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**EFFECTIVE USE OF STATISTICS IN EVIDENCE-BASED POLICYMAKING
CONCEPTUAL FRAMEWORK**



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The Economic and Social Commission for Western Asia (ESCWA) is pleased to set out the conceptual framework for enhancing the effective use of statistics in evidence-based policymaking. The framework was prepared under the project for strengthening statistical capacity and cooperation between institutions in the field of statistics, funded by the United Nations Development Account, to review the Millennium Development Goals and stimulate regional cooperation and knowledge-sharing.

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Introduction

Policymakers and decision-makers are well aware that the effective use of statistical data is vital to good decision-making, contributing to comprehensive and sustainable development objectives. The Millennium Development Goals, comprising eight goals, 21 targets and 60 indicators developed to assist in Goal achievement by 2015, are an indication of increasing international interest in the use of statistics in various development areas.

Although many efforts have been made to build statistical capacities in member States of the Economic and Social Commission for Western Asia (ESCWA), the use of statistics in policymaking requires further development, with special focus on tackling shortfalls in statistical processes and their role in public policy formulation and monitoring, and finding quick solutions to related problems. It is therefore beneficial to review and strengthen solutions developed by various countries to realize achievements in the field of statistics, as done by several developed countries. National statistical mechanisms in the ESCWA region (tasked with data collection, analysis, publication and distribution to decision-makers for the preparation of national development strategies) are an intrinsic part of the institutional framework of ESCWA countries, responsible for meeting statistical data needs for national development.

The United Nations Statistics Division, in collaboration with the regional commissions, analyses the Millennium Development Goal Indicators using approaches developed in cooperation with the Inter-Agency and Expert Group on Millennium Development Goals Indicators, and by preparing an annual assessment of the global and regional progress made towards achieving the Goals. Information from countries indicates the levels and direction of such progress and the Millennium Development Goals Progress Chart compares a country's progress to that of its region. The United Nations assessment conducted in 2011 showed that a large number of countries would not achieve the Goals by 2015.

Data indicate disparities between national and international data, which could be attributed to timing, the approach adopted in preparing data or to the use of estimations in the absence of national data. It is therefore necessary to strengthen coordination between countries and international agencies and provide broad metadata on indicators, so as to reduce disparities between data and explain their sources.

The present study is the first of its kind at the regional level. It sets out the conceptual framework for developing the effective use of statistics in evidence-based policymaking at all levels, and monitoring and evaluating their implementation, so as to establish guiding principles to assist experts in determining, preparing and documenting good practices in this field to build an information knowledgebase on successful practices in the Arab region.

The conceptual framework was developed under the project for strengthening statistical capacity and cooperation between institutions to monitor the implementation of the Millennium Development Goals through regional cooperation and knowledge-sharing, funded by the Development Account and implemented by the ESCWA Statistics Division, in collaboration with the other regional commissions. The project aims to achieve the following: provide new comparable data on achieving the Goals at the national, regional and international levels; strengthen statistical capacities and statistical coordination efforts to stimulate the development of Millennium Indicators; and reduce inconsistencies between national, regional and international sources regarding the Millennium Indicators.

Examining countries' achievements in this field has several benefits, including establishing national statistical mechanisms and clarifying ways to realize and benefit from them. Propagating such experiences and expertise assists individuals and statistical mechanisms to strengthen statistical capabilities and provide comprehensive data, so as to include reliable statistics on development planning in national databases. However, the adoption of successful statistical policies requires the use of statistical evidence at all stages and the undertaking of research to equip decision-makers with the necessary skills to identify effective and beneficial evidence when offering guidance to Governments.

The framework defines evidence-based policymaking and its main components; identifies the conditions for its success; and highlights the importance of understanding policymaking and the data needed by policymakers, to allow statistical mechanisms to determine data collection, analysis and publication priorities. The framework also sets out the relationship between statistics and policies on the one hand, and the requirements for statistical capacity-building in accordance with international standards, on the other hand, so as to ensure that statistical outputs are effectively used in development policymaking. Moreover, the framework explains the use of statistical indicators at every stage of policy formulation, monitoring and evaluation, and ways to develop and implement monitoring and evaluation mechanisms aimed at measuring results and impact. The framework also identifies standards for selecting successful practices and guiding principles to produce literature containing good practices for the efficient use of statistics in policymaking.

It should be noted that the ESCWA Statistical Committee, at its tenth session held in Cairo, on 30 and 31 January 2013, adopted the framework as a conceptual document and agreed to develop it periodically. It also requested the secretariat to organize a series of activities aimed at building the statistical capacities of ESCWA member States in using statistics in policymaking, and monitoring and evaluating their developmental effects.

I. CONCEPTUAL FRAMEWORK

A. OBJECTIVE

The conceptual framework to enhance the effective use of statistics in policymaking aims to highlight the importance of the following: statistics' role in policymaking, analysis and performance monitoring and evaluation; strengthening statistical capacity to develop necessary indicators for monitoring the Millennium Development Goals and national development goals; developing an accessible and easy-to-use knowledgebase to document successful national practices in the use of statistics that allows users to explore, learn and exchange information; and taking good decisions using statistics gathered, analysed and published in accordance with the United Nations Fundamental Principles of Official Statistics¹ and international data quality standards.

B. BENEFITS OF DOCUMENTATION

The following points outline the benefits of sharing success stories and adopting them as approaches for national capacity-building:

(a) Enabling statistical mechanisms to gather and file national achievements to enhance their ownership and encourage their monitoring, overcome comparable challenges with more confidence and build trust in national statistical capabilities and their advancement. To achieve this and to tackle unfamiliar statistical challenges, it is necessary to identify and carefully analyse the factors that contributed to realizing those successes. This does not mean applying the same solution to different statistical problems but rather learning the approaches used to arrive at those solutions, although statistical mechanisms in the Arab region generally face similar problems;

(b) Gathering successful experiences and expertise to analyse problems and find solutions leads to the establishment of a knowledgebase that includes fundamental information on experiences in the effective use of statistics in policymaking. Libraries contain various documents and reports on the importance of statistics in analysing policies and monitoring progress in their implementation, but they do not set out the necessary procedures for the effective use of statistics in formulating and analysing development policies;

(c) Successful experiences are founded on statistics collected, analysed and published in accordance with the United Nations Fundamental Principles of Official Statistics and international data quality standards, meaning that they are comprehensive and accessible to users and national statistical systems responsible for publishing data transparently and adopting international standards, such as the General Data Dissemination System and the Special Data Dissemination Standard used by the International Monetary Fund, containing metadata on practices used to produce, publish and improve data. The success of these experiences also depended on the establishment of interactive databases, geographic information systems and global geospatial information management.² Disseminating data through modern means is important as it directly contributes to the effective use of statistical data in evidence-based policymaking and formulating successful strategies. Moreover, providing disaggregated data by age, gender and geographical location, among other socioeconomic categorizations, contributes to the development of effective plans to allocate resources to target groups.

¹ The Fundamental Principles of Official Statistics were issued by the United Nations Statistical Commission in 1994. The Commission requested member States to disseminate statistical data transparently and increase user access to them for their use in decision-making and research.

² It is possible to benefit from the successful experiences of developed countries, including those of the Australian Bureau of Statistics that excelled in using modern technology to disseminate data, especially to publish the results of the 2005 census (see www.abs.gov.au).

C. IMPORTANCE OF STATISTICAL DATA

Available information indicates that statistical mechanisms are in possession of large amounts of unpublished national statistical data, which have not yet been gathered from files or are not accessible to users, because their importance has been underestimated or because of a lack of publishing capacity. This highlights the importance of building statistical capacities to develop necessary indicators and highlight the importance of research and analysis, which depend on cooperation between national statistical mechanisms, universities and research centres. Weak cooperation among these entities means that national statistical mechanisms do not benefit from user opinions and comments that could assist in improving statistical data quality, identifying priority issues for researchers and academics and providing a solid foundation for decision-makers to develop evidence-based solutions and policies that can be monitored and evaluated. However, statistics alone cannot guarantee the effective implementation or effects of policies, as this requires the adoption of institutional procedures, such as enhancing accountability, using policy reviewers and encouraging stakeholder participation, which are not covered by the framework.

II. BENEFITS OF EVIDENCE-BASED POLICIES

A. DEFINING EVIDENCE-BASED POLICIES

Evidence-based policies assist stakeholders in making effective decisions regarding public policy, programmes and projects, by offering the best available evidence to policymaking and implementation.³ They shed light on the working mechanism of policies rather than their direct effects on final objectives. The implementation of these policies entails methodological and scientific work.

Effective evidence-based policies require the use of evidence during all stages of policymaking, statistical data collection and research, so as to equip decision-makers with the necessary skills to identify effective and beneficial evidence. In the absence of such evidence, policy stakeholders cannot give good guidance to Governments. For evidence to be effective, it must reflect reality and be accurate, objective, timely, available, relevant to policies, accessible and easy to use.

B. BENEFITS OF EVIDENCE USE

The use of strong evidence plays the following five roles in policymaking:

(a) *Shedding light on policy-related issues*: which takes place when statistical data and evidence are used to highlight latent or recent socioeconomic issues. This allows the public sector, civil society organizations, development agencies and the media to tackle those issues and demand solutions through new policies and programmes;

(b) *Policy formulation and selection*: following the identification and analysis of an issue, its nature and dimensions are determined, and its effects are understood. It is vital to relate this approach to statistical applications to facilitate the selection of recommendations covered by a policy;

(c) *Predicting policy future effects*: evidence helps predict the future effects of policies if they continue to be implemented. This outlook, provided by statistical models, increases the possibility of achieving policy goals on schedule. This applies to the envisaged effects of achieving the Millennium Development Goals;

(d) *Monitoring policy implementation*: statistical data can assist in monitoring the progress of policy programmes and projects by developing integrated monitoring systems on the basis of various indicators that measure progress towards desired goals. Reports on those monitoring systems should be periodically prepared for review by decision-makers and should contain work mechanisms that cover inputs, outputs and results;

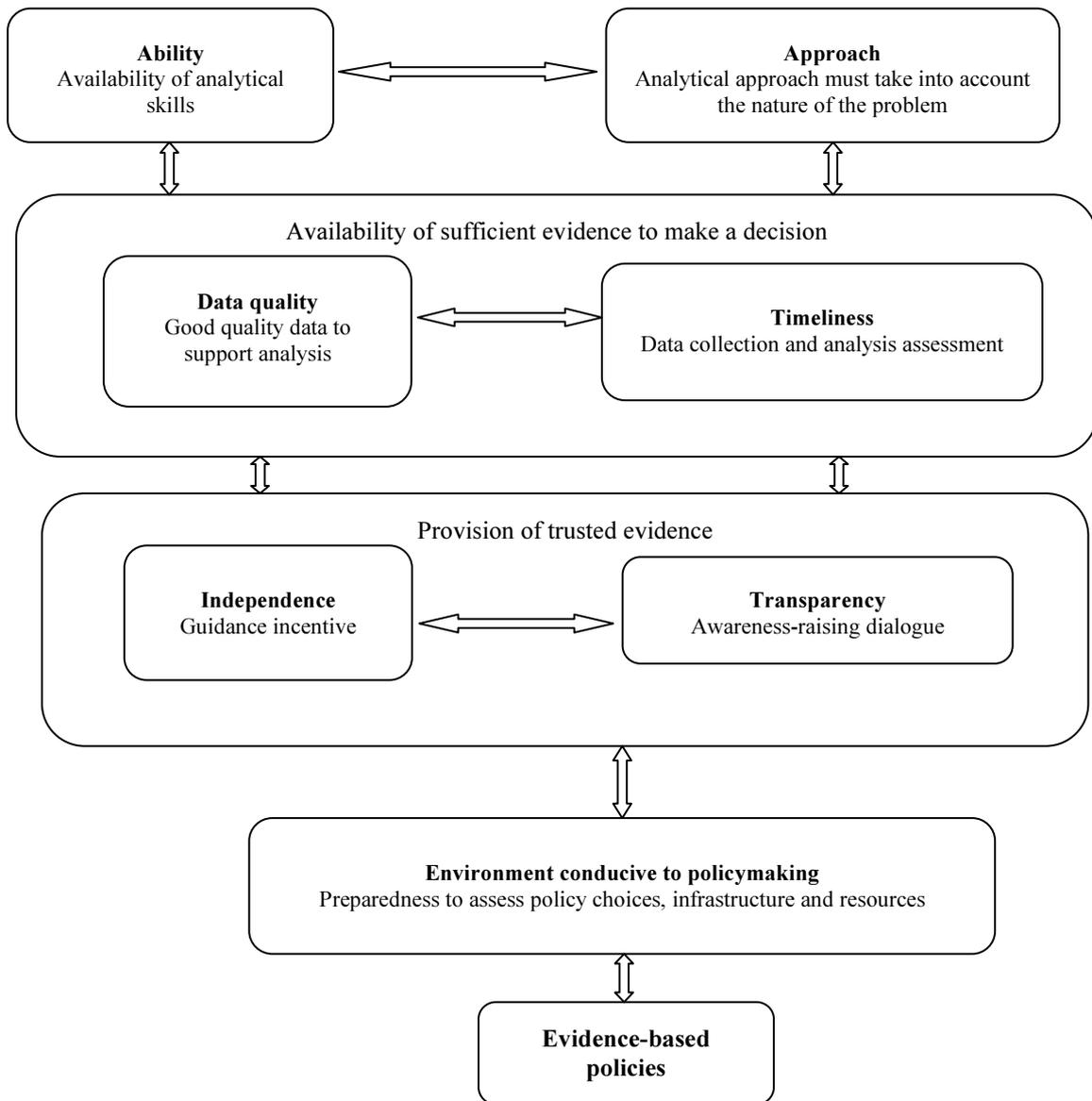
(e) *Evaluating policy results*: Standard means should be selected from the start of the process to evaluate expected policy results.

C. POLICIES AND EVIDENCE

Effective evidence-based policies require the use of evidence during all stages of policymaking, including data collection and research investment. Policymakers should be equipped with skills to differentiate between accurate and inaccurate evidence. The following seven conditions must be met for evidence-based policies to succeed: adopting the correct analytical approach, given that not identifying the nature of a problem leads to policy failure; availability of accurate and consistent data; data objectivity, regardless of founding hypotheses; timely availability of data; availability of qualified human resources; independent evaluation of technical research; and ability to integrate data in policymaking.

³ Sutcliffe and Court, 2005.

Figure I. Evidence components



Source: Banks, 2009.

III. PRIORITY ISSUES FOR THE EFFECTIVE USE OF STATISTICS

To identify priority issues regarding the effective use of statistics, it is necessary to determine institutional capacity-building components; policymaking processes; policy governance; policy consistency and integration; statistical processes; and policies.

A. BUILDING INSTITUTIONAL STATISTICAL CAPACITIES

The principal objective of highlighting successful practices is to effectively use statistical data in evidence-based policymaking. It is thus important to know the statistical capacities of national statistical mechanisms, which are the official source of statistical data, in accordance with domestic law. The main responsibility of those mechanisms therefore is collecting and publishing statistical data related to economic, social and environmental aspects; making them available to national and international users; and facilitating access to them, with the support of metadata. The statistical capacities of national mechanisms and statistical systems as a whole can be ascertained by assessing the viability of the following nine components: national strategies to develop statistics and related implementation plans; the administrative and legal environments of national statistical systems, especially in terms of professional independence and transparency in data publishing and use; dialogue between data producers and users to meet demand for data under a sustainable institutional framework; statistical infrastructure related to administrative records, such as population and employment records, databases, geographic information systems and data collection approaches to gather data from individuals, businesses, the public sector and non-governmental organizations, among others; knowledge of the approaches, methods and classifications used in statistical data collection and publishing; national data quality assurance frameworks and standards for statistical data and metadata exchange at the national and international levels;⁴ sufficient human resources to complete statistical tasks; training programmes to continuously raise staff capacities; and up-to-date and accurate data for use in policymaking.

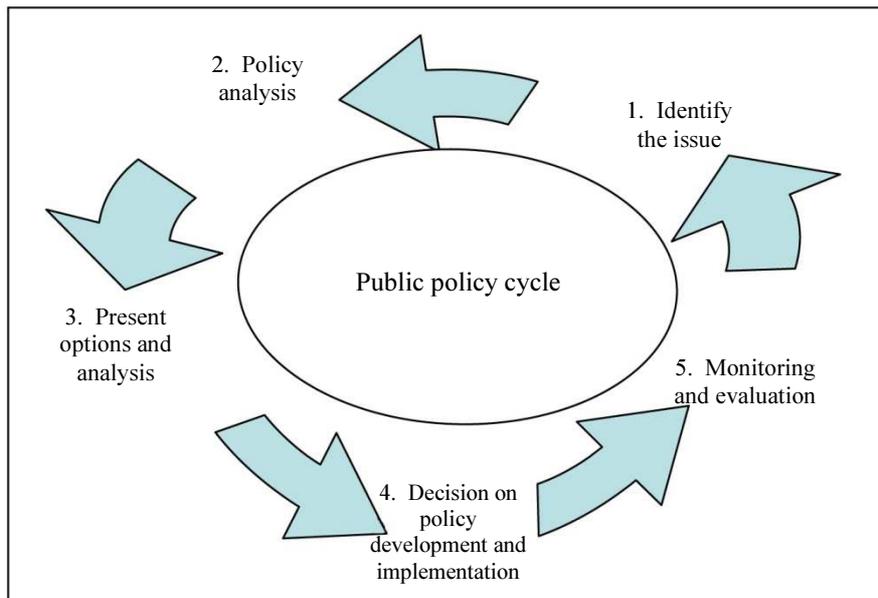
B. POLICYMAKING PROCESS

Determining the components of policymaking and the needs of policymakers and other statistical data users is necessary to identify the priorities of statistical data collection, analysis and dissemination, especially when selecting good practices in terms of statistics use. The most widespread approach to assessing public policy divides the process into several functional elements.⁵ Figure II sets out a conceptual model of the public policy cycle. Public policy processes should not be one-directional, but should include successes and setbacks. Figure II depicts the stages or technical elements of policymaking, which can assist in understanding the process' actual or desired trajectory. An efficient public policy cycle should facilitate the following: status quo evaluation; detailed goal determination; clear policy and strategy formulation; development of effective implementation procedures, strong administration, effective use of resources and accountability; and implementation of a monitoring and evaluation system that is dependable, effective and objective.

⁴ See www.sdmx.org.

⁵ Sutcliffe and Court, 2005.

Figure II. Public policy cycle



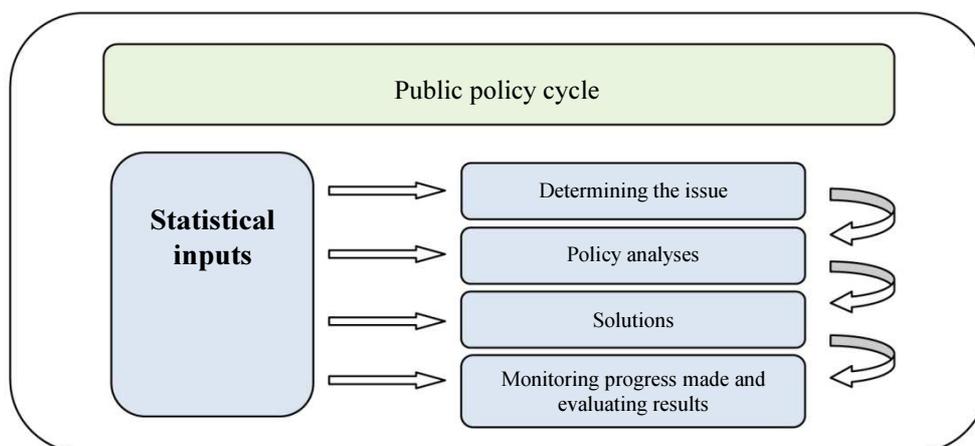
Source: Sutcliffe and Court, 2005.

It is possible to simplify the public policy cycle and its distribution by dividing it into the following stages:

(a) *Identify the issue*: problems and related social, economic and environmental dimensions must be identified. It is then possible to determine problems and challenges that are in need of solutions and identify the objectives of data analyses. It is therefore necessary to know the number of underprivileged families in a certain area; the demographic, social and economic characteristics of those families; the reasons why some families are underprivileged and others are better off in the light of the analyses, and to conceptualize the reasons behind those problems;

(b) *Policy analyses*: the policy analyses stage includes establishing working groups for data collection and policy discussion. Several points should be taken into account at this stage, including a preliminary explanation of the issue under discussion followed by a detailed explanation; and developing a general model followed by a specific model for a policy. Statistical inputs should be determined by analysing the availability of statistics from all sources and gathering information through consultative mechanisms. Figure III sets out statistical inputs in a public policy cycle.

Figure III. Statistical inputs in a public policy cycle



The following approaches can be used to simplify analytical methods:

(a) *Statistical graphics*: give a direct and simplified picture of an issue by distributing data in groups and identifying relationships among those groups. Several types of statistical graphics can be used to represent data, including simplified frequency tables that assist in understanding the nature of issues presented for analyses;

(b) *Statistical measures*: can be used for policy analyses, including percentages, averages and standard deviations;

(c) *Spatial distributions and maps*: can assist in the effective use of data, providing decision-makers with simple methods to facilitate policymaking;

(d) *Presenting and analysing options*: policies are formulated at this stage by developing and analysing options and reviewing their effects on target groups. Special focus should be placed on practical evidence to improve initiative efficiency, conduct analysis, acquire practical skills, undertake research and develop programmes to assess operational projects. Issues under consideration should not be viewed in isolation from other relevant issues. The following questions should be taken into account when preparing conclusions and results: What are the key conclusions and results? Can those conclusions and results be justified statistically? Are those conclusions realistic? What alternative solutions are available? Did the results differ from preliminary expectations?

(e) Monitoring progress and evaluating policy results: the main aim at this stage is to establish an effective system to monitor the implementation of projects and the preparation of reports on the progress achieved by those projects, by developing a group of performance indicators to measure success. The evaluation should cover the effectiveness of policy implementation and the improvement of future policymaking fundamentals.

C. POLICY GOVERNANCE

Policy governance is founded on a comprehensive group of integrated principles that, if consistently applied, could assist in ensuring the accountability of governing councils. Policy governance sets out the fundamental reasons for the existence of governing councils and determines the nature of their authority. The International Policy Governance Association identifies the following 10 fundamental principles that need to be applied to ensure the success of a Government.⁶

1. *Ownership*

Government council responsibility and authority are linked to owners who have moral responsibility for institutions, unless they are legal owners, and who consider that the role of governing councils is to manage the workload and serve their interests and those of the institutions. In terms of model policy governance, “owners” do not represent all stakeholders but rather those who are in a similar situation to shareholders who own ordinary shares. Staff and customers therefore do not count as owners.

2. *Governance situation*

Governing councils form a special link in the authority chain or in moral responsibility. Their role is to give orders not guidance. They exercise power and build the capacities of others, they bear full and direct responsibility for the governance process and its results and are held accountable for any task or responsibility delegated to others.

⁶ See www.policygovernanceassociation.org.

3. Governing council comprehensiveness

Governing councils take decisions implemented by administrations, the councils themselves, their members and their committees, given that they are comprehensive and integrated bodies, which means that their authority is collective rather than a collection of individual authorities.

4. Policy objectives

Governing councils determine in writing the desired results, changes and benefits; target groups and beneficiaries; priorities; and expenses. Achieving those benefits is the main objective of organizations and reflects their success.

5. Specific policies for governing council methods

Councils set out in writing their practices, conduct, added value, systems, performance, relationships with sub-components and executive bodies in organizations in terms of delegation and responsibility. Given that their decisions are not ends in themselves, they are therefore referred to as “methods” to differentiate them from staff purposes and methods. Council conduct, decisions and documents must be consistent. In governance policy terms, documents and texts only containing council decisions are categorized as the governing process and administration delegation. However, councils can label the process as they please as long as the meaning is preserved.

6. Specific policies for executive limitations

Councils decide the methods and procedures of their functional bodies through prevention or prohibition, so as to avoid specifying methods and circumvent more lenient restrictions. In terms of policy governance, documents that only contain such decisions are categorized as executive limitations. However, councils can label the process as they please as long as the meaning is preserved.

7. Policy measurements

Council decision-making processes linked to objectives, governance, administrative delegation and executive limitations begin at the broadest and most comprehensive level. They then move to more specific levels to narrow interpretation so as to reach a clear and unified level. These documents are thorough and are used by councils to refer to institutions’ missions, visions, ideology, values, strategies and budgets. They are labelled as “policies” in the policy governance language but councils can label the process as they please as long as the meaning is preserved.

8. Delegation of authority

If councils choose to delegate authority to high-level executives, their roles and responsibilities are clear given that they are the only link between governance and administration. Councils do not delegate the same authority or responsibility in more than one issue.

9. Good interpretation

Regarding the delegation of decisions not contained in council policies, the person delegated has the right to adopt any rational interpretation of those policies. Concerning objectives and executive limitations, a high-level executive, if one exists, would fulfil that role. In terms of policy governance and administrative delegation, delegates are also primarily responsible for the governance process, unless a council assigns such responsibility to another of its members or committees.

10. Oversight

Councils monitor organizational performance through a methodological and fair evaluation of the interpretation of policy objectives, within the limits of good interpretation of executive limitation policies. It is the responsibility of high-level executives, if they exist, to carry out such evaluations.

Box 1. Fundamental premises of the National Strategy for Poverty Reduction in Iraq

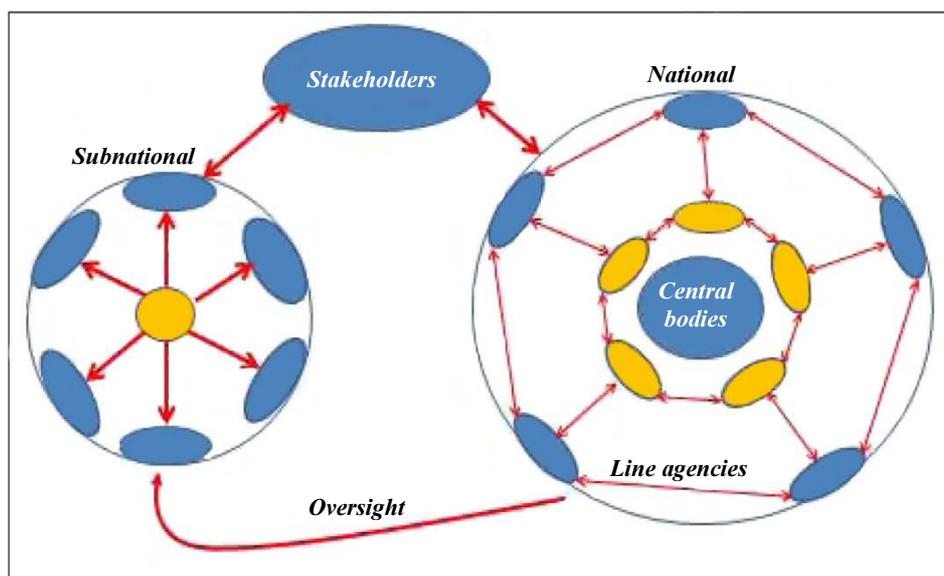
1. Government commitment to all aspects of the Strategy.
2. The Strategy forms the general framework for national efforts to achieve the Millennium Development Goals and to develop short and medium-term policies for national resource allocation and for galvanizing required international support.
3. The Strategy is linked to the Five-Year National Development Plan and annual budgets.
4. It considers poverty to be a multifaceted phenomenon.
5. The Strategy must be formulated in accordance with Iraqi needs, specificities and social and economic characteristics, so as to realize poverty reduction priorities, goals and solutions.
6. The Strategy is an opportunity to discuss and understand economic development and its link to poverty reduction.
7. Parliament should participate in all stages of Strategy preparation.
8. Collaboration with civil society institutions and the private sector is vital.
9. It is necessary to start from a perspective that strikes a balance between immediate assistance to eradicate poverty and reducing the number of poor persons in the long-run.
10. Eliminating the charity mentality and replacing it with the notion of empowering the poor to help themselves.

D. POLICY COHERENCE AND INTEGRATION

Policies must be consistent with the Millennium Development Goals and must not contradict other policies. The Organization for Economic Cooperation and Development (OECD) has compiled a check list of principles that outline policy criteria, on the basis of several countries' successful experiences with long-term sustainable development governance,⁷ notably achieving the maximum degree of internal coherence through policy integration; stakeholder participation to avoid conflicting views and achieve consensus on a single trajectory; and improving the management of scientific knowledge to raise awareness of the importance of sustainable development within and outside Governments. Principles linked to the improvement of policy coherence and integration for sustainable development can be summarized as follows: developing a standardized concept of sustainable development; ensuring commitment and leadership; providing an institutional mechanism for integration; adjusting conditions to manage sustainable development integration; and ensuring the good management of varied knowledge and scientific input. Figure IV shows some of the fundamental elements for the evaluation of institutional practices and sustainable development decision-making.

⁷ OECD, 2002a.

Figure IV. Decision-making for sustainable development: Institutional set-up



Source: OECD, 2002b.

E. ROLE OF STATISTICS IN POLICY DEVELOPMENT

The effective use of statistics depends on several issues related to the statistical process itself, in particular the availability of necessary statistical data; access to data from statistical mechanisms; and the accuracy and quality of such data and their suitability for development issues handled by data users and decision-makers, especially researchers, academics and the media. Statistical mechanisms publish statistical data in various ways, including multivariate statistical tables. Statistical indicators are issued in functional sets as indicators of sustainable human development and for achievement of the Millennium Development Goals. The majority of Arab countries have prepared reports on the progress made in achieving those eight Goals, using such indicators to measure achievements and assess what remains to be completed to realize the Goals by 2015 in compliance with the Millennium Declaration.

Arab countries use such indicators in the form of rates, percentages, averages and absolute values to assess the progress made in reaching the Goals by establishing national databases on the Goals. Several countries have developed applications for interactive databases using the DevInfo software in the monitoring process.

The effective use of statistics in policymaking and evaluation requires the use of statistical analysis methods to ascertain the reasons behind various phenomena, such as rises in illiteracy rates in some parts of a city but not others or an increase in poverty among workers in certain industries. Employing statistical analysis methods assists decision-makers in determining the reasons behind such phenomena; finding appropriate solutions to problems; and resource allocation and distribution. The following are some of the challenges faced by Arab national statistical mechanisms.

1. *Statistical data availability*

Statistical mechanisms in the Arab region face several challenges related to data provision, with ever-increasing user demand. Decision-makers and civil society organizations are increasingly recognizing the importance of statistics. The great cost of data collection hampers their provision and publication in user-friendly ways. The data and indicator publication cycle linked to monitoring development phenomena, such as the Millennium Development Goals, is given special attention by countries. Categorizing data and

indicators by variables, such as gender and geographical distribution, increases their effectiveness and assists policymakers in taking decisions related to woman empowerment and rural development programmes.

2. *Statistical activity classification*

The Classification of International Statistical Activities was prepared in October 2009 to classify official statistics by domain and is being used to establish an international database; as part of the Statistical Data and Metadata Exchange; and in the majority of international statistical initiatives. There is a difference between this Classification and other international standard statistical classifications used in statistical data collection and publication, such as the International Standard Industrial Classification and the 2011 International Standard Classification of Education (ISCED). The main components of statistical activity categorization have been divided into the following five domains: demographic and social statistics; economic statistics; environment and multi-domain statistics; methodology of data collection, processing, dissemination and analysis; and strategic and managerial issues of official statistics at the national and international levels.

3. *Commitment to the Family of International Statistical Classifications*

There are several international statistical classifications used by countries and international organizations to collect, publish and evaluate data. In general, countries adapt those classifications to meet national specificities, while maintaining the possibility of international comparisons. The Expert Group on International Statistical Classifications, which undertakes research on such classifications and monitors their progress, held a meeting from 18 to 20 May 2011 to discuss classification issues, including the Group's mandate and working mechanism, and review progress made in several classifications. It agreed on the phrase "Family of International Statistical Classifications" to define statistical classifications. The quality of gathered, published and used data is influenced by the commitment to using revised statistical classifications to arrive at conclusions that reflect reality. It is necessary to follow developments related to the continuous revision of such classifications. Over the period of two years, the UNESCO Institute for Statistics, in collaboration with its partners, completed the revision of ISCED. ESCWA countries must establish a working group to monitor statistical classifications, offer suggestions thereon and encourage best practices in national classification development on the basis of international classifications. Moreover, the United Nations Statistics Division developed a website setting out the majority of classifications and statistical concepts.⁸

4. *Statistical data sources*

There are various statistical data sources, including population and economic censuses, household and establishment surveys and all types of administrative records:

(a) *Population and economic censuses*: are considered a fundamental source of statistical data on inhabitant numbers, growth, characteristics and geographical distribution; they are part of an integrated national statistical system. The United Nations Statistics Division called upon countries to conduct at least one census every 10 years. Censuses provide a great amount of data that can be used in policy analysis and formulation and in Millennium Indicators. They also act as a departure point for population projections that can be used when examining development requirements in the medium and long-term, by identifying service needs in health, education, housing, transport and communication;

(b) *Household surveys*: are conducted by statistical mechanisms, including health, social, demographic and workforce surveys, in addition to income and expenditure surveys that produce important data used in estimating poverty levels, in accordance with the first Millennium Development Goal on

⁸ <http://unstats.un.org/unsd/class/family/default.asp>.

eradicating extreme poverty and hunger. Unemployment rates indicated through workforce surveys are used in labour market policymaking and decent work indicators, as requested by the International Labour Organization;

(c) *Establishment surveys*: are a vital tool for gathering data on prices, market indexes and gross domestic product (GDP) rates for use as evidence in economic policy analysis;

(d) *Administrative records*: the process of extracting statistical data from administrative records remains weak in most Arab countries because they have not yet been fully computerized. Strengthening administrative infrastructure therefore improves the quality and periodicity of statistical data;

(e) *Publishing statistical data*: the statistical process is not complete before data are published and made available for use in applications and research. Rapid developments in information and communication technology, especially databases, have allowed statistical mechanisms to store and access data easily and have provided the necessary tools for the establishment of interactive databases; although such applications are still nascent in the Arab region. Undoubtedly, progress in data publication will enhance their use in policymaking;

(f) *Data coherence*: statistical data are gathered from various sources. For example, graduation data can be gathered from administrative records and household surveys, although such sources are generally at odds. It is therefore necessary to unify concepts and definitions related to phenomena by developing data collection approaches that provide coherent data to facilitate policymaking;

(g) *Data analysis*: national statistical mechanisms should especially focus on data analysis to arrive at conclusions and results. Nevertheless, this process remains weak within national statistical mechanisms, as are relations between those mechanisms and research centres and universities. Statistical mechanisms should therefore provide data to researchers and academics and facilitate data analysis so as to produce results that assist the policymaking process;

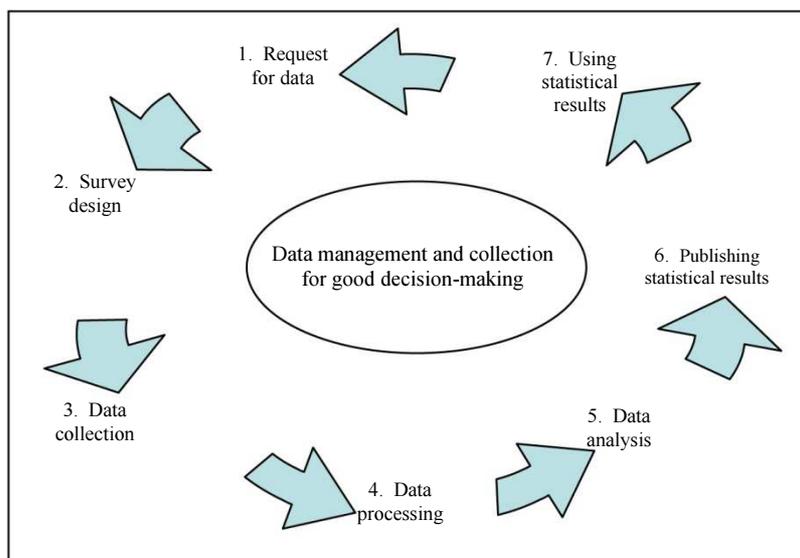
(h) *Data quality*: refers to whether data are valid for use in policymaking and analysis and in decision-making. To assess data accuracy, there compliance with the following eight institutional and regulatory quality requirements must be evaluated: relevance to an the issue under consideration; accuracy in describing the phenomenon; timeliness; ease of access; openness to interpretation; coherence; validity of the data collection approach; and data integrity;

(i) *Cooperation between data producers and users*: several experiences have shown that cooperation between statistical data producers and users benefits statistical systems and allows national statistical mechanisms to identify priorities in data collection, publication and analyses. This cooperation improves the quality of statistical data and reduces inconsistencies. Continuous consultations with users therefore strengthen data collection methods and processes. Several ESCWA member States have taken practical steps to institutionalize the consultation process by establishing high-level advisory councils representing government ministries and departments and private sector institutions, among others, which has brought together stakeholders, helped determine their data needs and provided support to national statistical mechanisms;

(j) *Adopting the Fundamental Principles of Official Statistics*: the success of data experiences depends on the adoption of the Fundamental Principles of Official Statistics issued by the United Nations Statistical Division in 1994, especially considering that those Principles cover the ethical guidelines for statistical practice. Data should therefore reflect those official ethical guidelines, in particular the data privacy of individuals and businesses. The Fundamental Principles of Official Statistics are set out in annex III to the present report.

Figure V represents the cycle for statistical data management and production required for decision-making and economic, social and environmental policymaking and analysis. Data collection is based on the demand of potential users in the public and private sectors. The first stage begins when the potential beneficiary submits a request for data. A related survey is then designed and data is collected from households in accordance with agreed standards and concepts. Data are then processed and results are reached within a determined timeframe. Subsequently, data are analysed and the conclusions required by decision-makers are reached. At the end of the cycle, data are used in decision-making, policymaking, as well as in the evaluation and the monitoring of their implementation and results. The monitoring and evaluation process begins when a statistical project is launched.

Figure V. Statistical cycle



Source: Gardner, 2010.

Box 2. Cooperation between data producers and users in Egypt to prepare human development reports

The team tasked with preparing human development reports at the Egyptian Institute of Planning was able to establish human development indicators, in collaboration with data producers represented by the Central Agency for Public Motivation and Statistics, and data users represented by the Institute of Planning. Human development indicators were used as tools for monitoring annual human development levels in Egyptian governorates to arrange them by development level and to link those levels to poverty indicators. This was achieved by identifying the following main characteristics of poverty:

1. Poverty is concentrated in governorates with the lowest human development levels.
2. Poverty is concentrated in tribal governorates.
3. Rural areas record higher poverty rates than urban areas.
4. The poor live in large families where the number of dependents affects their consumer needs and their ability to meet those needs.
5. Fertility levels are high among the poor leading to high numbers of dependents.
6. Child labour rates are high among the poor, leading to low school attendance rates either because they refrain from enrolling or because they drop out.
7. Families headed by women are poorer than those headed by men.
8. The head of the household's education level affects a family's poverty level.
9. The poor contribute less to the economy than their wealthier peers.

IV. CONDUCTING RESEARCH, POLICYMAKING AND DECISION-MAKING

A. RESEARCH

More focus is being placed on research for good evidence-based decision-making. Research bodies have begun to respond to the needs of individuals, institutions and policymakers by conducting relevant research. With regard to social research, an approach labelled “research to action” has been adopted. The importance of this approach lies in that the application of research conclusions realizes the desired objectives of conducting and funding such research. That is the case in the participatory approach that allows persons to identify social problems and present solutions to them.⁹ Several Governments¹⁰ allocate resources for conducting varied research aimed at developing a knowledgebase containing field expertise so as to guarantee good decision-making and evidence-based policymaking.

Research can be described as “the process of regularly collecting and publishing information”. Policy research offers societies and decision-makers realistic recommendations and procedures to tackle particular challenges. There are several types of research, including the following:

(a) *Available research*: whose conclusions and results are periodically reviewed and discussed by experts and stakeholders;

(b) *Secondary analysis*: entails examining databases and using statistical methods to describe them and present them in the form of statistical graphics;

(c) *Field tests*: assess the effectiveness of strategies in tackling problems by collecting data related to the achieved change and analysing them to determine the effect of supposed evidence-based strategies;

(d) *Descriptive methods*: entail collecting and analysing non-digital information to identify problems and find solutions to them;

(e) *Surveys*: are used to collect data on the reasons behind problems through personal interviews or various types of paper or digital questionnaires. Opinion polls are a kind of survey whose results are used for evidence-based decision-making;

(f) *Case studies*: entail recording and analysing the practical expertise of institutions or society regarding a certain issue. They also assist in determining performance and other variables concerning a certain problem or social issue, and generally clarify the complexities of an issue;

(g) *Analysing expenses, gains and benefits*: consists of a number of methods used by researchers to compare social issues and the expenses and gains of certain options.

B. FRAMEWORK FOR ANALYSING DECISION-MAKING PROCESSES

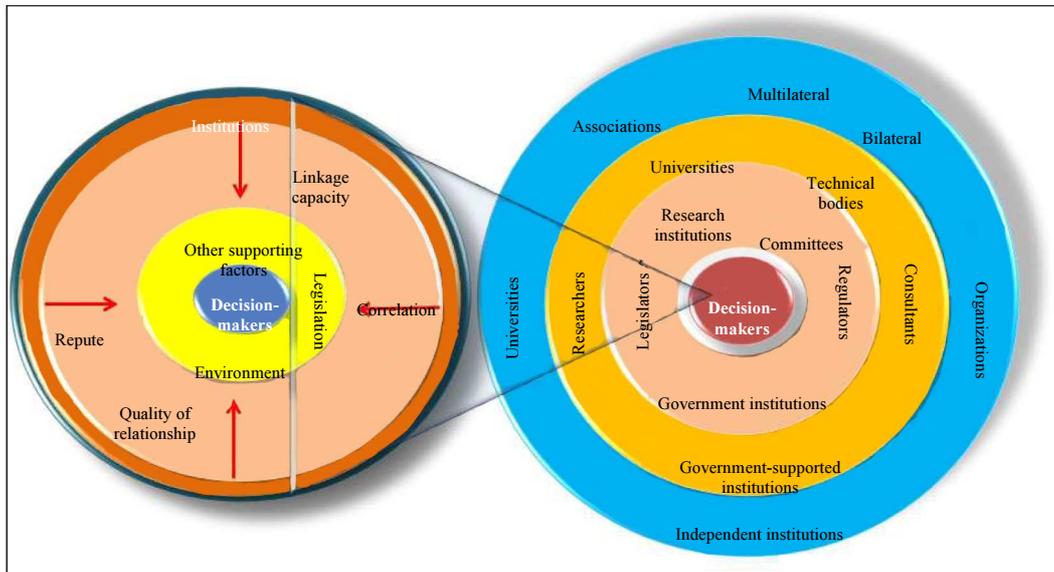
Developing a preliminary framework to analyse decision-making assists in identifying shortfalls in decision-makers’ abilities to understand interrelationships in the various policymaking fields, and facilitates the preparation of research agendas aimed at determining the best options, leading to the identification of significant outputs and factor models that could assist in developing statistical indicators on health and the environment.¹¹ Figure VI shows the institutional measures for conducting health research at the national level, in accordance with a general conceptual framework. The aim is to determine the situation of research institutions and their relationships with decision-makers in the health sector.

⁹ Dukeshire and Thurlow, 2002.

¹⁰ Qatar allocates financial resources (around 2.8 per cent of its annual GDP) to support scientific research in several fields, with the aim of establishing a solid knowledge and expertise base for sound evidence-based decision-making. Moreover, Qatar has prepared a national research strategy, which is an important addition to its National Development Strategy 2011-2016.

¹¹ Pattanayak and others, 2006.

Figure VI. General conceptual framework considering health research as an integral part of institutional work



Source: Alliance for Health Policy and Systems Research, April 2012.

V. POLICY MONITORING AND EVALUATION

A. MONITORING

Policy evaluation is an ongoing process through which stakeholders receive regular comments and opinions on progress made.¹² The monitoring process is not only limited to reviewing progress made, but also entails achieving the desired results, thus assisting in selecting the correct path for realizing those objectives. OECD sees monitoring as a regular process for collecting data on a specific indicator so as to provide stakeholders with the necessary information for preparing interventions, noting the use of allocated resources and the progress made in achieving goals. In other words, monitoring determines the extent to which the work undertaken is helping achieve goals. All stages of the monitoring process should include the following: periodically reviewing the extent to which desired results are being reached; tackling obstacles to achieving those results; assessing whether expected outputs are being achieved within the agreed timeframe and whether they contribute to achieving desired results; reviewing partnership strategies (this may require the development of new partnerships to achieve results faster); and benefitting from lessons learned and developing a knowledgebase for broader partnerships (this requires the use of acquired knowledge and its detailed assessment to guarantee desired results).

B. EVALUATION

The United Nations Development Programme (UNDP) states that evaluation is a thorough, rigorous and independent process applied to completed and ongoing activities to determine the extent to which they have reached objectives and assisted in decision-making. As is the case with monitoring, many issues undergo evaluation, including activities, projects, programmes, strategies, sectors and organizations. The main difference between monitoring and evaluation is that the latter is carried out independently to prepare objective reports indicating whether managers and staff are on the right track. Evaluation processes also have more thorough procedures, designs and approaches, and include more detailed assessments. However, the objectives of monitoring and evaluation are very similar; they both aim to provide information to improve decision-making and performance and to achieve desired results.

Each monitoring and evaluation unit at every level must have its own clear reference framework that specifies its role and responsibilities, including the following: developing methodological monitoring frameworks and preparing evaluation plans; holding regular meetings with stakeholders to evaluate progress; assuming joint field monitoring and evaluations to estimate successes and shortfalls; extracting good lessons and practices; determining the success levels of results achieved in terms of gender issues and the interests and rights of marginalized and weak groups; and identifying additional capacities that stakeholders and partners need to build.

Moreover, it is necessary to report regularly to advisors and consultative entities on specified results and take opportunities to influence policymaking and decision-making; guarantee quality monitoring and evaluation and offer relevant guidelines when necessary; and regularly assess the suitability of monitoring and evaluation frameworks leading to new development priorities or a change in circumstances.

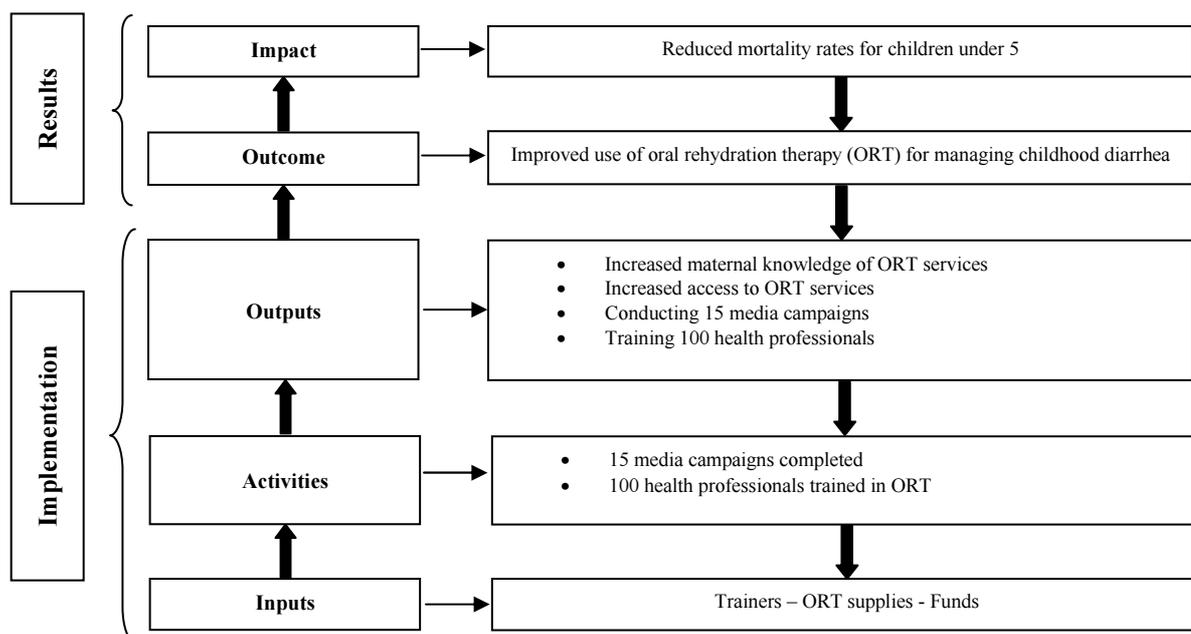
C. RESULTS-BASED MONITORING AND EVALUATION

Results-based monitoring and evaluation aims to continuously improve results by following the performance of government institutions in implementing development goals, collecting and analysing information for indicator development, and comparing the results of those steps with expected results. Simply put, monitoring processes entail overseeing changes in indicator values until goals are achieved. Evaluation, however, has a broader dimension, given that it does not only take into account progress towards achieving desired goals, but also the practical steps to that end.

¹² UNDP, 2009.

Results can be evaluated and presented using a logic framework that shows the types of information and data used at each stage. The logic model in figure VII shows the sequential results related to each stage of a particular policy or project. This example covers health policies aimed at orally tackling dehydration in children, leading to positive results, including a reduction in the mortality rate of children under 5. This framework is derived from a training manual prepared by the United Nations Children’s Fund (UNICEF) indicating the sequential monitoring and evaluation steps to arrive at the desired results.¹³ This model can be used for several programmes, especially if the expected result is manifold as is the case with the Millennium Development Goals.

Figure VII. Logic model for describing the implementation stages of a national development goal



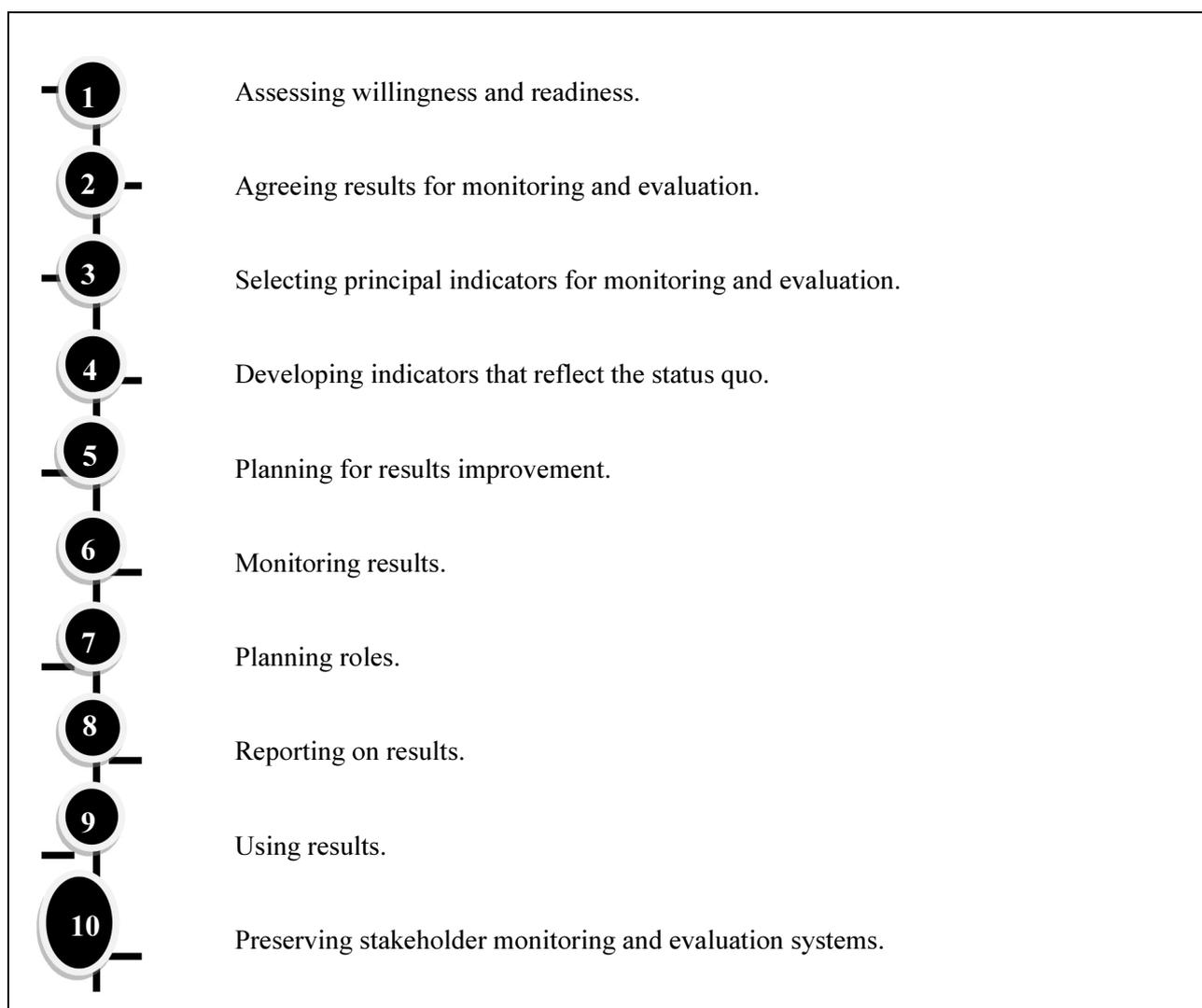
Source: Farrel, 2009.

D. DEVELOPING AND ACTIVATING A RESULTS-BASED MONITORING AND EVALUATION MECHANISM

International initiatives guide Arab countries in implementing their development goals with the support of evidence-based mechanisms. The main initiatives are the Millennium Development Goals aimed at reducing poverty, improving living standards and realizing other development goals by 2015. It is possible to gauge the extent to which those Goals have been achieved using measurement indicators. Figure VIII shows the necessary steps to develop an evidence-based monitoring and evaluation mechanism.

¹³ Farrel, 2009.

Figure VIII. Developing and activating an evidence-based monitoring and evaluation mechanism



Source: Kusek, 2004.

In terms of the Millennium Development Goals, evidence-based monitoring and evaluation systems and mechanisms can be developed for several sectors and policies. Figure VIII indicates the logical steps that a monitoring system takes before arriving at results, preparing reports thereon and using them in decision-making.¹⁴ This does not mean that a specific trajectory needs to be followed or that several activities cannot be implemented at once.

(a) *Assessing willingness and readiness*: aims to determine the ability of Governments and development partners to establish evidence-based monitoring and evaluation mechanisms and their willingness to do so;

(b) *Agreeing results for monitoring and evaluation*: entails agreeing on the achievement of specific strategic results and allocating resources and undertaking government development activities on that basis;

¹⁴ Kusek, 2004.

(c) *Selecting principal indicators for monitoring and evaluation*: this is a key step for evaluating achieved results and developing monitoring and development mechanisms that guide all data collection, analysis and reporting processes;

(d) *Collecting primary data on indicators*: entails measuring indicators first. Results are then measured by describing and measuring the initial result conditions;

(e) *Planning for improvement and to identify realistic goals*: the development of temporary goals to measure the necessary progress to achieve a specific result within a specified timeframe;

(f) *Results follow-up*: at this stage, guidelines are developed for data collection, analysis and reporting; to identify those responsible for activities; establish quality control methods; specify a timeframe; and determine costs;

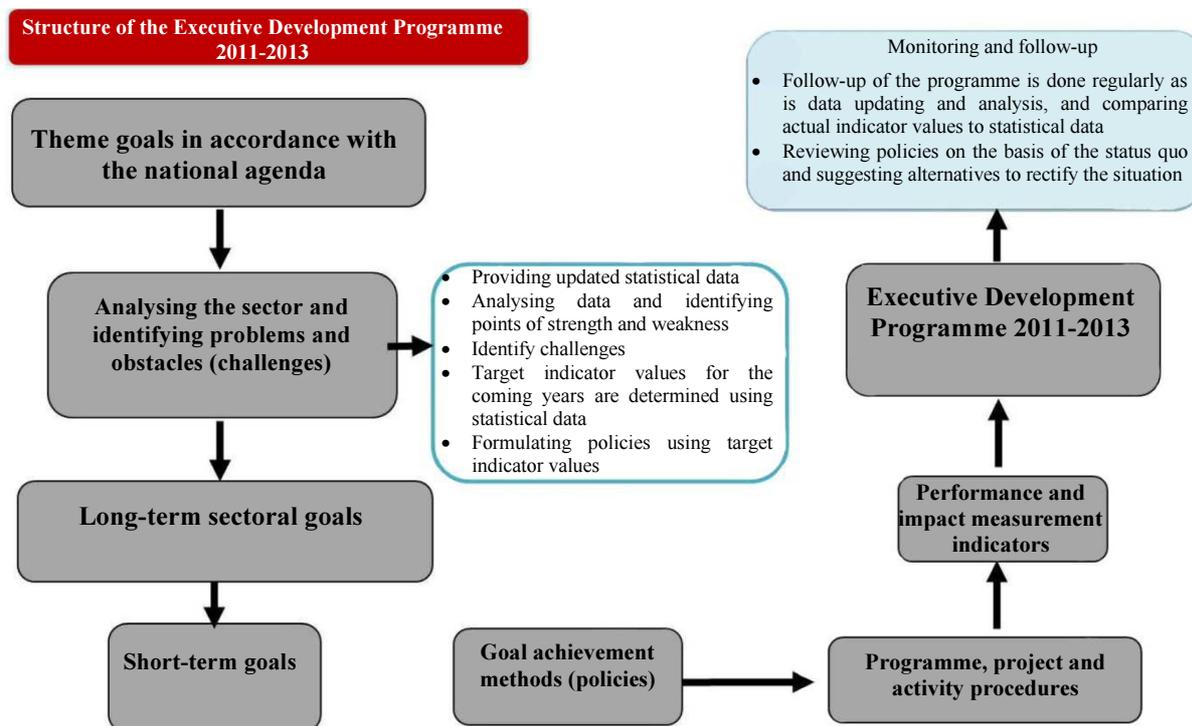
(g) *Evaluating information to support decision-making*: focusing on the role of evaluation studies and analysis in assessing results to ensure their full realization;

(h) *Evaluating results and preparing reports thereon*: by identifying results that will be reported and by determining the form of those reports and their deadlines;

(i) *Using results*: the aim is not to produce evidence-based information only, but for that information to reach relevant users in a timely manner so that they can be taken into consideration by Governments or organizations;

(j) *Guaranteeing the continuity of monitoring and evaluation systems within Governments*: this requires the development of sustainable mechanisms that meets several key standards, including demand, structuring, merit, confidence, information accuracy, accountability, incentives and capacity.

Figure IX. Jordanian Executive Development Programme 2011-2013



VI. DEVELOPMENT POLICIES AND THE MILLENNIUM DEVELOPMENT GOALS

A. MILLENNIUM DEVELOPMENT GOALS

The Millennium Development Goals are internationally agreed development goals, which represent the outcomes of various summits organized by the United Nations over the last decade, including summits on sustainable development, human settlements, women, populations and social development. These Goals are global, quantitative and have a specific timeframe for their achievement. They were developed to eradicate extreme poverty, hunger and disease, and to increase gender equality, particularly in education. They enshrine several inalienable human rights, including the right to health, education and housing. The eighth Goal on developing a global partnership for development reaffirms a commitment to all forms of development assistance, debt reduction, strengthening trade and providing new technologies.¹⁵

Over the last decade, the Millennium Declaration and Goals led to several commitments and the establishment of unprecedented partnerships, which were reaffirmed in several summits and meetings, including the International Conference on Financing for Development (Monterrey, Mexico, 2002), the World Summit on Sustainable Development (Johannesburg, 2002) and the World Summit (New York, 2005). Populations and Governments face new unexpected challenges, some linked to specific countries or regions, whereas others are global such as the food and the financial crises witnessed over the past few years. Today, the challenge lies in agreeing on a workplan to achieve the Goals. Although only three years remain before reaching the deadline for their achievement in 2015, they might not be realized because of lack of commitment. The Goals offer a historical framework to ensure accountability in development, tackle the potentially devastating effects of climate change and eradicate extreme poverty.

United Nations country development teams have prepared a framework to accelerate the implementation of the Goals at the national level, which provides Governments and their partners with an approach to identify and overcome the main obstacles to realizing the Goals and make progress with their targets. The framework begins by determining the targets that remain elusive. Governments and their partners should then tackle them through the following four steps:¹⁶ identifying priority interventions by country; determining and sorting the main obstacles and the key interventions that must be implemented to overcome those obstacles; specifying solutions to be implemented by several partners; and planning to implement those solutions and monitor their implementation.

This approach is flexible, allowing its application at the national and regional levels. It also assists in developing public and sectoral strategies and supports the implementation of existing strategies. The framework also allows for the development of a plan to hasten the implementation of national and sectoral goals. UNDP and country development teams tested a framework to accelerate the implementation of the Goals in 10 countries, including Jordan in the ESCWA region. The framework was adopted in December 2010.¹⁷

B. CAPACITY-BUILDING

The United Nations Statistics Division, in collaboration with ESCWA and the African Development Fund, organized a regional workshop in Amman, from 10 to 13 July 2011, on using the Statistical Data and Metadata Exchange (SDMX) initiative to exchange statistical data and metadata collected from monitoring the Goals. The workshop included practical training on using the initiative and on converting Goal databases to a format that can be stored on DevInfo. The workshop recommended the development of strategies to improve coordination within national statistical mechanisms and between them and government

¹⁵ General Assembly, 2010.

¹⁶ UNDP, 2011.

¹⁷ See www.undg.org/index.cfm?p=1505.

mechanisms. Participants were shown the benefits of using the initiative to report metadata and metainformation at the national and international levels, so as to reduce data disparities and costs; limit the burden of preparing reports; and improve coordination within national statistical mechanisms.

At the workshop, countries expressed their desire to adopt a data and metadata exchange standard for the Goals. They requested ESCWA to organize additional training sessions for national statistical mechanisms and ministries to strengthen their relevant skills. They also requested the Statistics Division to organize an international workshop to build the capacities of the most developed countries to exchange data and metadata on the Goals. They expressed their support for an interface to store information on the Goals using DevInfo. To benefit from lessons learned at the workshop, the Statistics Division will adapt its training material to meet the needs of developing countries in other regions and include that material in future workshops on the initiative.

The definition of the Goal data structure, developed by the SDMX Expert Group, underwent several assessments over the past few years. The results highlighted shortfalls in the first draft, including duplication and incomplete definitions and explanations. The Statistics Division thoroughly revised the definition to improve its performance. The revision was presented at the twentieth session of the Inter-Agency and Expert Group, held in Manila in October 2011, and was added to the Millennium Indicators website.¹⁸

Box 3. Programme summary on assessing development strategies to achieve the Millennium Development Goals in Morocco (the Maquette for Millennium Development Goal Simulations (MAMS) as a tool for analysing the Goals)

The Moroccan High Commission for Planning implemented a programme to assess development strategies to achieve the Millennium Development Goals in Morocco, with technical and financial support from the United Nations Development Programme (UNDP) and the World Bank. Since the launch of the National Human Development Initiative in 2005 and the realization of various social and economic programmes, Morocco has increased its efforts to achieve most of the Goals by 2015. It adopted a comprehensive approach to assess the impact of its achievements and the interaction between Goals. Morocco consulted UNDP and World Bank experts to develop a more holistic and accurate approach to the existing UNDP approach. The High Commission then prepared a comprehensive approach based on the application of a dynamic economic model to simulate the Goals.

The main aims of the programme were to evaluate its impact on factor markets and, in turn, on the economy; to assess employment, investment, commodity and service needs in all sectors related to the Goals; highlight the link between achieving the Goals and an increase in economic resources by strengthening labour markets, raising income and increasing long-term investment; and identify expected results to adopt various scenarios so as to avoid resource competition between service sectors related to the Goals and other sectors.

MAMS contains several modules, including those on poverty, health, education, water and sanitation. It describes the mechanisms through which the Goals interact in a way that explains complementarities between expenses. One module tackles social factors and variables and the indicators used to follow progress made in achieving the Goals.

UNDP, World Bank and High Commission experts oversaw the trial. The ministries of education and health provided the necessary statistics to complete the trial. Preparing and adapting the Moroccan model took almost three years (from the end of 2007 to March 2010). The trial represented a simulation of public policy effects on the Goals and an evaluation of the effects of the global financial crisis on their achievement. The programme resulted in the development of a database from statistical research conducted by the High Commission and relevant government sectors over the period 2007-2010.

Following the success of the trial, it was adopted as a good practice. During the biennium 2011-2012, it was implemented in several areas, including retirement; the High Commission suggested several scenarios to solve problems in the Moroccan retirement system in the future.

¹⁸ Statistical Commission, 2012.

VII. RAISING AWARENESS ON THE IMPORTANCE OF STATISTICAL DATA

A. AWARENESS RAISING

Raising awareness on the importance of statistical data is a process undertaken by a group of individuals, aimed at affecting public policy to change the policies of institutions, civil society organizations and the media; increasing the awareness of individuals and empowering them to carry out activities requiring the use of statistical data in policy formulation, monitoring and implementation; and raising awareness among stakeholders on the importance of using statistics to develop plans and make evidence-based decisions.

A distinction must be made between raising awareness on the importance of statistics and other concepts, such as data publication and consultations and communication on data. In Arab countries, national strategies must be developed to improve statistics and produce the necessary data to plan for development. Those strategies should include programmes and activities aimed at upgrading the entire national statistical process; information on human and institutional statistical capacity-building at the national level; and the relationship between statistical outputs and national development. The implementation of such programmes and activities will provide a set of Millennium Indicators and poverty reduction strategy indicators.

Awareness-raising programmes should include activities that promote each Goal to galvanize support and influence decision-makers to develop programmes that guarantee Goal achievement. The success of such awareness-raising and advocacy campaigns relies on a strong relationship between campaign leaders, decision-makers and stakeholders.

B. ENGINES OF CHANGE

In 2000, the international community agreed on the Millennium Development Goals as an international development framework and called for the adoption of necessary procedures for their achievement by 2015. At the national level, political and administrative institutions, civil society organizations and individuals were called upon to work together to achieve those Goals. Awareness-raising and advocacy strategies in the field of statistics support efforts by those driving change and progress in national statistical mechanisms and statistical systems

C. DEVELOPING A STRATEGIC PLAN FOR AWARENESS-RAISING AND ADVOCACY IN THE FIELD OF STATISTICS

Suggested methods to develop awareness-raising strategies on the importance of statistics include organizing workshops to exchange ideas and identify the following elements: required changes contained in strategies; social, political and economic institutions and statistical mechanisms capable of initiating change and driving progress; individuals and institutions involved in guiding change and its necessary stimulants; best advocacy methods; and ways to deliver messages to target groups. The following table contains a practical example of a mechanism to raise awareness on the importance of statistical data and their use.

The publication *Advocating for the National Strategy for the Development of Statistics* indicates that awareness-raising strategies must include an action plan that covers the following activities: forming a team to plan the strategy; indentifying key elements in all stages of activity implementation; preparing a plan and budget; providing the necessary awareness-raising material and funding; and specifying a timeframe for implementing activities.

AWARENESS-RAISING MECHANISM ON THE IMPORTANCE OF STATISTICAL DATA

Awareness-raising aims	Awareness-raising stakeholders	Key messages	Advocacy material	Advocacy approaches
What are the aims of the awareness-raising campaign?	Who is raising awareness? For whom? Who is achieving the objectives?	What are the key messages that must be disseminated by campaign leaders?	What are the advocacy materials that assist in achieving the advocacy objective?	What are the best approaches to achieve campaign objectives?
Improving and strengthening the use of statistical data in awareness-raising for change	The media	<ul style="list-style-type: none"> • Behind every figure is a story • What cannot be measured cannot be managed 	Press conference data and articles published in newspapers	Adopting direct approaches targeting the media
	Civil society organizations	Count on us because we will count on you	School materials, text messages, music and radio programmes and writing competitions	<ul style="list-style-type: none"> • Developing radio programmes for young people and awarding prizes • Adopting indirect methods, such as pamphlet distribution
	Government decision-makers	<ul style="list-style-type: none"> • Providing qualitative data • Developing more effective plans • Achieving successful development 	Holding seminars and working groups	Adopting direct approaches
	<ul style="list-style-type: none"> • Business community • Young people • Research centres • Universities and institutes 	Understanding the markets	<ul style="list-style-type: none"> • PowerPoint presentations • Preparing reports, publishing booklets and holding meetings and conferences 	Adopting direct approaches

Source: Paris 21, 2010.

VIII. GUIDING PRINCIPLES FOR DETERMINING BEST PRACTICES

A. CRITERIA FOR SELECTING GOOD PRACTICES

Key criteria for selecting good practices include the following: practices must generate a measurable improvement; provide a successful solution to a specific statistical problem; statistical data users and producers must participate in their development; they should be possible to repeat, develop and adapt; their objectives, procedures and results should be clear and easy to understand; and the data used in them must be innovative and sustainable.

B. DOCUMENTING BEST PRACTICES

Documenting best practices entails recording the lessons that institutions have learned from their experiences, so as to tackle their future challenges and to share this information with other institutions to find solutions to similar problems. Documentation must include detailed descriptions of the methods used to develop solutions; analyses of issues and challenges; and an explanation of options and conducive circumstances leading to success. Documentation must therefore not simply be a narration of events and facts. Herein lies the importance of developing guiding principles that assist stakeholders in identifying successful practices for adoption.

C. FACTORS FOR DETERMINING BEST PRACTICES

Guiding principles for identifying good practices include the following components.

1. *Identifying the issue or the challenge*

It is necessary to accurately describe problems whose solutions are achievable through the effective use of statistical data. These problems could be linked to issues such as poverty, unemployment, illiteracy, school dropout rates, women empowerment and social protection. Successful trials could employ statistical surveys or develop a set of additional indicators to find solutions to obstacles hampering the achievement of the Millennium Development Goals.

In 2000, over 170 Heads of State adopted the Goals, which form an international development agenda that must be fulfilled by 2015. The process must be integrated into national development processes so the Goals become an indivisible part of local and national development strategies. Herein lies the importance of countries that have successfully used statistics to nationalize the Goals to document and exchange their experiences. Innovative uses of statistics form good practices, including using data from general population and housing censuses to develop a master plan or spatial planning for cities; supplying geographic information systems; or solving transport problems. A manual prepared by the British Royal Statistical Society¹⁹ shows the use of statistics in communication is a good practice and sets out key principles for documenting such experiences, including the following:

- (a) Explaining the use of statistical data to achieve public relations objectives to raise awareness in general, inform decision-makers of specific issues or influence public behaviour;
- (b) Identifying the reasons for using statistics, confirming that statistical data reflect reality and are used to measure policy effects;
- (c) Specifying statistics that should be used in public relations;
- (d) Analysing survey results or statistics uses in communication;
- (e) Preparing reports on data collection approaches;
- (f) Identifying indicators for development to better understand issues under consideration;
- (g) Determining data shortfalls.

¹⁹ Garrett and Penrose, 2010.

2. Specifying results

Identifying good practices in the effective use of statistics includes determining the changes that occur as a result of those practices and their effects; and presenting the approach for measuring and evaluating such changes. This may result in establishing a database on poverty that could assist in formulating strategies to eradicate poverty; developing a system to monitor and evaluate gender mainstreaming in development programmes to increase the number of women in positions of power; carrying out statistical surveys to produce data to identify underprivileged households; establishing a database that includes indicators on national energy for energy production, transfer, export and consumption; or developing policies on energy, the environment and sustainable development. Such changes could occur at the visual, attitude or conceptual levels as a result of the effective use of statistical data that guide the change process. Related indicators of achievement and baselines should be mentioned when identifying results.

3. Trial or practice details

Details should include the objectives of a trial or practice and its geographical location; implementation methods; executors; partners, including their full names and addresses; timeframe; start date; performance indicators; approved budget; adopted mechanism; and monitoring and evaluation mechanism.

4. Success factors

Government and non-governmental bodies that collaborated to provide statistical data or assisted in developing appropriate solutions could set out success factors.

5. Challenges and solutions

Challenges include fundamental issues that hampered the success of a trial or practice. Solutions include the methods used to overcome those challenges, the quality of data used and the data collection and evaluation approach.

6. Recommendations

Recommendations indicate the minimum requirements for a trial or practice to succeed and the lessons learned and good practices whose exchange would be beneficial to all involved, despite that the success of such practices is linked to spatial and temporal conditions and specific circumstances. A practice could therefore succeed in one country but not in another, or in one part of a country but not in another.

7. Identifying future plans and sustainability

This entails determining the bullet points of plans aimed at ensuring the sustainability of good successful practices and the necessary financial and human resources; and the suggested mechanisms to ensure the sustainability of statistical data provision and improve their quality.

8. Beneficiary opinions and responses

The opinions and responses of decision-makers, professionals and all those who participated in a successful trial, in addition to the opinions of researchers and experts who did not participate.

9. Supporting documents

Documents supporting good practices are annexed to the reports thereon. Any information considered necessary by those who developed the practices can also be added, including references used in implementing practices, and information on committees tasked with ensuring their success and on persons who participated in that success.

IX. CONCLUSION

Determining and documenting good practices and successful experiences in the effective use of statistical data in policymaking is a vital tool that statistical mechanisms in the ESCWA region can benefit from and build upon to tackle statistical challenges. The aim of the present conceptual framework is to encourage analytical thought, self-education and mutual learning; stimulate serious research to develop solutions for existing problems; and meet statistical data and information needs so as to achieve national development goals and strengthen individual and institutional participation in establishing an information base to improve the effective use of statistical data.

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Annex I

OFFICIAL LIST OF MILLENNIUM DEVELOPMENT GOAL INDICATORS

(All indicators should be disaggregated by sex and urban/rural as far as possible)

Millennium Development Goals (MDGs)	
Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
Goal 1: Eradicate extreme poverty and hunger	
Target 1.A: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day	1.1 Proportion of population below \$1 (PPP) per day ^{a/} 1.2 Poverty gap ratio 1.3 Share of poorest quintile in national consumption
Target 1.B: Achieve full and productive employment and decent work for all, including women and young people	1.4 Growth rate of GDP per person employed 1.5 Employment-to-population ratio 1.6 Proportion of employed people living below \$1 (PPP) per day 1.7 Proportion of own-account and contributing family workers in total employment
Target 1.C: Halve, between 1990 and 2015, the proportion of those suffering from hunger	1.8 Prevalence of underweight children under-five years of age 1.9 Proportion of population below minimum level of dietary energy consumption
Goal 2: Achieve universal primary education	
Target 2.A: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	2.1 Net enrolment ratio in primary education 2.2 Proportion of pupils starting grade 1 who reach last grade of primary education 2.3 Literacy rate of 15-24 year-olds, women and men
Goal 3: Promote gender equality and empower women	
Target 3.A: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education no later than 2015	3.1 Ratios of girls to boys in primary, secondary and tertiary education 3.2 Share of women in wage employment in the non-agricultural sector 3.3 Proportion of seats held by women in national parliament
Goal 4: Reduce child mortality	
Target 4.A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	4.1 Under-five mortality rate 4.2 Infant mortality rate 4.3 Proportion of 1 year-old children immunised against measles
Goal 5: Improve maternal health	
Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio	5.1 Maternal mortality ratio 5.2 Proportion of births attended by skilled health personnel
Target 5.B: Achieve, by 2015, universal access to reproductive health	5.3 Contraceptive prevalence rate 5.4 Adolescent birth rate 5.5 Antenatal care coverage (at least one visit and at least four visits) 5.6 Unmet need for family planning

Millennium Development Goals (MDGs)	
Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
Goal 6: Combat HIV/AIDS, malaria and other diseases	
Target 6.A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS	6.1 HIV prevalence among population aged 15-24 years 6.2 Condom use at last high-risk sex 6.3 Proportion of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS 6.4 Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years
Target 6.B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it	6.5 Proportion of population with advanced HIV infection with access to antiretroviral drugs
Target 6.C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	6.6 Incidence and death rates associated with malaria 6.7 Proportion of children under 5 sleeping under insecticide-treated bednets 6.8 Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs 6.9 Incidence, prevalence and death rates associated with tuberculosis 6.10 Proportion of tuberculosis cases detected and cured under directly observed treatment short course
Goal 7: Ensure environmental sustainability	
Target 7.A: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	7.1 Proportion of land area covered by forest 7.2 CO ₂ emissions, total, per capita and per \$1 GDP (PPP) 7.3 Consumption of ozone-depleting substances 7.4 Proportion of fish stocks within safe biological limits 7.5 Proportion of total water resources used
Target 7.B: Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	7.6 Proportion of terrestrial and marine areas protected 7.7 Proportion of species threatened with extinction
Target 7.C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation	7.8 Proportion of population using an improved drinking water source 7.9 Proportion of population using an improved sanitation facility
Target 7.D: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers	7.10 Proportion of urban population living in slums ^{b/}
Goal 8: Develop a global partnership for development	
	<i>Some of the indicators listed below are monitored separately for the least developed countries (LDCs), Africa, landlocked developing countries and small island developing States</i>
Target 8.A: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system with a commitment to good governance, development and poverty reduction – both nationally and internationally	<u>Official development assistance (ODA)</u> 8.1 Net ODA, total and to the least developed countries, as percentage of OECD/DAC donors' gross national income
Target 8.B: Address the special needs of the least developed countries	8.2 Proportion of total bilateral, sector-allocable ODA of OECD/DAC donors to basic social services (basic education, primary health care, nutrition, safe water and sanitation)

Millennium Development Goals (MDGs)

Goals and targets (from the Millennium Declaration)	Indicators for monitoring progress
Includes: tariff and quota-free access for the least developed countries' exports; enhanced programme of debt relief for heavily indebted poor countries (HIPC) and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction	8.3 Proportion of bilateral official development assistance of OECD/DAC donors that is untied
	8.4 ODA received in landlocked developing countries as a proportion of their gross national incomes
	8.5 ODA received in small island developing States as a proportion of their gross national incomes
Target 8.C: Address the special needs of landlocked developing countries and small island developing States (through the Programme of Action for the Sustainable Development of Small Island Developing States and the outcome of the twenty-second special session of the General Assembly)	<u>Market access</u>
	8.6 Proportion of total developed country imports (by value and excluding arms) from developing countries and least developed countries, admitted free of duty
	8.7 Average tariffs imposed by developed countries on agricultural products and textiles and clothing from developing countries
	8.8 Agricultural support estimate for OECD countries as a percentage of their gross domestic product
	8.9 Proportion of ODA provided to help build trade capacity
Target 8.D: Deal comprehensively with the debt problems of developing countries through national and international measures to make debt sustainable in the long term	<u>Debt sustainability</u>
	8.10 Total number of countries that have reached their HIPC decision points and number that have reached their HIPC completion points (cumulative)
	8.11 Debt relief committed under HIPC and MDRI Initiatives
Target 8.E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	8.12 Debt service as a percentage of exports of goods and services
	8.13 Proportion of population with access to affordable essential drugs on a sustainable basis
Target 8.F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	8.14 Fixed-telephone subscriptions per 100 inhabitants
	8.15 Mobile-cellular subscriptions per 100 inhabitants
	8.16 Internet users per 100 inhabitants

a/ For monitoring country poverty trends, indicators based on national poverty lines should be used, where available.

b/ The actual proportion of people living in slums is measured by a proxy, represented by the urban population living in households with at least one of the four characteristics: (1) lack of access to improved water supply; (2) lack of access to improved sanitation; (3) overcrowding (three or more persons per room); and (4) dwellings made of non-durable material.

Annex II

CLASSIFICATION OF STATISTICAL ACTIVITIES

Domain 1: Demographic and social statistics

- 1.1 Population and migration
- 1.2 Labour
- 1.3 Education
- 1.4 Health
- 1.5 Income and consumption
- 1.6 Social protection
- 1.7 Human settlements and housing
- 1.8 Justice and crime
- 1.9 Culture
- 1.10 Political and other community activities
- 1.11 Time use

Domain 2: Economic statistics

- 2.1 Macroeconomic statistics
- 2.2 Economic accounts
- 2.3 Business statistics
- 2.4 Sectoral statistics
 - 2.4.1 Agriculture, forestry, fisheries
 - 2.4.2 Energy
 - 2.4.3 Mining, manufacturing, construction
 - 2.4.4 Transport
 - 2.4.5 Tourism
 - 2.4.6 Banking, insurance, financial statistics
- 2.5 Government finance, fiscal and public sector statistics
- 2.6 International trade and balance of payments
- 2.7 Prices
- 2.8 Labour cost
- 2.9 Science, technology and innovation

Domain 3: Environment and multi-domain statistics

- 3.1 Environment
- 3.2 Regional and small area statistics
- 3.3 Multi-domain statistics and indicators
 - 3.3.1 Living conditions, poverty and cross-cutting social issues
 - 3.3.2 Gender and special population groups
 - 3.3.3 Information society
 - 3.3.4 Globalisation
 - 3.3.5 Indicators related to the Millennium Development Goals
 - 3.3.6 Sustainable development
 - 3.3.7 Entrepreneurship
- 3.4 Yearbooks and similar compendia

Domain 4: Methodology of data collection, processing, dissemination and analysis

- 4.1 Metadata
- 4.2 Classifications
- 4.3 Data sources
 - 4.3.1 Population and housing censuses; registers of population, dwellings and buildings
 - 4.3.2 Business and agricultural censuses and registers
 - 4.3.3 Household surveys
 - 4.3.4 Business and agricultural surveys
 - 4.3.5 Other administrative sources
 - 4.4.6 Data editing and data linkage
- 4.4 Dissemination, data warehousing
- 4.5 Statistical confidentiality and disclosure protection
- 4.6 Data analysis

Domain 5: Strategic and managerial issues of official statistics

- 5.1 Institutional frameworks and principles; role and organization of official statistics
- 5.2 Statistical programmes; coordination within statistical systems
- 5.3 Quality frameworks and measurement of performance of statistical systems and offices
- 5.4 Management and development of human resources
- 5.5 Management and development of technological resources (including standards for electronic data exchange and data sharing)
- 5.6 Coordination of international statistical work
- 5.7 Technical cooperation and capacity building

Annex III

FUNDAMENTAL PRINCIPLES OF OFFICIAL STATISTICS

The Economic and Social Council

Recalling recent resolutions of the General Assembly and the Economic and Social Council highlighting the fundamental importance of official statistics for the national and global development agenda,

Bearing in mind the critical role of high-quality official statistical information in analysis and informed policy decision-making in support of sustainable development, peace and security, as well as for mutual knowledge and trade among the States and peoples of an increasingly connected world, demanding openness and transparency,

Bearing in mind also that the essential trust of the public in the integrity of official statistical systems and confidence in statistics depend to a large extent on respect for the fundamental values and principles that are the basis of any society seeking to understand itself and respect the rights of its members, and in this context that professional independence and accountability of statistical agencies are crucial,

Stressing that, to be effective, the fundamental values and principles that govern statistical work have to be guaranteed by legal and institutional frameworks and be respected at all political levels and by all stakeholders in national statistical systems,

Endorses the Fundamental Principles of Official Statistics set out below, as adopted by the Statistical Commission in 1994 and reaffirmed in 2013, and recommends them further to the General Assembly for endorsement.

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.