



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://cnnespanol.cnn.com/video/comentario-gabriela-frias-accidente-migrantes-chiapas-carretera-redaccion-mexico/>
<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**

1

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

2019 – 2022. ECLAC WG on international migration (IM) – National Statistical System assessment – UNSD –ECLAC– IOM

- 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, afroamericans, “migrants”), sex and age group)

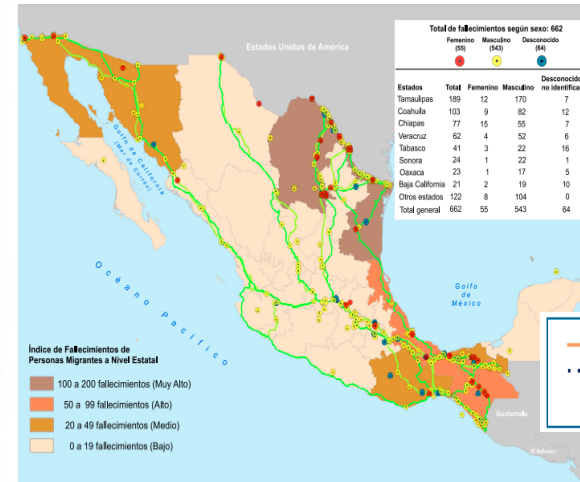
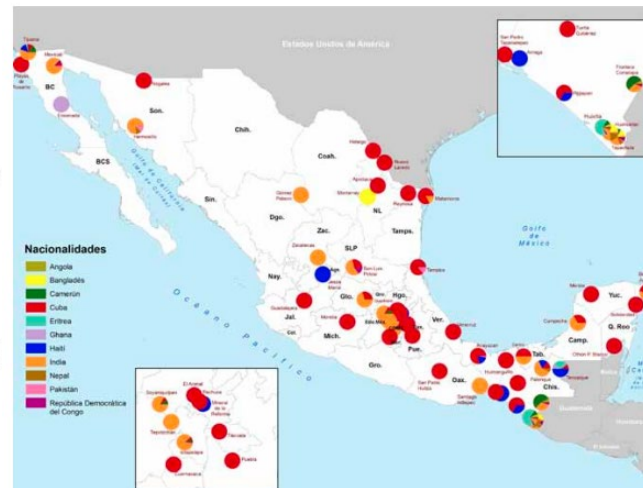
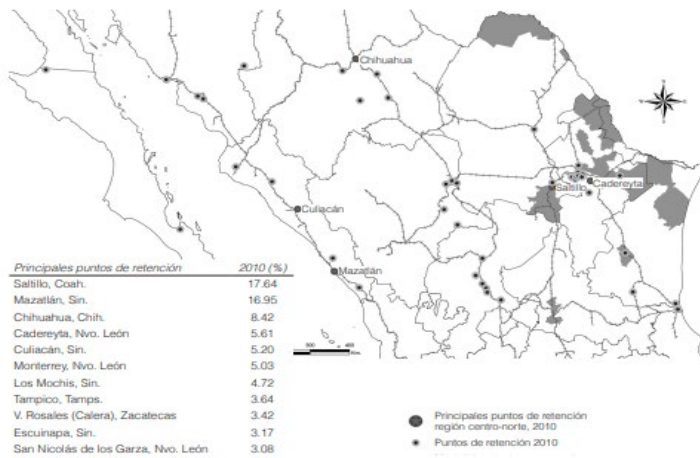
2

• Understanding Indicator 10.7.3

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

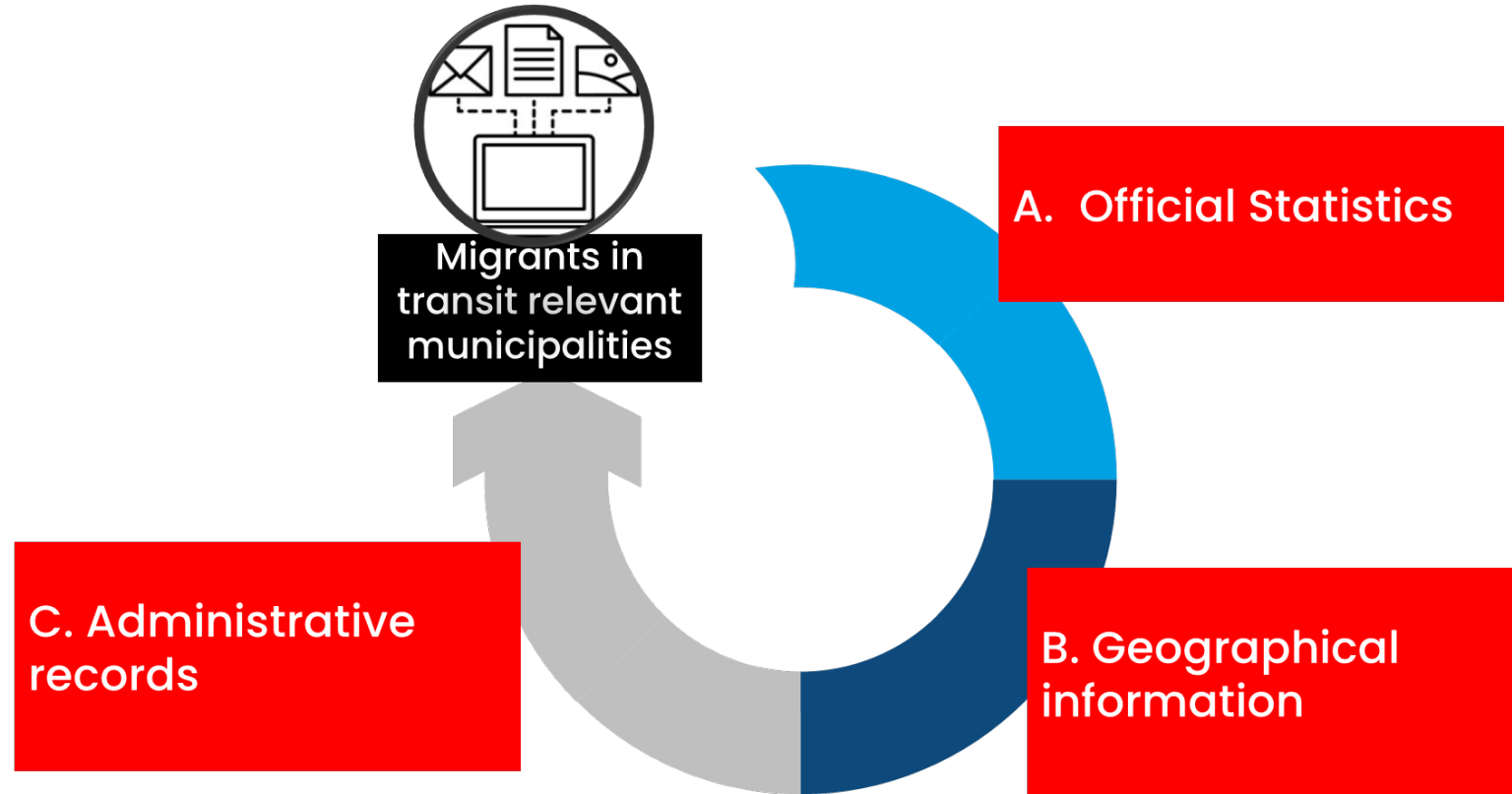
Approved within SNI-E-G's WG on International Migration and
Mobility

Identified key concepts, data sources and literature available



Defining and integrating data

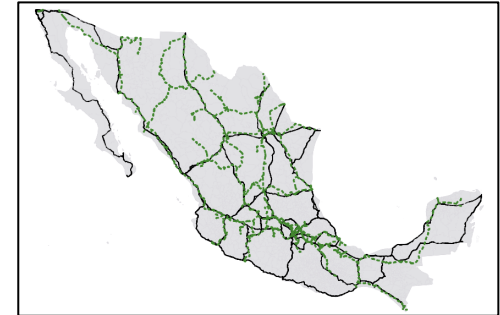
- Identifying “High Value Datasets”



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).

7. 2016–2017. Migratory routes . Reported in migrant survey (Guatemalan, Hondurans and Salvadorians “migrants”)

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

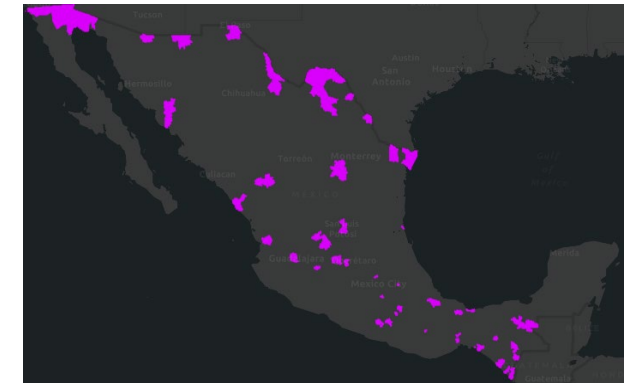
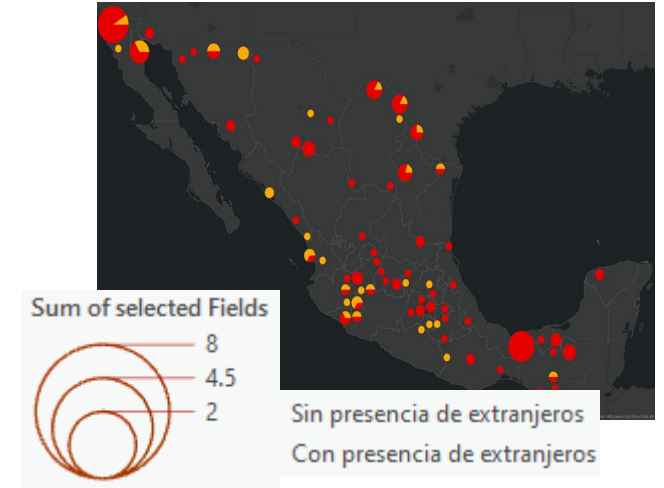
- Transforming variables

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

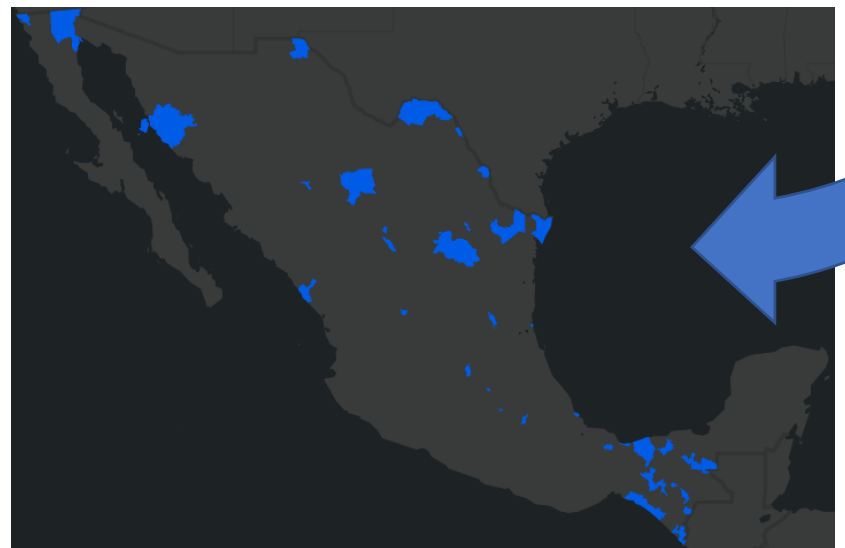
- Deploying common “persistent unique identifiers” for shelters’ statistical data as
a means of geocoding data into an integrated repository



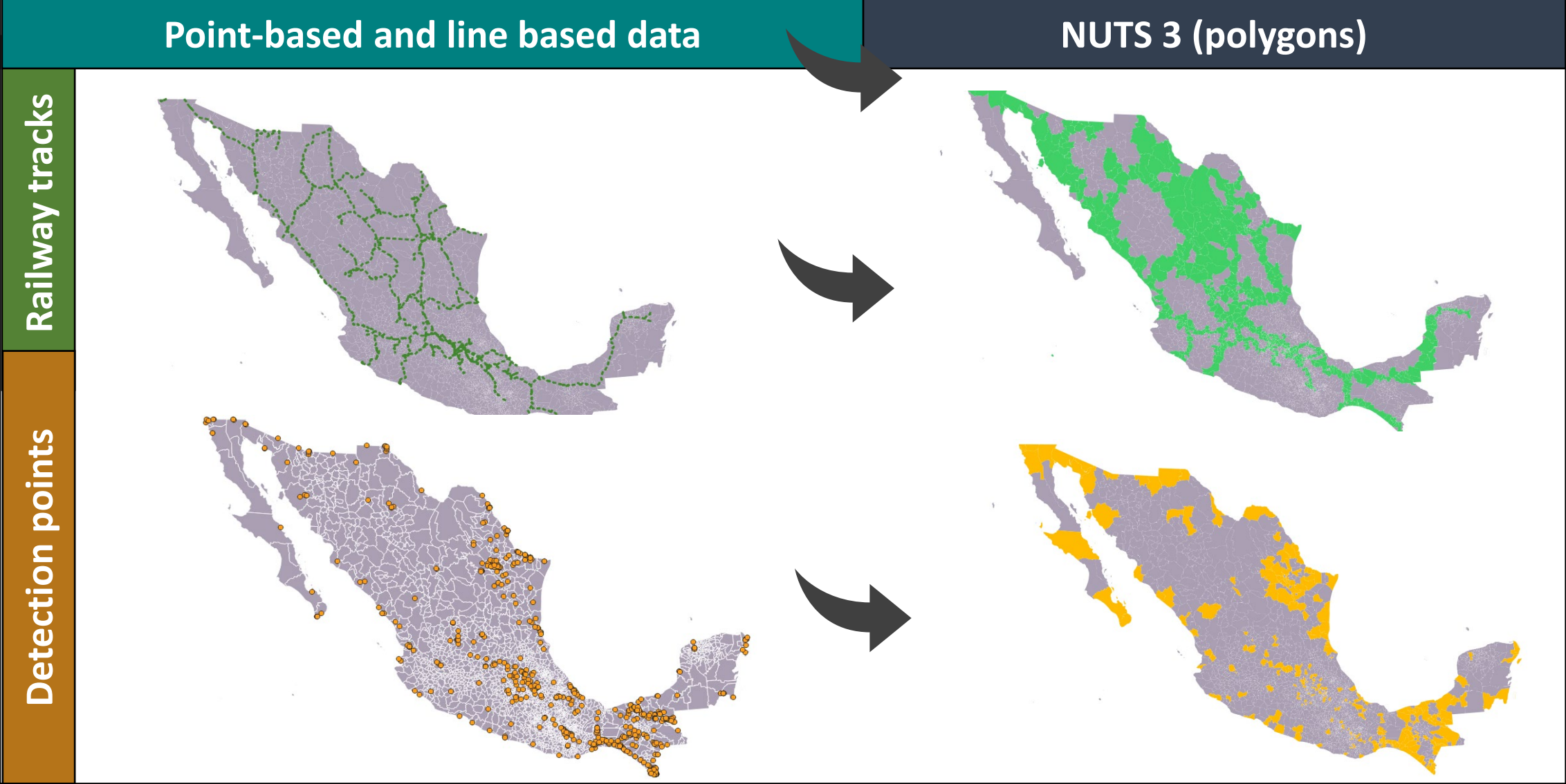
Geocoding statistics of persons under irregular conditions

Continentes/ país de Nacionalidad	Tapachula, Chis.	Acayucan, Ver.	• • •
Total general	35 308	18 773	8 143
América	26 791	18 381	8 135
América del Norte	20	10	5
Canadá	2	-	-
Estados Unidos ¹	18	10	5
América Central	20 596	17 648	7 927
Belice	2	16	8
Costa Rica	5	1	-
El Salvador	2 949	2 671	374
Guatemala	7 893	4 993	776
Honduras	9 221	9 706	6 678
Nicaragua	514	261	91
Panamá	12	-	-
Islas del Caribe	5 498	690	200
Cuba	2 580	684	186
Dominicana, Rep.	12	3	-
Haití	2 906	3	14
Jamaica	-	-	-
América del Sur	677	33	3
Argentina	3	2	-
Bolivia	2	-	-
• • •	343	2	-

Municipio	Total general
Tapachula, Chis.	35308
Acayucan, Veracruz	18773
Palenque, Chis.	8143
Reynosa, Tamps.	6563
Centro, Tab.	6439
Suchiate, Chis.	5812
Huimanguillo, Tab.	4717
Comitán de Domínguez	4121
Huixtla, Chis.	4105
Tuxtla Gutiérrez, Chis.	4040
Tenosique, Tab.	3327
Hermosillo, Son.	3193
Huehuetán, Chis.	3034
Piedras Negras, Coah.	3001
San Luis Potosí, S.L.P.	2997
Iztapalapa, CDMX.	2946
Puebla, Pue.	2792
San Pedro Tapanatepec	2521
Chiapa de Corzo, Chis.	2513
Tuxtla Chico, Chis.	2501
Saltillo, Coah.	2426

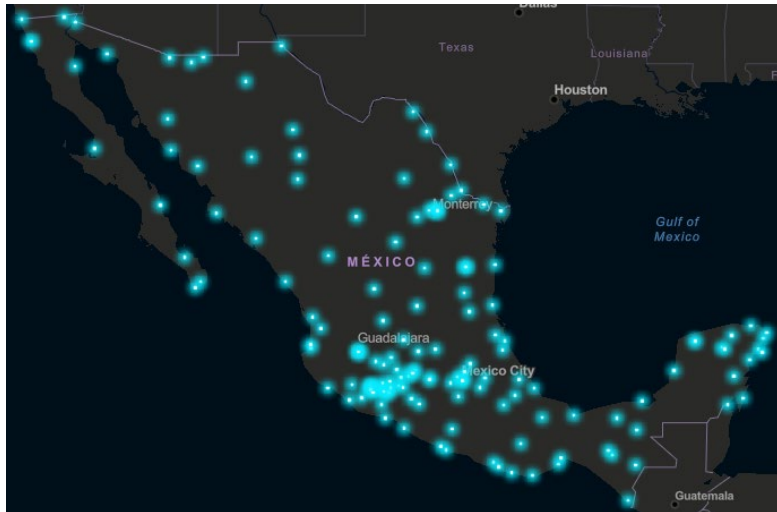


Geocoding admin record of detentions and railway tracks geospatial data by administrative units (NUTS 3)

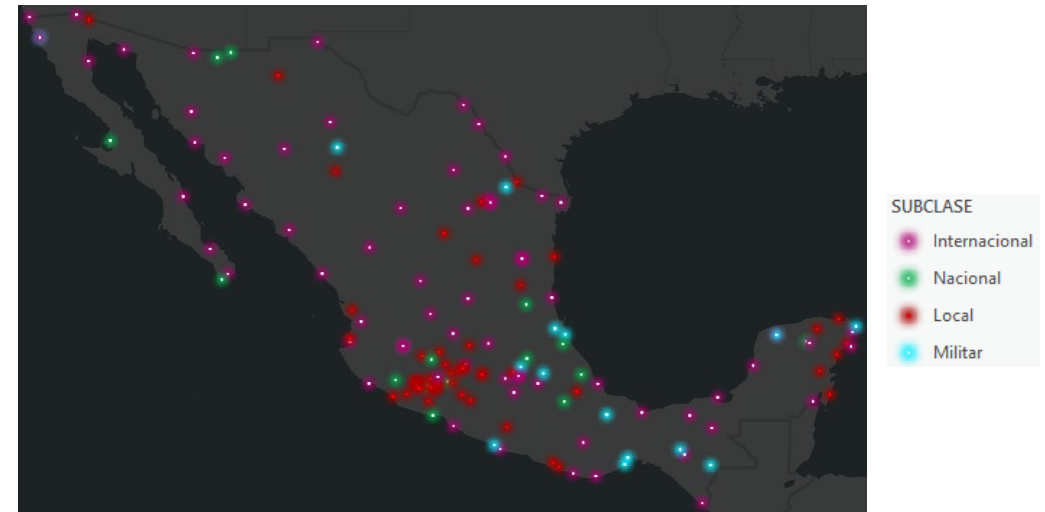


Dissaggregating by existing categories of operating infrastructure

Georeferenced airports



Georeferenced airports by type



National Road Network has georeferenced all airports but for its purposes they are not disaggregated by type and we exclude the military ones.

- Integrating a harmonized and disaggregated geocoded by NUTS 3 database

CVE_ENT	ENTIDAD	CVE_MUN	MUNICIPIO	EVENTOE_19	DECESOS_19	SIN_EXTRAN	CON_EXTRAN	MUN_BBVA	DETECC_20	DETECC_21	INTER_OP19	INTER_SO19	FERROV_OPE	FERROV_FU	FERROV_CON
03	Baja California Sur	003	La Paz	0	0	0	0	0	1	1	1	1	0	0	0
03	Baja California Sur	001	Comondú	0	0	0	0	0	0	0	1	0	0	0	0
03	Baja California Sur	008	Los Cabos	0	0	0	0	0	1	1	1	0	0	0	0
06	Colima	007	Manzanillo	0	0	0	0	0	1	1	1	1	1	0	1
07	Chiapas	089	Tapachula	1	0	0	1	1	1	1	1	0	1	0	0
04	Campeche	002	Campeche	0	0	0	0	0	1	1	0	1	1	0	0
02	Baja California	006	San Quintín	0	0	0	0	0	0	0	0	0	0	0	0
03	Baja California Sur	002	Mulegé	0	0	0	0	0	1	1	1	0	0	0	0
02	Baja California	005	Playas de Rosarito	0	0	0	0	0	1	1	0	0	0	0	0
02	Baja California	001	Ensenada	0	0	1	0	0	1	1	1	1	0	0	0
04	Campeche	003	Carmen	0	0	0	0	0	1	1	1	0	0	0	0
04	Campeche	012	Seybaplaya	0	0	0	0	0	0	0	1	0	0	0	0
03	Baja California Sur	009	Loreto	0	0	0	0	0	0	0	1	1	0	0	0
02	Baja California	007	San Felipe	0	0	0	0	0	0	0	0	0	0	0	0

- **Defining variables to select migrant-relevant areas (NUTS3).**

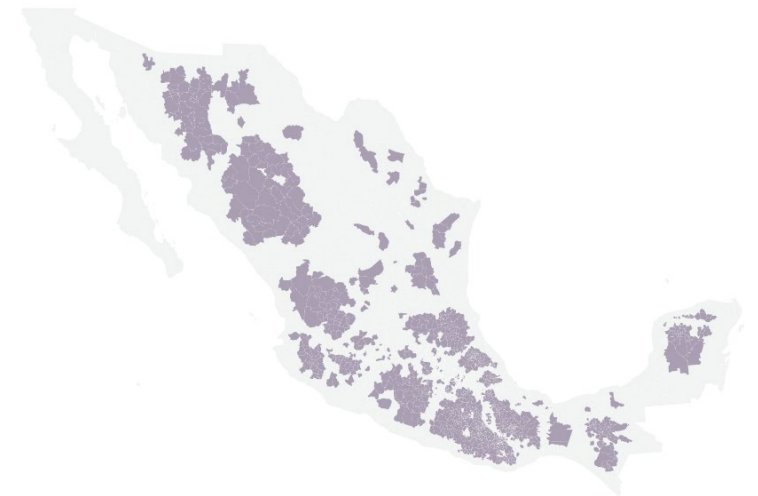
With “high” migrant-presence	With “medium” migrant-presence	With “low” migrant-presence
<ul style="list-style-type: none"> • Detentions • Records of dead migrants • Born-in-other-country - shelters • Events of persons on irregular conditions • Border municipalities (North and South) • Migrant routes 	<ul style="list-style-type: none"> • Entry points • Main transport corridors • Railway network • Airports (international, national, local) • Border municipalities (West and East Coast) • Ports 	<ul style="list-style-type: none"> • Without matches

- Migrant-relevant areas (NUTS3). Initial results

With “high” migrant-presence

With “medium” migrant-presence

With “low” migrant-presence



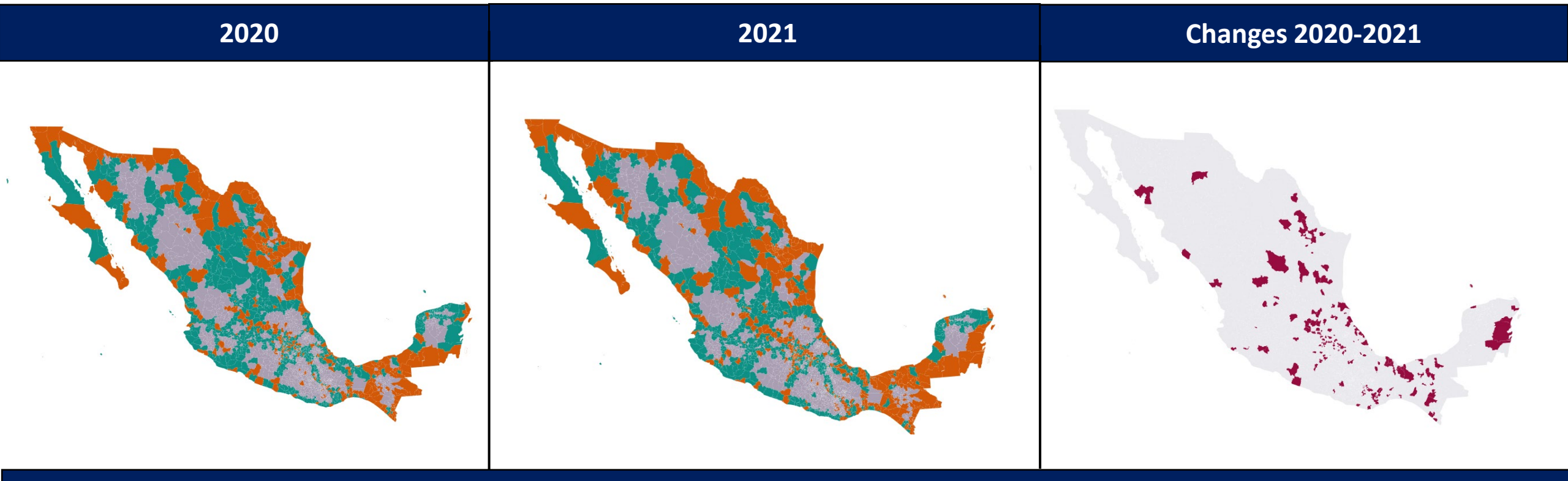
Number of municipalities

367

802

1,302

- **Migrant-relevant areas (NUTS3). Initial results by year**



- 183 Municipalities change from 2020 - 2021
- Ongoing validation

- **Other potential uses**



International mobility análisis

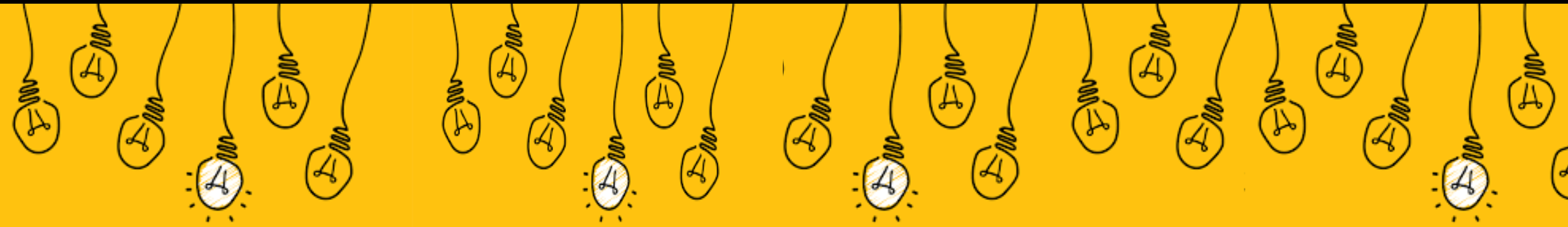


Defined geographic areas to provide services for temporary populations (accomodation, health)



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 Division

- Trinidad Carrillo
- Violeta Zamora

Ministry of the environment

- Cleotilde Arellano