



CONCEPT NOTE

Regional workshop on geospatial population estimation for selected countries in the Arab Region

Date: 16-18 September 2024

Location: League of Arab States, Cairo-Egypt

Background

Population and housing censuses (PHC) form a critical part of national data systems. For most countries, a PHC is the primary source of data that allows disaggregation at the lowest level by geographic areas and population groups for development planning and monitoring. The United Nations recommends a 10-year interval for PHC, with the 2020 census round that started in 2015 coming to an end in 2024. However, just about half of the countries in the UNFPA Arab States Region had conducted the 2020 Census Round as of 2023, with Tunisia, Djibouti and Morocco conducting theirs in 2024. Iraq, Somalia and Libya have postponed their censuses initially planned for 2024, with only Iraq potentially conducting the census within the first half of 2025. There are no plans for a census in a set of four countries with complex crises and outdated census data – Lebanon (last census 1932), Syria (2004), Yemen (2004) and Sudan (2008).

The UNFPA Arab States Regional Office together with the United Nations Economic and Social Commission for Western Asia (ESCWA) and the Arab Institute for Training and Research in Statistics (AITRS), developed in 2020, a *Guidance Note on Strengthening Geospatial Information Support to the Census in the Arab Region*¹. The guideline highlighted opportunities for the application of geospatial population estimation techniques where conventional population and housing censuses are impossible or where there are coverage concerns due to humanitarian crises and other factors. However, these methodologies have not been applied at scale to address data gaps or improve population data in the most affected countries in the region.

UNFPA has established a partnership with the University of Southampton's WorldPop Research Group to provide direct technical support to national statistical offices for the application of innovative geospatial modeling approaches for population estimation to fill population data gaps and inform census planning in complex settings such as some of those identified in the Arab region. Geospatial modeling approaches have been used to provide estimates of population numbers by sex, age and small area sub-national geographic units with associated confidence

¹ http://www.aitrs.org/sites/default/files/GIS_Guidance_EN_2020.pdf

intervals in a range of countries^{2,3}. Application of these approaches have included, for example, census independent population estimation in Nigeria⁴, complementing census with estimated populations in inaccessible areas in Burkina Faso⁵ and national population mapping across both government- and non-government-controlled areas in Afghanistan^{1,2}.

UNFPA and WorldPop in collaboration with ESCWA, League of Arab States, and AITRS plan to conduct a regional workshop on geospatial population estimation for senior leaders of national statistical offices (NSOs) and other key decision makers from selected countries that may have gaps in population data and uncertain prospects for a complete census: **1) Yemen; 2) Syria; 3) Lebanon; 4) Libya; 5) Sudan; 6) Somalia; 7) Iraq; and 8) Palestine.**

Training aim and objectives

The aim of the workshop is to provide an in-depth orientation to senior leaders of national statistical offices (NSOs) and other key decision makers on geospatial population estimation techniques and their potential contribution to population data systems with a view to getting buy-in for their implementation in the target countries.

The specific objectives of the workshop are to:

- a) Review the population data ecosystem and data gaps in each of the target countries.
- b) Provide an overview of geospatial population estimation techniques, their uses, strengths and limitations.
- c) Examine the availability and accessibility of input data required for geospatial population estimation (e.g. representative population surveys, household listing, urban structural listing, satellite images, health facility location survey, etc.) in each country's context.
- d) Share practical examples of the use of geospatial population estimation techniques to fill data gaps or aid in census planning and their applicability to each of the target countries.
- e) Identify technical support needs for the implementation of geospatial population estimation in each country's context.
- f) Outline a roadmap or workplan for undertaking geospatial population estimation in each of the target countries, including requirements for national buy-in, data availability and accessibility, key stakeholders and their roles and responsibilities, funding, capacity building, and data use plans, among others.

The main outcome of the workshop will be an outline of a practical roadmap for the implementation of geospatial population estimation in each of the target countries. UNFPA ASRO, ESCWA and AITRS will develop a regional workplan for strengthening capacity in and rolling out geospatial population estimation drawing from the individual country plans.

² https://www.unfpa.org/sites/default/files/resource-pdf/Hybrid_Census_Brief_v9.pdf

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https://www.unfpa.org/sites/default/files/resource-pdf/Technical-Guidance-Note_Vaue_of_Modeled_Pop_Estimat es in Census FINAL.pdf

⁴ <https://www.pnas.org/content/pnas/early/2020/09/08/1913050117.full.pdf>

⁵ <https://wopr.worldpop.org/download/253>

Target participants

National Statistical Organizations (NSO) and other key ministries: Senior officials and statisticians from NSOs in each of the target countries. Up to three senior staff from NSO and other key ministries with direct responsibility for population data and statistics will be invited from each of the target countries. The targeted participants are those in the following positions or their equivalents in each of the target countries: **1) Statistician General or Deputy; 2) Director of Population and Social Statistics; and 3) Director of Geographical Information Systems (GIS).**

UNFPA: 1) Country Office Population and Development Focal Points from the selected countries to facilitate follow-up actions from the training; and 2) UNFPA Regional Population and Development Advisor and Specialist.

Regional population data partners: Up to two technical persons each from ESCWA, LAS and AITRS.

WorldPop at the University of Southampton will conduct the training workshop. AITRS will handle logistical arrangements for the workshop, including translation. AITRS will coordinate with ESCWA the invitation of and follow-up with NSOs for the training workshop.

Agenda (Provisional)

Preparation before the training: Each NSO team will be required to prepare a detailed presentation on the population data ecosystem and data gaps in their country to be shared at the training workshop by one of the country team members. WorldPop in coordination with UNFPA and AITRS will provide a presentation template.

Day 1: Country-specific data ecosystem and potential role of geospatial population estimation in addressing data gaps

Time	Session to cover:	Presenter/facilitator
8:00 – 8:30	Registration and set up	LAS, UNFPA
8:30 – 8:45	Session 1 (Opening): Welcome and opening remarks	-LAS -UNFPA -ESCWA -AITRS -WorldPop, University of Southampton
8:45 – 9:00	Session 2: Introductions, background and objectives of the training workshop and expected outcome	UNFPA
09:00 - 9:15	Session 3: Censuses in the Arab World	League of Arab States (LAS)
09:15 - 09:45	Session 4: The state of statistical survey, census and geospatial information infrastructure in Arab states	ESCWA
9:45 – 10:30	Session 5: Overview of WorldPop geospatial population estimation approaches	WorldPop
10:30 – 11:00	Break	
11:00 – 13:00	Session 6: Country-specific population data ecosystem and gaps (Yemen; Syria; Lebanon; Libya; Sudan)	NSOs
13:00 – 14:00	Lunch	
14:00– 15:30	Session 6 continued: Country-specific population data ecosystem and gaps – Somalia; Iraq and Palestine	NSOs
15:30 – 16:00	Break/End of Day 1	

Day 2: Practical examples of the use of geospatial population estimation techniques

Time	Session to cover:	Presenter/facilitator
8:30 – 9:00	Recap of/reflections on Day 1	UNFPA
9:00 - 9:30	Session 7: Recap and overview of small area population estimation techniques	WorldPop
9:30 – 10:30	Session 8: <i>Use Case 1:</i> Application of geospatial population estimation techniques for the disaggregation of large area estimates/projections to small area estimates	WorldPop
10:30 – 11:00	Break	
11:00 – 12:30	Session 9: <i>Use Case 2:</i> Application of geospatial population estimation techniques in cases where census data are lacking, incomplete or outdated	WorldPop
12:30– 13:30	Discussion	WorldPop
13:00 – 14:00	Lunch	
14:00 – 15:30	Session 10: Datasets: Population data, settlement, covariates	WorldPop
15:30 – 16:00	Break/End of Day 2	

Day 3: Hands-on exercises on concepts of geospatial population estimation techniques, uses of outputs and way forward

Time	Session to cover:	Presenter/facilitator
8:30 – 9:00	Recap of/reflections on Day 2	UNFPA; WorldPop
9:00 – 10:30	Session 11: Hands-on exercises on exploring and using the outputs of estimation techniques, presentations on example uses of population estimation technique outputs	WorldPop
10:30 – 11:00	Break	
11:00– 12:30	Session 12: Group work in country teams to outline country-specific plans/roadmaps for implementing geospatial population estimation	Country teams
12:30 - 13:00	Session 13: Presentation of roadmaps for implementing geospatial population estimation	Country teams
13:00 – 14:00	Lunch break	
14:00 – 15:00	Session 13 continued: Presentation of roadmaps for implementing geospatial population estimation	Country teams
15:00 – 15:30	Workshop closure and next steps	LAS/UNFPA/ESCWA/ AITRS/WorldPop
15:30 – 16:00	Break and departure	