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EUROPEAN UNION (EUROSTAT)**

**ORGANISATION FOR ECONOMIC COOPERATION
AND DEVELOPMENT (OECD)
STATISTICS DIRECTORATE**

**UNITED NATIONS
ECONOMIC AND SOCIAL COMMISSION
FOR ASIA AND THE PACIFIC (ESCAP)**

Meeting on the Management of Statistical Information Systems (MSIS 2014)
(Dublin, Ireland and Manila, Philippines 14-16 April 2014)

Topic (iii): Innovation

MSIS 2014 - Informing a Data Revolution

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I. Overview

1. The Informing a Data Revolution (IDR) Project was initiated by the Partnership in Statistics for Development in the 21st Century (PARIS21) in January 2014. The objective of the Project is to improve the production, accessibility and use of data to support and strengthen evidence-based decision-making.
2. The Project will support the Post-2015 Development Agenda, identifying ways in which the data needed to monitor progress on goals and targets can be made available, and supporting the design and implementation of policies, programmes and projects. It is expected that this will be done by: improving the understanding of data systems; building a coalition of both existing and new partners; and by preparing a road map for a data revolution, supporting the post 2015 development process.
3. The Project was formally launched at a meeting that took place in Paris on 17 and 18 February 2014. It is financed by a grant from the Bill and Melinda Gates Foundation (BMGF).

II. Outcomes and outputs

4. One of the main outcomes of the project is to improve the understanding of data systems in developing countries, including how they are best designed, managed and supported. The aim is to build on the progress that has been made through national strategies for the development of statistics (NSDS), but bringing in new actors and making best use of new technology. In particular the focus of the project is to make better use of existing systems through an open data approach and new opportunities provided by big data.
5. The project aims to build a coalition and expand the partnership that has developed so far. This will involve bringing in new players, including civil society organisations and private sector businesses.

6. The main output will be a document setting out a road map for the data revolution, supporting the post-2015 development process. This document will need to make the case for a data revolution in developing countries, identifying what will need to be done and how it might be implemented, including some overall cost estimates.
7. The Road Map document will establish a vision for the data revolution that is broadly accepted by most stakeholders and which will help to set the agenda for the next five years or so. It will need to be in a form that is accessible to statisticians, policy makers and other stakeholders. It is anticipated that it will be formally launched at the beginning of July 2015 in advance of the UN General Assembly in September 2015 where the Post-2015 Development Agenda will be discussed and agreed.
8. The road map will be supported by a number of other outputs, including:
 - (a) A review of the situation of statistical systems in developing countries, identifying the main data gaps and providing examples of how they might be bridged ;
 - (b) A limited number of case studies of important innovations in statistics;
 - (c) A small number of commissioned research or review papers; and
 - (d) Feedback from stakeholders on the data revolution and how it might be supported and put into effect.

III. Activities

The main activities will be:

A. Country studies

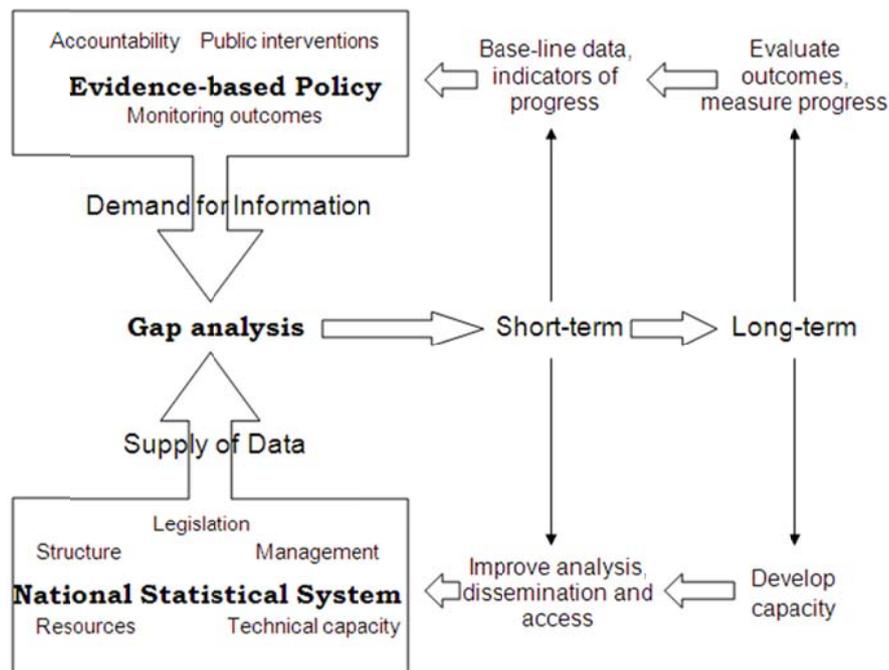
9. The country studies are a major component of the project. Their main objective is to provide an understanding of the situation facing statistics in 2014 in countries at different levels of development. In essence, the country studies will be a stocktaking exercise, including an inventory of the needs of both users and producers of statistics, including the agencies in the official statistical system and other public and private producers where they are or could be important. The stocktaking will assess the current capacity to produce and to use statistics as well as the main gaps between the supply of statistics and the demand from users.
10. It is anticipated that the main outputs of the country studies will include a better understanding of the underlying causes of the gaps between supply and demand and ideas of how to close them. The studies will pay particular attention to an assessment of the ability and readiness of countries to make use of new opportunities such as open and big data, new technology for data collection and institutional innovations such as public-private-partnerships. Another important area of analysis will be how the national statistical system interacts with the international statistical architecture and how countries are able to access and use both financial and technical assistance.

The conceptual framework

11. The conceptual basis for the country studies is provided by a Technical Working Paper, prepared by Dr Jeff Round for this project (See Annex 1) . The supply of statistics is determined by their nature as goods or commodities in the economic cycle. In particular, statistics are produced by different agents and they satisfy different wants or needs. In general, most official statistics, in the sense of those data generated and disseminated by or on behalf of governments, are considered to be public goods and, in many cases, global public goods in that they are of value outside the immediate environment they produces them. As Dr Round indicates there are a number of consequences of the global public good nature of official statistics on their supply. First, it is not possible to rely on market provision. Second, as global goods, there has to be

some global responsibility for their provision, especially in low income countries. Third it is very difficult, if not actually impossible, in practice to determine what the optimal provision of statistics should be.

12. The period since 2000, building on the Millennium Development Goals and the debt relief process, has seen a major increase in both the supply of and demand for statistics of many different kinds. Efforts to strengthen decision making through the monitoring of the MDGs and the preparation and implementation of poverty reduction strategy papers have led to new demands for data and a major response by the statistical community. Almost all developing countries for example have now prepared at least one National Strategy for the Development of Statistics (NSDS) and many countries are actively involved in their implementation. There have also been major improvements in the availability of data to monitor the MDGs.
13. Despite the undoubted improvements that have been seen over the past 13 years, however, understanding the supply and demand for statistics and analysing the gaps between them remains complex and difficult. At a basic level, because users do not usually have to pay for statistics, or at least pay a price that reflects the costs of production, they do not face a budget constraint and demand is, potentially, almost limitless. In addition, not all demand is readily apparent. Both latent demand, for statistics that are not yet produced, and induced demand, which comes into being when new kinds of statistics are disseminated, are apparent and need to be considered.
14. A further complication comes about because published official statistics have a number of inherent characteristics or components of quality that are determined by different factors. The demand for statistics from different users is not necessarily the same. One user may stress accuracy and reliability, for example, over timeliness, while others may be more concerned with having data as quickly as possible and may have less concern about accuracy. Because users are not able to determine the quality of a statistic from the data alone, producers need to provide other information in the form of metadata. Demand is also dynamic and changes over time, both as economies develop and become more complex and because new issues and needs become apparent.
15. Taking all these concerns into account, it is clear that any assessment of supply and demand and the gaps between them will need to be empirically based, looking at what the situation is in different environments and then looking to draw more general conclusions. The overall proposed approach is set out in Figure 1.



16. On the supply side, the capacity of the national statistical system to produce and disseminate statistics with required characteristics depends on its structure its management, the legislative framework, its technical

capacity and the resources it can draw on. In the short term supply may be expanded through more effective analysis, dissemination and by improving access. In the longer term, the emphasis will be on capacity building.

17. On the demand side, the use of statistics comes from the needs to develop and implement policy, to monitor outcomes and to strengthen accountability. In the short term the focus tends to be more on the creation of baselines and the use of different indicators. In the longer term, evaluation of outcomes and impacts and time series analysis become more important. Over time, feedback on both the demand and supply sides are important.

The proposed approach

18. It is proposed to carry out the Country Studies using a two-stage approach. The first stage will involve a cross-country comparative study, covering a reasonable number of countries, at least 20 and possibly more depending on time and resources. This comparative study will be based on existing documentation and material, using, as far as possible, a standardised approach to the compilation of the information. One important criterion for the selection of countries will be the availability of recent relevant documentation. The main sources of information are expected to include the following:
- (a) Recent National Strategies for the Development of Statistics, including formal reviews of progress;
 - (b) MDG country reports;
 - (c) The data module of Reports on Standards and Codes (ROSC) published by the IMF;
 - (d) Sector-specific studies looking at statistics, including country studies for the Global Strategy on Agriculture and Rural Statistics
 - (e) National strategy documents, including poverty reduction strategy papers
 - (f) National monitoring and evaluation reports
 - (g) Documentation from countries participating in the General Data Dissemination System (GDDS) and the Special Data Dissemination Standard (SDDS)
 - (h) The World Bank's Bulletin Board on Statistical Capacity
 - (i) Documentation compiled by the UN Statistics Division
 - (j) Documentation from other providers of technical and financial support to statistics, including Eurostat.
19. It is anticipated that the first stage analysis will focus on the extent to which the supply of statistics is in line with international standards and recommendations using frameworks such as the GDDS and the SDDS. An initial focus is expected to be the extent to which data producers are able to meet the needs of policy makers in areas such as macro-economic management, service delivery, poverty reduction and key sectors of the economy. With regard to the needs of the post 2015 development agenda, an important part of the analysis will be an assessment of the capacity of the statistical system in the country to respond to new and changing data needs.
20. The second stage will consist of up to six in-depth case studies. These case studies will aim to add specific examples and insights to the more generic conclusions from the analysis of the first stage. The studies will involve consultations and discussions with stakeholders in the selected countries, a more in-depth review of existing documentation and a more detailed analysis of demand for statistics, both at present and any changes that are anticipated over the next five years.
21. A particular concern will be to assess supply and demand, both actual and potential, taking into account improvements in data quality, the needs for reporting data internationally and pressures for strengthening accountability.
22. On the supply side it is expected that a standard framework will be used. This will, necessarily, have to be limited to the information that is generally available, but could be based on the Eurostat Snapshot tool, or a subset of the United Nations' generic National Quality Assurance Framework (NQAF).

23. On the demand side, an analysis will be carried out of the main sources of demand and comparing what users have indicated they need with what is being produced. Since this is inherently more complex, much of the analysis may have to be qualitative, using a simple response such as “fully or mostly observed”; “partly observed”; or “not observed”. The aim will be to establish a consistent cross-country data base, which may then allow for some more detailed quantitative analysis.
24. The case studies will follow an agreed template and are expected to cover the following areas and issues.
- (a) Brief overview of the country situation
 - (b) Summary of the main elements and the capacity of the official national statistical system, including how the country interacts with the international statistical system
 - (c) Other suppliers of statistical information
 - (d) Overview of the demand for and use of statistics, internally, regionally and internationally
 - (e) The main data gaps identified by users and by comparison with international standards and recommendations and priorities for improvements
 - (f) Any important recent changes or innovations that have had an impact on the national statistical system
 - (g) Conclusions and recommendations

B. Case studies of innovations in statistics

Overview

25. The aim of this component is to explore solutions that can help close data gaps, looking at what works and what is less effective and assessing where and how different innovations may be replicated. The case studies will involve the documentation of important innovations covering different aspects of the statistical process or different statistical domains. It is anticipated that the case studies and related documentation will feed directly into the Road Map Document, identifying ways in which the data revolution could result in improvements in data coverage, quality and timeliness in line with both current and expected future needs.
26. Innovations that improve access to and the use of statistics can take place in a number of ways and will focus on the following areas.
- (a) Strengthening international coordination and promoting harmonisation, including the development and implementation of statistical standards and tools.
 - (b) Improving the ways in which the international statistical system and national statistical systems interact.
 - (c) Developing new ways of financing statistical activities and providing technical assistance, including aid for capacity building.
 - (d) Strengthening the coordination and management of statistical systems in countries.
 - (e) Improving the organisation and management of statistical production processes, including increasing the efficiency and effectiveness of the design, collection, processing, analysis, dissemination, archiving and evaluation phases in line with the Generic Statistical Business Process Model (GSBPM).
 - (f) Developing tools and applications to support the analysis and use of statistics for decision making and for other uses
27. In principle, innovations will lead to improved outcomes in terms of reduced costs, increased efficiency, improved data quality, or better meeting the needs of users. The aim of this part of the project will be to document different kinds of innovation, using existing sources where possible, but providing for the documentation of a few case studies where these are thought to be relevant and important. A key requirement will be to assess, as far as possible, to what extent different innovations could be replicated and what the pre-conditions are for them to be effective in other environments.
28. An initial piece of work will be to identify different kinds of innovation and to carry out a comprehensive literature review. The aim is to identify, as far as possible, what is being done, to review relevant

documentation and to make an initial assessment of the extent to which the particular innovation might be applicable in other countries and other situations.

29. The project will explore innovations in public-private partnerships, linking big data with official statistics, data collection technologies, and archiving.

C. Commissioned research and reviews

30. The IDR project will commission specific pieces of research, for example, to review the literature or to undertake a new analysis. Each piece of research will have a specified output or deliverable; in most cases this will be a paper, but other outputs may also be required in some cases, including data sets and pieces of analysis.
31. The purpose of the research programme is to feed directly into the Road Map document. Where possible, use will be made of all available research and documentation; the research programme will deal with major gaps in knowledge or provide reviews and overviews where these are not available. Possible areas and topics for research are expected to include the following.
- (a) Assessing the demand for and the supply of statistics.
 - (b) An overview of innovations in the processes of statistical production and use.
 - (c) A review of the interaction between the international statistical architecture and national statistical systems. It is expected that this review will consider the difficulty of satisfying the needs of national and international users of statistics and how the role of national versus international players can be better delineated. The review may also examine to what extent changes are needed in the international architecture in order to meet the needs of developing countries.
 - (d) A literature review examining the political economy of the statistical process and especially the interaction between better data and better decision making and better policies. It is anticipated that the research will feed into the discussion of the relative importance of technology as against institutional change in the data revolution.
 - (e) An examination of the main factors affecting and/or constraining the operations of national statistical systems in developing countries. How can capacity best be strengthened and these investments then be sustained? Are new approaches needed or is the NSDS still an appropriate way of building capacity?
 - (f) To what extent are standards and/or protocols needed in order to make use of unconventional data sources such as “big data” in official statistics? How can the basic principles that official statistics operate under be carried over to high frequency, large volume, machine generated data?
 - (g) How can statistical activities, especially those falling within the definition of “official statistics” be financed in the future? Are new models and new funding mechanisms needed and in the case of developing countries are new ways of providing technical and financial support required?

D. Advocacy and communications

32. A comprehensive communications and advocacy campaign will take place for the duration of the project.

E. Project management and governance

33. The IDR project will be implemented and managed by the PARIS21 Secretariat with support from a Technical Review Group and a number of ambassadors.