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Topic (iv): Collaboration

Establishment of a Strategic Advisory Body for the Modernization of Statistical Production and Services in Asia and the Pacific and of a supporting network of experts

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I. Introduction

1. The modernization of statistical production and services is a relatively recent but rapidly emerging concern for national statistical institutions in the Asia and the Pacific region. On the basis of discussions by the ESCAP Committee on Statistics and groups of experts during the past 3 years, the Committee decided in December 2012 to establish a regional high level strategic body on modernization of statistical production and services and a supporting network of experts.
2. The regional dialogue recognized a number of specific characteristics which should influence the strategy for collaboration in the Asia and the Pacific region on the modernization of statistical production and services. Taking those into account, the present paper proposes some possible areas of priorities for the work of the network of experts and the regional strategic body, and explores possible modalities for regional collaboration activities on modernization.

II. A recent but rapidly emerging regional concern

A. Committee on Statistics

3. The ESCAP Committee on Statistics is the highest level forum for discussion of statistical issues in the Asia and the Pacific region. Organized every two years, it is attended by representatives, heads or senior managers, from national statistical offices in the region as well as representatives from a large number of international organizations involved in official statistics.

4. The modernization of statistical production and services was discussed at the past two sessions of the Committee on Statistics in 2010 and 2012. In 2010, a side event to the Committee on Statistics, titled “Modernizing statistical information systems”¹, gave a first opportunity for senior statisticians in the region to discuss the changing environment within which they operate.

5. This first discussion stressed that although information technology would form an important element of any modernization process, fundamental changes would be required to strategic business design, including the adaptation of organizational structures and business processes to the present day business environment. Participants stressed the urgent need for the statistical community to work together to develop common solutions, recognizing that their respective transformation processes would greatly benefit, not least in terms of increased cost-effectiveness, from joint development of related concepts, standards and tools.

6. Recognizing these strategic challenges, the Committee at this same session in December 2010² set two overarching goals for 2020 for statistics development in the Asia and the Pacific region. The first goal is to ensure that all countries in the region by 2020 have the capability to provide an agreed basic range of population, economic, social and environment statistics; the second is to create a more adaptive and cost-effective information management environment for National Statistical Institutions (NSIs) through stronger collaboration. A more adaptive and cost-effective information management goal as set by the Committee captures broadly the ultimate goal of the modernization efforts.

7. The decision of the Committee was reinforced by resolution 67/11 adopted by the ESCAP Commission at its 67th session on 25 May 2011³. The Commission, to which the Committee on Statistics reports, meets annually at the ministerial level to discuss and decide on issues pertaining to inclusive and sustainable development in the region. The resolution on the strengthening of statistical capacities in Asia and the Pacific calls on members to align resources and institutional arrangements to support the achievement of the two goals set by the Committee on Statistics.

8. At its third session in December 2012⁴, the Committee on Statistics took further concrete steps towards achieving the two goals set at its previous session. It decided to establish a high-level strategic body on the modernization of statistical information systems and an expert community to raise awareness and build capacities, particularly in relation to concepts, methods, and standards to support national modernization efforts.

9. Following the decision of the Committee on Statistics, its bureau prepared and agreed in principle⁵ the terms of reference for the high level body named the “Strategic Advisory Body for the Modernization of Statistical Production and Services in Asia and the Pacific”.

B. Strategic Advisory Body for the Modernisation of Statistical Production and Services in Asia and the Pacific

10. The strategic body is being established with the objective of driving and supporting changes towards the modernization of statistical production and services in the Asia and the Pacific region. As such the strategic body shall be responsible for:

- a. Developing a regional strategy to raise awareness and advocate on the importance and urgency of the modernization issue;
- b. Mobilizing financial and human resources to implement the regional strategy, including identifying relevant partners and other stakeholders.

¹ <http://www.unescap.org/stat/MSIS/side-event/index.asp>

² <http://www.unescap.org/stat/cst/2/index.asp>

³ E/ESCAP/67/2, http://www.unescap.org/commission/67/documents/English/E67_23E.pdf

⁴ <http://www.unescap.org/stat/cst/3/index.asp>

⁵ Following the review of the draft terms of reference by the Bureau at its meeting on 24 February 2013, the approval of the final document is currently underway.

- c. Acting as a regional voice on the issue of modernization, representing the Asia-Pacific region in global standard-setting mechanisms and strategic bodies such as the High-Level Group for the Modernisation of Statistical Production and Services;
- d. Providing strategic directions to and overseeing the programme of work of the network of experts to be established.

11. The strategic body shall comprise a minimum of five heads of national statistical institutions plus one member of the network of experts; plus ESCAP Statistics Division as ex-officio member. The Australian Bureau of Statistics (ABS) and Statistics Korea (Kostat) have indicated their interest in becoming members of the strategic body, and ESCAP Statistics Division is in the process of inviting additional national statistical offices to become members. In doing so, the Committee on Statistics, through its Bureau, needs to ensure a balanced representation, geographically as well as in terms of level of development of national statistical systems.

12. In order to maintain close coordination with the global HLG, the strategic body shall include at least one of the regional members of the global High-Level Group for the Modernisation of Statistical Production and Services. This will notably be ensured initially by the membership of the Australian Bureau of Statistics (ABS) and Statistics Korea (Kostat) in both bodies.

13. Bearing in mind available resources, the strategic body shall establish a yearly programme of work identifying priority areas and related activities to be implemented with the support of the experts' network. It shall report on progress of the implementation of the programme of work to the Bureau of the Committee on Statistics on a yearly basis and if requested to the Committee itself.

C. Network of experts on modernization

14. A network of experts in relation to modernization is to be established. Drawing on experts from NSIs in the region, it formed on a voluntary basis. The regional strategic body shall provide strategic direction to the network of experts as well as oversee its programme of work.

15. Among the objectives of the Meeting on the Management of Statistical Information Systems (MSIS 2013) in Bangkok is (a) seeking the interest of the participating experts to join the experts' network, and (b) identify a representative to represent the expert community in the regional high level strategic body.

16. Modernization programmes are large in scope, complex and of a long-term nature. In this context careful planning is essential, including identifying priority areas of work. The MSIS Bangkok meeting will also be an opportunity to confirm or identify new possible regional priorities in regards to modernization and to make recommendations to the regional high level strategic body for the work of the programme of work of the regional network of experts.

III. Possible regional priorities for collaboration

A. Modernization: The regional context

17. The Asia and the Pacific region is a highly diverse region in terms of geography, population distribution, economic development, culture, politics, and history. This diversity also pertains to level of development of national statistical systems in the region. While past regional discussions on the modernization of statistical production and services have led to a consensus that the issue is of relevance and of importance to all countries in the region, the differences in level of development require different approaches regarding modernization strategy.

18. Regional discussions have shown that some of the concepts, standards and tools developed to support the modernization of official statistics are new to a large number of countries in the region. There is therefore a need to continue to build knowledge on the subject matter and advocate for the importance and urgency in the

implementation of those concepts, tools and standards to support modernization among NSIs in Asia and the Pacific

19. NSIs in the region are, as is the case in most of the world, most often structured by statistical areas or domains, such as agricultural statistics, education statistics, and national accounts. Such structures present a powerful barrier to standardization of statistical business processes across a national statistical system; the barrier may be even greater in countries where statistical domains are shared across a large number of relatively independent NSIs such as line ministries.

20. In a similar way, standard procedures governing access to and use of administrative record databases, and privately generated databases will need to be developed. Such access to administrative and privately held databases is a key component of most modernization programmes. In that regard the distribution of official statistical domains across various national institutions will require stronger coordination and communication mechanisms.

21. Unlike members of the European Union, who are accustomed to aligning and collaborating within the European Statistical System, most countries in the Asia and the Pacific region do not have transnational legislation on statistics. As a result, most countries are not accustomed to and lack of a solid framework and motivator for standardized statistics production and reporting. An Asia and the Pacific collaboration strategy will hence need to be designed to respond in a flexible manner to the needs, priorities and capacities of individual members of the Committee

22. The least developed countries in Asia and the Pacific, in particular, lack the full range of methodological and internet technology (IT) expertise necessary to contribute actively to developing and implementing modernization standards, concepts and tools. However, the specific needs of less developed statistical systems need to be taken into account in developing concepts and tools to support their modernization.

23. Beyond the benefits of increased cost-effectiveness and better adaptability, the regional dialogues showed that the modernization concepts and tools are well-suited to improve quality of data by the more systematic application of standardized statistical procedures/techniques. Beyond the advantage of increased data processing speed, modernization would also bring more generalised application of automated data editing, data imputation, validation, and adjustment procedures.

24. Applying standard business processes also holds the potential for improving the coherence of national datasets through a better consistency of methods across the national statistical system. However, the cost-effectiveness benefit, a key motivator for the work at the global level, was assessed to be of less immediate priority to some countries in the region due to relatively low labour costs and high costs and scarcity of expertise in IT and methodology. Therefore, improved quality could be taken up as a key driver for modernization efforts in Asia and the Pacific, and be used as the starting point for related advocacy efforts.

B. Possible regional priorities

Generic Statistical Business Process Model (GSBPM)

25. Concepts and standards are being continuously developed by the global statistical community. Building on the Generic Statistical Business Process Model (GSBPM) which was finalized in 2010, the Generic Statistical Information Model (GSIM) was published in December 2012. GSIM allows the statistical community to turn to the development of a “plug-and-play” architecture in which components can be assembled in different ways; and shared and reused.

26. These concepts and standards constitute the building block of modernization programmes, applying to all national statistical systems and to all domains of official statistics. While not all NSIs can actively contribute to the development of standards and concepts, all should be able to create business and information system environments that facilitate the reuse and sharing of methods and components (software tools). Such favourable environment to modernization will enable them to more rapidly and more efficiently be able to implement modernization concepts and tools in order to develop new products and services.

27. A pre-requisite for such favourable environment to be established is a clear understanding of the statistical business processes taking place in the national statistical institutions. In this context, documenting and mapping business processes applied by NSIs in the region using the common framework offered by GSBPM appears fundamental.

28. Standardization of terminology and harmonization of production process, within and across countries in the region, though documentation on the basis of GSBPM, will bring direct benefits in facilitating the adoption of generic common tools. Initially, the documentation will also be key to identifying critical areas (GSBPM processes, sub-processes) for improvement along the statistical production chain. In that regard, GSBPM could greatly facilitate regional collaboration by providing a common framework and terminology.

29. GSBPM is of interest and importance to a broad range of NSIs embarking on modernization programmes. It might also bring more immediate benefits as a data quality assessment framework for many statistical institutions than the more long term benefits of the complete modernization process.

Big Data

30. A strong rationale for the global modernization effort has been the explosion in the quantity and diversity of high frequency data, usually grouped under the name of “Big Data”. These include ⁶:

- a. Administrative data (arising from an administrative process, be it governmental or not), e.g. electronic medical records, hospital visits, insurance records, bank records, food banks, etc.
- b. Commercial or transactional data: (arising from the transaction between two entities), e.g. credit card transactions, on-line transactions (including from mobile devices), etc.
- c. Data from sensors, e.g. satellite imaging, road sensors, climate sensors, etc.
- d. Data from tracking devices, e.g. tracking data from mobile telephones, GPS, etc.
- e. Behavioural information, e.g. from online searches (about a product, a service or any other type of information), online page views, etc.
- f. Opinion information, e.g. comments on social media, etc.

31. One of the conclusions from the High-level Seminar on Modernization of Statistical Production and Services (St. Petersburg, Russian Federation, 3-5 October 2012) was that: “Big data is an increasing challenge. The official statistical community needs to better understand the issues, and develop new methods, tools and ideas to make effective use of Big Data sources”. The data revolution that big data represents is not restricted to the industrialized world⁷. Of the over 5 billion mobile phones in use in 2010, 80% were used in developing countries, “one billion consumers in the world have a mobile phone but no access to a bank account”⁸. These are just a few examples pointing out that the conclusions of the high level seminar could equally apply to less advanced economies in the region.

32. The amount of data in the world is exploding and a large portion of this comes from the interactions over mobile devices being used by people in the developing world - people whose needs and habits have been poorly understood until now. Researchers and policymakers are beginning to realize the potential for channelling these torrents of data into actionable information that can be used to identify needs & provide services for the benefit of low-income populations⁹. In that context, statistical offices in less advanced countries have similar interest to those of most advanced countries in leveraging big data, even if strategies to make use of and integrate big data in their regular statistical work might differ according to the level of development of national statistical systems.

⁶ UNECE, What does “BIG DATA” mean for official statistics?

<http://www1.unece.org/stat/platform/download/attachments/58492100/Big+Data+HLG+Final.docx>

⁷ www.unglobalpulse.org

⁸ Gavin Krugel, director of mobile banking strategy at GSM Association, cited in *Big Data for Development: Challenges & Opportunities*, Global Pulse

⁹ World Economic Forum - Big Data, Big Impact: New Possibilities for International Development; http://www3.weforum.org/docs/WEF_TC_MFS_BigDataBigImpact_Briefing_2012.pdf

33. At the most general level, properly analysed, these new data can provide snapshots of the well-being of populations at high frequency, high degrees of granularity, and from a wide range of angles, narrowing both time and knowledge gaps¹⁰. This is to explore the applicability of big data for development that the United Nations has launched the “Global Pulse” initiative. The initiative was launched in response to the need for more timely information to track and monitor the impacts of global and local socio-economic crises. Its strategy is based on

- a. Conducting research to discover new proxy indicators in digital data that can improve tracking development progress, and identifying impediments to population wellbeing. The work will be used to develop a toolkit of the most effective methodologies and technology tools.
- b. Forging partnerships with companies and organizations that have the data, technology and analytical expertise needed for the success of “Big Data for Development” research and advocacy.
- c. Working with UN Member States to establish an integrated, global network of Pulse Labs, where researchers work to prototype and pilot approaches at country level. Successful data analytics methodologies and technology tools that Pulse Labs develop would be widely shared for adoption by institutional partners.

34. The recent establishment of the Jakarta Pulse Lab in October 2012, the pilot use of big data sources by Statistics Korea as part of the production process of some official statistics are witness to the rapidly emerging role of big data for NSIs in the region. But the use of Big Data in the production of official statistics in itself presents a broad range of new issues: (i) legislative (with respect to the access and use of data held privately); (ii) privacy (managing public trust and acceptance of data re-use and its link to other sources); (iii) financial (potential costs of sourcing data); (iv) management (policies and directives about the management and protection of the data); (v) methodological (data quality and suitability of statistical methods); (vi) technological (information technology to efficiently access data)

35. While National Statistical Offices (NSOs) inside and outside the region are starting to test and experiment with the use of big data, it is essential that successful use cases be brought to the attention of the international statistical community in order to better understand the potential of big data and support the development of new methods and tools. Such documentation and dissemination of successful use cases of big data in supporting the production of official statistics could constitute a second area of priority for the network of experts, supporting discussion and decision by the regional high level strategic body.

Other priorities

36. The two proposed areas of priorities will be further refined during the Bangkok-side discussion of the 2013 MSIS meeting. The experts will have the opportunity to identify more specific activities regarding GSBPM or big data, or propose additional or different priority areas.

IV. Modalities of functioning

37. The regional strategic body will not yet be functioning at the time of the MSIS 2013 meeting and thus not in the position to “provide strategic directions to and oversee the programme of work of the network of experts” as stated in the body’s terms of reference. But nevertheless the MSIS 2013 meeting offers an opportunity to explore possible modalities the functioning of the networks and how the network can best support the advisory body once created.

38. One of the possible functions of the network of experts would be the facilitation of experience sharing across countries in Asia and the Pacific. This experience sharing could serve as basis for further collaboration activities such as exchange of expertise, for example through south-south collaboration.

¹⁰ <http://www.unglobalpulse.org/BigDataforDevWhitePaper>

39. With a role of support to the discussions and decision making process of the regional strategic body, the network of experts could aim at documenting and sharing national modernization experiences in order to develop communication material based on the regional context and support the advocacy role of the regional body.
40. Similarly, under the directions of the strategic body, the network might focus its documentation and experience sharing work on developing region-relevant training material/guidelines for NSOs and other national statistical institutions to support the adoption of modernization principles.
41. In supporting the role of the strategic body in mobilizing financial and human resources to implement the regional modernization strategy, including identifying relevant partners and other stakeholders, the network might constitute a pool of expertise to support project activities with potential partners.
42. The regional network of experts might be expected to facilitate the flow of information regarding modernization initiatives undertaken in other parts of the world. As such, it should follow, and when possible be represented in important modernization-related meetings such as MSIS. In that regard, the possibility of MSIS 2014 being hosted in the region would be very beneficial. It could also consider participating or being represented in meeting of the Conference of European Statisticians on Statistical metadata (METIS), or selected standards-setting technical meetings such as the past SPRINT meetings from which the GSIM framework was developed.
43. With no dedicated budgetary resources identified at this point, the network of experts will start functioning as an informal group of experts, initially discussing primarily through electronic means. In that regard, based on discussion during the 2013 MSIS meetings, ESCAP Statistics Division might offer support to the work of the group of experts by maintaining a web-based platform to support the documentation and experience sharing across countries.