Can integrated statistical and geographical datasets provide insights on *migrants in transit-relevant municipalities* in Mexico?"

An ongoing process towards a proxy of SDG 10.7.3

UNECE. Group of Experts on Migration Statistics

Geneva, October 2022


https://www.dw.com/es/m%C3%A9xico-pide-a-honduras-contener-las-caravanas-migrantes/a-56252173
Our roadmap

1. Objective
2. Specifying data needs on "migrants in transit"
3. Defining and integrating data
4. Initial results and next steps
Objective

• To develop a proxy of SDG 10.7.3 “Number of people who died or disappeared in the process of migration towards an international destination” by
  • identifying migrant-relevant municipalities (geographic areas) of interest
  • processing vital statistics -deaths recorded by nationality
Specifying data needs on “migrants in transit”

- International references


- Develop methodologies to characterize specific populations related to international migration: social assistance shelters, border control offices, migration routes.
- Analyze the possibility of the use of new data sources for international mobility and or migration

2021. UNSD’s Updated SDG’s metadata

Indicator 10.7.3. Number of people who died or disappeared in the process of migration towards an international destination was identified.

2022. UNECE’s Use of new data sources for international migration

Database of Innovation in Migration Statistics (DIMIS) as a hub of references.

2021. Statistical and geographical activities for SDG disaggregation

Using available statistics to maximize disaggregation (geographical units, specific populations (indigenous, people with disabilities, afromexicans, “migrants”), sex and age group)
Understanding Indicator 10.7.3

International Organization for Migration (Berlin, Costa Rica & MX): Metadata (Scope, definitions, international methodology)

Approved within SNIEG’s WG on International Migration and Mobility

Identified key concepts, data sources and literature available
Defining and integrating data

- Identifying “High Value Datasets”

A. Official Statistics
B. Geographical information
C. Administrative records
Defining and integrating data
• Making partnerships and selecting variables

1. 2020. Population and Housing Census. Location of collective households, shelters and centers for migrant’s assistance and country of birth of “migrants” using these facilities.

2. Yearly. National Road Network. Key national transport corridors and railways (operating, out of operation and in construction).

3. Yearly. Statistics on events of “people” with undetermined migratory status identified by migratory authorities. (by nationality and municipality (NUTS 3).

4. Yearly. Points of detection. Location where Migration authorities found people under an irregular stay.
5. **Yearly. Administrative records on foreigners found death.**
   Depending on the situation, records may include sex, age, country of birth, (NUTS 3), **location** of death recorded.

6. **Yearly. Administrative records of official points of entry** (operating and out of operation).


8. **Yearly. Geostatistical catalogue.** NUTS 1, 2 and 3

9. **Airports** (excluding military) and **ports**

10. **Main rivers.** Defined by Ministry of the Environment.

11. **Desertic areas.** Defined by Ministry of the Environment.
Defining and integrating data

• Transforming variables

Who was using the migrant shelters?

- Characterize the populations (Native-born – Born-in-other-country)
- Proportion of Born-in-other-country by shelter
- 22% of the shelters did not have Born-in-other-country registered
- Selection of shelters when 3 of 10 were Born-in-other-country (123 out of 181)

Where are those shelters

- Deploying common “persistent unique identifiers” for shelters’ statistical data as a means of geocoding data into an integrated repository
Geocoding statistics of persons under irregular conditions

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total general</td>
<td>35210</td>
<td>18773</td>
<td>8143</td>
<td>6563</td>
<td>6439</td>
<td>5812</td>
<td>4717</td>
<td>4105</td>
<td>4040</td>
<td>3327</td>
<td>3193</td>
<td>3034</td>
<td>3001</td>
<td>2997</td>
<td>2946</td>
<td>2792</td>
<td>2521</td>
<td>2513</td>
<td>2501</td>
<td>2426</td>
</tr>
<tr>
<td>América</td>
<td>26791</td>
<td>18381</td>
<td>8135</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>América del Norte</td>
<td>20</td>
<td>10</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canadá</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estados Unidos</td>
<td>18</td>
<td>10</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>América Central</td>
<td>20596</td>
<td>17648</td>
<td>7927</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Belice</td>
<td>2</td>
<td>15</td>
<td>8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Costa Rica</td>
<td>5</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>El Salvador</td>
<td>2649</td>
<td>2671</td>
<td>374</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guatemala</td>
<td>7893</td>
<td>4993</td>
<td>776</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honduras</td>
<td>9221</td>
<td>9706</td>
<td>617</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nicaragua</td>
<td>514</td>
<td>261</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Panamá</td>
<td>12</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Islas del Caribe</td>
<td>5498</td>
<td>690</td>
<td>208</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cuba</td>
<td>2580</td>
<td>684</td>
<td>188</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dominicana, Rep.</td>
<td>12</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haití</td>
<td>2606</td>
<td>3</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jamaica</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>América del Sur</td>
<td>677</td>
<td>33</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argentina</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bolivia</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>343</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Geocoding admin record of detentions and railway tracks geospatial data by administrative units (NUTS 3)
National Road Network has georeferenced all airports but for its purposes they are not dissaggregated by type and we exclude the military ones.
• Integrating a harmonized and disaggregated geocoded by NUTS 3 database
- Defining variables to select migrant-relevant areas (NUTS3).

<table>
<thead>
<tr>
<th>With “high” migrant-presence</th>
<th>With “medium” migrant-presence</th>
<th>With “low” migrant-presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detentions</td>
<td>Entry points</td>
<td>Without matches</td>
</tr>
<tr>
<td>Records of dead migrants</td>
<td>Main transport corridors</td>
<td></td>
</tr>
<tr>
<td>Born-in-other-country shelters</td>
<td>Railway network</td>
<td></td>
</tr>
<tr>
<td>Events of persons on irregular conditions</td>
<td>Airports (international, national, local)</td>
<td></td>
</tr>
<tr>
<td>Border municipalities (North and South)</td>
<td>Border municipalities (West and East Coast)</td>
<td></td>
</tr>
<tr>
<td>Migrant routes</td>
<td>Ports</td>
<td></td>
</tr>
</tbody>
</table>
• Migrant-relevant areas (NUTS3). Initial results

<table>
<thead>
<tr>
<th>With “high” migrant-presence</th>
<th>With “medium” migrant-presence</th>
<th>With “low” migrant-presence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of municipalities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>367</td>
<td>802</td>
<td>1,302</td>
</tr>
</tbody>
</table>
- 183 Municipalities change from 2020 - 2021
- Ongoing validation
• Other potential uses

International mobility análisis

Defined geographic areas to provide services for temporary populations (accomodation, health)

Defined criteria to use non-traditional data source (web scraping, big data).
**Engaged team**

**INEGI (NSO)**

VP Socio Demographic Info
- Adriana Oropeza
- Naghielli Álvarez

 ministry of the Interior (SEGOB)
- Graciela Martínez Caballero

**INEGI (NSO)**

Research – Data Science Lab
- Alejandra Figueroa
- Elio Villaseñor
- Olinca Páez
- Víctor Cuevas
- Abel Coronado

**INEGI (NSO)**

Geographic Divison
- Trinidad Carrillo
- Violeta Zamora

**Ministry of the environment**
- Cleotilde Arellano