





- In

# 1x1 Estimates and Projections

- NSO's demands for 1x1 official estimates
- Denominators for health and education (when coverage is close to 100% they are very sensitive to the denominators) (99.6 vs 99.9%)
- First done in Cuba in 2009
- Currently 10 countries have 1x1 projections
- PRODEX software

- Three main challenges...



# Challenge 1

- Law of small numbers, the more disaggregated the fewer observations.
- Specifically, 1x1 projections can be very sensitive.
- For example, when initially projecting 1x1 we have obtained negative population in some ages.



## Challenge 3

- How to deal with Census under-enumeration?
- PESs are the only solution?
- Countries may publish only adjusted Census results (imputation or weights for absents/refusals/cartography problems). Important to try to obtain non-adjusted data.
- Iterative process to verify whether corrections or adjustments make sense with the demographic reconciliation.



# Recommendations

- The real truth is unknown: do the best based on available information and demographic knowledge.
- Need to be consistent and have reproducible results that make sense.
- Important to consider the reproducibility of results in **NSOs** in developing countries. Pressure to understand, validate, reproduce UN results (and explain differences).
- Include fertility <15 and >50.

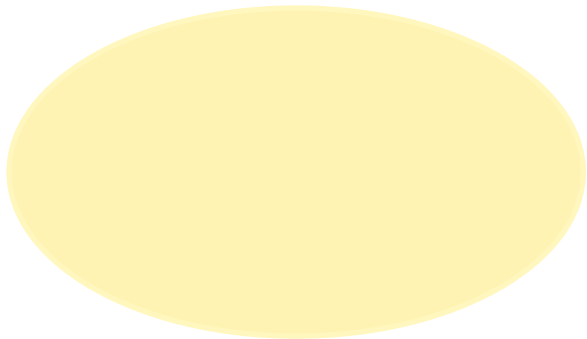
# Challenges in doing population estimates and projections in the LAC region

- The work of analyzing and evaluating data quality, demographic reconciliation, estimation and projections is **complex and requires high technical and analytical capacity** in demography.
- In LAC, the challenges in NSOs are related to the **high turnover of technicians**, job insecurity, work overload, and difficulties in retaining trained personnel.



Sinergias al interior de la propuesta entre

**Goal**





Thank you!