Geospatial Information and the SDGs in Mexico: institutional perspectives on urban resilience

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  - National initiatives
  - International collaborations
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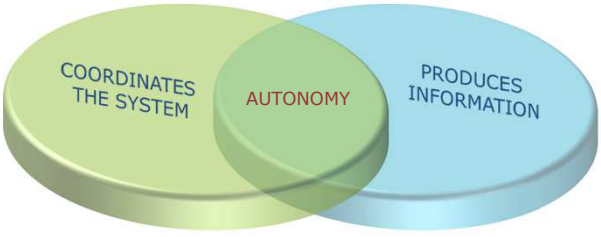
I. Mexico's institutional setting

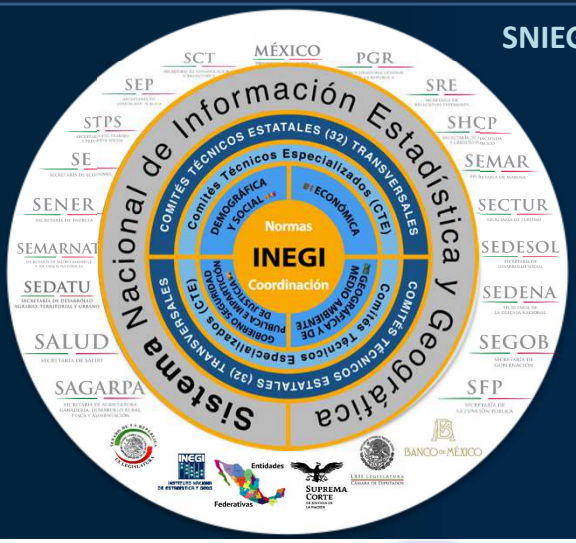
National Institute of Statistics and Geography INEGI

3 Key Elements

- Geospatial and Statistical Information in a single Institution since 1983
- Autonomous since 2008
- Coordinates National System of Statistical and Geographic Information (SNIEG)



National System of Statistical and Geographic Information



Information sub-systems

- Demographic & Social
- Economic
- Geographic & Environmental
- Government, Public Security & Justice

INEGI
INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA

Mexico's National Statistical and Geographical Information System

National System of Statistical and Geographical Information (SNIEG)
Information Subsystems

Specialized Technical Committees

Demographic and Social
12 Specialized Technical Committees

- **Sustainable Development Goals**
- Population Dynamics

Economic
11 Specialized Technical Committees

- National Accounts
- Tourism
- Industrial activity
- Transportation
- Infrastructure
- Science and Technology

SNIEG

- Federal Public Administration
- Supreme Court
- States and Municipalities
- Congress
- Central Bank
- Other autonomous bodies

Geographic and Environmental
8 Specialized Technical Committees

- Climate Change
- Energy
- Urban development
- Water
- Land degradation

Government, Public Security & Justice
6 Specialized Technical Committees

- Government
- Justice

National System of Statistical and Geographic Information (SNIEG)
Geographic and Environmental Information Subsystem (SNIGMA)

Specialized Technical Committees (CTEs)

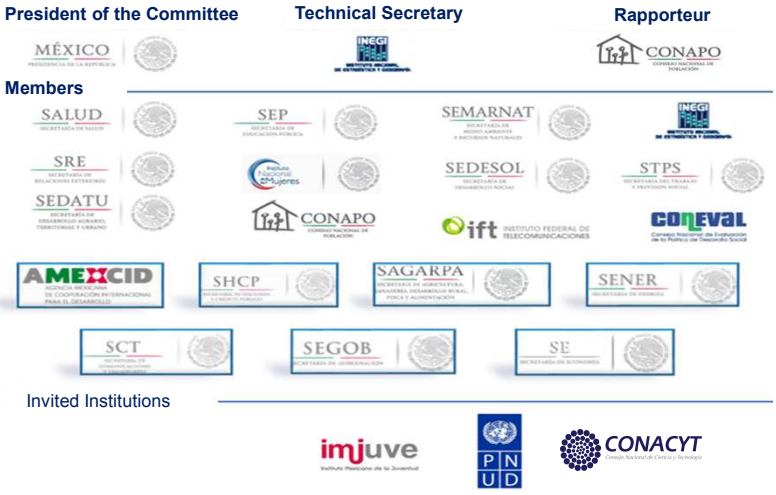
8 CTEs in SNIGMA

- Basic Geographic Information 9
- Cadaster and Regsitration 7
- Water 8
- Land Use, Vegetation and Forest Resources 7
- Emissions, Hazardous Waste and Substances 8
- Climate Change 7
- Energy 13
- Urban and Regional Development 17

Total State Units: 42
Ministries: 18
Other Agencies: 24

Lessons learned from monitoring the Millennium Development Goals

Technical Committee on MDG Indicators



Geographical coverage of the MDGs indicators

Total	National	By State	By State and Municipality	Urban and rural
80	**26**	**52**	**17**	**7**

UN agreed MDG indicators: 48

National adjustments

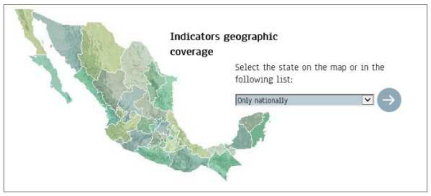
Beyond the MDGs: 22

Reformulated: 10

TOTAL FOR MEXICO: 80

A consolidated web platform for MDG monitoring

- Open Access
- Coordinated by INEGI
- Compiles information from all State agencies and institutions
- Data and metadata available
- Calendar for periodic updating
- Transparency in monitoring

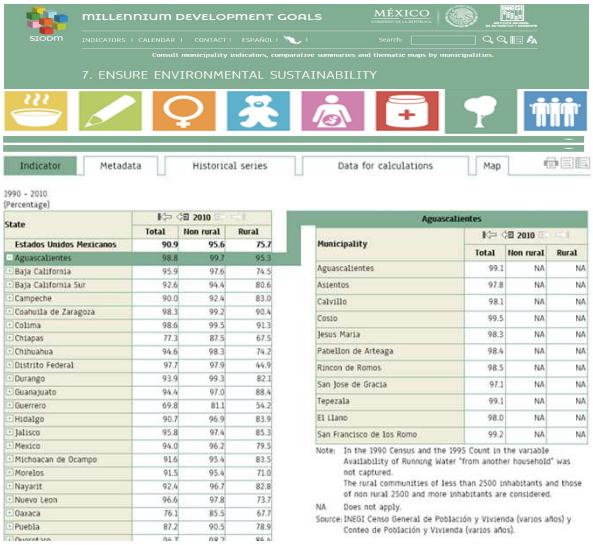


MDG 7
Ensure environmental sustainability

Target 7.C.
Halve, by 2015,
the proportion of people without sustainable access to safe drinking water and basic sanitation

Indicator 7.8.
Proportion of population with regular access to an improved drinking water source - Reformulated

Data at state and municipal levels for certain indicators

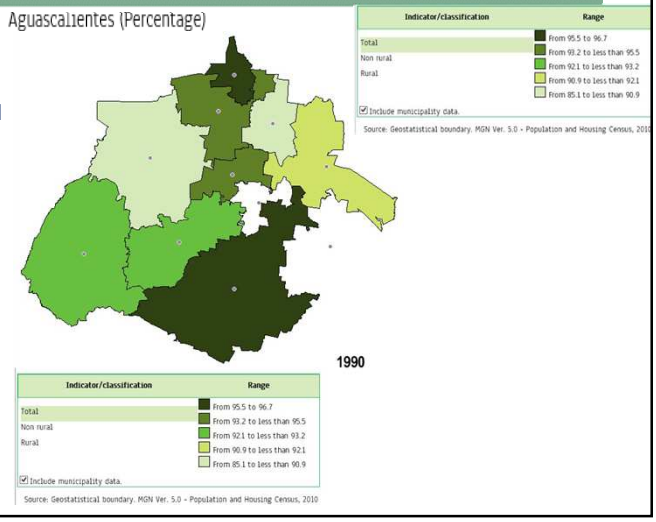


MDG 7. ENSURE ENVIRONMENTAL SUSTAINABILITY

Target 7.C. Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation

7.8. Proportion of population with regular access to an improved drinking water source - Reformulated

Example of geo-referenced data showing progress for MDG indicator 7.8 by municipality, over time



III. Agenda 2030 and the Sustainable Development Goals

National Implementation

National Reporting for Agenda 2030

- On July 2016, Mexico was among the first thirteen countries in the world to present a Voluntary National Review (VNR) of the Sustainable Development Goals, to the UN High Level Political Forum, at its Ministerial Segment
- The report emphasized plans to: modify existing national economic and development planning processes; engage different government departments and broader technical expertise; develop indicators and collect data; and ensure high-level leadership.

The National Council for Sustainable Development and Agenda 2030

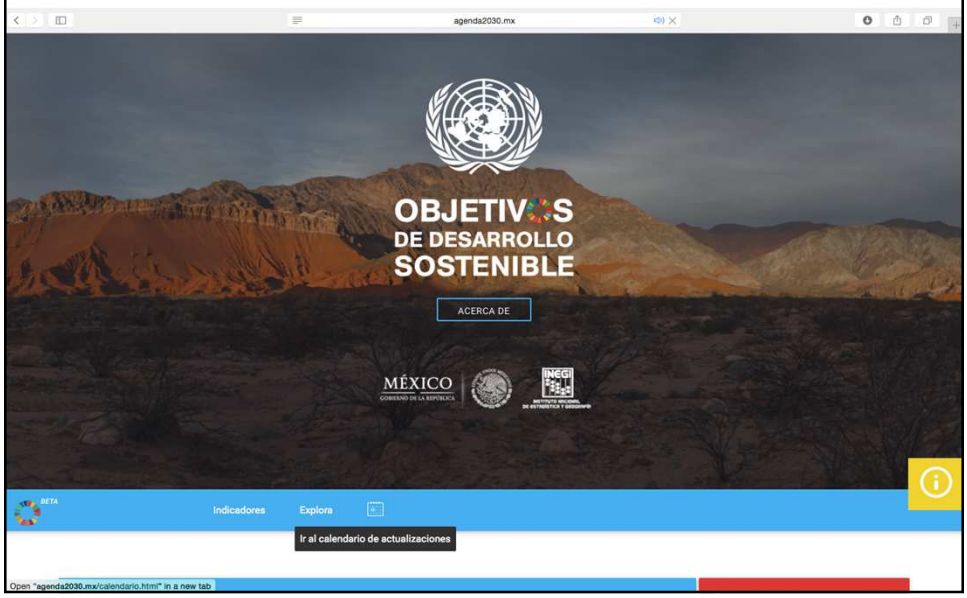
- Created by Executive Decree, and formally installed on April 26, 2017
- Conceived as a State-wide, **long-term commitment** at the highest level, transcending individual administrations
- Decree includes modifications to the ***National Development Planning Law***, as well as to the ***2018 national budget***, in order to include provisions for SDG implementation.

The National Council for Sustainable Development and Agenda 2030

- A cross-sectoral committee coordinated by the Office of the President
- It includes 18 line ministries, state and local governments, Congress, the private sector, academia and civil society;
- The Senate, and the National Conference of State Governors, have each installed Commissions and Working Groups for the follow-up of the SDGs
- Technical advice from INEGI and other autonomous institutions;
- Launch of the National Platform for SDG monitoring (**http://agenda2030.mx**)

National Online Platform for the SDGs

http://agenda2030.mx/



National Online Platform for the SDGs

25 SDG Indicators already under monitoring

1.1.1 Proportion of population below the international poverty line, by sex, age, employment status and geographical location (urban/rural)
1.2.1 Proportion of population living below the national poverty line, by sex and age
1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions
3.1.1 Maternal mortality ratio
3.1.2 Proportion of births attended by skilled health personnel
3.2.1 Under-five mortality rate
3.3.3 Malaria incidence per 1,000 population
3.7.1 Proportion of women of reproductive age (aged 15-49 years) who have their need for family planning satisfied with modern methods
3.7.2 Adolescent birth rate (aged 10-14 years; aged 15-19 years) per 1,000 women in that age group
6.3.1 Proportion of wastewater safely treated
8.2.1 Annual growth rate of real GDP per employed person
8.3.1 Proportion of informal employment in non-agriculture employment, by sex
8.7.1 Proportion and number of children aged 5-17 years engaged in child labour, by sex and age
8.8.1 Frequency rates of fatal and non-fatal occupational injuries, by sex and migrant status
9.2.2 Manufacturing employment as a proportion of total employment
9.4.1 CO2 emission per unit of value added
10.1 By 2030, progressively achieve and sustain income growth of the bottom 40 per cent of the population at a rate higher than the national average
14.5.1 Coverage of protected areas in relation to marine areas
15.1.1 Forest area as a proportion of total land area
15.1.2 Proportion of important sites for terrestrial and freshwater biodiversity that are covered by protected areas, by ecosystem type
15.5.1 Red List Index
16.1.1 Number of victims of intentional homicide per 100,000 population, by sex and age
17.10.1 Worldwide weighted tariff-average
17.11.1 Developing countries' and least developed countries' share of global exports

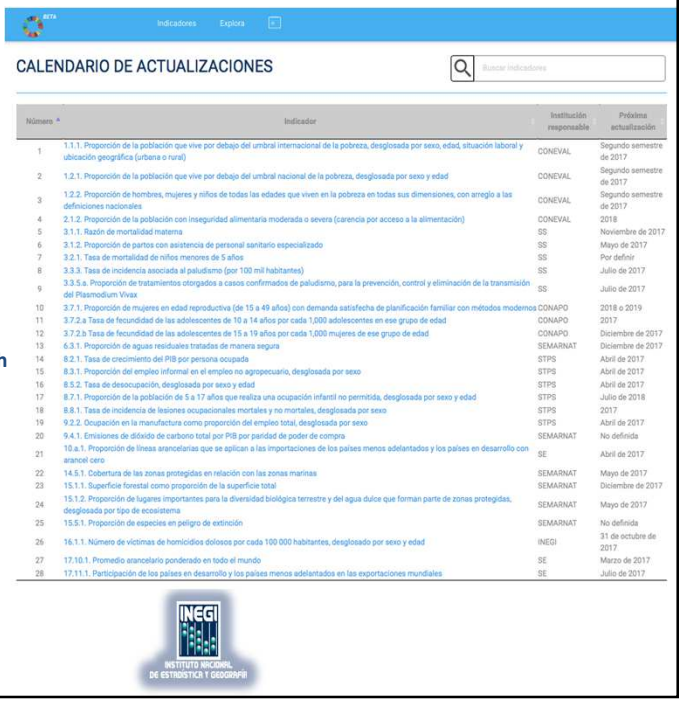
http://agenda2030.mx/

http://agenda2030.mx/

Platform includes a calendar outlining:

- Expected updates of National SDG indicators
- State unit/government agency in charge of each indicator

Additional indicators expected by mid-2018



Technical Committee on the SDGs

(transformed from the MDGs)

Charged with proposing, discussing and approving national SDG indicators

President of the Committee: MÉXICO

Technical Secretary: INEGI

Rapporteur: CONAPO

Members

- SALUD
- SEP
- SEMARNAT
- INEGI
- SRE
- Instituto Nacional de las Mujeres
- SEDESOL
- STPS
- SEDATU
- CONAPO
- ift Instituto Federal de Telecomunicaciones
- coneval
- AMEXCID
- SHCP
- SAGARPA
- SENER
- SCT
- SEGOB
- SE
- CONACYT

Observers

- imjuve
- PNUD

Current National SDG Indicator Status (by Tier)

Goal	Tier according to Mexico's statistical capacity*			
	Total	I	II	III
	232	94 (81)	51 (57)	81 (88)
1. No poverty	12	3	4	5
2. Zero hunger	13	5	4	4
3. Good health and well-being	25	17	4	4
4. Quality education	11	5	2	4
5. Gender equality	13	7	1	5
6. Clean water and sanitation	11	2	5	4
7. Affordable and clean energy	6	2	2	2
8. Decent work and economic growth	17	10	3	4
9. Industry, innovation and infrastructure	12	8	1	3
10. Reduced inequalities	11	4	2	5
11. Sustainable cities and communities	13	2	6	5
12. Responsible consumption and production	11	0	1	10
13. Climate action	3	0	0	3
14. Life below water	10	3	0	7
15. Life on land	12	4	3	5
16. Peace, justice and strong institutions	21	4	12	5
17. Partnerships for the goals	25	18	1	6

*** Numbers in parenthesis represent indicators currently in each tierwithin the global indicator framework**

National data and methodologies could allow for the measuring of more indicators than those currently in tier I, based on globally available data

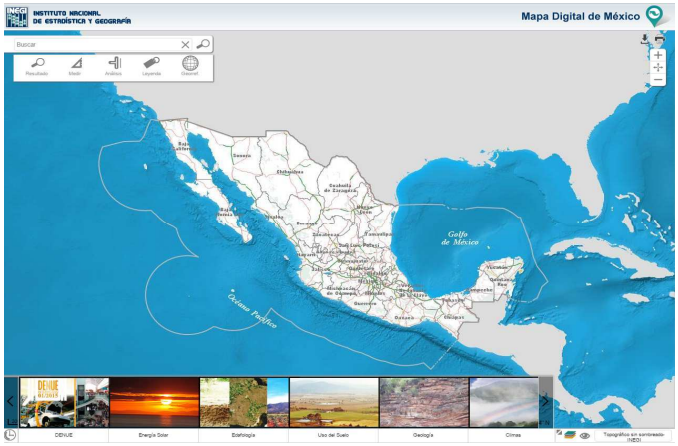
III. Mapping vulnerability and building resilience

- **The role of national geospatial information in urban settings**

Digital Map of Mexico

Open-source geomatic platfrom which allows the visualization and analysis of geographic and geo-referenced statistical information.

It contains 208 vector data layers, with more than 71 million geographic objects, and 4 raster layers covering the entire country.



Urban Cartographic database

Benefits

- Update of the national geostatistical framework
- Provides support for censuses and surveys
- Update of the National cartographic database
- Support for the activities of State Units
- Strengthens the Public Information Service

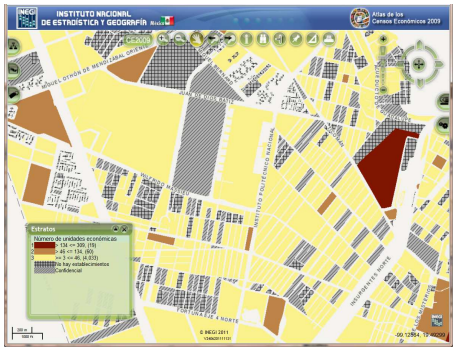
Information sources

- Administrative records
- Information from INEGI
- Satellite images and pictures

Updated every three years
2,234 localities – representing 80% of the country's population

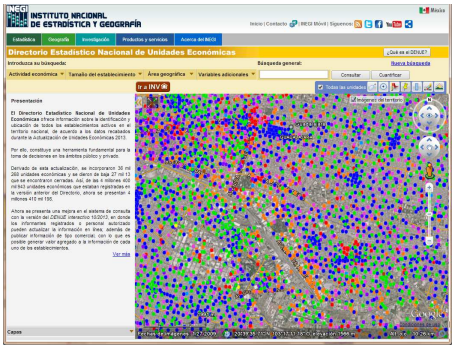
Economic Census Atlas

Total economic units by state

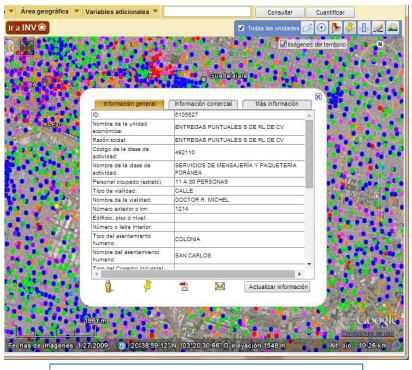


Total economic units by block (Mexico City´)

DENUE (Business Registry)



Economic units (Guadalajara city)



Data for a single economic unit

Gender Atlas

46 Gender-related indicators (geo-referenced)

10 main areas:

- General population
- Education
- Health
- Labor
- Decision making
- Use of time
- Poverty
- Entrepreneurship
- Violence
- % Indigenous population

http://gaia.inegi.org.mx/atlas_genero/

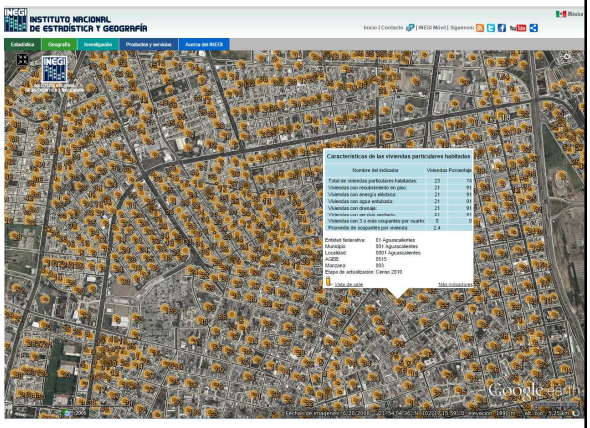
SDG preliminary indicators assessment

Based on INEGI's experience in integrating statistics and geospatial information, some SDG indicators are currently being spatially referenced, as follows:

Socio-economic Indicators

SDG 1 - No poverty

Indicator 1.4.1 **Proportion of the population living in households with access to basic services**



Source:
National Housing Inventory (geo-referenced)

Visualized within the Digital Map of Mexico

Socio-economic & gender-related indicators

Indicator	Geographic coverage	Source	Disaggregation
1. Percentage of population performing unpaid work 2. Average number of hours devoted to unpaid work • e.g. Domestic, care for children, elderly or disabled	National, states and municipality	Population census Economic census Inter-census surveys Gender Atlas	Age / age groups Gender Location Type of activity/care

$$PPTNR_s = \frac{100 * PTNR_s}{TP_s}$$

Linked to SDG indicators

5.4.1 Proportion of time spent on unpaid domestic and care work, by sex, age and location (tier II)

Gender-related Indicators

Indicator	Geographic coverage	Source	Disaggregation
1. Prevalence of violence (physical or sexual) against women • Total • Age-specific, childhood, throughout life	National, states and municipality	Population census Inter-census surveys Administrative records Gender Atlas	Age Gender Location Marital status

Linked to SDG indicators:

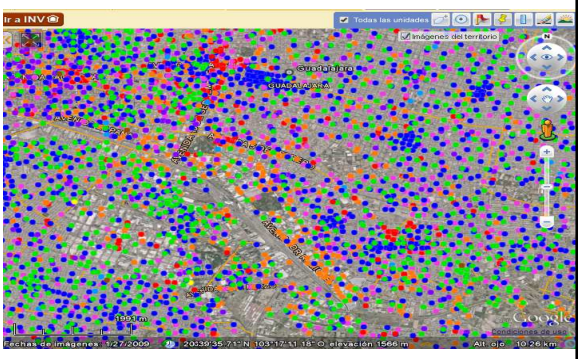
- ***5.2.1*** Proportion of ever-partnered women and girls aged 15 years and older subjected to physical, sexual or psychological violence by a current or former intimate partner in the previous 12 months, by form of violence and by age (tier II)
- ***5.2.2*** Proportion of women and girls aged 15 years and older subjected to sexual violence by persons other than an intimate partner in the previous 12 months, by age and place of occurrence (tier II)

Socio-economic Indicators

SDG 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Indicator 8.3.1 Share of informal employment in non-agriculture employment by gender

***Sources*:**
National Employment Survey
visualized within the Digital Map of Mexico



SDG 15. Life on land

Indicator 15.1.2 **Forest area as a percentage of total land area**

Indicator 15.2.1 **Progress towards sustainable forest management**

Source:
INEGI's Land Use and Vegetation Map Series Visualized in the Digital Map of Mexico (various scales available)

SDG 15. Life on land
Target 2: By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally

Indicator 15.2.2 **Net permanent forest loss**

Changes in tropical broadleaf evergreen forest can be estimated

Marqués de Comillas, Chiapas
Satellite images (from 2006 and 2013).

Government Indicators

Indicator	Geographic coverage	Source	Disaggregation	National Results	
				2013	2015
1. Percentage of the population aged 18 and over that victim of corruption *(Population aged 18 and over who were victims of corruption in at least one procedure, payment or service made personally / Population of 18 years and over who performed at least one procedure, payment or request for service personally with a public official) x 100*	National and by federal entity (states)	National Survey of Quality and Government Impact	Geo-referenced	12.1	12.6

These indicators measure experiences with acts of **corruption** in the interaction with **public officials**

SDG Indicator 16.5.1
Proportion of persons who had at least one contact with a public official, and who paid a bribe to a public official, or were asked for a bribe by those public officials, during the previous 12 months

Link to public policy:
National Anti-Corruption System

Government Indicators

Indicator	Geographic coverage	Source	Disaggregation	National Results	
				2013	2015
2. Percentage of population aged 18 and over satisfied with basic public services, by type of service. *(Population aged 18 and over who is satisfied with basic public services / Population aged 18 and over who live in urban areas of 100,000 people and more) x 100*	National by State	National Survey of Quality and Government Impact (ENCIG)	Garbage collection	67.3	61.0
			Drinking water	57.6	51.7
			Public parks and gardens	40.1	38.0
			Street lighting	35.3	33.0
			Streets and avenues	21.8	20.7

This indicator is associated with measuring **quality in the provision of basic public services** at the municipal level

SDG Indicator 16.6.2
Proportion of the population satisfied with their last experience of public services

Note: Based on the upcoming ENCIG results, a drainage and sewer service indicator will be included.

SNIEG Sistema Nacional de Información Estadística y Geográfica

Government Indicators

Indicator	Geographic coverage	Source	Disaggregation	National Results 2013	National Results 2015
3. Percentage of the population aged 18 and over satisfied with public educational services, by educational level *(Population of 18 years and over who uses the services of education that is satisfied with the service / Population of 18 years and more user of the education services) x 100*	**National** **by States**	**National Survey of Quality and Governmental Impact (ENCIG)**	**Compulsory public education** (Primary, secondary, high school)	**62.0**	**61.0**
			University public education	**79.3**	**78.0**

The indicator is associated with **quality in the provision of public educational services.**

SDG Indicator 16.6.2

Proportion of the population satisfied with their last experience of public services

Link to public policy:
Education Sector Programme 2013-2018

SNIEG Sistema Nacional de Información Estadística y Geográfica

Government Indicators

Indicator	Geographic coverage	Source	Disaggregation	National Results 2013	National Results 2015
4. Percentage of the population aged 18 and over satisfied with the electricity service. *(Population of 18 years and over that are users of the electric power service that is satisfied with the service / Population of 18 years and over users of the electric power service) x 100*	**National** **by States**	**National Survey of Quality and Governmental Impact (ENCIG)**	**No**	**78.3**	**73.5**

This indicator is associated with measuring the **quality of the electric power service**

SDG Indicator 16.6.2

Proportion of the population satisfied with their last experience of public services

Link to public policy:
- ✓ **National Development Plan 2013-2018.**
- ✓ **Program for Development of the National Electricity System 2016 - 2030**

Government Indicators

Indicator	Geographic coverage	Source	Disaggregation	National Results 2013	National Results 2015
5. Percentage of the population aged 18 and over satisfied with public health services, by type of provider. *(Population of 18 years and over users of health services who are satisfied with the services received / Population of 18 years and more users of health services) x 100*	National by States	National Survey of Quality and Governmental Impact (ENCIG)	State Health or Popular Insurance	54.9	47
			Institute of Social Security and Services for State Workers (ISSSTE)	56.8	41.6
			Mexican Social Security Institute (IMSS)	52.7	38.8

The indicator is associated with measuring **quality in the provision of public health services**

SDG Indicator 16.6.2
Proportion of the population satisfied with their last experience of public services

Link to public policy:
Health Sector Program 2013-2018

Socio-economic Indicators

SDG 9. Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation

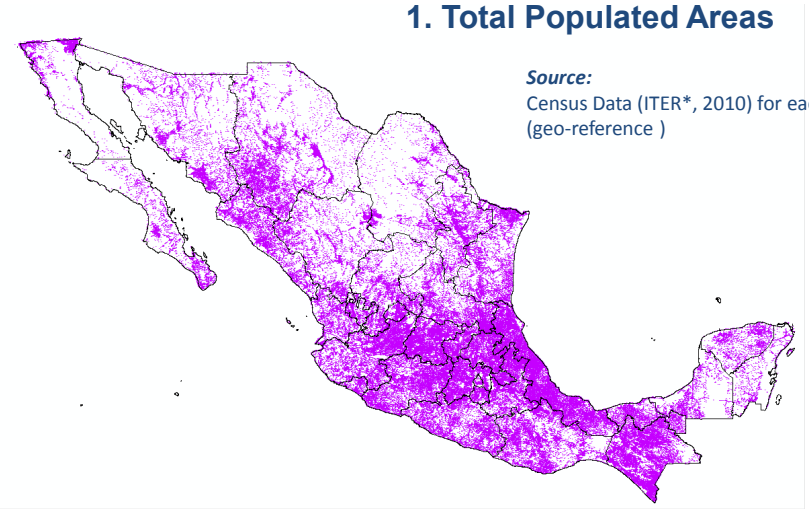
Indicator 9.1.1 **Proportion of the rural population who live within 2km of an all-season road**

Statistical data:
Census Data (ITER 2010) for each population center, with total population, and other census variables, and longitude, latitude for geospatial purposes (192,244 places). Select populated places with 2,500 and less inhabitants as rural.

Geospatial data:
National Topographic Data Set 1:50,000.
Transportation Layer.
Paved highways and gravel roads as all-season roads.

Calculation of indicator 9.1.1 using statistical and geospatial sources

1. Total Populated Areas

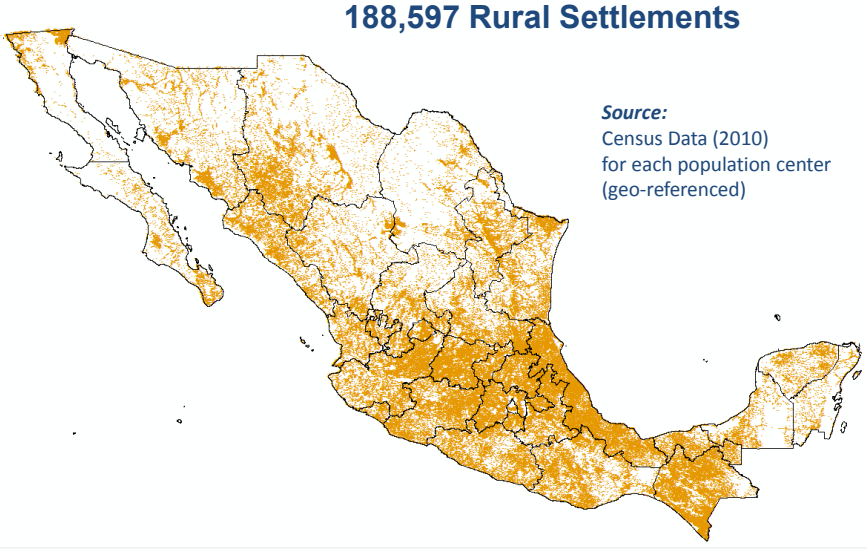


Source:
Census Data (ITER*, 2010) for each population ce
(geo-reference)

*ITER- National Territorial System

Calculation of indicator 9.1.1 using statistical and geospatial sources

188,597 Rural Settlements

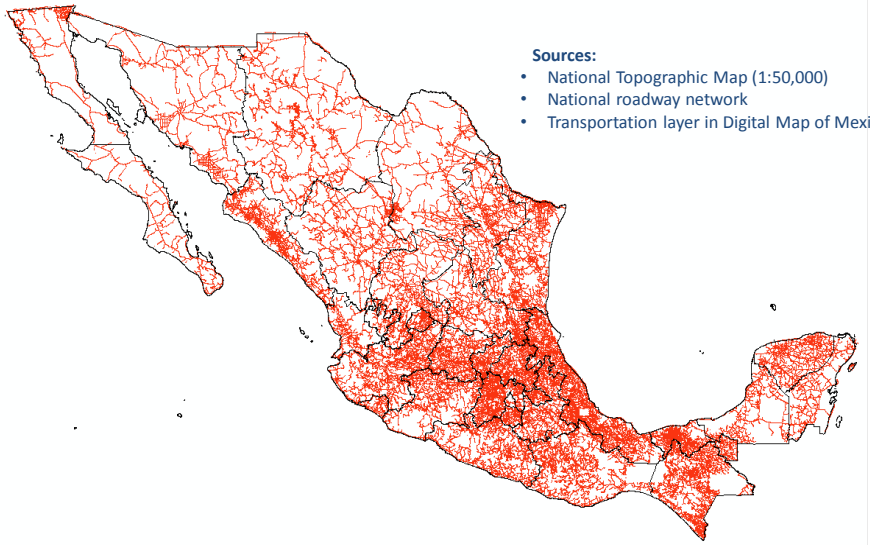


Source:
Census Data (2010)
for each population center
(geo-referenced)

Calculation of indicator 9.1.1 using statistical and geospatial sources

2. All-season roads

(paved highways and gravel roads)



Sources:

- National Topographic Map (1:50,000)
- National roadway network
- Transportation layer in Digital Map of Mexico

Calculation of indicator 9.1.1 using statistical and geospatial sources

3. Calculate a 2 km buffer around each road segment

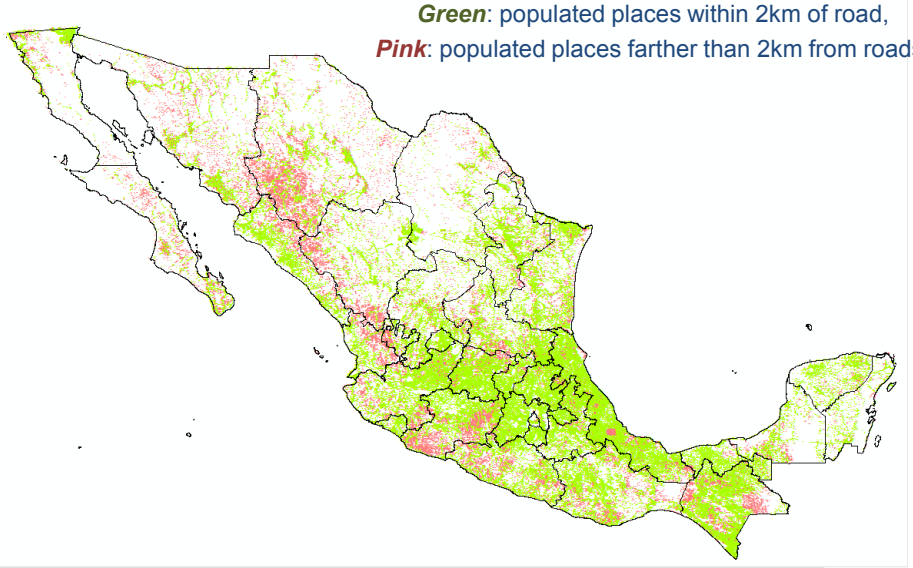
Calculation of indicator 9.1.1 using statistical and geospatial sources

4. Select rural populated places inside a 2 km buffer

Calculation of indicator 9.1.1 using statistical and geospatial sources

Results

Green: populated places within 2km of road,
Pink: populated places farther than 2km from roads.



Indicator 9.1.1

Proportion of the rural population living within 2km of an all-season road

Population, per class:

- within 2km,
- farther than 2km

Geographic disaggregation:

- National
- By state

Rural population within 2Km of an all season road (National, and State)

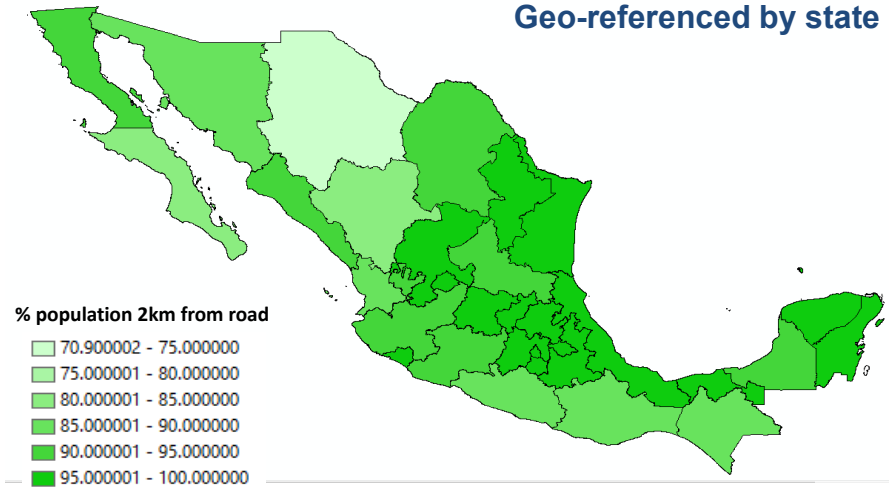
State	Rural population within 2km of road	Total Rural Population	Proportion (as %) of population within 2km of road
National	24,259,295	26,059,128	93.1
Aguascalientes	228,934	229,907	99.6
Baja California	219,355	243,196	90.2
Baja California Sur	73,469	88,308	83.2
Campeche	196,571	209,032	94.0
Coahuila	260,790	275,003	94.8
Colima	72,540	73,016	99.3
Chiapas	2,131,638	2,459,382	86.7
Chihuahua	366,551	517,269	70.9
Ciudad de México	40,687	40,687	100.0
Durango	427,687	508,499	84.1
Guanajuato	1,590,087	1,653,668	96.2
Guerrero	1,259,310	1,416,920	88.9
Hidalgo	1,247,993	1,273,778	98.0
Jalisco	926,187	985,248	94.0
México	1,956,414	1,976,017	99.0
Michoacán	1,246,190	1,362,688	91.5
Morelos	285,369	286,889	99.5
Nayarit	297,297	336,945	88.2
Nuevo León	239,483	247,333	96.8
Oaxaca	1,737,581	2,002,757	86.8
Puebla	1,563,986	1,633,943	95.7
Quérétaro	527,405	540,664	97.5
Quintana Roo	152,584	157,058	97.2
San Luis Potosí	872,814	935,008	93.3
Sinaloa	702,073	751,994	93.4
Sonora	320,686	372,252	86.1
Tabasco	943,984	954,075	98.9
Tamaulipas	386,563	398,945	96.9
Tlaxcala	232,159	235,696	98.5
Veracruz	2,866,657	2,976,060	96.3
Yucatán	310,569	312,821	99.3
Zacatecas	577,965	604,070	95.7

Calculation of indicator 9.1.1 using statistical and geospatial sources

Indicator 9.1.1

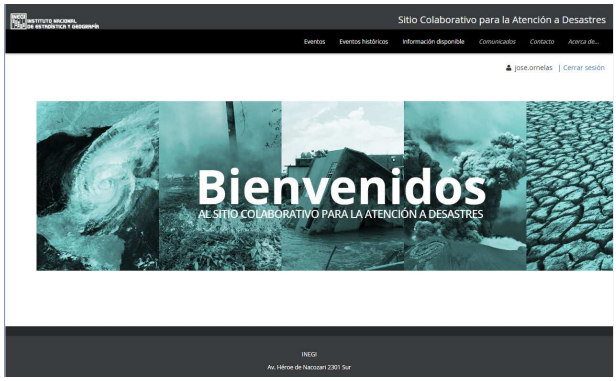
Proportion of the rural population who live within 2km of an all-season road

Geo-referenced by state



Collaborative platform for disaster preparedness

When disasters strike, or when they can be foreseen, **geospatial information becomes a critical asset** for actions that mitigate its effects. This information must be accessible, timely, inter-operable and of good quality, to offer the best response.



Collaborative platform for disaster preparedness

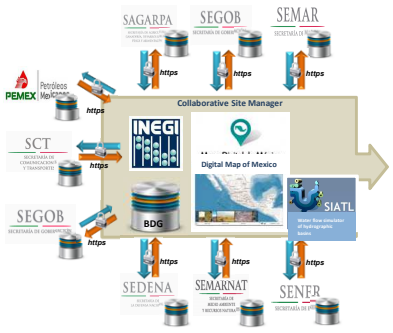
Multi-layer web platform

Input from/access to all relevant agencies

Combines layers on population, economic & environmental data

Includes satellite/radar imagery & real-time data

Data available prior, during and post-emergencies



Web Geo-services

- Discovery
- Viewing and Consultation
- Downloading
- Direct Access

Use of OGC Standars:

- WMS
- WCS
- WFS

Permanent base layers by emergency or event

geospatial information as a critical asset for disaster management

INEGI
INSTITUTO NACIONAL DE ESTADÍSTICA Y GEOGRAFÍA

SDGs related to Disasters

There are **25 targets** related to disaster risk reduction **in 10 of the 17 SDGs**, firmly establishing the role of disaster risk reduction as a core development strategy.

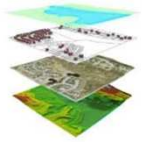
Alignment between Sendai targets and the SDGs

Five of the Sendai proposed indicators contribute to measuring four of the SDG targets (UNISDR):

- **SDG target 1.5** (By 2030 build the resilience of the poor and those in vulnerable situations, and reduce their exposure and vulnerability to climate-related extreme events and other economic, social and environmental shocks and disasters)
- **Sendai Target A:** 'Number of deaths, missing persons and persons affected by disaster per 100,000 people;' 'Direct disaster economic loss in relation to global GDP;' and 'Number of countries with national and local DRR strategies.'
- **SDG target 11.5** (By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global GDP caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations)
- **Sendai Target A:** 'Number of deaths, missing persons and persons affected by disaster per 100,000 people;' and 'Direct disaster economic loss in relation to global GDP, including disaster damage to critical infrastructure and disruption of basic services.'
- **SDG target 11.b** (By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for DRR, holistic disaster risk management at all levels)
- **Sendai Target E**: 'Number of countries with national and local disaster risk reduction strategies;' and 'Proportion of local governments that adopt and implement local DRR strategies in line with Sendai.';
- **SDG target 13.1** (Strengthen resilience and adaptive capacity to climate related hazards and natural disasters in all countries) is addressed by the
- **Sendai Target A:** 'Number of deaths, missing persons and persons affected by disaster per 100,000 people;' 'Number of countries with national and local DRR strategies;' and 'Proportion of local governments that adopt and implement local DRR strategies in line with Sendai.'

Sustainable Urban Development (SDG11) Climate Action (SDG13)

Collaborative Site for Disaster Attention



DENUE

Digital Map of Mexico

Technical Committee on Urban and territorial development

SDG Target 11.5 Disaster Preparedness

By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations

- **Indicator 11.5.1 -** Number of deaths, missing and persons affected by disaster per 100,000 people
- **Indicator 11.5.2 -** Direct disaster economic loss in relation to global GDP, including disaster damage to critical infrastructure and disruption of basic services
- **Indicator 13.1.2** Number of countries that adopt and implement national disaster risk reduction strategies in line with the Sendai Framework for Disaster Risk Reduction 2015-2030

IV. International collaborations

Participation in relevant international initiatives

IAEG-SDGs Inter-agency Expert Group on SDG Indicators
Working Group on Geospatial Information

- Inter-agency and Expert Group on SDG indicators (IAEG-SDGs)
  - *Working Group on Geospatial Information (WGGI)*
- UN-GGIM: Working Group on Geospatial Information and Services for Disasters
- UN-Habitat: City Prosperity Initiative (CPI)
- Group on Earth Observations (GEO): EO in support of Agenda 2030 (EO4SDGs)
- Task Force on Measuring Extreme Events and Disasters, coordinated by the UN Regional Economic Commission for Europe (UNECE);

CITY PROSPERITY INITIATIVE

ONU HABITAT

GROUP ON EARTH OBSERVATIONS

UN-GGIM
UNITED NATIONS INITIATIVE ON GLOBAL GEOSPATIAL INFORMATION MANAGEMENT

22-26 MAY, 2017 | CANCUN, MEXICO
2017 GLOBAL PLATFORM FOR DISASTER RISK REDUCTION
FROM COMMITMENT TO ACTION

Working Group on Geospatial Information

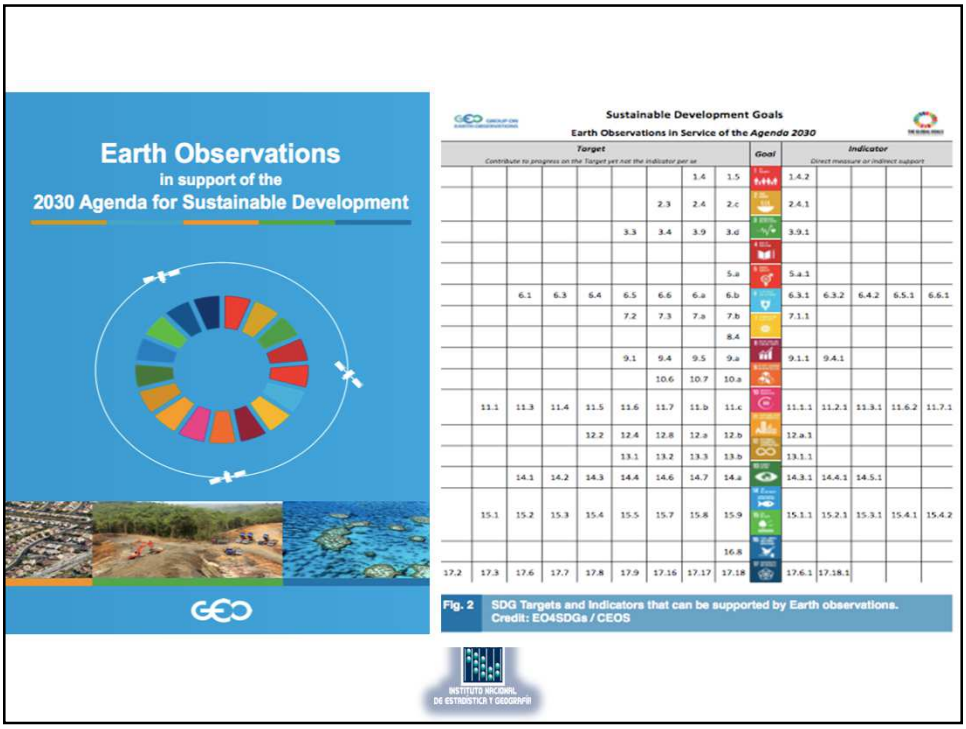
IAEG-SDGs
Inter-agency Expert Group on SDG Indicators

- Tasked with analyzing the SDG indicator framework "through a geospatial information" lens
- Composed of statistical & geospatial experts from 13 countries, UN-GGIM, GEO, OECD and other invited experts

Analysis from first WGGI meetings – Mexico City (Dec 2016) & Kunming (May 2017):

- Consensus around a short-list of 15 indicators where geospatial information together with statistical data can contribute directly to the production of the identified indicators
  - *Tier I* 9.c.1 14.5.1 15.1.1 15.1.2
  - *Tier II* 11.2.1 11.3.1 15.4.1
  - *Tier II* 2.4.1 6.3.2 6.5.2 6.6.1 9.1.1 11.7.1 14.2.1 15.3.1
- An additional short-list of 9 indicators where geospatial information can significantly support the production of these indicators
  - *Tier I* 1.1.1 (4.5.1)
  - *Tier II* 5.2.2 5.4.1 15.4.2 (4.5.1)
  - *Tier III* 1.4.2 5.a.1 5.a.2 11.7.2 (4.5.1)

UN-GGIM | United Nations Secretariat Global Geospatial Information Management
Positioning geospatial information to address global challenges
ggim.un.org


Earth Observations
in support of the
2030 Agenda for Sustainable Development
Sustainable Development Goals
Earth Observations in Service of the Agenda 2030
Target
Goal
Indicator
Fig. 2 SDG Targets and Indicators that can be supported by Earth observations.
Credit: EO4SDGs / CEOS

City Prosperity Initiative (CPI)
ONU HABITAT
POR UN MEJOR FUTURO URBANO
CITY PROSPERITY INITIATIVE
THE DIMENSIONS
Productivity
The productivity dimension measures the average achievements of the cities in terms of creating wealth and how it's shared, or cities contribution to economic growth and development, generation of income, provision of decent jobs and equal opportunities for all.
Infrastructure Development
The Infrastructure dimension measures the average achievement of the city in providing adequate infrastructure for accessing clean water, sanitation, good roads, and information and communication technology - in order to improve living standards and enhance productivity, mobility and connectivity.
Quality of Life
The quality of life dimension measures the cities' average achievement in ensuring general wellbeing and satisfaction of the citizens.
Equity and Social Inclusion
The Equity and Social inclusion dimension measures the cities' average achievements in ensuring equitable (re)distribution of the benefits of prosperity, reduces poverty and the incidence of slums, protects the rights of minority and vulnerable groups, enhances gender equality, and ensures equal participation in the social, economic, political and cultural spheres.
Environmental Sustainability
The Environmental Sustainability dimension measures the average achievement of the cities in ensuring the protection of the urban environment and its natural assets. This should be done simultaneously while ensuring growth, pursuing energy efficiency, reducing pressure on surrounding land and natural resources and reducing environmental losses through creative and environment-enhancing solutions.
Urban Governance and Legislation
The Urban Governance and Legislation dimension has the purpose of demonstrating the role of good urban governance in catalysing local action towards prosperity, including the capacity to regulate the urbanization process.

CPI in Mexico

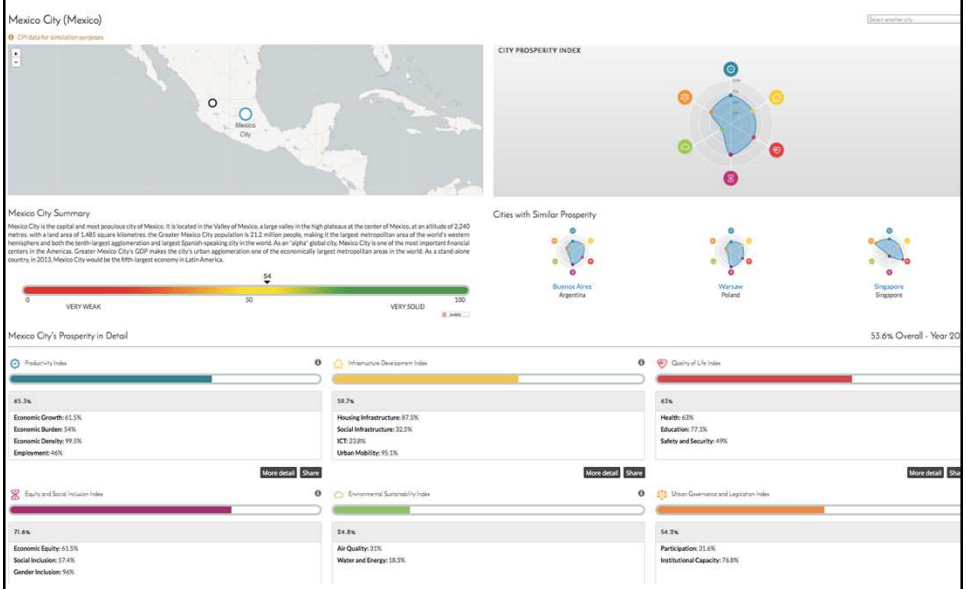
137 municipalities under monitoring

- The Mexican Housing Development Bank (INFONAVIT) and UN-Habitat committed to implement the Urban Prosperity Initiative in Mexico, calculating the **CPI for 137 municipalities and 16 delegations**.
- The CPI was used as a strategy to evaluate how the housing sector can impact on urban prosperity and contribute to design more integrated housing policies.
- Mexico is the country where **more urban diagnoses are made in the world**:
- 51.4% of total population and 69.70% of total urban population.

Monitor progress and undertake action for integrated urban policies:

- ***Better Infrastructure***, urban mobility and public spaces
- ***Improved Urban Services:*** enhanced pubic policies framework for better decision making.
- **Improved Data Monitoring:** for housing developers, urban planners and local authorities, for more compact, socially diverse and functional cities.

Example: CPI monitoring in Mexico City



General Law on Human Settlements, Land Use Planning and Urban Development

Aligned with UN-Habitat CPI standards and related SDGs

Proclaimed in November, 2016

Basic standards and management instruments to order the use of the territory, and human settlements in the country, with full respect for human rights.

All people have the right to live and enjoy cities:

- Sustainable
- Resilient
- Healthy
- Productive
- Equitable,
- Fair
- Including
- Democratic and secure

Through coordinated work between the federation, the states and municipalities.

As well as instruments of Planning:

- National Program for Territorial Planning and Urban Development
- National Development Plan
- National Planning Strategy

And of mechanisms of social surveillance composed by:

Neighbors, users, academic institutions, social organizations, professional colleges, institutes and observatories.

Conclusions

- Integration of Geospatial and Statistical information facilitates location & assessment of SDGs progress over time at all scales
- Geospatial information and disaggregation facilitates the monitoring of social, economic and environmental indicators to support, design and monitoring of public policies.
- Harmonization between SDG and Sendai indicators can be greatly enhanced by geospatial and EO information; this integration particularly applies to resilience-building in urban settings: