

## **United Nations Expert Group Meeting on Statistical Methodology for Delineating Cities and Rural Areas**

**United Nations, New York, 28 – 30 January 2019**

### **Conclusions and recommendations**

1. The expert group meeting took place in the United Nations Headquarters, New York, from 28 to 30 January 2019 and was hosted by the United Nations Statistics Division with full support of the European Commission. The United Nations Statistics Division chaired the meeting; experts from the following countries and organizations participated: Brazil, Canada (by remote connection), Ecuador, France, India, Indonesia, Mexico, Mongolia, Poland, Portugal, Republic of Korea, United States of America, Zambia (by submitting the presentation), European Commission, Eurostat, ILO, OECD, UN Geospatial Information Section, UN Global Geospatial Information Management (UN GGIM), UN Habitat, UN Population Division, UNICEF, UNFPA and the World Bank.
2. The meeting was requested by the 49<sup>th</sup> session of the United Nations Statistical Commission, as per the Report on its 49<sup>th</sup> Session: E/2018/24-E/CN.3/2018/37, Decision 49/112, paragraph (i).  
The purposes of the meeting were to:
  - a. Assess the technical comprehensiveness of the Degree of Urbanization methodology (DegUrba) as developed by the European Commission and partners;
  - b. Assess the applicability of the parameters for delineation of urban and rural areas in terms of levels of density;
  - c. Assess the implementation of the DegUrba methodology, and the concept of functional urban areas as developed by OECD, in national circumstances through the presentation and elaboration of national practices and examples;
  - d. Elaborate on the suitability of submitting the proposed methodology to the United Nations Statistical Commission for discussion and possible recommendation for the purpose of achieving regional and international comparison and harmonization of urban and rural areas and their statistics;
3. The participants noted that the meeting is very timely, especially from the point of view of the monitoring of the implementation of the 2030 Sustainable Development Agenda and accompanying goals, targets and indicators; the 2020 World Programme on Population and Housing Censuses main recommendation regarding the production of geo-referenced small-area census statistics; the New Urban Agenda; and the overall need for comprehensive international and regional comparison purposes.
4. In that context, the meeting outlined the need for the integration of statistical data and geospatial information, aligned with the UN-GGIM activities, including the implementation of the principles based on the Global Statistical Geospatial Framework in the geo-referencing of small areas and geo-coding of unit record data; and that the population driven one-square-kilometer grid as applied in the DegUrba methodology may be a starting point in that direction while at the same time developing and maintaining national definitions and urban/rural classifications; it also encouraged NSOs to collect and tabulate data by grid cells.

5. The DegUrba methodology is based on a two-level hierarchy; at level 1 it recognizes three different classes; at the more detailed level (level2) it recognizes six different classes of areas based on a combination of population density applied to 1 square km cells and population size thresholds which are applied to clusters of cells above the respective density thresholds. The two density thresholds are 300 residents per square kilometer and 1,500 per square kilometer. The three population size thresholds are 500, 5,000 and 50,000 residents. The meeting discussed in detail the universality of these thresholds, especially for populous and low-density countries as well, and noted that for international and regional comparison purposes the use of identical thresholds would be an advantage. The meeting also underscored the valuable information that the methodology offers in terms of cross-border comparisons and cross-border urbanization patterns.
6. The meeting pointed to the fact that the long-standing dichotomy of urban and rural areas is in need of adjustment in terms of the realities on the ground and thus the introduction of six classes in the DegUrba methodology provides a more nuanced overlook. The meeting also noted that the use of colloquial terms in the DegUrba methodology such as cities, villages, towns, suburbs might not suit all circumstances and augmenting this terminology with a more technical terminology might be beneficial; yet it also requires further consultations and testing.
7. Aside from basing the DegUrba methodology on population density and similarity of contiguous one-square-kilometer cells, the meeting noted that DegUrba methodology may include, where available, corrections based on the characteristics of built-up areas. In that context, and especially from the point of view of distinguishing slum settlements, the meeting underscored the need to work on the further development of this parameter while finalizing and improving the methodology.
8. In terms of the elaboration of the DegUrba methodology, the meeting underscored the need to produce a comprehensive technical presentation, an introductory guide, and a detailed methodology including relevant metadata with translation to other languages.
9. From the presentations of experts from national statistical offices the meeting concluded that adjustments and adaptations of the DegUrba methodology were needed in a number of participating countries, to better reflect national circumstances. Furthermore, the meeting concluded that a recommendation can be made to use a parallel approach – using the DegUrba methodology for international and regional comparison as well as estimates based on national definitions for national purposes. A good communication strategy needs to be put in place to explain to the users the purpose of the parallel approach, and the potentially different outputs of the DegUrba methodology versus the national methodology in any given country.
10. Critical to the development and implementation of the DegUrba methodology is the quality of underlying statistical data on population. These data are usually coming from population and housing censuses. Thus, it is becoming imperative, the meeting concluded, to insist on georeferencing the housing units during the 2020 round of population and housing censuses

and assigning the households to units they inhabit – as recommended by the 2020 World Population and Housing Census Programme. These data would result in a much more precise and accurate population grid that can then be used for adding layers of valuable information.

11. In that context, the meeting outlined the importance of implementing geo-referencing of census statistics in 2020 round of censuses as this would be crucial in establishing time series for the 2030 round of population and housing censuses and beyond, thus allowing the monitoring of changes affecting societies in a more precise manner.
12. In discussing the various characteristics of urban, semi-urban and rural areas, the meeting underscored that the density of the population that is now used in DegUrba methodology is one of the indicators and that it would be valuable to explore adding additional parameters for delineating these different areas, such as employment, industry, services and infrastructure. It was concluded that at this point of time the inclusion of these variables at the global level could not be implemented due to the lack of proposed harmonized methods and limitations regarding available data from official sources of statistics across different regions.
13. The meeting noted the usefulness and relevance of the concept of “Functional Urban Area”. Such a concept allows the functional extent of cities to be assessed by combining population density with people’s daily mobility. While the implementation of functional urban areas would not be universal at this point due to the lack of data on daily commuting in many countries, efforts are underway to assess people’s daily mobility through other sources of data, including labour force surveys, mobile phone data or other sources in the big data domain. Countries with already available commuting data are encouraged to implement the functional urban area definition along with the degree of urbanisation.
14. The meeting inquired about the possibility to develop universal one-square-kilometer grid cells covering the whole planet, each with a unique identifier, and further discussion among the DeGurba partners will be initiated, including possibilities to integrate already existing city databases to the grid systems.
15. In terms of implementing DeGurba methodology in as many countries as possible, the meeting noted with appreciation a series of workshops organized by UN Habitat in that respect. It also urged that more comprehensive and structured efforts are necessary in terms of providing capacity building and technical assistance to national statistical offices and that would necessitate bringing this issue to the UN Statistical Commission.
16. The meeting concluded to propose to the UN Statistical Commission that the work of this expert group should convert from *ad hoc* to continuous, thus providing a continuing forum to discuss relevant methodologies for delineation of urban, rural and other areas, including discussions on sources of data and metadata, and their implementation at national level.
17. The meeting suggests discussing the DeGurba approach with the Inter Agency and Expert Group on SDG Indicators (IAEG-SDGs) to help with monitoring SDG indicators. For national level reporting for SDGs, national definitions of urban-rural are used. For global reporting and

aggregations, however, a harmonized approach is worth considering, for specific SDG targets and for rural-urban dis-aggregations. The EGM can liaise with the IAEG-SDGs group to discuss some practical options on monitoring.