared reports around the same time but, again, we were unable to obtain copies and cannot comment on the success their efforts.

[16] This outcome is consistent with what we found in our review of the regional capacity to monitor the MDG indicators.

[17] We have not succeeded in obtaining copies of these spreadsheets.

[18] These groups are sub-groups of the broader Arab Regional Working Group on Environmental Data.

(d) Expertise in data analysis, indicator development and reporting is lacking;

(e) Peace and security issues limit access to data in some countries and regions;

(f) The indicators are not always clear and are sometimes contradictory;

(g) Financial resources are inadequate;

(h) Decision-makers are not always aware of the indicators or their importance;

(i) There is no legislative framework for the indicators.

Recommendations to address the above included capacity-building; sharing of experience through the League of Arab States and other regional organizations; increasing financial resources and raising awareness among data-providers and decision-makers.

B. Overview of sustainable development monitoring and evaluation in selected Arab countries

In this chapter, we summarize the state of sustainable development monitoring and evaluation in our selected countries.[19] The material is drawn largely from our desk research but also from interviews with regional sustainable development experts.[20]

1. *Iraq*

Overview: In 2004, the Iraqi Central Statistics Organization (CSO) formed an environment statistics directorate to meet a need for better environmental statistics. Its work was guided by a national environmental statistics committee made up of representatives from relevant ministries (environment, industry, health, oil, municipalities and public works, agriculture, water resources) and the Baghdad mayor's office.

Since 2010, the CSO has published an annual environment and sustainable development indicators report. The reports for 2011, 2012 and 2013 are available in English on the CSO's website. The latest report contains 69 indicators organized under the headings of poverty, health, education, demography, peace and security, atmosphere, agriculture and lands, coastal and marine, water, biodiversity, economic development, global partnership and sustainable production and consumption. Of the 69 indicators in the latest report, data are available to compile the majority. Only four could not be compiled at all due to data gaps and an additional two could only be partially compiled. All indicators that could not be compiled were related to environmental themes. The data used to compile the indicators come from a combination of official statistics collected as part of the CSO's core statistical programme and surveys funded by international organizations.

Relation to the ASDIF: The Iraqi sustainable development indicator set (see annex IV) is derived directly from the long version of the ASDIF. In the 2011 edition of the Iraqi report (and presumably the 2010 edition as well, which is not available on the CSO's website), there is almost complete overlap between the Iraqi indicators and the ASDIF. The overlap was less complete by the time the 2013 report was published, as several of the indicators had been deleted. No reason is given for this, but it appears to have been due to lack

[19] Although we are aware that Egypt has produced sustainable development indicators (Bahgat, personal communication, 25 November 2014), we were unable to obtain documentation describing the indicators. For this reason, no description of Egypt's indicators is provided in this chapter.

[20] We were unable to interview experts from Iraq, Morocco or Tunisia. However, a number of the experts interviewed in the other selected countries were able to provide useful context for the whole region.

of data for some of the indicators and lack of relevance to the Iraqi situation for others (e.g., indicators related to coastal zones).

2. *Jordan*

Overview: Jordan does not have a stand-alone sustainable development indicator set. Rather, its monitoring of sustainability is incorporated into the National Agenda – the national development plan for 2007-2017 launched by the Government in 2005. The National Agenda is intended as a strategy for social, political and economic transformation to achieve sustainable development through economic growth and social inclusion. Developed by a steering committee comprising representatives from the Government, parliament, civil society, private sector, media and political parties, it takes a holistic approach to development, recognising that social, economic and political development can only advance in tandem. Its emphasis on targets with deadlines, performance indicators and built-in monitoring and evaluation mechanisms distinguishes it from previous Jordanian development programmes. Initiatives are focused on three key areas: governance and policies, basic rights and freedoms, and services, infrastructure and economic sectors.

A set of 112 indicators was selected as the basis for monitoring and evaluating progress in implementing the National Agenda. For each indicator, a baseline value (2004) was noted and target values to be achieved by 2012 and 2017 were established.

Monitoring of the indicators is done by each relevant Government agency and ministry rather than through a single, comprehensive report. No English language versions of the monitoring reports are available, so it is not possible to comment here on the capacity of the Government to compile and report the indicators. The individual monitoring reports submitted by each ministry or public entity are compiled and assessed by a special unit in the Ministry of Planning through a unified spreadsheet.

As is common where multi-stakeholder groups are employed to choose sustainable development indicators, the initial set of indicators was quite long (as, for that matter, is the final set). Many groups wanted their indicators included. Some were subjective and others focused on projects that were planned but never executed; they were eventually dropped. The number of indicators has thus decreased in updates to the Agenda, which are conducted every four years.

In general, compilation of the indicators has proven difficult because of data gaps and relatively short times series for some variables. The environmental indicators have proven particularly difficult. The Ministry of the Environment is responsible for many of Jordan's environmental statistics but does not always release all the data it collects; for example, more data on air pollution are collected than are released. The national statistics office also collects environmental data. These are generally easier to access but not comprehensive (Wardam, personal communication, 5 December 2014).

Relation to ASDIF: Overlap between the indicators in Jordan's National Agenda (see annex V) and the ASDIF is limited and probably coincidental. There is no indication that Jordan took the ASDIF into consideration, although some consideration was given to aligning the indicators with the MDGs.

3. *Morocco*

Overview: Morocco designed its first strategy on environment and sustainable development in 1995. That was followed by a National Environmental Action Plan in 2002. At the same time, the Government studied the CSD indicator set and concluded that 65 sustainable development indicators were relevant to Morocco. A Committee on Sustainable Development Indicators was put in place to aid in the selection. A first indicators report was released in 2003 and others followed in 2006 and 2011. The indicators are grouped according to the Driving Force-Pressure-State-Impact-Response framework made popular by the

European Environment Agency.[21] All three Moroccan SD indicator reports have presented the same suite of 65 indicators.

Relation to Arab SDI Framework: Overlap between the Moroccan indicator set (see annex VI) and the ASDIF is limited and probably coincidental. There is no indication that Morocco took the ASDIF into consideration when developing its sustainable development indicators.

4. *Saudi Arabia*

Overview:[22] The Presidency of Meteorology and Environment (PME) of Saudi Arabia recently began publishing a sustainable development indicator report. The initial report, for 2003-2007, was released in 2011. No date has been set for the release of the next one, which is in preparation. The first report is currently available only in paper format.

Preparation of the first report met with a number of obstacles. Accessing the necessary data was particularly problematic. Agencies responsible for data did not always have them available in readily accessible form. Obtaining approval to access data was time-consuming and difficult.

The PME has found that it must go through the same (laborious) process of accessing data again to prepare the second report. This is partly because of changes in personnel in the agencies that hold the data. New staff are unaware of the sustainable development indicators and must be convinced all over again to share data. As a result, it is difficult to predict when the second report will appear.

The quality of available data also poses problems. Time series are short and full of gaps for many variables and data are inaccurate.

Although awareness of the need to report on sustainable development is increasing, thanks in part to the efforts of regional organizations to promote it, more needs to be done. Saudi sustainable development experts indicate that the situation in Saudi Arabia is similar to that of other Arab countries with regard to preparing indicator reports.

Relation to Arab SDI Framework: The Saudi Arabian sustainable development indicator set (see annex VII) is derived from the ASDIF, but considerably condensed. The Saudi set contains 49 indicators, compared to the 84 in the long version of the ASDIF. Although the Saudi set is similar in length to the short, "compulsory" 44-indicator version of the ASDIF, it differs from it significantly in content. It is unclear why the PME did not simply adopt the "compulsory" 44-indicator set. In condensing the ASDIF, the PME removed the themes related to peace and security and sustainable production and consumption. For other themes, specific indicators were deleted. The theme for which the greatest number of indicators was deleted is biodiversity, perhaps reflecting the relative scarcity of environmental data in the country.

5. *Tunisia*

Overview: Tunisia tested the CSD and Mediterranean Commission on Sustainable Development indicator sets in the late 1990s. Those tests led to the country's first sustainable development indicator report in 2003, in which 36 indicators grouped into economic, social and environmental categories were reported. The next report was not released until 2014. It was based on an indicator set that differed considerably from the 2003 set in size, content and organization, with 46 indicators organized under 9 "challenges" identified in

[21] Available from http://ia2dec.pbe.eea.europa.eu/knowledge_base/Frameworks/doc101182.

[22] The material in this sub-section draws heavily on the author's personal communication with Dr. Waleed Jomah, former Deputy General Director of Sustainable Social Development, Presidency of Meteorology and Environment of Egypt, on 23 December 2014.

the 2011 national sustainable development strategy (Direction générale de développement durable, 2011). There is little overlap between the 2003 and 2014 indicator sets.

Relation to the SDIAR and ASDIF: Overlap between the 2014 indicator set (see annex VIII) and the ASDIF is limited and probably coincidental. There is no indication that Tunisia took the ASDIF into consideration in the development of its indicators.

C. The experience of Arab sustainable development experts

The previous chapter outlined what was learned primarily from our desk review of sustainable development indicator reporting in the region. Here we summarize comments received during interviews conducted for this report with Arab experts.[23] We have grouped the comments in a set of frequently recurrent themes: institutional issues; concerns regarding data; the role of international organizations; resourcing and the post-2015 agenda. Concerns regarding those themes were raised often enough in the interviews for us to identify them as key problem areas.

1. *Institutional issues*

A common concern voiced by interviewees was that processes for compiling and reporting sustainable development indicators in Arab countries were not fully integrated into national and regional institutional structures. For example, each time a new indicator report is compiled, project teams must be created anew in the agency responsible for the report and in the agencies providing data. This limits opportunities for capacity-building and "learning-by-doing" and increases the burden of reporting. One interviewee noted: "We worked for seven years and ended up with 25 per cent of the data." Partly to blame for this is the time lag between reports in many countries; it is nearly impossible to keep teams in place if reports are prepared only a few times a decade. Exceptions were noted where indicators were collected systematically. Information systems exist in some countries to store, manage, analyze and report environmental data. AGEDI, in partnership with UNEP, is trying to fill the gap with its National Reporting Toolkit, which focuses on data capture and transformation into indicators.

Another concern was that the quality of reporting depended greatly on finding the right people for the task, but that professional capacity for measuring sustainable development was limited in most ministries. The best professionals often left the region to work elsewhere.

National statistics offices were viewed as useful sources of data, but not as lead players in the compilation and reporting of sustainable development indicators. Interviewees often mentioned planning or environmental ministries as appropriate for that role.

Several interviewees lamented that sustainable development reporting in the Arab region was largely perceived as an initiative of environment ministries (even when that was not fully the case). Since they are traditionally weak ministries, it was common for other, more powerful ministries to pay little attention to sustainable development. For it to be taken more seriously, sustainable development reporting needed to be housed closer to the centre of Government, such as in planning ministries or cabinet offices.

Many interviewees noted the League of Arab States as a key regional player in monitoring sustainable development. However, the League was short of the resources needed to deliver on its commitments in the area. It was an effective convener and consensus-builder but lacked the resources to ensure that there was follow-through on its declarations. Although the SDIAR had the "highest level" of political backing from the League, it had had little impact on monitoring of sustainability. Only two countries in the region (Iraq and

[23] Comments are not attributed to the individual interviewees.

Saudi Arabia) have adopted the SDIAR indicators as the basis for monitoring and evaluating sustainable development.

2. *Issues related to data*

Interviewees noted many concerns regarding the data required to compile sustainable development indicators.

Missing data: Some data are simply not available from any source. Environmental data suffer the most from this problem.[24] Economic and social data are relatively more available, although they, too, are incomplete in many cases.

Gaps in time series: Some data are available but only for a limited number of points in time. In many cases, the data are available for seemingly random points in time rather than with a regular periodicity. Data that are randomly, as well as infrequently, available are the least valuable of all for sustainable development reporting purposes, since they lend themselves poorly to assessing trends over time.

Sub-national data: Data below the national level were much less available and of lower quality than national data. Sub-national data, when available, often did not meet the criteria to be considered official statistics and, therefore, were of limited use in compiling indicators for official release.

Changes in concepts, definitions and methods: Data were in some cases subject to breaks in time series because of changes in underlying concepts, definitions or methods. That rendered the data less useful for identifying trends in sustainability, as it can be difficult to separate changes due to statistical artefacts from those due to changes in the prevailing social, economic or environmental conditions of the country.

Accessibility: Not all data collected were routinely made available in some countries. Government agencies might, for a variety of reasons (including simply reluctance to share information), withhold information from citizens and even from other Government agencies. Forcing potential users to pay for data was another impediment to access and perhaps a veiled effort at keeping data secret. Strengthened laws on access to information were a possible solution.

Capacity: Capacity to collect basic economic, social and environmental data was limited in some countries. Problems included: insufficient funds; a lack of professional knowledge and skills relevant to monitoring sustainable development; insufficient time to devote to the work; weak institutional support and poor national and regional coordination.

3. *Role of international organizations*

Some of those interviewed viewed the role of international organizations as providing the required "pressure" to force Arab governments to take action on sustainable development monitoring and evaluation. Without pressure from, for example, the United Nations, some countries were unlikely to do anything. Others felt that it was easy to ignore international agencies because penalties did not result from failing to living up to international commitments.

International organizations should help to facilitate south-south cooperation by, for example, inviting Arab countries to participate in conferences and other awareness-building activities on sustainable development. A key to progress was to make senior Arab decision-makers aware of the importance of measuring sustainable development. Capacity-building, knowledge transfer and the sharing of best practices and success stories were also important.

[24] This is not a uniquely Arab problem. The world over, environmental issues are the statistical "poor cousins" of economic and social issues.

It was noted that periodic indicator reports by international organizations mandated to monitor and evaluate progress toward sustainable development were considered the most reliable source of data in the region.

4. *Resourcing*

Sustainable development indicator (SDI) reports took up to two years to prepare, making project management a challenge. Staff turnover, for instance, was likely during such long periods. Maintaining project momentum and the interest of stakeholders could be challenging. Long report development timeframes were to be expected given the long lists of indicators. Innovative use of new information and communication technologies (ICT) was a key to efficiency.

5. *The post-2015 agenda*

Interviewees expressed varying opinions about the SDGs. There was a general sense that the SDGs represented an opportunity to move forward on development. Given the fragility of the region, sustainability was widely held to be crucial. Whether the SDGs themselves were needed to move forward on sustainability was less clear. Unless Governments in the region saw them as relevant to the issues they faced – such as political unrest and conflict – they might have little impact. Some interviewees felt that improving existing sustainable development reporting efforts might be just as effective.

To be successful, the SDGs needed to be adaptable to the capacities, levels of development and rates of progress of different countries. Experience showed that "one-size-fits-all" would not work. Some interviewees were encouraged that the list of SDGs proposed by the Open Working Group was not significantly different from the goals proposed in the Arab regional submission to the group (ESCWA, 2014). However, most were concerned by the length of the list (17 SDGs versus 8 MDGs) and the lack of a framework supporting the indicators, which were considered to be "all over the map". It was thus suggested that a core list of SDGs for the Arab region would be needed.

Opinions varied on which institutions should monitor the SDGs. Some argued that national statistics offices should take on the task but most felt that they had insufficient capacity. Planning ministries were seen as the most logical candidates for SDG monitoring. Interviewees agreed that policy-related analysis of trends in the indicators should be conducted outside statistics offices. ESCWA must play an important role in overall monitoring, as it had done for the MDGs. The League of Arab States was also felt to be an important player. Any reporting activities for the SDGs would have build on structures put in place for the MDGs and on national sustainable development reports.

D. Conclusions for the post-2015 era

Effective monitoring of the SDGs will require nationally generated data (as opposed to that produced by international organizations) for most of the indicators. This will be a challenge. Most Arab States currently produce data for fewer than half of the MDGs, so it is unrealistic to expect the Arab region to be ready to compile the SDGs. Unless even more assistance flows from the international community than has been provided for the MDGs, the region will face difficulties meeting monitoring and evaluation expectations after 2015.

International assistance can help fill data gaps in the short term but will not necessarily create the long-term statistical capacity needed for countries to become self-sufficient in measuring sustainable development. Assistance should be designed to ensure that it results in real, sustainable capacity-building. Regional cooperation may be a more effective way of ensuring this, as it builds capacity entirely within Arab countries.

Based on our research, the six countries reviewed for this study and Qatar[25] are the only ones in the Arab region to have prepared formal SDI reports.[26] Thus, only about one third of Arab countries measure sustainable development. This finding is similar to that contained in the recent Prototype Global Sustainable Development Report (United Nations, 2014b), which noted that only three of 18 North African and Western Asian States had formally submitted sustainable development reports to CSD.[27] The level of preparedness for the post-2015 agenda in the region is clearly low overall.

The considerable difference between the number of sustainable development and MDG reports in the region is noteworthy. Nearly every country in the region has prepared one or more MDG reports since 2000. Clearly, with the support of the international community, the region is capable of investing considerable effort in monitoring and evaluating development issues. However, when left to its own devices – as in the case of sustainable development reporting – the region's limited capacity results in only a modest outcome. The low rate of sustainable development reporting in the region can probably be partly explained by the difficulties countries face in compiling reports, such as gaps in data, difficulty in accessing data and a lack of institutional support.[28]

A feature of the region is the heterogeneity of reporting approaches. Each of the reports reviewed used a unique set of indicators to measure sustainability, effectively eliminating the possibility for comparison of performance from country to country. There is, of course, some overlap in indicators used across countries and even more in terms of the themes covered in the reports. Yet very few indicators are measured with sufficient consistency from one country to the next to permit comparisons. The same problem exists within at least one country as well; Tunisia's indicator set changed substantially from its first report to its second. Again, this all but eliminates meaningful analysis of progress on Tunisia's sustainability over time.

It is worth comparing the heterogeneity of sustainable development reporting[29] with the homogeneity that is the hallmark of macroeconomic statistics. GDP and the related suite of national accounts aggregates are measured with a high degree of consistency between and within countries. The analytical value of the resulting time series cannot be overstated and is one of the reasons why macroeconomic indicators wield greater influence over decision-making than sustainable development indicators.

The ASDIF has had only a modest impact. Of the six selected countries, only two made use of the ASDIF in defining their indicator sets and only one (Iraq) made use of it in a substantially complete form. Few experts mentioned the ASDIF without prompting, suggesting that it is not uppermost in their minds when they consider measurement of sustainable development. This is so despite efforts of ESCWA, UNEP-ROWA and the League of Arab States to promote the ASDIF, including the preparation of three volumes of detailed methodological guidance on ASDIF indicators (UNEP and others, 2012a, 2012b and 2012c), the

[25] Qatar, which was not one of our selected countries, has produced two versions of a human development report focused on achieving sustainable development. The reports are part of Qatar's national vision for 2030. The indicators in the reports are not aligned with the ASDIF.

[26] It may be that some countries have produced reports that are either not available on the Internet and/or not available in English. Since our research was based largely on the English language content of the Internet, any reports not on the Internet or on the Internet but in Arabic might have escaped our attention. We believe the number of such reports is likely to be small.

[27] This puts the Arab region in the same category as most of the developing world, except for Latin America and Eastern Asia, which had higher rates of reporting to CSD. Thus, while rates of sustainable development indicator reporting are not particularly high in the region, they are not far from what might be expected based on the performance of peer countries.

[28] The modest degree of sustainable development measurement in the region may reflect a lack of interest in the issue and not just limited capacity. However, the number of declarations regarding sustainable development made by the League of Arab States and others in the region suggests that the issue is taken seriously, at least in some circles. However, sustainable development is seen in the region as largely an environmental initiative, which may partly explain the lack of attention paid to it by some Governments.

[29] The Arab region is not unique and, overall, the world is far from settling on a single, global set of sustainability indicators, in spite of efforts over the past 20 years by CSD and others to articulate a common set of indicators. The SDGs may move the world toward consistent reporting, at least with respect to the specific goals agreed upon by the United Nations.

creation of a regional working group on sustainable development indicators, numerous meetings and declarations on the topic since the mid-2000s and the preparation of a short version (44 indicators) of the ASDIF to simplify its implementation.

One probable factor in the failure of the ASDIF to gain more traction is that indicators were something of an afterthought when the SDIAR was launched in the early 2000s. The ASDIF was developed subsequently and was never adopted as the official indicator set for monitoring progress on SDIAR. Its status in the region is, therefore, diminished.

The ASDIF, like many other sustainable development indicator sets, lacks a clear conceptual underpinning. Its wide range of indicators share little in common except that they all address issues related to the "three pillars" of sustainable development: economy, environment and society. Countries may thus find no compelling reason to favour the ASDIF over their own indicator sets.

IV. THE DATA REVOLUTION – INFORMATION IN THE POST-2015 ERA AND CONCLUSIONS FOR THE ARAB REGION

In its 2013 report on the post-2015 agenda for the Secretary-General, the High-level Panel of Eminent Persons called for the "data revolution" to be leveraged to promote sustainable development. As the panel noted, "too often, development efforts have been hampered by a lack of the most basic data about the social and economic circumstances in which people live... Stronger monitoring and evaluation at all levels, and in all processes of development (from planning to implementation) will help guide decision making, update priorities and ensure accountability."

The Secretary-General subsequently appointed an independent expert advisory group (IEAG) to look at challenges and opportunities associated with the data revolution in more detail. In its report of November 2014, the group noted that efforts to monitor the MDGs had "spurred increased investment to improve data for monitoring and accountability. As a result, more is known now about the state of the world and, particularly, the poorest people in it. But despite this significant progress, huge data and knowledge gaps remain about some of the biggest challenges we face, and many people and groups still go uncounted". The group argued that the capacity of many Governments, institutions and individuals must be boosted significantly in order to deliver and use improved data for sustainable development decision-making.

The IEAG observed that the challenge is not to create a data revolution but to harness the revolution in progress with a view to improving decision-making, accountability and problem-solving related to sustainable development. The group noted:

- The need to integrate new data with traditional data to produce high-quality information that is more detailed, timely and relevant for fostering and monitoring sustainable development;
- The need for much greater data transparency and care to avoid the creation of a new form of inequality: inequality in production, access to and use of data that splits the world between those who know, and those who do not;
- That the public sector is not keeping up with companies, which are increasingly able to collect, analyze and respond to real-time data as quickly as it is generated; richer countries are benefitting more from these possibilities than poorer countries that lack the resources for investment, training and experimentation.

The IEAG called on the United Nations to close key gaps in access to and use of data between developed and developing countries, between information-rich and information-poor people, and between the private and public sectors, noting that Governments were responsible for putting in place the necessary rules and systems. As the group noted, there is not enough high-quality data to measure sustainable development. Too many countries still produce inaccurate data that arrives late and leaves too many issues untreated; indigenous populations and slum-dwellers, for example, are regularly left out of data sets. Data are often insufficiently disaggregated geographically, demographically and by sector, making it hard to compare progress across communities or countries. Not enough attention is paid to women's activities and priorities in the statistical record. Data on many environmental issues are especially sparse. The IEAG pointed specifically to the lack of data on chemical pollutants and flows of reactive nitrogen.

The group pointed out that much existing data is either unused or not usable. To be useful, data must be relevant, accurate, timely, accessible, comparable and produced free of political interference.[30] Often Governments or companies fearing an excess of transparency place legal or technical barriers on data that prevent or limit their use.

[30] The inclusion of freedom from political influence in the IEAG list reflects the difference between statistical production in Canada – where freedom from political influence is a cornerstone of the statistical system – and in those parts of the world where such freedom cannot be taken for granted.

To address such problems, the IEAG spelled out a vision for the future:

- By 2020, Governments empower their public institutions, including independent statistics offices, to make the necessary changes to respond to the data revolution. They put in place regulatory frameworks that, while ensuring privacy and data protection, promote the fullest release of data possible and create capacity for continuous data innovation;
- Governments, international and regional institutions and donors provide resources to countries and regions where statistical or technical capacity is weak and develop infrastructure and standards to improve data quality and usability;
- International and regional organizations work with other stakeholders to set and enforce common standards for data collection;
- Statistics offices are empowered and equipped to collect, process, disseminate and use high-quality, open, disaggregated and geo-coded data. They will produce their own data and manage and curate data created by other organizations;
- All public, private and civil society data producers share data and methods;
- Governments, civil society, academics and the philanthropic sector work together to raise awareness and promote the use of data;
- The private sector reports using common global standards for integrating data on its economic, environmental and human-rights activities and impacts;
- Civil society organizations and individuals use data to hold Governments and companies accountable;
- The media report fairly on statistical and scientific evidence available on relevant dimensions of sustainable development;
- Academics and scientists carry out analyses based on data coming from multiple sources, providing long-term perspectives.

The group recommended action to mobilize the data revolution for sustainable development in four areas.

Principles and standards: The United Nations should develop a comprehensive global consensus on data, agreeing on and promoting adoption of specific principles related to the data revolution and accelerating the development and adoption of legal, technical, geospatial and statistical standards.

Technology, innovation and analysis: The United Nations should foster a network of data innovation networks and leverage emerging data sources for monitoring SDGs through an "SDG data lab" that will mobilize key public, private and civil society data providers, academics and stakeholders to identify available and missing data and indicators, as well as opportunities for benefitting from new methods, analytical tools and technologies.

Capacity and resources: Strengthening national capacities in all areas, from data production to use, will be the essential test of any data revolution, especially in developing countries. For this, a new funding stream is needed to address investment needs, manage funds, engage the private sector, assess capacity needs and increase global data literacy.

Leadership and governance: A global partnership for sustainable development data should be set up, beginning with the establishment of a biennial world forum on sustainable development data, and associated regional and country level events and ongoing engagements.

The international focus on data that will result from the call by the United Nations to capitalize on the data revolution will create opportunities for the Arab region and highlight challenges before it in terms of monitoring and evaluation of sustainable development.

1. *Opportunities*

Joining the data revolution will above all allow the region to capitalize on international assistance. Unlike with the MDGs, the international community has decided that the SDGs will be unsuccessful unless the statistical issues preventing effective monitoring and evaluation are addressed from the outset. This decision, if pursued seriously, will unleash a range of well coordinated, strategic and appropriately financed efforts to improve statistics. Countries and regions that choose to engage willingly and fully in the process are liable to benefit substantially from it.

Among the specific opportunities for the region are the following.

(a) A review of statistical capacity to pinpoint what is preventing the region from effectively monitoring and evaluating sustainable development could be funded as part of the data revolution and followed by a statistical action plan to identify and prioritize the investments needed to improve countries' internal capacity to report on the SDGs. The key is to build national capacity;

(b) Statistics are most useful when compiled using concepts, methods and definitions that are common from country to country. The global data revolution should offer many opportunities for the Arab region to share concepts, methods and definitions with countries and organizations from other regions. The issue of data standards is likely to receive considerable – and due – attention in the post-2015 agenda;

(c) The Arab region is already a leader in some aspects of the data revolution. In particular, AGEDI is a world-class effort devoted to improving data for environmental monitoring and using, among others, remote sensing techniques. The data revolution offers an opportunity to build upon the success of AGEDI by boosting the region's capacity to collect, analyze and apply remotely sensed data in decision-making;

(d) Overall, the Arab region may be less advanced in the use of new data technologies than other regions. This point deserves attention. A review of the region's capacity to make use of data revolution technologies would reveal where it sits in relation to other regions and, therefore, where it can most benefit from the post-2015 agenda;

(e) A number of countries in the Arab region have sufficient financial resources to act as development funders for less well-off States. Wealthier States could focus some of their foreign assistance, within or outside the region, on the improvement of statistics for monitoring and evaluating sustainable development.

2. *Challenges*

Most, if not all, of the shortcomings identified by the IEAG with regard to monitoring and evaluation of development can be found in the statistics of Arab countries. Not all problems exist in all countries and some clearly do better than others in compiling and reporting statistics. Because the Arab region as a whole reflects many of the problems identified by the IEAG, it is both a good candidate to benefit from the data revolution and at a weak starting point for doing so. In other words, for the region to benefit from the global data revolution, it urgently needs its own data revolution. Among the more difficult challenges of the current regional statistical landscape to overcome include the following.

(a) The IEAG has called strongly for openness and transparency in data collection and reporting. While the degree of transparency varies from one Arab country to the next, as a rule it is given less priority than would ideally be the case. Changing this is key to the region's chances of success in implementing and benefitting from the post-2015 agenda, but very difficult in the face of cultural and institutional forces that are not always oriented toward transparency;

(b) Monitoring and evaluating the SDGs may require a doubling – or more – of the reporting burden vis à vis the MDGs, a burden the region has had difficulty bearing. The sheer scale of the data revolution may overwhelm certain countries. To avoid paralysis, the region will have to establish realistic priorities for what can and cannot be achieved;

(c) The Arab region faces many development challenges and, given the need to address more pressing matters such as security, poverty and education, Governments may be unwilling to devote resources to improving statistics. Many countries may need to look beyond their borders to fund statistical capacity-building. The data revolution promises to be a source of new funds for this. Managed well, those funds can be used to build real national statistical capacity. Managed poorly, however, the result may be the creation of national capacity that is sustained only so long as funds flow in from outside.

V. RECOMMENDATIONS - IMPROVING ARAB SUSTAINABLE DEVELOPMENT MONITORING AND EVALUATION IN THE POST-2015 ERA

We begin with some general recommendations and then focus on more specific issues. Because some readers may focus on this chapter of the report, we repeat some of the conclusions from earlier chapters to provide the necessary context.

A. GENERAL RECOMMENDATIONS

The Arab countries and region as a whole are, at best, only partially prepared for monitoring and evaluation in the post-2015 era. Challenges related to data quality, accessibility and availability, limited human and financial capacity and the failure of the region to adopt a shared approach to measuring sustainable development are hurdles to be overcome.

1. *Improved governance for sustainable development*

One relative strength of the region is governance. Political and administrative bodies offer effective mechanisms for coordinating sustainable development efforts, including monitoring and evaluation. CAMRE provides an active political forum for discussing sustainable development. Two bodies support CAMRE: the Joint Committee for Environment and Development in the Arab Region (JCEDAR) and the Regional Joint Secretariat. However, although effective at convening organizations and experts to discuss sustainable development, they lack the financial and legal means to monitor compliance by national authorities with commitments agreed upon. Moreover, several reports have called for governance to be strengthened. The Third Implementation Report of the Sustainable Development Initiative in the Arab Region (Gelil, 2011), for example, argued for "strengthening the legal framework, nurturing democracy, accountability and transparency [and ensuring] effective participation of civil society … in the [sustainable development] decision-making process". Creation of an Arab council for sustainable development was suggested as one mechanism for doing so. The report also noted that "countries need to establish a high council of sustainable development or equivalent entity to lead development and oversee implementation of national sustainable development strategies".

Similarly, it was argued in the proposal for a new Arab Strategic Framework for Sustainable Development (ESCWA and others, 2014) that "the region should consider elevating the overall responsibility for sustainable development agenda setting, policymaking and monitoring of progress to the highest political level within the [League of Arab States]". However, "the success of any regional institutional mechanism should be accompanied by a commitment of Arab countries to allocate overall responsibility for sustainable development to capable national institutions".

Recommendation 1. Building upon the structures in place, measures should be taken to strengthen governance for sustainable development in the Arab region. Recent recommendations for improving governance (Gelil, 2011 and ESCWA and others, 2014) should be used as starting points. National sustainable development governance approaches in the region should be reviewed to identify best practices. International best practices should also be taken into consideration. Strengthening should focus on increasing Arab regional and national capacity for sustainable development monitoring and evaluation.

2. *A new framework for sustainable development indicators*

The ASDIF has failed to generate a substantial following in the Arab region. Only two countries (Iraq and Saudi Arabia) use the framework for measuring sustainable development and neither uses it in its complete form. Sustainable development experts in the region do not show great interest in the framework. The Arab Strategic Framework for Sustainable Development (ASFSD), proposed in 2014 (ESCWA, League of Arab States and UNEP) is intended to guide the region into the post-2015 era. Unlike the SDIAR, the ASFSD includes a formal set of indicators for monitoring and evaluating progress against its objectives (see annex IX). While an important improvement vis à vis SDIAR, the proposed ASFSD indicators are clearly at an early stage of development. Several of them are too ill-defined to be measurable and the

proposed list remains long (at least 83 indicators). Given that no country in the region has compiled all 84 ASDIF indicators, a more attractive proposal would have included a significantly shortened set of indicators.

Recommendation 2. The development of a new set of sustainable development indicators should be pursued. The proposed ASFSD set is a start but too long. The region should aim for a set with fewer than 30 indicators and which is within the capacity of most Arab States to compile. A list with fewer, more relevant indicators would not only be quicker and less costly to compile but easier for decision-makers to use. See our next recommendation for suggestions on how this might be accomplished.

Another factor limiting uptake of the ASDIF may have been that it, like many sustainable development indicator sets, lacks a clear conceptual underpinning. The same concern applies to the proposed ASFSD indicator set. Given this, countries may have found no compelling reason to adopt the ASDIF as opposed to their own indicators, which they may have felt were more closely related to their own priorities and as equally well founded as the ASDIF. Countries and international organizations began compiling sustainable development indicator sets in the 1990s. Because sustainable development is so broadly defined and many groups contribute to identifying indicators, the tradition of long indicators sets persists. The proposal for 17 SDGs to replace the 8 MDGs is a case in point. Although there is still no global consensus on a single conceptual approach to sustainable development, one approach has emerged as a strong front-runner. It is the extended concept of capital that has had its fullest expression in the recent Inclusive Wealth reports, released by UNEP and the International Human Resources Dimensions Programme on Global Environmental Change (IHDP) of the United Nations University (UNU) in 2012 and 2014. Briefly, the idea of inclusive wealth is that the sustainability of development depends on the current generation passing on to the future a portfolio of economic, natural, human and social capital assets that is at least as large per capita as it inherited. If this condition does not hold, development (defined as increased human well-being) cannot be sustained.

The extended wealth concept underpinning the Inclusive Wealth reports can also be found at the heart of other important attempts at the rigorous definition and measurement of sustainable development. They include reports on measuring sustainable development released in 2009 and 2014 by the United Nations Economic Commission for Europe (ECE), the influential Report by the Commission on the Measurement of Economic Performance and Social Progress (Stiglitz and others, 2009), and various reports on the "wealth of nations" produced by the World Bank (see, for example, World Bank, 2011). The concept is also central in other major measurement frameworks and programmes that, although not focused on sustainable development, are nevertheless relevant to it; notably, the System of Environment-Economic Accounts, the World Bank initiative on Wealth Accounting and the Valuation of Ecosystem Services (see also the next chapter) and the OECD's work on measuring well-being.

Recommendation 3. The Arab region should consider basing the revised set of SDIs for the region on the extended concept of wealth, which is gaining increasing currency as a rigorous means of defining sustainable development. Doing so would provide a means of deriving a shorter and more robust set of indicators that is highly relevant to measuring sustainability. The 2009 ECE report on measuring sustainable development, for example, offers a set of indicators with only 28 items.

3. *Improving the statistical basis for monitoring and evaluating sustainable development*

A number of shortcomings in Arab statistics limits effective monitoring and evaluation of sustainability. They include poor data quality, difficulty in gaining access to data, missing data, low professional capacity and inadequate institutionalization of statistical processes. The causes are complex and numerous, but one that is common across the region is the lack of financial and human resources. Inadequate political support for statistics is also commonly cited. A fuller assessment of the strengths and weaknesses of statistical systems in the region than could be conducted for this study is needed.

Recommendation 4. A full assessment of Arab regional statistical systems would reveal in detail the degree of the region's preparedness for the post-2015 monitoring and evaluation agenda. In the absence of such a review, it is difficult to make strategic recommendations for improvement of the region's readiness.

A proper review would cover traditional elements of the statistical system and emerging elements related to the data revolution. It would consider the system's legal basis, its adherence to the accepted principles and quality standards of official statistics (see below), and the adequacy of its resources. Conducting a review in the near future would allow the region to plan strategically for an improved response to the post-2015 monitoring and evaluation agenda.

Given the challenges in the region in terms of statistical quality, it is surprising that the contribution national statistics offices can make to sustainable development monitoring and evaluation is not more fully appreciated. Some experts interviewed for this report felt that those offices had no major role to play beyond supplying basic statistics, seeing ministries of, planning or the environment as more appropriate for sustainable development monitoring and evaluation. Of course, such agencies have a role to play, particularly in setting policy frameworks. However, there is a twofold risk in assigning them sole responsibility for monitoring and evaluation processes as well.

Giving policy agencies sole responsibility for monitoring and evaluation puts them in the position of "judge and jury"; that is, responsible for setting the policy framework for achieving sustainability and assessing the success of that framework. The risk of biased monitoring and evaluation under such an arrangement is patent. The second, less obvious, concern with placing responsibility for monitoring and evaluation completely outside statistical agencies is the spreading of statistical capacity and expertise too thinly. Compiling and reporting high-quality statistics, including sustainable development indicators, involves complex concepts, methods and processes that take time and effort to master. Doing so is generally easier when those responsible work together in a single, purpose-driven organization. When spread out over many organizations, some with no direct mandate for statistics, people have fewer chances to work together and support one another. They are also more likely to use divergent concepts and methods in their work, leading to less overall consistency across statistical domains.

While there may be legitimate reasons for limiting the role of national statistic offices (for example, they may focus on economic and/or social data and have nothing to say about the environment), it is worth noting that one of the best sustainable development monitoring and evaluation systems in the world – that of Germany – includes prominent roles for the statistics office and the policy side of Government (see box 2).

Box 2. Monitoring sustainable development in Germany

Perhaps more than in any other country, there is an explicit and dynamic link between the German Government's sustainable development strategy and the Federal Statistics office (Destatis). Many of Destatis' economic, social and environmental statistics are used to monitor progress on implementation of the strategy.

The strategy was set out in 2002. Since then, a progress report has been compiled every four years by the Government, in order to highlight areas of the strategy needing adjustment and those requiring new action.

A set of 21 indicators is used to monitor progress in achieving the strategy's goals. Quantitative targets are set out for most of the indicators, providing a clear basis on which to assess progress. The Government decides on the indicators and targets, and the statistics office reports on them, calculates progress and advises the Government on matters of methodology. This indicator reporting is done every two years and Destatis is careful to ensure that its reports are neutral, transparent and independent.

Most of the sustainable development indicators are derived from official statistics in Germany, especially from Destatis's national and environmental accounts. This clearly demonstrates the importance of the national statistics office to this major Government policy initiative.

In an interesting and possibly unique example of the interplay between policy and statistics, a section of each four-year Government progress report is devoted to a discussion of the indicators report prepared by Destatis. The latest Government report notes that "the Federal Statistics office makes a valuable contribution that allows for a credible and comprehensible review of the National Sustainable Development Strategy". Nevertheless, the Government "does not embrace all of the statements issued by the Statistics office".

Recommendation 5. The role of national statistics offices in measuring sustainable development should be strengthened in the Arab region. Good examples from within the region and internationally (such as that of Germany) should be found to illustrate the benefits of involving statistics agencies to help ensure the quality and transparency of reporting. At the same time, it must be recognized that statistics offices can have no say in policy responses to trends in sustainable development indicators. This is properly and solely the role of policy ministries. The ideal situation is, then, one in which the statistics office takes the lead in monitoring and evaluating and the remainder of Government takes the lead in responding to their findings.

An argument for giving statistics offices a more prominent role in sustainable development monitoring and evaluation is their adherence to clear principles and quality standards for the collection and dissemination of information. These principles and standards are normally enshrined in a national statistics law, making them harder to ignore than the less explicit principles and standards used by other organizations. This is particularly important when the data are a matter of the general public good, as is the case with sustainable development indicators. For example, according to Statistics Canada's official quality framework (see annex X), high quality statistics are relevant, accurate, timely, accessible, understandable and consistent. A similar set of principles is found at the global level in the United Nations Fundamental Principles of National Official Statistics (see annex XI). Sustainable development indicators in the Arab region do not fully comply with those frameworks. Indicators are usually not timely, often appearing several years after the reference year. Consistency is also a problem, particularly within indicator sets over time. Indicator sets are often revised from one report to the next through the deletion, addition or modification of indicators. Since assessing trends over time is one of the key applications of indicators, this renders sustainable development indicator reports less useful to decision-makers than they might otherwise be.

Recommendation 6. Sustainable development indicator sets in the Arab region should be modified as little as possible from one report to the next so that long-time series may be compiled for analytical purposes. Sustainable development indicator sets need to be established from the outset on the basis of well articulated and scientifically founded concepts, definitions and methods (see also Recommendation 3), thereby obviating the need to modify the sets significantly soon after their creation. Although politically legitimate, the use of multi-stakeholder committees to establish SDI sets does not always result in indicators that are firmly grounded in science. This, combined with the multiplicity of stakeholders with varying opinions, can increase the pressure to change indicators soon after they have been established.[31]

The principle that statistics be "made available on an impartial basis" to the public is not always observed in the Arab region. Data collected by Governments are commonly not made available to the public and are even kept from members of Governments. That obviously limits the capacity to compile sustainable development indicators, which, by their nature, require access to a wide range of statistics.

Recommendation 7. Statistics offices and other credible national and international institutions in the Arab region should do all in their power to insist on transparency in the collection of information by Governments.

Only when indicators are available according to a predictable and widely known schedule are decision-makers liable to plan ahead for their inclusion in decision-making. Indicators that appear irregularly are more likely to be ignored because they come at random points in decision-making cycles. One of the reasons why economic indicators, such as GDP, are influential in decision-making is that they appear "like clockwork" every quarter. For this reason, decision-makers anticipate their arrival and build them into the information base they use for analysis.

[31] This recommendation should not be taken to suggest that indicators never be changed once established. Change is often required for legitimate reasons (such as a change in national context or a development in scientific understanding). The point is simply that change should be kept to a minimum and processes for selecting indicators should be designed to avoid the need for frequent change.

Recommendation 8. Arab countries should put more effort into ensuring the regular production of sustainable development indicator reports. The interval between these reports should not be too long; an annual or biennial frequency would be ideal. This recommendation aligns with Recommendation 2 on shortening indicator sets. Shorter sets are less burdensome to compile and, therefore, more likely to be feasible on an annual or biennial basis. Compiling 50+ indicators every year is a task that would challenge any Government.

B. TARGETED RECOMMENDATIONS

1. *Improve environment statistics*

The poor quality of environmental statistics is a particular weakness in the Arab region. Several experts interviewed for this report noted that finding economic and social statistics to monitor and evaluate sustainable development is much easier than finding environmental statistics. This is borne out by our own assessment of the data available for MDG indicator reporting; the indicators for the environmental MDG (goal 7) were the least well reported in the region.

The relative lack of environmental data is not a uniquely Arab concern. Environmental data across the world are more limited than their social and economic counterparts. One of the many reasons for this until recently was the lack of an international standard for collecting environmental data. This changed when the United Nations Statistical Commission adopted the SEEA as an international statistical standard in 2012. It offers a set of internationally agreed concepts, definitions and methods for the collection of environmental data and their organization into a system of accounts. Its consistency with the System of National Accounts means that environmental data can be integrated easily with economic data.

Some countries (Algeria, Egypt, Jordan, Lebanon, Mauritania, Palestine and Tunisia) have made partial attempts, especially with regard to water accounts, to implement the SEEA. In 2009, ESCWA proposed that water accounts be compiled over three years in all ESCWA region countries, but widespread adoption of environmental-economic accounting in the Arab region is not yet a reality. According to some experts, the SEEA is too advanced to be implemented in many countries of the region.

Another recent development relevant to building environmental statistics capacity in the region is the World Bank's Wealth Accounting and the Valuation of Ecosystem Services (WAVES) project. WAVES is a global effort to promote the development and use of accounts for natural capital assets in developing countries. The idea is that countries are not able to manage their natural capital unless they know how much of it they have and, importantly, what its contribution is to national wealth and well-being. While no Arab country is a full partner in WAVES, three (Lebanon, Morocco and the State of Palestine) have signed the related Communiqué on Natural Capital Accounting and five (Egypt, Jordan, Lebanon, Morocco and Tunisia) attended a 2013 regional workshop on natural capital accounting sponsored by the Center for Mediterranean Integration.

Morocco has expressed strong interest in the concept of total wealth and King Mohammed VI has instructed the Moroccan Economic, Social and Environmental Council to conduct a study on the country's total wealth and ensure its use in decision-making. The concept of total, or inclusive, wealth is the focus of a biennial United Nations report that measures the total wealth of all countries and promotes use of the concept in the global trend to move "beyond GDP" as the central measure of progress.

Yet another recent advance is the finalization in 2013 of the updated version of the United Nations FDES, a multi-purpose framework setting out the scope of environment statistics. It provides an organizing structure to guide the collection and compilation of national environment statistics. Its primary objective is to guide countries in the early stages of development of their environment statistics programmes. A set of

environment statistics is proposed for countries that face stringent resource constraints or are at an early stage in the development of environment statistics.[32]

Recommendation 9. The SEEA and FDES should be promoted in the Arab region as the basis for improving environmental data. Consideration should be given to identifying a core set of environmental accounts and statistics that are relevant to and within the capacity of all regional countries to compile. The core set of the FDES is a sensible starting point for this.

The concept of natural capital should be the guiding framework for efforts to improve environmental statistics. Its use would provide a consistent conceptual basis for environmental statistics across all Arab countries. Careful attention should be paid to communication of the concept in the region so that it is not perceived to be "too complicated" (as the SEEA is perceived by some). The concept itself is straightforward, but its measurement can be demanding if pursued in the form of comprehensive accounts. The accounting approach should be undertaken in countries with advanced statistical capacity. Other countries could focus on measuring natural capital using the core set of statistics advocated by the FDES.

Given the scarcity of water in the region and its importance, it would seem sensible to choose water as the initial focus for improving environmental statistics. Any lessons learned from the earlier effort (ESCWA, 2009) at promoting water accounting in the region should be taken into consideration.

2. *Create an independent office for sustainable development*

There appears to be no independent office for sustainable development in the Arab region. In Canada, an Office of the Commissioner of the Environment and Sustainable Development (CESD) has been established under the Office of the Auditor General. It reports on matters relating to environment and sustainable development, comments on the sustainable development strategies compiled every three years by each department of the Canadian Government, and reports on the extent to which federal departments have helped to meet the targets of the federal sustainable development strategy. It also receives public petitions on environmental and sustainable development matters and can compel ministers to respond to them.

Similar offices exist in New Zealand, the Canadian provinces of Ontario and Quebec, the Australian state of Victoria and its National Capital Territory.

Recommendation 10. Consideration should be given to creating, either at the regional level or in specific countries, independent offices with responsibility for advancing sustainable development. Existing international offices offer a variety of models for an Arab office. This recommendation could be one means of implementing the call for an Arab Council for Sustainable Development made in the Third Progress Report of the Sustainable Development Initiative in the Arab Region and a call during the Arab consultative meeting on accountability for the post-2015 agenda to transform the JCEDAR into an Arab sustainable development committee.

3. *Reconsider the role of international organizations in building statistical capacity*

Even in the wealthiest Arab countries, capacity for data collection is limited compared with that of Western nations. Saudi Arabia, for example, collects data only for 21 of the 45 MDG indicators that a Government might be expected to compile. The remaining data required come from sources funded by international agencies. Reliance on international organizations for funding and expertise in data collection is widespread in the region.

[32] The FDES core set provides guidance on statistics to include in a national environment statistics programme and so provide policy-makers with the most pertinent information. It incorporates statistics needed to report on global environmental conventions and multi-lateral environmental agreements.

While effective as a means of increasing the availability of data in the region, it is an open question to what extent international statistical assistance leads to increased long-term capacity for data collection by national authorities. Such assistance is targeted by a range of organizations and aid agencies at various ministries in recipient countries, thus probably diluting the effectiveness of their capacity-building efforts. Different donors emphasize different approaches to data collection and different ministries will internalize what they learn in different ways.

Recommendation 11. The process of statistical capacity building in the Arab region through international donor assistance should be rationalized. International donors should be encouraged to coordinate efforts to ensure that consistent statistical concepts, definitions and methods are used. Their programmes should be targeted at as few ministries as possible in order to concentrate capacity-building. Ideally, the national statistics office should be the target of this assistance in all cases unless there is a compelling reason for involving a policy ministry. Targeting national statistics agencies will ensure that capacity-building is concentrated in the smallest number possible of individuals, whose professional role is focused on data collection. ESCWA may wish to study in detail the effectiveness of current statistical assistance in creating capacity in the Arab region.

4. *Join the data revolution*

The IEAG has called on the United Nations to show leadership in harnessing the data revolution in order to ensure sustainable development (Data Revolution Group, 2014). Arab countries stand to benefit considerably from joining the data revolution. Arab regional organizations and national Governments should therefore consider how they can contribute.

Discussions on the recommendation by the IEAG that a global consensus be created on the standards and principles informing statistical systems will probably focus on key issues such as transparency, data quality, statistical methods and standards, protection of privacy, and governance. Arab countries have a clear stake in these issues and they should ensure that they are well represented in the relevant discussions. However, they should resist any urge to develop a unique regional set of statistical principles and standards. High-quality statistics are a common good and rarely can it be argued legitimately that their nature differs from one country or region to the next. The Arab region should therefore embrace the conclusions of the new global consensus reached through international discussion and apply them in national and regional Arab statistical systems.

Recommendation 12. Arab regional organizations and States should join the global consensus on data proposed by the IEAG and participate in its efforts to define principles and standards to leverage the data revolution for sustainable development. The existing principles of official statistics (see annex XI) should be taken as the starting point so that such efforts are not based on approaches inconsistent with existing statistics.

Noting that technology is a key driver of the data revolution, the IEAG has argued that sustained investment is needed to take advantage of new technologies, especially in countries where technological development is lagging. Countries of the Arab region should take this seriously. Clearly, countries and regions that are relatively behind in terms of technology cannot suddenly catch up with global leaders. Investment in technology must therefore be focused where it will pay the highest dividends in terms of increased statistical capacity. Spreading resources too thinly on new technologies is unlikely to yield satisfactory results.

In determining where to invest, Arab countries should consider where their strengths lie. One of these is the use of remotely sensed data to monitor the environment, as championed by AGEDI and used extensively in ESCWA's Regional Initiative for the Assessment of the Impact of Climate Change on Water Resources and Socio-Economic Vulnerability in the Arab Region (RICCAR). There are likely to be others that were not revealed during research for this report. An investigation into that aspect of the region's

response to the data revolution might be warranted before decisions are made by national or regional organizations on how best to leverage new technologies.

Recommendation 13. The Arab region and its States should embrace the new technologies and innovations of the data revolution where strategically to their advantage to do so. In areas where it is already advanced, such as remotely sensed data, the region can – and should –play a leadership role. In other areas, it should learn from others and adopt new technological approaches where most appropriate. This will require first identifying and prioritizing regional data needs and then assessing which of them can be met through the new technologies of the data revolution.

IEAG recommended the establishment of a global partnership for sustainable development data that would promote, among other things, biennial forums on sustainable development data at the global and regional levels.

Recommendation 14. Arab nations and regional organizations should support the initiative to create a global partnership for sustainable development data and consider creating a parallel regional forum (or assign that role to the Arab High-level Forum on Sustainable Development). A regional forum would enable Arab countries and regional organizations to come together periodically to define an agenda for statistical improvement and discuss how to leverage international developments in statistics.

It will be impossible to monitor progress on the SDGs without new and sustained investment, particularly in developing countries. Some countries in the Arab region could contribute as donors but most would be beneficiaries. The IEAG has suggested that new funding be addressed at the Third International Conference on Financing for Development in Addis Ababa in July 2015.

Recommendation 15. The Arab region and its States should take advantage of the opportunity provided by the post-2015 agenda to seek and/or provide additional financial resources to build capacity for monitoring and evaluation of sustainable development. In particular, the region should ensure that it is well represented at the upcoming international conference on development financing and prepared to discuss funding needs for statistical capacity-building. It would be useful to hold regional discussions before the meeting in order to define the most pressing statistical needs in Arab countries. In seeking new funding, the region should ensure that new statistical capacity is truly sustainable (see recommendation 11). Engaging in efforts related to the data revolution brings the risk that Arab countries will create capacity that is contingent on a continuous flow of funds and expertise from outside the region. That would be undesirable. Outside resources will undeniably be needed to launch processes of statistical improvement, but what is essential in the long run is the creation of true national and regional capacity. That will be achieved only if Governments and regional organizations commit their own funds to the effort. If not, capacity created risks being fleeting and Arab countries may find themselves no further ahead – and possibly further behind – when the time comes for the international community to move on to other development priorities.

Annex I

ARAB SUSTAINABLE DEVELOPMENT EXPERTS INTERVIEW AND INTERVIEW QUESTIONS

LIST OF EXPERTS INTERVIEWED

Ms. Wafa Aboul Hosn, PhD
Chief, Economic Statistics Section
Statistics Division
Beirut, Lebanon

Mr. Tarek Sadek, PhD
First Economic Affairs Officer (Climate Change)
Sustainable Development and Productivity Division (SDPD)
Beirut, Lebanon

Mr.Adel Abdel Kader, PhD
Regional Coordinator, early warning and assessment of environmental management, West Asia
Manama, Bahrain

Ms. Shahira Wahbi
Ambassador, Chief, Sustainable Development & International Environmental Cooperation, Environment, Housing, and Sustainable Development Department
League of Arab States
Cairo, Egypt

Mr. Waleed Gomaa
Deputy General Director of sustainable social development, Presidency of Meteorology and Environment
Jeddah, Saudi Arabia

Mr. Abdel Aziz Bahgat
Former Director General
General Administration of Environmental Statistics
Egyptian Central Agency for Public Mobilization and Statistics (CAPMAS)
Cairo, Egypt

Mr. Batir Wardam
Former Project Coordinator
Ministry of Environment
Jordan

Mr. Ibrahim Abdel Gelil, PhD
Adjunct Professor
Arabian Gulf University

Mr. Hosny Khordagui, PhD
Former Director
Arab Water Governance Program
United Nations Development Program

INTERVIEW INSTRUMENT

Sustainable Development Monitoring and Indicators in the Arab Region

Interview Questionnaire

Thank you for agreeing to participate in this brief interview regarding sustainable development monitoring in the Arab region. The questions below are designed to help in the preparation of an expert report on this topic. They will also inform the upcoming Arab Sustainable Development Report to be published in 2015 and assist with Arab regional preparations for the global Sustainable Development Goals (SDGs) and post-2015 agenda.

The questions are intended as guidelines only. You should not feel obliged to answer them all. Likewise, if you would like to raise issues that are not covered by the questions, please feel free to do so.

The interview should last 45-60 minutes.

Thank you in advance for your cooperation.

Questions

1. About the interviewee

(a) What is your current position and how do your responsibilities relate to the monitoring of sustainable development in the Arab region?

(b) How long have you held this position?

2. Views on past/current efforts at measuring sustainable development in the Arab region

(a) What past or current efforts at measuring sustainable development in the Arab region and/or in your country are you familiar with?

(b) What was (is) your role in the efforts?

(c) Were (are) these efforts linked directly or indirectly to sustainable development measurement efforts in other regions or at the global level?

(d) In your opinion, what were (are) the strengths of these efforts?

(e) What challenges did (do) they face?

(f) What were (are) the possibilities for overcoming these challenges?

(g) In your opinion, were (are) these efforts a success? What were the main factors in ensuring success/lack of success?

(h) If the efforts have ended, what was the reason for stopping them?

3. Views on the future of sustainable development monitoring in the Arab region and/or in your country

(a) How familiar are you with the development of the United Nations Sustainable Development Goals (SDGs)?

(b) In your opinion, what opportunities do the SDGs offer the Arab region and/or your country?

(c) Do you believe all the required capacity exists in the Arab region and/or your country to compile and monitor the SDGs? If not, what challenges do you see?

(d) What, in your opinion, are the three highest priority actions needed to overcome these challenges?

(e) What opportunities for collaboration on the SDGs do you see, either among Arab countries or between them and other national/regional or global initiatives?

(f) Who should be responsible for compiling and monitoring the SDGs in the Arab region and/or your country?

(g) Among all the needs for social/economic/environmental monitoring in the Arab region and/or your country, how highly would you rank the importance of sustainable development monitoring?

Annex II

ARAB SUSTAINABLE DEVELOPMENT INDICATOR FRAMEWORK (ASDIF)

Poverty

1. Percentage of population living below national poverty line
2. Proportion of population living below international poverty line ($1 and/or $2)
3. Ratio of share in national income of highest to lowest quintile
4. Proportion of population with access to improved sanitation, urban and rural
5. Waste water treatment by category (primary, secondary, tertiary) in urban areas (NC)
6. Proportion of population with access to safe drinking water
7. Share of households without access to electricity or commercial energy
8. Proportion of population living in slums

Governance

9. Number of recorded bribes crimes per 100,000 population
10. Number of recorded violent crimes and homicides per 100,000 population

Health

11. Mortality rate among children under the age of 5
12. Life expectancy at birth
13. Healthy life expectancy, years
14. Percentage of population with access to primary health care facilities
15. Immunization against infectious childhood diseases
16. Contraceptive prevalence rate (NC)
17. Nutritional status of children (percentage of underweight and obese children)
18. Smoking prevalence (NC)
19. Prevalence of mental health problems (suicide rates as proxy) (NC)
20. Prevalence of major diseases such as HIV/AIDS, malaria, tuberculosis

Education

21. Gross intake into last year of primary education, by sex
22. Net enrolment rate in primary education (NC)
23. Adult secondary (tertiary) schooling attainment level, by sex
24. Lifelong learning (proportion of working age population receiving learning or training) (NC)
25. Adult literacy rate, by sex

Demographics

26. Population growth rate, rural and urban
27. Percentage of rural population from total
28. Total fertility rate (NC)
29. Dependency ratio (young and old)
30. Rate of migration from rural to urban areas

Peace and Security

31. Number of people displaced and refugees due to war
32. Economic and human loss due to war, as percentage of population and of GDP

Atmosphere

33. Emissions of greenhouse gases
34. Ambient concentration of air pollutants in urban areas
35. Consumption of ozone depleting substances

Agriculture/Land

36. Land affected by desertification/degradation
37. Vegetation cover
38. Land use change
39. Arable and permanent crop land area
40. Use of fertilizers
41. Use of agricultural pesticides

Coastal and Marine Environment

42. Percentage of total population living in coastal areas
43. Annual fish catch
44. Release of nitrogen and phosphorus into coastal waters

Water

45. Annual withdrawal of ground and surface water as a percentage of available water
46. Annual utilization or withdrawal of water by type (agriculture, domestic, industrial, commercial, other)
47. BOD (biochemical oxyden demand) in water bodies
48. Waste water treatment coverage
49. Access to safe drinking water

Biodiversity

50. Area of selected key ecosystems
51. Protected areas as a percentage of total area
52. Abundance of selected key species
53. Percentage of threatened species
54. Number of alien (invasive) species

Economic Development

55. GDP per capita
56. Investment share in GDP (NC)
57. Net savings rate (NC)
58. Inflation
59. Debt to gross national product (GNP) ratio
60. Labour productivity by sector
61. Employment rate, disaggregated by sex

62. Employment status, by sex (NC)
63. Unit labour costs by sector (NC)
64. Internet users per 100 inhabitants
65. Fixed telephone lines and cellular subscribers per 100 inhabitants (NC)
66. Personal computer per 100 inhabitants [could be deleted, depending on the outcome of revision on MDG indicators]
67. Tourism contribution to GDP and employment

Global partnership

68. Current account deficit as percentage of GDP (NC)
69. Share of imports and exports by sector from total GDP
70. Total official development assistance (ODA) given or received as a percentage of gross national income (GNI)
71. Net foreign direct investment (FDI) inflows and outflows as percentage of GNI (NC)
72. Remittances (inflows and outflows) as percentage of GNP (NC)

Consumption and Production Patterns

73. Intensity of material use
74. Annual material use per capita, total and by sector (NC)
75. Annual (commercial) energy consumption per capita, total and per sector
76. Share of consumption of renewable energy resources (NC)
77. Intensity of energy use
78. Generation of waste by industry/sector (NC)
79. Generation of hazardous waste
80. Management of radioactive waste (NC)
81. Waste treatment and disposal by method of treatment (recycled, incinerated, landfill)
82. Share of cars in passenger transportation (NC)
83. Road share of freight transport (NC)
84. Fuel use by distance of passenger transportation (energy intensity of transport)

Annex III

ARAB SUSTAINABLE DEVELOPMENT INDICATOR FRAMEWORK (SHORT VERSION)

Poverty

1. Percentage of population below national poverty line (also known as national poverty rate)
2. Percentage of population with income less than $1 or $2 per day
3. The percentage share of the top quintile of income to the lowest quintile
4. Percentage of population who use improved health facilities, urban and rural
5. Percentage of population who use improved drinking water source

Health

6. Mortality rate for children under 5 years old
7. Prevalence of contraceptives (family planning)
8. Vaccination against infectious diseases for children
9. Nutritional status of children (percentage of underweight or overweight children)

Education

10. Enrolment rate in the last grade of primary education
11. Net enrolment rate in primary education
12. Rate of literacy, by gender

Demographics

13. Rural and urban population growth rate
14. Urban population as percentage of total population
15. Dependency ratio (young and older)

Natural hazards

16. Economic ($) and human loss (deaths) due to disasters and natural hazards

Atmosphere

17. Emissions of greenhouse gases
18. Ambient concentration of air pollutants in urban areas

Agriculture/Land

19. Vegetation cover
20. Arable and permanent crop land area

Coastal and Marine Environment

21. Percent of total population living in coastal areas
22. Annual fish catch

Water

23. Annual withdrawals of ground and surface water as a percent of available water
24. Annual utilization or withdrawals of water by type (agriculture, domestic, industrial commercial, other)
25. Waste water treatment coverage (percentage)
26. Access to safe drinking water (percentage)

Biodiversity

27. Protected area as a percent of total area
28. Percentage of threatened species as a total of all species

Economic Development

29. GDP per capita
30. Investment share in GDP (NC)
31. Inflation
32. Debt to GNP ratio
33. Employment rate, disaggregated by sex
34. Internet users per 100 inhabitants
35. Fixed telephone lines
36. Cellular subscribers per 100 inhabitants (NC)

Global partnership

37. Current account deficit as percentage of GDP (NC)
38. Total ODA given or received as a percentage of GNI

Consumption and Production Patterns

39. Annual (commercial) energy consumption per capita, total and per sector
40. Share of consumption of renewable energy resources (NC)
41. Generation of waste by industry/sector (NC)
42. Generation of hazardous waste
43. Waste treatment and disposal by method of treatment (recycled, incinerated, landfilled)
44. Share of cars in passenger transportation (NC)

Annex IV

SUSTAINABLE DEVELOPMENT INDICATORS
IRAQ (2013)

Poverty

1. Percentage of population living below the national poverty line
2. Percentage of population living below the international poverty line ($1 and/or $2)
3. Ratio of share in national income of highest to lowest quintile
4. Percentage of households without access to electricity or commercial electric energy
5. Percentage of population who use improved sanitation facilities in urban and rural areas
6. Percentage of population who use improved sources of drinking water

Health

7. Mortality rate of children under 5 years old
8. Life expectancy at birth
9. Percentage of population with access to primary health care services
10. Average contraceptive prevalence rate
11. Vaccination against infectious childhood diseases
12. Nutritional status of children
13. Prevalence of smoking
14. Prevalence of mental health problems
15. Prevalence of major diseases such as HIV/AIDS, malaria and tuberculosis

Education

16. Proportion of pupils enrolled to sixth class
17. Net enrolment rate in primary education
18. Adult secondary schooling attainment level
19. Literacy rate

Demography

20. Annual population growth rate
21. Percentage of population living in urban areas
22. Total fertility rate
23. Dependency rate (young and old)
24. Rate of migration from rural to urban areas

Peace and Security

25. Number of displaced people and refugees due to wars
26. Economic and human loss due to war as percentage of population and of gross national product
27. Human loss due to natural disasters and risks

Atmosphere

28. Greenhouse gases emissions
29. Concentration of air pollutants in urban areas

Agriculture and lands

30. Land affected by desertification and degradation
31. Vegetation cover
32. Area of cultivated and arable land
33. Use of fertilizers
34. Use of herbicides

Coastal and Marine Environment

35. Percentage of population living in coastal areas (not calculated because Iraq has no coastline)
36. Annual fishing

Water

37. Withdrawal of ground and surface water as percentage of available water
38. Annual use or withdrawal of water by type (agricultural, domestic, industrial, commercial and environmental)
39. Waste water treatment (initial, dual, triple) by classification in urban areas
40. Access to drinking water
41. BOD concentration in surface water

Biodiversity

42. Selected ecosystem areas
43. Percentage of protected areas in Iraq
44. Main biological types
45. Percentage of threatened species
46. Number of invasive species

Economic Development

47. GDP per capita
48. Investment share of GDP
49. Net savings rate of GDP
50. Inflation
51. Unemployment rate
52. Employment status/economic activity average
53. Number of internet users per 100 inhabitants
54. Fixed telephone lines per 100 inhabitants
55. Number of mobile telephone subscribers per 100 inhabitants
56. Personal computer per 100 inhabitants
57. Tourism as a share of (GDP)

Global Partnership

58. The deficit as a percentage of (GDP)
59. Percentage of imports and exports to GNP
60. Percentage of official assistance from GNP
61. Net FDI as percentage of GNP
62. Remittances as percentage of GNP

Production and Consumption Patterns

63. Total annual expenditure of material per capita by commodities groups
64. Share of annual consumption (commercial) of energy by sector
65. Share of consumption of renewable energy resources
66. Waste generation by sector
67. Hazardous waste generation
68. Waste treatment and disposal by method of treatment (recycling, incineration, landfill)
69. Cars as percentage of the total number of transport vehicles

Annex V

NATIONAL AGENDA INDICATORS
JORDAN (2006)*

Main socio-economic targets

1. Average annual real GDP growth
2. Public debt as a percentage of GDP
3. Budget (deficit)/surplus as a percentage of GDP, excluding grants
4. Capital investments as a percentage of GDP
5. National savings as a percentage of GDP
6. Net exports/imports in $ billion
7. Unemployment as a percentage of active population

Performance of the institutional framework for investments

8. Cumulative value of investment deals directed through the JAED (Jordan Agency for Enterprise and Investment Development) framework
9. Inward FDI stock as a percentage of GDP
10. Number of procedures to set up a new company through Jordan Islamic Bank (JIB)
11. New company set-up time through JIB (days)
12. Percentage of SMEs contribution to GDP
13. Percentage of SMEs contribution to employment
14. Annual spend on financial and other support to SMEs
15. Proportion of surveyed small businesses citing regulation as an obstacle to growth
16. Total annual spend on R&D as a percentage of GDP
17. Number of surveyed small businesses reporting "high" or "very high" difficulties in obtaining financing for start-up and growth
18. Cumulative value of privately run venture capital funds

Financial services

19. Currency in circulation as percentage of GDP
20. Total banking sector deposits and bonds with maturity greater than one year (as percentage of total)
21. Average maturity of government bonds (in years)
22. Private Pension premiums/Life assurance premiums (as percentage of total)

Fiscal performance

23. GDP (real growth)
24. Public debt as a percentage of GDP
25. Budget (deficit)/surplus as a percentage of GDP, excluding grants
26. Domestic revenues as a percentage of current expenditures
27. Tax revenues as a percentage of total government revenues
28. Civil service pension costs (in millions of Jordanian dinars)
29. Oil subsidies (in JD million)
30. Subsidies on wheat, malt and bran (in JD million)

* The National Agenda is Jordan's sustainable development programme.

31. Subsidies to state-owned enterprises (in JD million)

Government efficiency

32. Control of corruption percentile ranking
33. Central government wage bill as a percentage of GDP
34. Government effectiveness percentile ranking

Employment Support and Vocational Training

35. Percentage of unemployed that are registered at the employment support network
36. Number of Jordanians directly placed into jobs by the employment support network annually (in thousands)
37. Cumulative number of net new jobs (in thousands, starting from 2006)
38. Number of Jordanians placed abroad by the outplacement department annually
39. Percentage of unemployed benefiting from the unemployment insurance, out of total unemployed
40. Percentage of unemployed benefiting from unemployment insurance for less than three months
41. Percentage of employers "satisfied" or "very satisfied" with the skills of certified trainees
42. Number of jobs held by foreigners and substituted with Jordanian workers annually (in thousands)
43. Percentage of employed Jordanians with disabilities out of total employed
44. Number of workers registered with the employment support network and not registered with social security for the past 12 months (in thousands)
45. Percentage of economically active females out of the total female population of working age
46. Percentage of employed females out of the total employed population

Public Health Care

47. Percentage of population covered by any type of medical insurance
48. Life expectancy
49. Public health expenditure as a percentage of GDP
50. Total health expenditure per capita in $
51. Fertility rate

Poverty

52. Poverty rate
53. Poverty gap
54. Percentage of poor people attaining secondary education
55. Percentage of poor population with access to micro-finance services

Social security

56. Percentage of workers not covered by any retirement plan
57. Year of cash deficit for social security (with investment income)
58. Early retirement age

Education

59. Gross enrolment ratio in pre-school education
60. Gross enrolment ratio in primary education

61. Gross enrolment ratio in secondary education
62. Employment rate of secondary vocational education graduates
63. National student scores in (Trends in International Mathematics and Science Study (TIMSS) (mathematics)
64. National student scores in TIMSS (science)
65. Percentage of schools with intranet access
66. Internal efficiency index
67. Tertiary education gross enrolment ratio
68. Percentage of university graduates employed within 12 months of graduation
69. Percentage of students admitted under the parallel teaching scheme
70. Percentage of universities where faculty trained by FDCS exceeds 60 per cent for the year
71. Percentage of community college graduates employed within 12 months of graduation in their area of specialization

Scientific research and innovation

72. Expenditure on research and development (R&D) as a percentage of GDP
73. Number of internationally published science papers, as indexed by Thomson Reuters Web of Science (formerly Thomson ISI)
74. Number of patent applications submitted by Jordanians since the year 2000
75. Number of manuscripts deposited at the National Library since 1994

Water

76. Percentage of households with access to the water supply network
77. Percentage of households connected to the sewage network
78. Non-revenue water for domestic use
79. Water supplies per capita
80. Average cost recovery (O&M in the short term, O&M and part of capital expenditure in the long term)
81. O&M cost recovery for irrigation water in the Jordan valley

Energy

82. Gas use as a percentage of total energy consumption
83. Renewable energy sources as a percentage of total energy
84. Percentage of households using solar energy for water heating
85. Energy consumption per GDP (Ktoe[**] per $1,000 in 1995 $)
86. Percentage of new buildings that meet energy conservation standards
87. Percentage of electricity distribution loss

Transport

88. Number of premium taxi licenses
89. Average age of public transport buses (years)
90. Percentage of citizens “satisfied” or “very satisfied” with public transport bus services
91. Freight cost per ton per km for a 40-inch container ($)
92. Percentage of licensed trucks owned by registered transport companies
93. Percentage of citizens “satisfied” or “very satisfied” with road infrastructure

[**] One thousand tons of oil equivalent.

94. Number of passengers per day on light rail Amman-Zarqa
95. Percentage of regional maritime trade through Aqaba
96. Number of tourists arriving by air (million tourists per year)

Information and communication technologies

97. Fixed line – teledensity (number of lines/100 households)
98. Mobile sector – penetration
99. Mobile sector – minute rate for local calls
100. PC penetration
101. Internet penetration
102. Access bandwidth
103. Mail delivery on the next day

Environment

104. Percentage of hazardous waste being effectively treated to remove its hazardous characteristics
105. Percentage of medical waste treated
106. Percentage of houses connected to the sewage network and septic tanks
107. Wastewater treatment plants utilization rate
108. Particulate matter concentration in downtown Amman (in micrograms per cubic meter)
109. Air quality index (ESI)
110. Biodiversity indicator (ESI)
111. Number of nature reserves
112. Dead Sea level

Annex VI

SUSTAINABLE DEVELOPMENT INDICATORS
MOROCCO (2013)

Driving forces

1. Population growth
2. Total fertility rate
3. Number of working women for every 100 working men
4. Share of population living below the poverty line
5. Employment rate
6. Literacy rate
7. Share of children attending school
8. Population density in coastal provinces
9. Annual energy consumption per capita
10. Annual energy consumption by type of fuel
11. Share of renewable energy in total energy consumption
12. Use of fertilizers and pesticides
13. Share of irrigated agricultural land
14. Share of pasture fodder in animal feed
15. Extent of protected areas
16. Number and average power of fishing boats
17. Structure, volume and growth in transportation by mode
18. Number of tourist nights per 100 inhabitants
19. Number of tourist beds per 100 inhabitants
20. Number of international tourists per 100 inhabitants
21. GDP by sector
22. GDP per capita
23. Foreign direct investment (FDI)
24. External debt as percentage of GDP
25. Loss of agricultural land due to urbanization
26. Share of slum dwelling families
27. Urbanization rate

Pressures

28. Industrial waste water emissions
29. Greenhouse gas emissions
30. Emission of sulfur dioxide and nitrogen oxide
31. Consumption of ozone depleting substances
32. Rate of siltation of dams
33. Land area affected by erosion, salinity and desertification
34. Total area of forest lost or degraded annually

State

35. Share of water resources consumed
36. Share of urban households connected to the sewerage network and share of wastewater treated
37. Quality of coastal swimming waters
38. Freshwater quality
39. Frequency of exceeding of ozone, SO2, NO2, particulate (PM10) and lead standards
40. Solid waste production and collection rates

41. Share of endangered species
42. Land use change
43. Areas subject to flooding
44. Oil tanker traffic
45. Value and volume of fish products
46. Coastal erosion
47. Forestation rate
48. Area of green space per capita in cities with more than 100,000 inhabitants

Impacts

49. Life expectancy at birth
50. Infant mortality per 1000 live births
51. Access to drinking water
52. Maternal deaths per 100,000 births
53. Rates of mortality due to water-borne and infectious diseases

Responses

54. Number of support programs for rural areas
55. Share deforested areas reforested
56. Extent of coastal protected areas
57. Number of mines rehabilitated at end of life
58. Number and area of commercial shopping centres
59. Number of civil society associations active in the field of environment and sustainable development
60. Public expenditure on environmental protection as a percentage of GDP
61. Existence of national environmental plans and/or strategies for sustainable development
62. Number of Local Agenda 21 plans
63. Share of public and private sector budgets devoted to professional training
64. Public expenditure on education
65. Public expenditure on the preservation and enhancement of historic and cultural heritage

Annex VII

SUSTAINABLE DEVELOPMENT INDICATORS
SAUDI ARABIA (2011)

Poverty

1. Proportion of the population whose daily income is less than $1 a day (national poverty line)
2. Proportion of population using sanitation facilities in urban and rural areas
3. Proportion of population with access to safe drinking water
4. Proportion of the population without access to electricity and other modern energy services
5. Proportion of the population living in slums

Governance

6. Number of violent crimes and murders per 100,000 inhabitants

Health

7. Death rate of children under 5 years old
8. Life expectancy at birth
9. Proportion of population with access to health services in primary health care facilities
10. Proportion of population immunized against infectious diseases in childhood
11. Health care services
12. Incidence of AIDS, tuberculosis and malaria per 100,000 people
13. Nutritional status of children
14. Prevalence of smoking
15. Number of cases of suicide or self-harm leading to death per 100,000 inhabitants

Education

16. The proportion of students who enrolled in the study at the elementary level
17. Student enrolment in high school
18. Percentage of adults aged 25-64 who have completed high school
19. Percentage of adults aged 25-64 who have receiving education or training
20. Rate of literacy among persons over age of 15 years

Demographics

21. Annual growth rate of the population
22. The proportion of urban living in urban areas
23. Fertility rate
24. Dependency ratio (youth and elderly)

Atmosphere

25. Concentration of ambient air pollutants in urban areas
26. Consumption of ozone depleting substances

Agriculture

27. Land use/land cover
28. Use of fertilizers
29. Use of pesticides

Coastal and Marine

30. Annual fishing/hunting annual key species of fish
31. Discharge of nitrogen and phosphorus to coastal waters.

Water

32. The proportion of consumption of groundwater and surface water
33. Annual use or withdrawal of water
34. BOD
35. Share of wastewater treated
36. Access to potable water

Biodiversity

37. Protected areas as a percentage of the total area

Economic development

38. Average per capita GDP ($)
39. Investment as a share of GDP
40. Net savings
41. Inflation
42. Unemployment rate
43. Number of Internet subscriptions per 100 inhabitants
44. Fixed telephone lines per 100 inhabitants
45. Telephone lines and mobile computers per 100 inhabitants
46. The contribution of tourism to GDP and employment

Global Partnership

47. Deficit or surplus of the balance of payments as a percentage of GDP
48. Proportion of imports from developed countries
49. The proportion of official aid of GNP workers' remittances as a percentage of GNP

Annex VIII

SUSTAINABLE DEVELOPMENT INDICATORS
TUNISIA (2014)

Sustainable consumption and production

1. Quantity of pesticides imported annually and used per hectare
2. Rate of exploitation of fossil groundwater
3. Value added per cubic meter allocated in irrigated agriculture
4. Rate of collection of waste plastics, oil and batteries
5. Area of land farmed organically
6. Intensity of energy use by sector
7. Share of tourism revenues from ecotourism or share of beds/nights certified as "green"

Promotion of economic growth, social equity and regional equity

8. Gini index of income inequality
9. Ratio of annual average expenditure per household for high-income to low-income households by region
10. Poverty rate
11. Unemployment rate
12. Foreign debt as a share of GDP
13. Net exports as a share of GDP
14. Public investment as a share of GDP by region and governorates

Sustainable natural resource management

15. Loss of productive land to erosion and desertification
16. Rate of exploitation of fossil groundwater
17. Share of non-conventional water sources in total use
18. Vegetated areas as a share of total land area
19. Extent of wetlands
20. Extent of protected areas
21. Rate of use of fishery resources

Promotion of balanced spatial development based on efficient and sustainable transport

22. Share of public transit in total urban transit
23. Modal split of inland passenger and freight transport
24. Transportation share of total energy consumption
25. New business creation by governorate
26. Net migration flows
27. Proportion of non-communal rural roads relative to the total length of the road network

Promotion of better quality of life for citizens

28. Number of basic health centres per capita
29. Share of population connected to drinking water network
30. Share of households with adequate sanitation
31. Number of air quality monitoring stations in urban areas

32. Number and area of urban green spaces per inhabitant
33. Share of basic housing by governorate

Rationalization of energy consumption and promotion of renewable energy

34. Energy intensity
35. Share of renewable energy in total energy consumption and in electricity generation
36. Greenhouse gas emissions
37. Number of households equipped with solar panels

Strengthening capacity to adapt to climate change

38. Proportion of irrigated farmland equipped with water-saving technology
39. Proportion of irrigated land
40. Coastal areas vulnerable to flooding due to sea-level rise
41. Share of land vulnerable to desertification
42. Share of vulnerable land protected by conservation measures
43. Number and area of forest fires

Promotion of the knowledge society

44. Educational attainment rates
45. Number of internet users
46. Investment as a share of GDP
47. Research and development

Governance for sustainable development

48. Share of communes with a regional or local Agenda 21
49. Proportion of ISO 14001 certified companies
50. NGOs working in the field of sustainable development
51. Number of schools in the “network of sustainable schools” programme

Annex IX

ARAB STRATEGIC FRAMEWORK FOR SUSTAINABLE DEVELOPMENT 2015 PROPOSED INDICATOR SET

Peace and Security, Justice and Participation

1. Number of people displaced and refugees due to wars, social unrest, and other aggression
2. Percentage of women in parliament
3. Percentage of women in the labour force

Global Stability

4. GDP per capita
5. Rate of inflation
6. Debt to GNP ratio
7. Fluctuation of global food prices

Governance for Sustainable Development

8. The existence of a sustainable development institutional setup

The Water-Energy-Food Nexus as a Framework for Planning and Monitoring

9. The amount of water needed per unit of energy
10. The amount of energy needed per unit of water
11. Energy and water needs per unit of major crops

Water

12. Annual withdrawal of ground and surface water as a percentage of available water
13. Per capita water consumption
14. BOD in water bodies

Energy

15. Per capita energy consumption
16. Energy intensity

Agriculture and Food Security

17. Arable land as a percentage of land total
18. Food imports as a percentage of total food consumption

Climate Change

19. Per capita CO2 emissions
20. Carbon intensity
21. Percentage of population vulnerable to climate change

Green Economy

22. Green economy strategy
23. Green economy policies
24. Green economy initiatives

Poverty Alleviation, Employment and Inequalities

25. Percentage of population below the national poverty line
26. Percentage of population below the international poverty line
27. Rate of unemployment

Population and Health

28. Population growth rate (rural and urban)
29. Under-5 mortality rate
30. Life expectancy at birth
31. Percentage of population with access to primary healthcare facilities

Education, Illiteracy Eradication and Public Awareness

32. Net enrolment rate in primary education (NC)
33. Adult secondary (and tertiary) schooling attainment level, by sex
34. Adult literacy rate, by sex

Scientific Research & Technology Development and Transfer

35. Expenditure on R&D per GDP
36. Number of patents per capita
37. Number of published scientific papers per capita
38. Drought and desertification
39. Land affected by desertification/degradation
40. Vegetation cover

Urban Planning and Sustainable Cities

41. Percentage of population living in slum areas
42. Access to safe drinking water
43. Energy intensity of transport
44. Proportion of population with access to improved sanitation (urban and rural)
45. Share of households without access to electricity or commercial energy
46. Ambient concentration of air pollutants in urban areas

Management of Wastes and Chemicals

47. Per capita generation of solid wastes
48. Per capita generation of hazardous waste
49. Waste treatment and disposal, by method of treatment (recycled, incinerated, landfill)

Sustainable Consumption and Production

50. The same indicators of:
51. Energy
52. Water
53. Solid wastes
54. Poverty
55. Education
56. Tourism

Disaster Risk Management (DRM)

57. Existence of institutional and legislative framework for DRM
58. Disaster preparedness plans and contingency plans are in place
59. Budget for disaster risk reduction
60. Development of a post-2015 disaster risk reduction framework (HFA2)
61. Annual numbers of recorded disasters

Biodiversity and Bio-safety

62. Protected areas as a percentage of total area
63. Percentage of threatened species
64. Number of alien (invasive) species
65. Existence of bio-safety laws/regulations

Coastal Zones and the Marine Environment

66. Percent of total population living in coastal areas
67. Annual fish catch
68. Release of nitrogen and phosphorus into coastal waters

Information and Communication Technologies

69. Internet users per 100 inhabitants
70. Fixed telephone lines and cellular subscribers per 100 inhabitants (NC)
71. Personal computers per 100 inhabitants

Sustainable Tourism and Sustainable Management of Mountains and Forests

72. Tourism contribution to GDP
73. Tourism contribution to employment
74. Forests coverage areas

Finance

75. Total Official Development Assistance (ODA) given or received as a percentage of GNI
76. Net FDI inflows and outflows as percentage of GNI
77. Remittances as percentage of GNP (inflows and outflows)

Trade and Investment

78. Current account deficit as a percentage of GDP
79. Share of imports and exports by sector from total GDP

Capacity Building

80. Number of capacity-building projects on different priority issues of this framework

Regional Cooperation

81. Number of Arab-Arab cooperation projects
82. Progress on Arab regional integration projects, e.g. regional electricity interconnection
83. Progress on implementation of Arab free trade area.
84. Arab cooperation on management of shared water resources

Annex X

STATISTICS CANADA'S QUALITY MANAGEMENT FRAMEWORK

Relevance: The relevance of statistical information reflects the degree to which it meets the real needs of clients. It is concerned with whether the available information sheds light on the issues of most importance to users. Assessing relevance is a subjective matter dependent upon the varying needs of users. The agency's challenge is to weigh and balance the conflicting needs of current and potential users to produce a programme that goes as far as possible in satisfying the most important needs within given resource constraints.

Accuracy: The accuracy of statistical information is the degree to which the information correctly describes the phenomena it was designed to measure. It is usually characterized in terms of error in statistical estimates and is traditionally decomposed into bias (systematic error) and variance (random error) components. It may also be described in terms of the major sources of error that potentially cause inaccuracy (e.g., coverage, sampling, non-response, response).

Timeliness: The timeliness of statistical information refers to the delay between the reference point (or the end of the reference period) to which the information pertains, and the date on which the information becomes available. It is typically involved in a trade-off against accuracy. The timeliness of information will influence its relevance.

Accessibility: The accessibility of statistical information refers to the ease with which it can be obtained from the agency. This includes the ease with which the existence of information can be ascertained, as well as the suitability of the form or medium through which the information can be accessed. The cost of the information may also be an aspect of accessibility for some users.

Interpretability: The interpretability of statistical information reflects the availability of the supplementary information and metadata necessary to interpret and utilize it appropriately. This information normally covers the underlying concepts, variables and classifications used, the methodology of data collection and processing, and indications of the accuracy of the statistical information.

Coherence: The coherence of statistical information reflects the degree to which it can be successfully brought together with other statistical information within a broad analytic framework and over time. The use of standard concepts, classifications and target populations promotes coherence, as does the use of common methodology across surveys. Coherence does not necessarily imply full numerical consistency.

Annex XI

UN FUNDAMENTAL PRINCIPLES OF OFFICIAL STATISTICS

Principle 1. Official statistics provide an indispensable element in the information system of a democratic society, serving the Government, the economy and the public with data about the economic, demographic, social and environmental situation. To this end, official statistics that meet the test of practical utility are to be compiled and made available on an impartial basis by official statistical agencies to honour citizens' entitlement to public information.

Principle 2. To retain trust in official statistics, the statistical agencies need to decide according to strictly professional considerations, including scientific principles and professional ethics, on the methods and procedures for the collection, processing, storage and presentation of statistical data.

Principle 3. To facilitate a correct interpretation of the data, the statistical agencies are to present information according to scientific standards on the sources, methods and procedures of the statistics.

Principle 4. The statistical agencies are entitled to comment on erroneous interpretation and misuse of statistics.

Principle 5. Data for statistical purposes may be drawn from all types of sources, be they statistical surveys or administrative records. Statistical agencies are to choose the source with regard to quality, timeliness, costs and the burden on respondents.

Principle 6. Individual data collected by statistical agencies for statistical compilation, whether they refer to natural or legal persons, are to be strictly confidential and used exclusively for statistical purposes.

Principle 7. The laws, regulations and measures under which the statistical systems operate are to be made public.

Principle 8. Coordination among statistical agencies within countries is essential to achieve consistency and efficiency in the statistical system.

Principle 9. The use by statistical agencies in each country of international concepts, classifications and methods promotes the consistency and efficiency of statistical systems at all official levels.

Principle 10. Bilateral and multilateral cooperation in statistics contributes to the improvement of systems of official statistics in all countries.

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