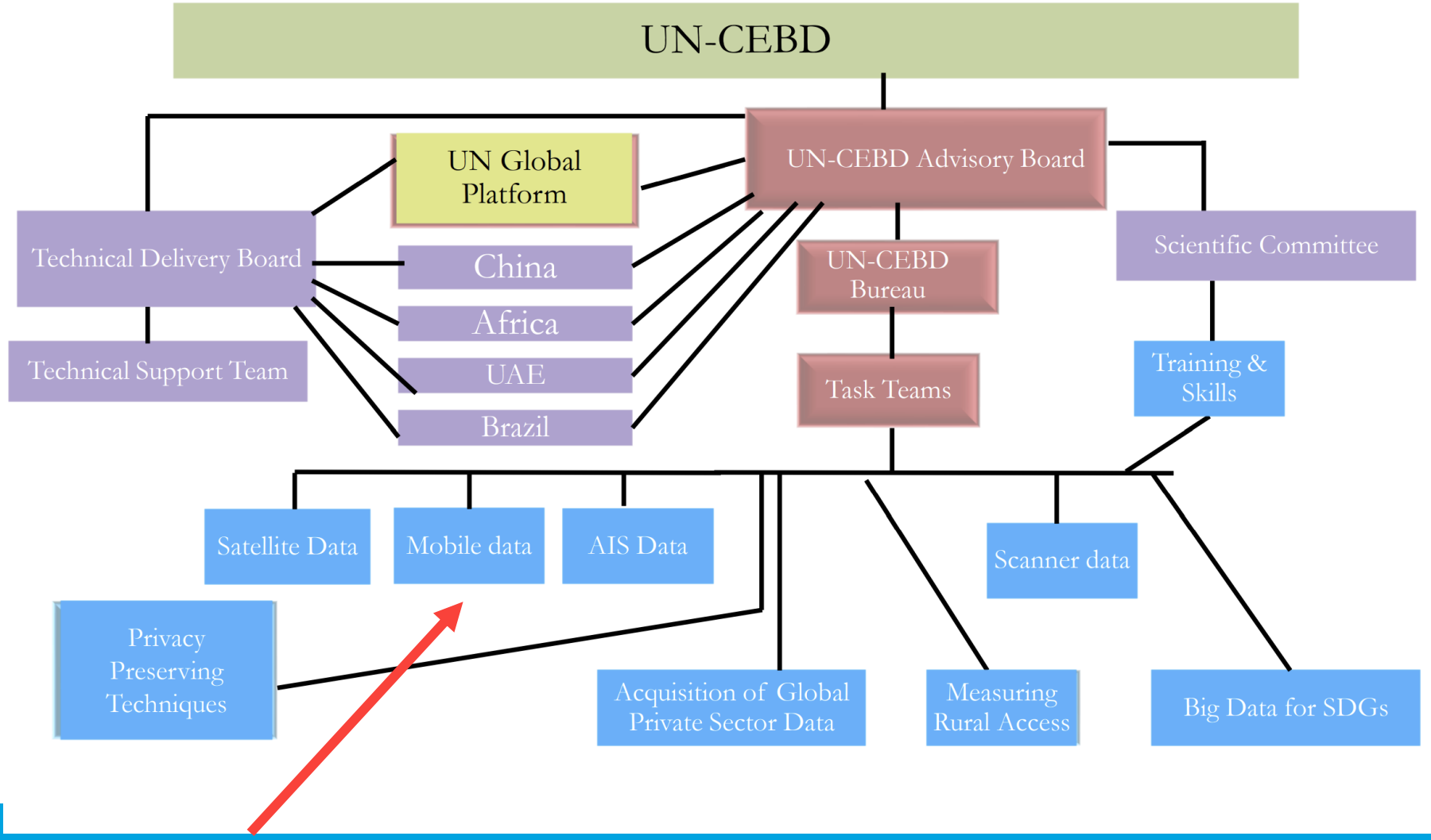
UN Regional Hub for Big Data in Rwanda - Webinar series:

Introduction:
Task Team on Mobile phone big data

Esperanza Magpantay
Senior Statistician, ICT Data and Analytics Division, ITU
UN-CEBD Mobile Phone Data Task Team (Chair)

UN Committee of Experts on Big Data and Data Science for Official Statistics (UN-CEBD)



UN-CEBD Task Team on Mobile Phone Data

Chair: ITU

Objectives

Explore the use of mobile phone big data for the different areas of statistics and develop methodologies

Who

Composed of around 50 individual members/ 30 entities - international and regional agencies, countries, academia, private agencies/companies

Members

- Brazil
- Colombia
- Gambia
- Georgia
- India
- Indonesia
- Italy
- Japan
- Korea
- Malaysia

Members

- Mexico
- Netherlands
- Oman
- Qatar
- Philippines
- Romania
- Saudi Arabia
- United Arab Emirates

Members

- EU JRC
- Eurostat
- IMF
- IOM
- UNFPA
- UNGP Jakarta
- UNSD
- UNESCWA
- World Bank
- OECD-ITF
- UN-ECE
- Flowminder
- GSMA
- Positium
- Telenor

Methodological Guides on the use of Mobile Phone Data (2022)

1) Tourism statistics (lead: BPS Indonesia)

2) Migration statistics (Lead: GeoStat, Georgia)

3) Census and dynamic population (lead: Positium)

4) Displacement in disaster context (lead: University of Tokyo)

5) Information society indicators (lead: ITU)

6) Transport and commuting statistics (lead: ECE & UAE)

https://unstats.un.org/bigdata/task-teams/mobile-phone/index.cshtml

Methodological guide on the use of mobile phone data: information society SDG indicators

1. Introduction
2. Background
3. Access and preparations
4. Data sources (description of mobile operator data, quality assurance of raw data)
5. Reference data (local admin units, world population, cell data, digital elevation, household survey data)
6. Data processing (models, data protection guidelines)
7. Calculating the indicators (rationale, definition, indicators calculation, quality assurance)
8. Quality assurance
9. Conclusions

- with experiences and examples from country pilots

https://unstats.un.org/wiki/display/MPDMIS

Methodological guide on the use of mobile phone data: measuring the information society indicators

Pages

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Methodological guide on the use of mobile phone data: Measuring the Information Society (SDG ICT indicators)

Created by UNSD Clarence Lio, last modified on May 11, 2023

This Handbook was prepared by the ICT Data and Analytics Division (IDA) within the Digital Knowledge Hub Department (DKH) of the Telecommunication Development Bureau (BDT) of the International Telecommunication Union. It is part of the ITU project on the *Use of Mobile Phone Big Data for Measuring the Information Society*. It was drawn up in the context of the work done by the Measuring the Information Society sub-group of the Task Team on Mobile Phone Data under the UN Committee of Experts on Big Data and Data Science for Official Statistics (UN-CEBD).

The authors of the Handbook are experts on mobile phone big data led by Esperanza Magpantay with support from Fredrik Eriksson (ITU) and from Positium, Estonia (Gerttu Pilsas, Siim Esko, Erki Saluveer); Cetic.br|NIC.br, Brazil (Alexandre Barbosa, Marcelo Pitta, Winston Oyadomari); the Brazilian Institute of Geography and Statistics, Brazil (Maria do Carmo Bueno); and Statistics Indonesia (Titi Kanti Lestari, Alfatihah Reno). The authors would like to thank the national statistical offices of Indonesia and Brazil and their staff for their contributions to the work of the task team and for their efforts to access the data and ensure implementation of the project with mobile positioning data in both countries. The report was peer reviewed by Scarlett Fondeur Gil from UNCTAD.

Methodological Guides on the use of mobile phone data

- Displacement and Disaster Statistics
- Dynamic Population Mapping
- Measuring the Information Society
- Migration Statistics
- Tourism Statistics

About

Author/s: Esperanza Magpantay, Fredrik Eriksson, Gerttu Pilsas, Siim Esko, Erki Saluveer, Alexandre Barbosa, Marcelo Pitta, Winston Oyadomari, Maria do Carmo Bueno, Titi Kanti Lestari, and Alfatihah Reno

Reviewers: Scarlett Fondeur Gil

Citation: Methodological guide on the use of mobile phone data: Measuring the Information Society. New York: United Nations Statistics Division, 2022.

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Awareness raising course

https://academy.itu.int/training-courses/full-catalogue/mobile-phone-data-awareness-course

https://learning.officialstatistics.org/

Activities of UN-CEBD MPD Task Team

2023-2022:

- Regional Hubs events (Brazil, UAE, Rwanda)
- UNSC Side event - February 2023
- World Data Forum – April 2023
- Big data conference – November 2022
- Awareness raising training course – Q42022
- Release of Guides – Nov 2022
- MPD Promotional video – June 2022
- Mobile Tartu – 29-30 June 2022
- UNECE – MPD for Transport Statistics - 15 June 2022
- WSIS Forum 2022 – MPD for information society session – May 2022
- EXPO2020 – MPD session, Dubai, January 2022

2021:

- Data and Policy Journal 2021 – Guiding principles for MPD
- UN World Data Forum 2021 – Oct 2021
- Road to Expo2020 – Nov 2021
- Invited Paper Sessions on the use of MPD for official statistics at the ISI (July)
  - Use of Mobile Phone Data to measure SDG ICT Indicators
  - Exploring Statistics on Tourism, Migration, Population and Displacement by Using MPD
- Measuring the information society using new data sources, WSIS Forum 2021 (May)
- Oman's Experience in Utilizing MPD for official statistics (April)
- MPD for official statistics – addressing data accessibility, privacy and regulatory issues (UN ESCAP StatsCafé, April)

Previous events:

- 6th International Conference on the Use of Big Data 2020 (hosted by Korea)
- Mobile Tartu Conference, Asia Pacific Statistics Week 2020
- ITU World Telecommunication/ICT Indicators Symposium 2020
- Conducted workshops in Colombia (2017, Rwanda (2019) and Indonesia (2019)
- Organized the International meeting on measuring human mobility in Georgia (2019)

How to accelerate the use of MPD in developing countries?

1. Coordination with all key stakeholders (access to data, validation of results, analyses)
2. Prepare all administrative and legal procedures to access the data before the project starts
   - Agreed processing model for calculation (by data providers or by TRA/NSO)
   - Agreed method for data transfer
3. Infrastructure and human resources (data scientist) for data processing should be in place
4. Use clear and unambiguous methodology – use of the Guides
   - detailed data source description (input data)
   - calculation methodology
   - example algorithms for calculation
5. Establish data pipelines that can be used for multiple areas of statistics

https://www.itu.int/en/ITU-D/Statistics/Pages/bigdata/default.aspx

Way forward

- Publish the Methodological Guide on Transport statistics
- Prepare/generate synthetic data sets to be used for the preparation of training materials and delivery of the trainings
- Develop training materials, including e-learning courses, on the six Guidelines
  - Project managers
  - Data Scientists
- Conduct training workshops to support regional capacity development, in collaboration with regional hubs
- Participate actively in the international events to raise awareness on the Guidelines
- Develop step-by-step/non-technical methodology on how to use MPD for official statistics and indicators
- Algorithms/Python codes to help NSOs and agencies to MPD indicators

Please contact: magpantay[at]itu.int

https://unstats.un.org/bigdata/task-teams/mobile-phone/index.cshtml

https://www.itu.int/en/ITU-D/Statistics/Pages/bigdata/default.aspx

Thank you!