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

FRANCISCO VALA | Statistics Portugal

New York, 28-30 January 2019
AGENDA

1. National Definitions on urban and rural

2. National definitions vs. DEGURBA

3. Global DEGURBA: PT exercise

4. Final remarks
PT: Portugal

NUTS I: 3 regions
Mainland and 2 Autonomous Regions

NUTS II: 7 regions

NUTS III: 25 regions

Local Administrative Unit (LAU1): 308 Municipalities

Local Administrative Unit (LAU2): 3092 Parishes

NUTS + Município + Freguesia
Spatial references for statistical data

**Territorial units for National Statistical System and European Statistical System**

- **NUTS I**
- **NUTS II**
- **NUTS III**

**Administrative Divisions**
- Urban-Rural Regions
- Coastal Regions
- Metropolitan Regions
- European Cities

**Intermunicipal Entities (CIM e AM)**

**Autonomous Regions**

**Districts**

**Census Territorial Units**
- Localities
- Urban Locality > 2 000 inhab.

**Census Territorial Units**
- Census Blocks
- Census Sections

**Units to support Statistical Production**
- Buildings (BGE)
- Households (FNA)

**Statistical Territorial Units**
- Urban Area
- APU, AMU, APR
- TIPAUL 2014
- DEGURBA
- Coastal Areas
- Statistical Cities
- GRID 1 x 1 km
1. National definitions on urban and rural

- **Urban locality**
  - Census locality with 2 thousand or more inhabitants

- **Statistical Cities**
  - Administrative definition – localities with city status defined by law
  - Urban perimeter as laid down in municipal land use plans and adapted to census blocks limits
  - Delimitation results from a partnership between Statistics Portugal and municipalities
  - Definition used for PT UN-Habitat III report (and metropolitan areas)
1. National definitions on urban and rural

- 49% of population living in coastal areas
- 42% of population living in Cities (159)
- Only seven cities with more than 100,000 inhab.
- 17 cities with less than 5,000 inhab.
1. National definitions on urban and rural

- **Urban/Rural Typology (TIPAU2014)**
  - Classifies Local Administrative Units (Parishes) into three categories:
    - predominately urban areas (APU) → Urban Areas
    - medium urban areas (AMU)
    - predominately rural areas (APR)
  - Based on the analysis of **census blocks**:
    - morphological criteria:
      - Population density: 100 – 500 ; > 500 inhab./km²
      - Locality dimension: 2 000 – 5 000 ; > 5 000
    - administrative criteria: Urban land use in municipal plans
  - Location of Municipality Council
Eurostat defines “Urban” based on two classes – ‘Densely populated areas’/’Cities’ and ‘Intermediate density areas’/’Towns and Suburbs’ – while the national typology only considers one – ‘Predominantly urban areas’
2. DEGURBA vs National Definitions

Eurostat defines “Urban” based on two classes – ‘Densely populated areas’/‘Cities’ and ‘Intermediate density areas’/‘Towns and Suburbs’ – while the national typology only considers one – ‘Predominantly urban areas’
2. DEGURBA vs National Definitions

Population distribution according to TIPAU and DEGURBA, Portugal and NUTSII regions
2. DEGURBA vs National Definitions

Population distribution according to TIPAU and DEGURBA (Urban Areas), Portugal and NUTSII regions
2. DEGURBA vs National Definitions

Population distribution according to Statistical Cities and DEGURBA (Urban Areas), Portugal and NUTSII regions

- **PORTUGAL**:
  - **Cities**: 58% (DGURBA) vs 25% (Cities)
  - **Norte**: 42% (DGURBA) vs 75% (Cities)
  - **Centro**: 80% (DGURBA) vs 50% (Cities)
  - **A. M. Lisboa**: 60% (DGURBA) vs 40% (Cities)
  - **Alentejo**: 42% (DGURBA) vs 0% (Cities)
  - **Algarve**: 47% (DGURBA) vs 33% (Cities)
  - **R. A. Açores**: 40% (DGURBA) vs 0% (Cities)
  - **R. A. Madeira**: 40% (DGURBA) vs 0% (Cities)

Note: DGURBA data shows an increase of 47 p.p. and 33 p.p. for DPA_IDA/cities and PA/other territories, respectively.
3. Global DEGURBA: PT exercise

✓ Refined Degree of urbanisation: definition of six classes
✓ Same criteria and thresholds
✓ Includes the simplification proposed on urban clusters: “(...) to use four-point contiguity in both urban centres and urban clusters.”
✓ Does not include the correction and the option based on built-up data

Data sources and options for this exercise:

- European GRID
- Census 2011 population data
- National Land cover / Land use map to identify water bodies

Population density thresholds
3. Global DEGURBA: PT exercise

Global Degree of Urbanisation

[Maps showing territorial limits and urbanisation levels]
3. Global DEGURBA: PT exercise

Global DEGURBA vs Statistical Cities

- The proposed methodology captures all Portuguese cities with 50,000 inhabitants or more (17): 15 by ‘cities’ and 2 by ‘towns’ (the smallest Statistical cities)

- From all the Portuguese cities (159), 135 intersect either a ‘city’ or ‘town’

- Statistical Cities not captured by ‘cities’ and ‘towns’ have around 5,000 inhabitants or less
Suburban cells were included in a ‘urban cluster’ with less than 5,000 inhabitants:

- Cells with a population density of at least 300 inhabitants per sq km, and population under 5,000 inhabitants in the cluster, that are adjacent to cities and towns ≠ “(...) a town or suburb has an urban cluster with a population over 5,000”
3. Global DEGURBA: PT exercise

The option in this exercise for suburbs

**Santarém Area**

- Global DEGURBA - JRC
- Global DEGURBA PT exercise_version1
- Global DEGURBA PT exercise_version2

**Ericeira Area**

- Global DEGURBA - JRC
- Global DEGURBA PT exercise_version2
Good results for DEGURBA - level 1, specially if we consider the national urban system in a European context.

GLOBAL DEGURBA produces very meaningful results at the grid level and allows identifying the main urban agglomerations, and the system of medium and small sized cities which structures most of the inland territory.

GLOBAL DEGURBA is particularly valuable to produce international comparisons, including for SDG monitoring, while allowing better benchmarking across countries.

Robust comparability will be probably higher at the grid level: the process of classifying small local units in each country may introduce distortions if local units have different size from country to country and even within countries.

The global methodology sequence should be presented in a more straightforward way, identifying objectively the steps and sequence to apply the different criteria to produce the refined degree of urbanisation...
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