

# UN Methodological Guidance on the Use of Mobile Phone Data for Migration Statistics



**SHORENA TSIKLAURI**

Head, Population Census and Demographic  
Statistics Department

National Statistics Office of Georgia (GEOSTAT)

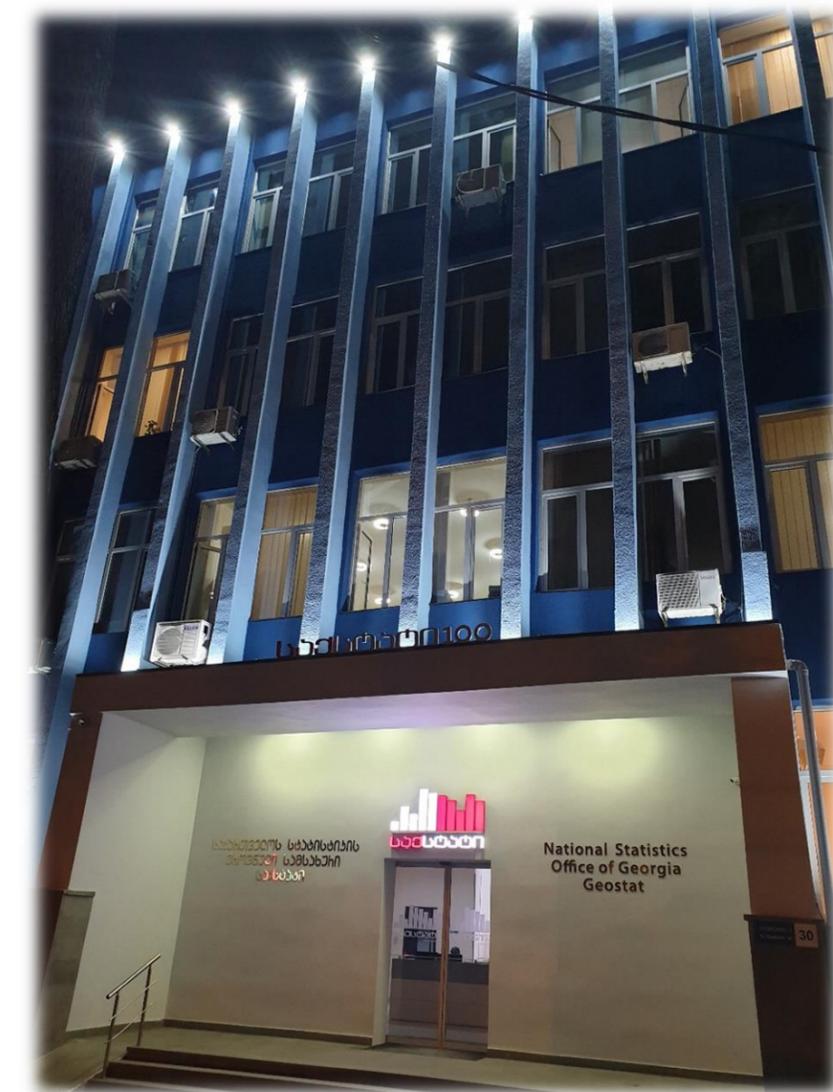
# About GEOSTAT



[WWW.GEOSTAT.GE](http://WWW.GEOSTAT.GE)



- Legal Entity of Public Law
- Responsible for official statistics
- Coordinator of National Statistical System
- The Law on Official Statistics of Georgia



# Priorities



1



Produce high  
quality statistics  
based on user  
need

2



Establish  
effective and  
modern  
processes

3



Capacity  
building and  
infrastructure  
development

# UNGWG on Big Data - Mobile Phone Data

---

- ❑ Mobile Phone Data Task Team member of the UN Global Working Group on Big Data for Official Statistics.
  
- ❑ **Aim of WG:** to develop the Handbook on the Use of Mobile Phone Data.
  - Migration Statistics Subgroup led by **Geostat** team;
  - with support from **Positium**, **EU-JRC** and **UNSD**.



# Traditional Data Sources for migration statistics

---

- ✓ Population Census;
- ✓ Population Register;
- ✓ Administrative data.

**Limitations:** coverage, measurement, timeliness, and data quality issues

# Alternative Data Sources for migration statistics - MPD

---

## Advantage:

- Timeliness (raise frequency of data collection - more data points)
- access to statistical information previously not available (new indicators)
- calibration opportunities for existing data,
- space and timely resolution/granularity (i.e. the scale or level of detail in a set of data)
- Accuracy.



## Steps and algorithms used for identifying INTERNAL MIGRANTS for the year X include:

---

- ❑ **Daytime population** - might be identified based on activities of the person traced from 07:00 a.m. to 06:59 p.m.
- ❑ **Nighttime population** - might be identified based on activities of the person traced from 07:00 p.m. to 06:59 a.m.

**Step 1.** Identify the date of the first cross (movement from home municipality to another) of a person in X year (year, day, month);

**Step 2.** Sum up the number of nights a person spent at home municipality during the 12 months before the first cross, and identify those persons who have cumulated at least 183 days;

**Step 3.** Sum up the nights a person spent outside the home municipality during the 12 months after the first cross, and identify those persons who have cumulated at least 183 days.

## Steps and algorithms used for identifying INTERNATIONAL MIGRANTS for the year X include:

---

- I. Identify the date of the first cross (movement from home country to abroad) of a person in X year (year, day, month);
- II. Sum up the number of nights a person spent at home country during the 12 months before the first cross, and identify those persons who have cumulated at least 183 days;
- III. Sum up the nights a person spent abroad during the 12 months after the first cross, and identify those persons who have cumulated at least 183 days

# Limitations and Caveats

---

- ❑ The availability and quality of socio-demographic information;
- ❑ Completeness and accuracy;
- ❑ To obtain the data from all the Mobile Network Operators;
- ❑ MPD can be difficult to access from MNOs due to privacy and other legal aspects;
- ❑ Geographic accuracy or the so-called “tossing”;
- ❑ Coping with under- or over-coverage.

# Lessons Learned

---

- Legislative aspects;
- IT infrastructure;
- Access to data/Partnership Model.



**THANK YOU FOR YOUR ATTENTION!**

---

National Statistics Office of Georgia  
(GEOSTAT)

[shtsiklauri@geostat.ge](mailto:shtsiklauri@geostat.ge)

[WWW.GEOSTAT.GE](http://WWW.GEOSTAT.GE)