



Strengthening data management for sustainable development: Regional perspectives

Course/Workshop for Members of the Caribbean Project and the Americas

Earth Observations and Geospatial Information for the Monitoring of the Sustainable
Development Goals

New York, 30 July, 2018

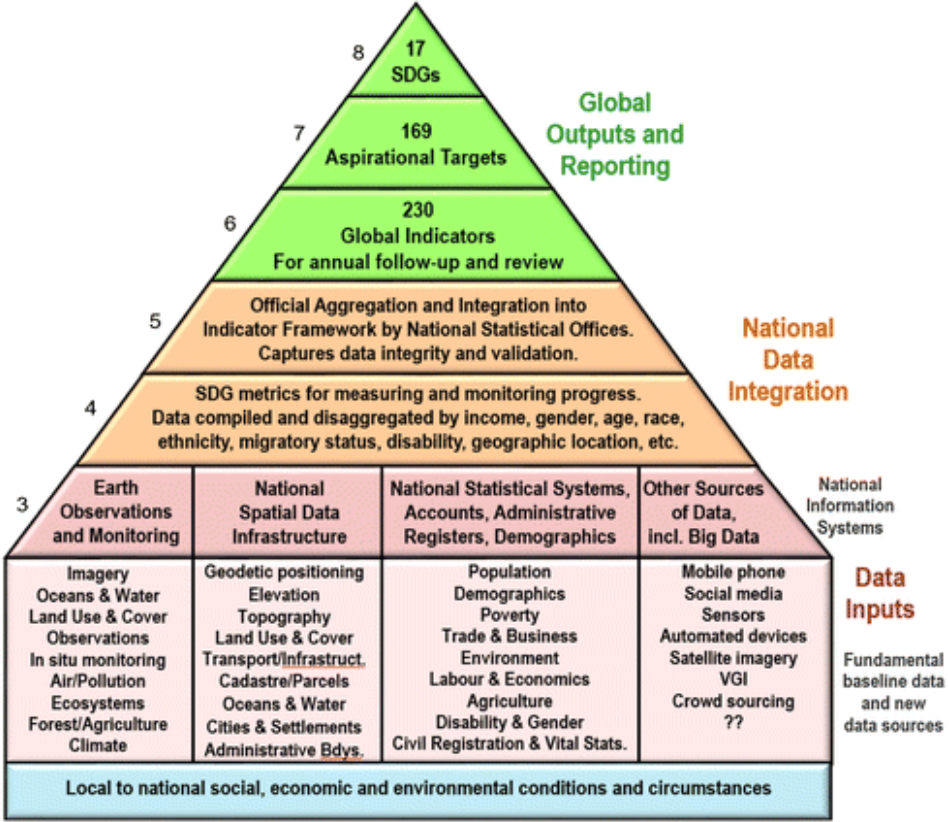


NACIONES UNIDAS
UNITED NATIONS



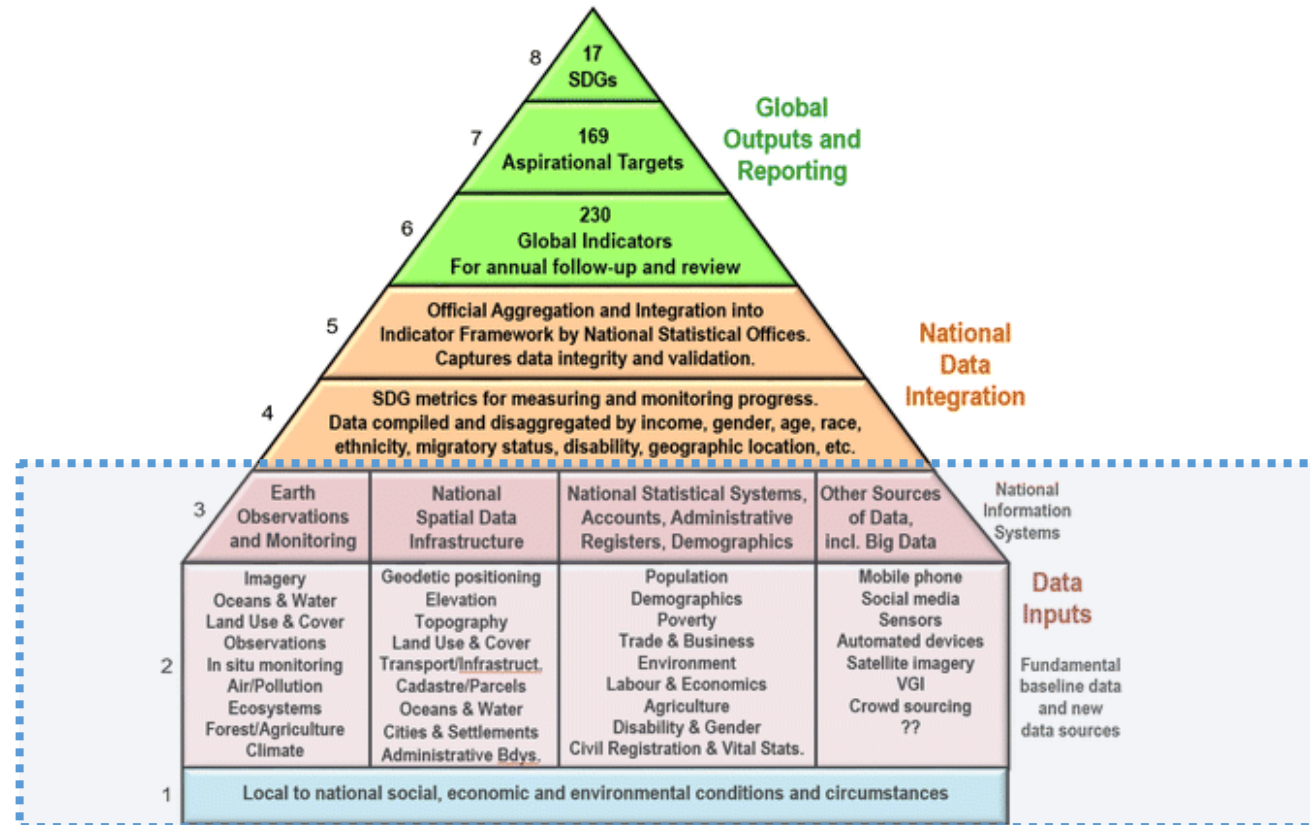
Economic Commission for Latin America and the Caribbean, Statistics Division

Tracking goals, targets and indicators of SDGs need an **integrative sustainable development ‘data flow’ framework** for national information systems.

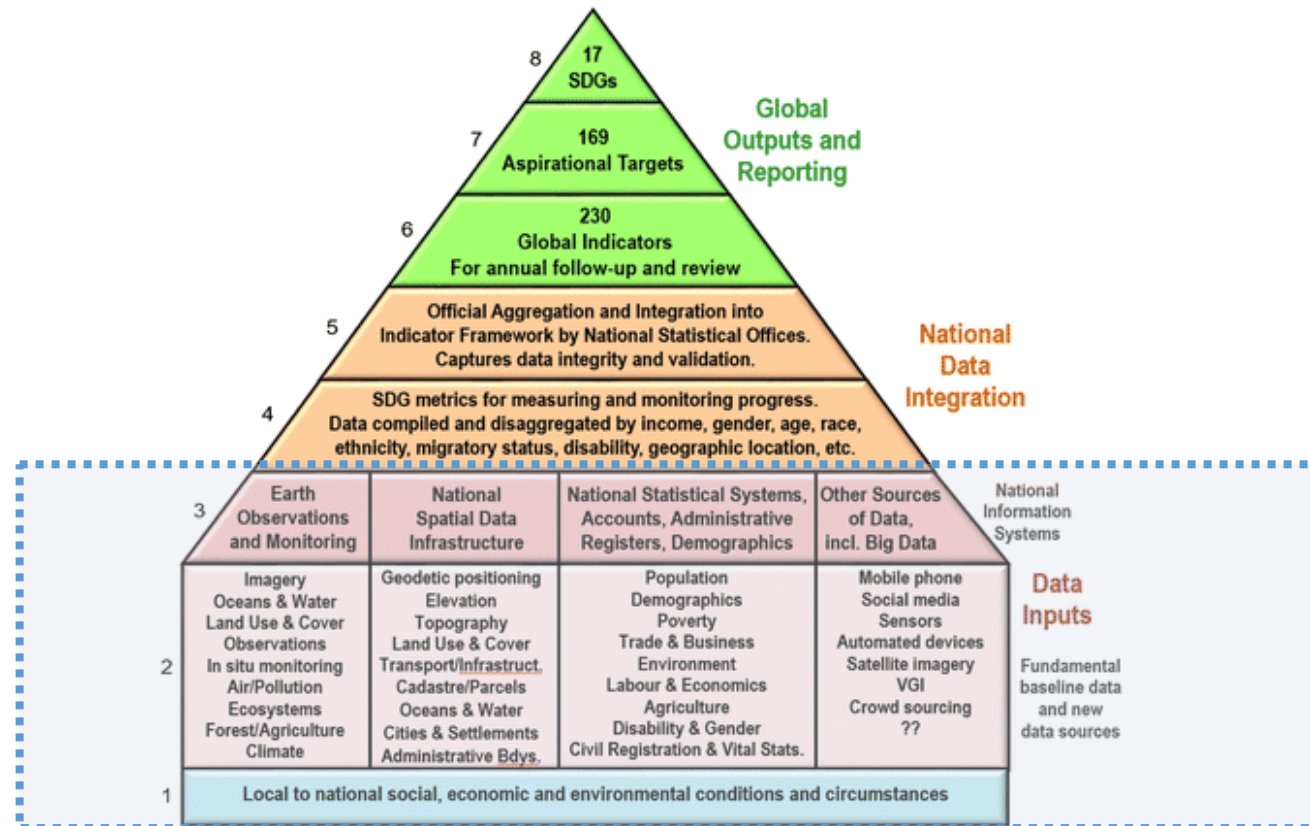


Scott, G. & Rajabifard, A. (2017): Sustainable development and geospatial information: a strategic framework for integrating a global policy agenda into national geospatial capabilities,

It comprises a **mix of national data** that provides the building blocks and processes for any given country to measure and monitor the SDGs .



How do we **contribute from the regional level** to improve data management and increase data availability in the national level, aiming at sustainable development goals?



How do we **contribute from the regional level** to improve data management and increase data availability and use in the national level, aiming at sustainable development goals?

**SOME RELEVANT
WORK LINES IN THE
AMERICAS**

- ✓ Supporting the establishment of national geospatial information frameworks
- ✓ Helping the integration of statistical and geospatial information
- ✓ Promoting the use of geospatial and Earth Observation information to support Agenda 2030 implementation

1. Supporting the establishment of national geospatial information frameworks

Bringing **global strategies** and frameworks closer to the **national geospatial policies** and SDI initiatives



ANNEX I: UN-GGIM Strategic Framework 2018 – 2022

CONTEXT	VISION	<i>Positioning geospatial information to effectively address global challenges</i>				
	MISSION	<i>Operating within agreed policies and institutional arrangements, and as an interconnected global community of practice, provide leadership to ensure that geospatial information and resources are coordinated, maintained, accessible, and able to be leveraged by Member States and society to find sustainable solutions for social, economic and environmental development</i>				
	MANDATED STRATEGIC OBJECTIVES	Provide leadership in setting the agenda for the development of global geospatial information and to promote its use to address key global challenges	Provide a forum for coordination and dialogue with and among Member States and relevant international organizations on enhanced cooperation	Provide a platform for the development of effective strategies to build and strengthen national capacity and capability concerning geospatial information, especially in developing countries	Propose work-plans, frameworks and guidelines to promote common principles, policies, methods, standards and mechanisms for the interoperability and use of geospatial data and services	Make joint decisions and set the direction for the production and use of geospatial information within and across national, regional and global policy frameworks

GLOBAL POLICY FRAMEWORK	Transforming our World: The 2030 Agenda for Sustainable Development					
	Sendai Framework for Disaster Risk Reduction 2015-	SIDS Accelerated Modalities of Action (SAMOA)	Addis Ababa Action Agenda	Paris Agreement on Climate Change	New Urban Agenda	Our Ocean, Our Future: Call for Action

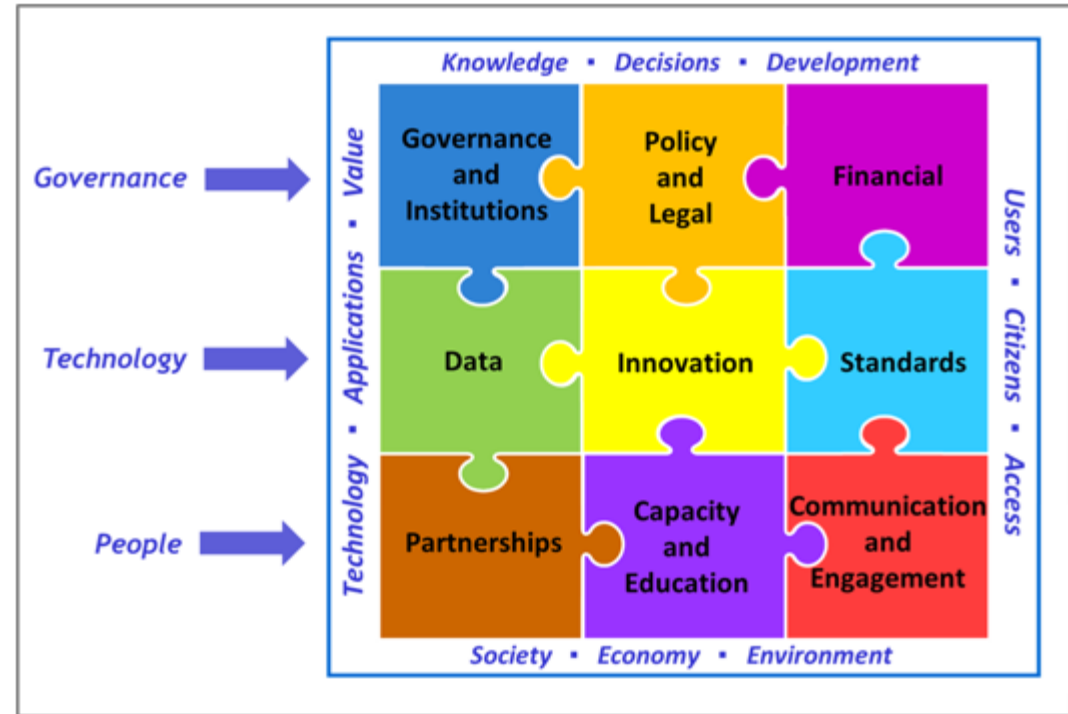
INTEGRATED GEOSPATIAL INFORMATION FRAMEWORK

A STRATEGIC GUIDE TO DEVELOP AND STRENGTHEN NATIONAL GEOSPATIAL INFORMATION MANAGEMENT

1. Supporting the establishment of national geospatial information frameworks

Assessing **national geospatial baseline components** in face to these emerging strategies and frameworks

CHALLENGING TASK TO CONTRIBUTE FROM THE REGIONAL LEVEL



Source: Integrated Geospatial Information Framework (Consultation Draft)

1. Supporting the establishment of national geospatial information frameworks

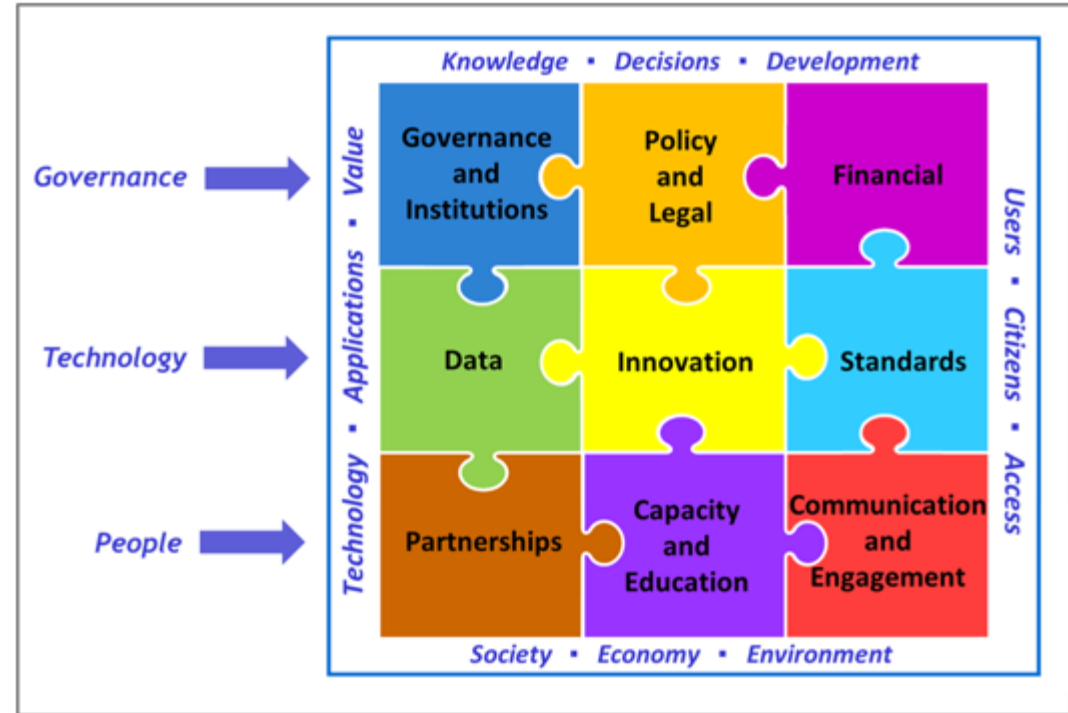
Exercise of assessment in the context of ECLAC technical assistance



GOVERNMENT
OF
GUYANA

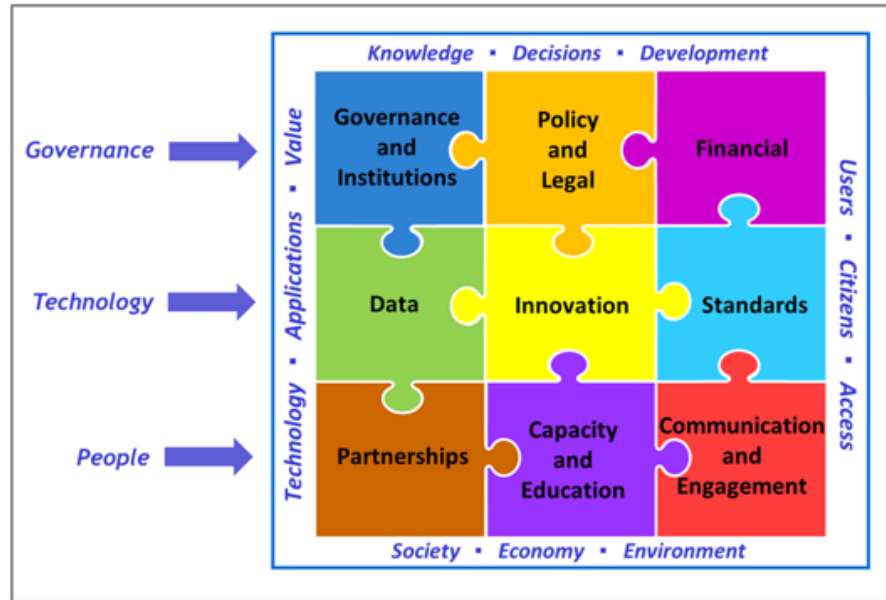
NATIONAL POLICY ON GEOGRAPHIC
INFORMATION

Source: Guyana Lands and Surveys Commission (GLSC)



Source: Integrated Geospatial Information Framework (Consultation Draft)

1. Supporting the establishment of national geospatial information frameworks



Source: Integrated Geospatial Information Framework (Consultation Draft)

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Source: Guyana Lands and Surveys Commission (GLSC)

1. Supporting the establishment of national geospatial information frameworks

Monitoring the progresses of the countries on national spatial data infrastructure components

TO BEST ADDRESS THE GAPS AND NEEDS EXISTING AT THE NATIONAL LEVEL

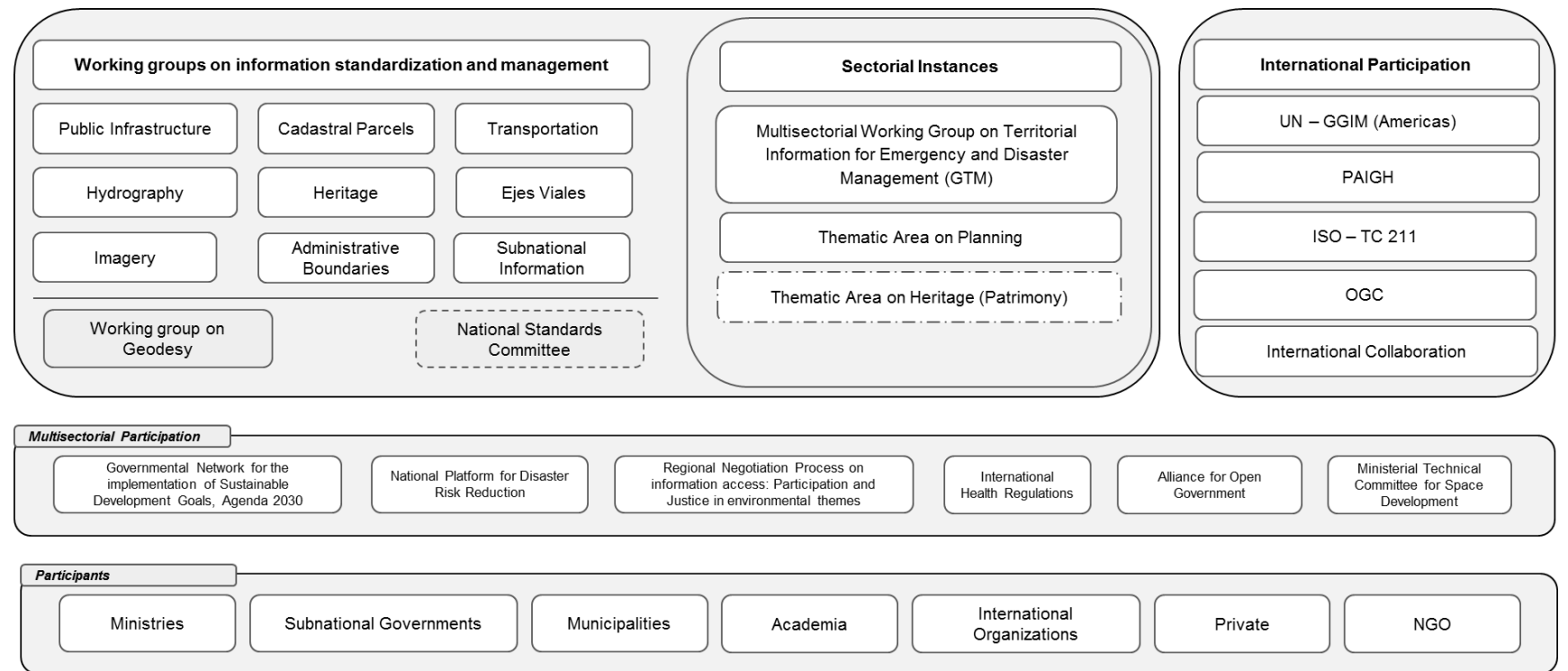
Survey of the United Nations Regional Committee on Global Geospatial Information Management for the Americas (UN-GGIM Americas)

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Try contacting the owner of the form if you think that this is a mistake.

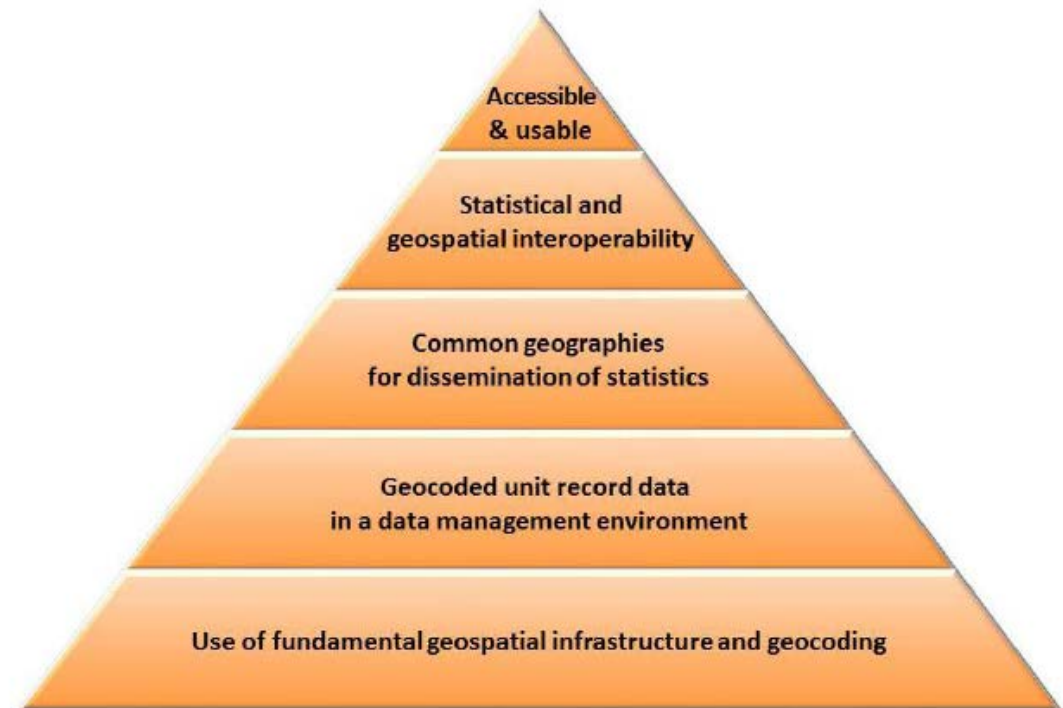
1. Supporting the establishment of national geospatial information frameworks

Promoting the **exchange of experiences** on how the countries are implementing their national geospatial frameworks



2. Helping the integration of statistical and geospatial information

Bringing **global strategies and frameworks** closer to the national statistical and geospatial communities



Global Geospatial Statistical Framework

2. Helping the integration of statistical and geospatial information

Developing regional projects to integrate statistical and geospatial information

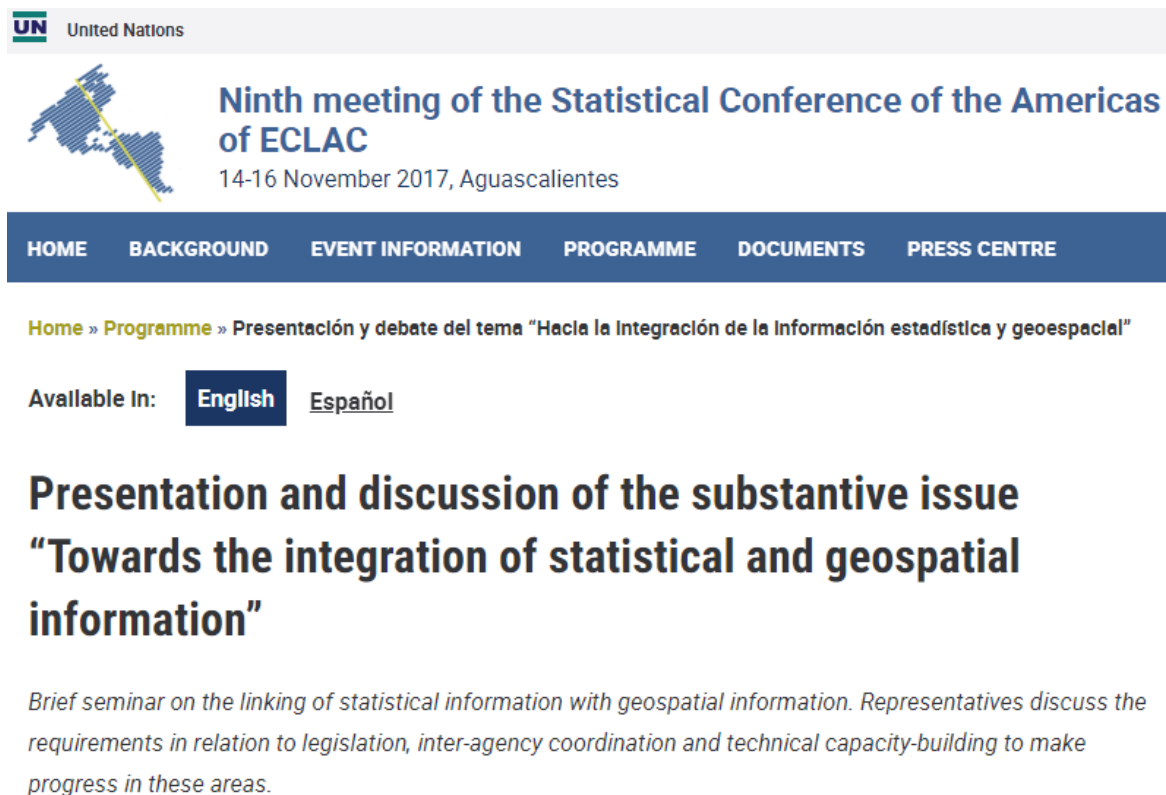


MARCO ESTADÍSTICO Y GEOESPACIAL PARA LAS AMÉRICAS Y EL CARIBE - MEGA


Estandarización de la Información
Geoespacial y Socioeconómica

2. Helping the integration of statistical and geospatial information

Positioning geospatial issues
in the regional statistical
community



UN United Nations

 **Ninth meeting of the Statistical Conference of the Americas of ECLAC**
14-16 November 2017, Aguascalientes

HOME BACKGROUND EVENT INFORMATION PROGRAMME DOCUMENTS PRESS CENTRE

Home » Programme » Presentación y debate del tema “Hacia la Integración de la Información estadística y geoespacial”

Available In: **English** [Español](#)

**Presentation and discussion of the substantive issue
“Towards the integration of statistical and geospatial
information”**

Brief seminar on the linking of statistical information with geospatial information. Representatives discuss the requirements in relation to legislation, inter-agency coordination and technical capacity-building to make progress in these areas.

Source: <https://cea.cepal.org/9/en/programme>

2. Helping the integration of statistical and geospatial information

Engaging and **joining statistical and geospatial information communities** through collaborative and integrated road maps



Regional Meeting between the Statistics and Geospatial Communities of Latin America and the Caribbean. ECLAC Headquarters, April 2017. In the frame of the sixteenth meeting of the Executive Committee of the Statistical Conference of the Americas

<https://cea.cepal.org/9/es/noticias>



**Fifth Meeting UN-GGIM: Americas
Regional workshop on the integration of
geospatial and statistical information**

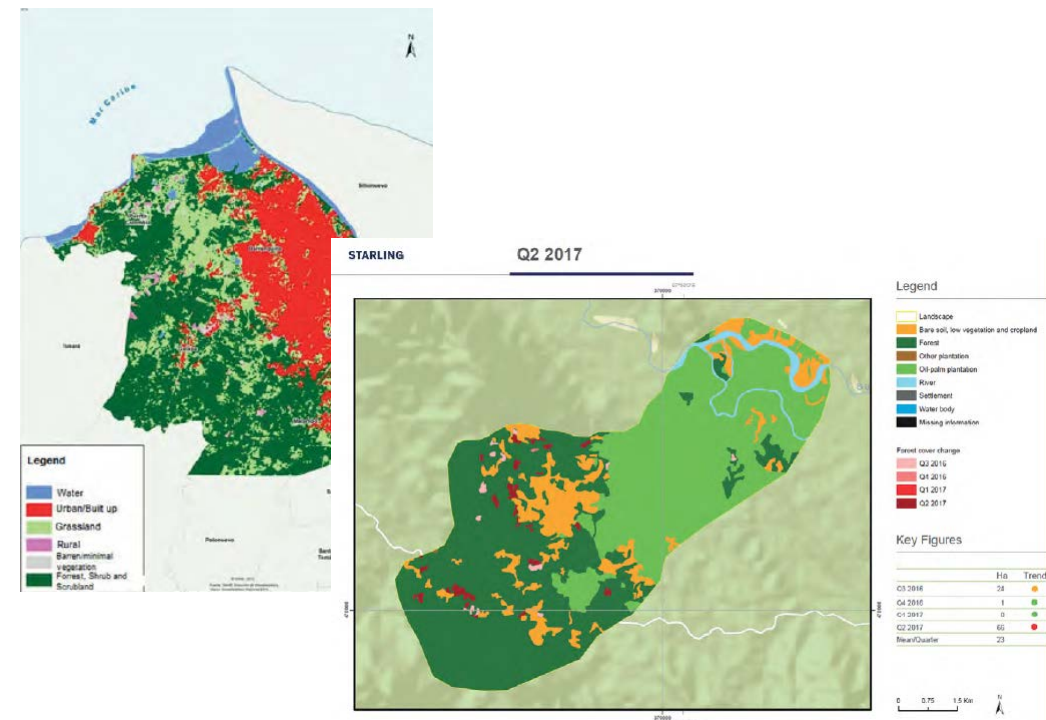
**06 - 08 de noviembre 2018
Hotel Sheraton María Isabel, Ciudad de México**



2. Helping the integration of statistical and geospatial information



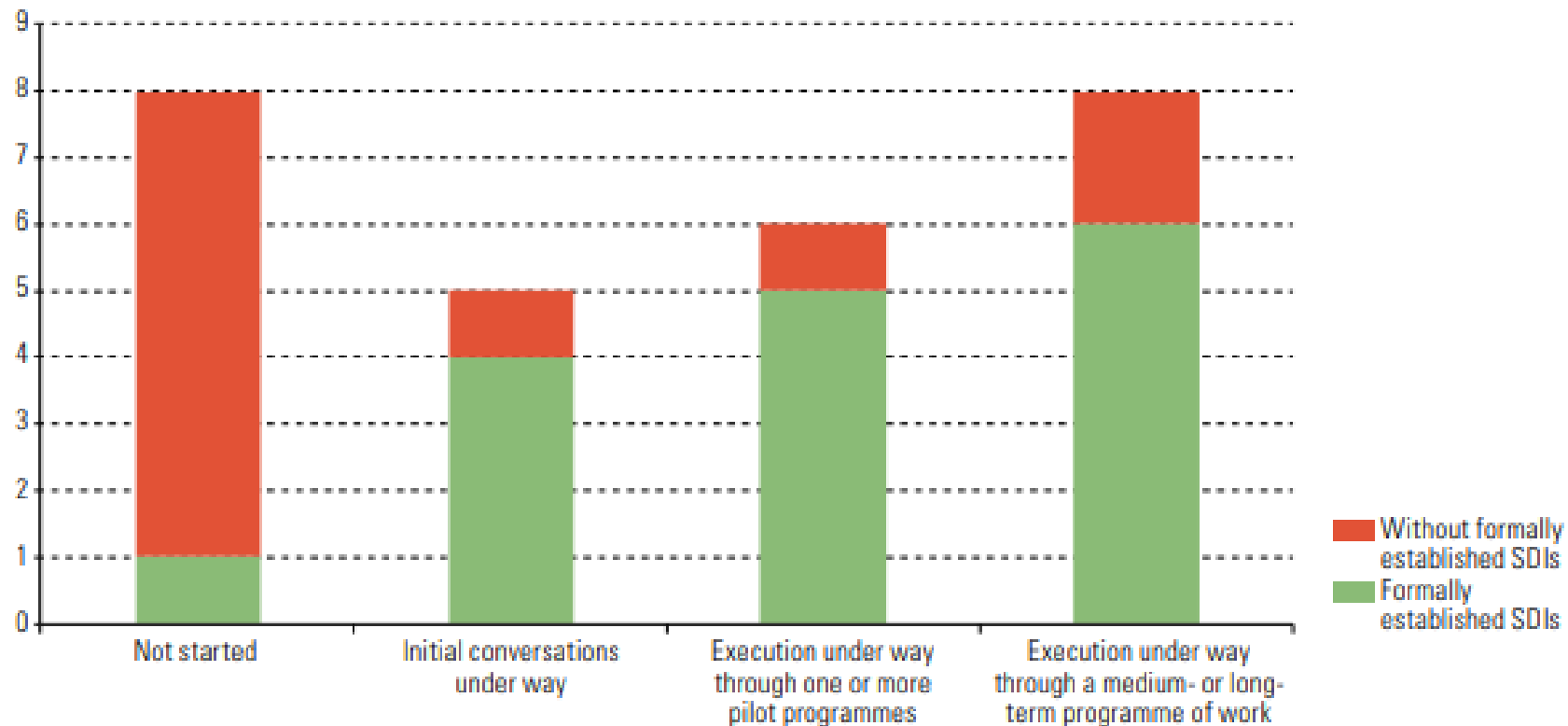
Working closely with the Earth Observation community to generate new statistical and geospatial data



2.A. Applying regional base line assessments on the integration of statistical and geospatial information

Latin America and the Caribbean (27 countries): status of statistical and geospatial information integration with respect to the existence of spatial data infrastructures (SDIs)

(Number of countries)

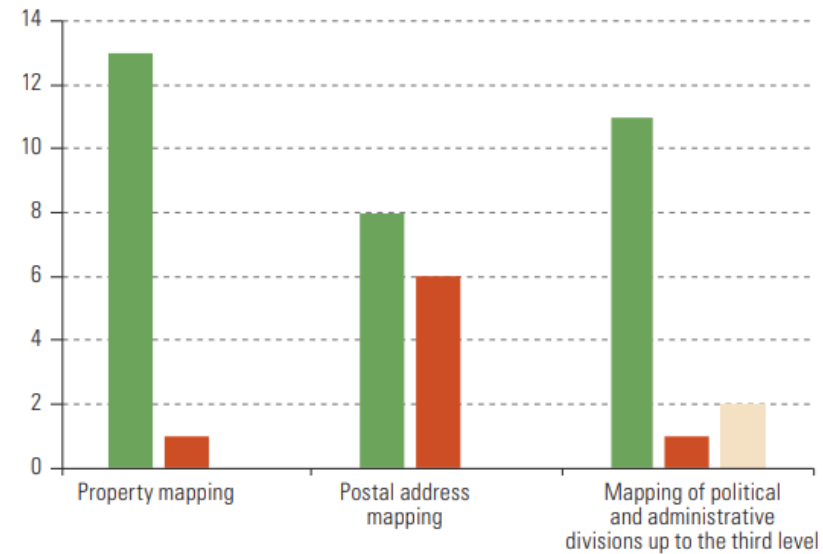


2.A. Applying regional base line assessments on the integration of statistical and geospatial information

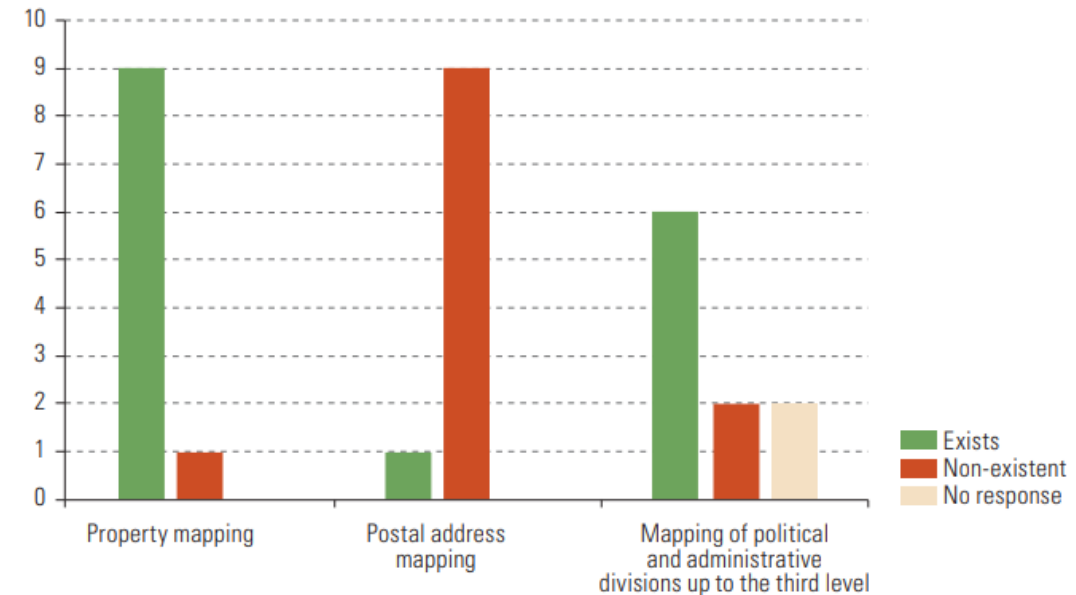
Latin America and the Caribbean (24 countries): availability of basic data for statistical and geospatial information integration, with respect to the existence of national spatial data infrastructure

(Number of countries)

A. Countries with spatial data infrastructure

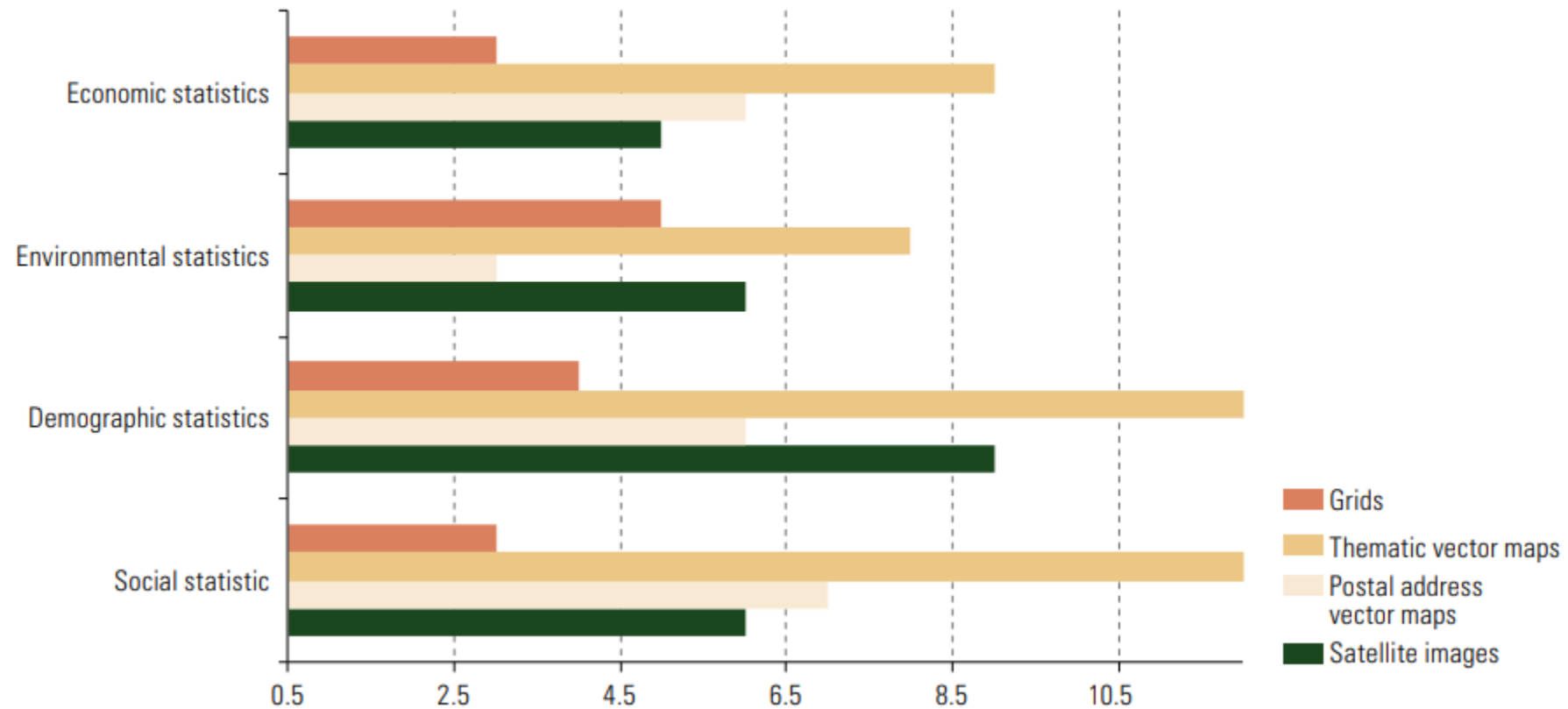


B. Countries without spatial data infrastructure



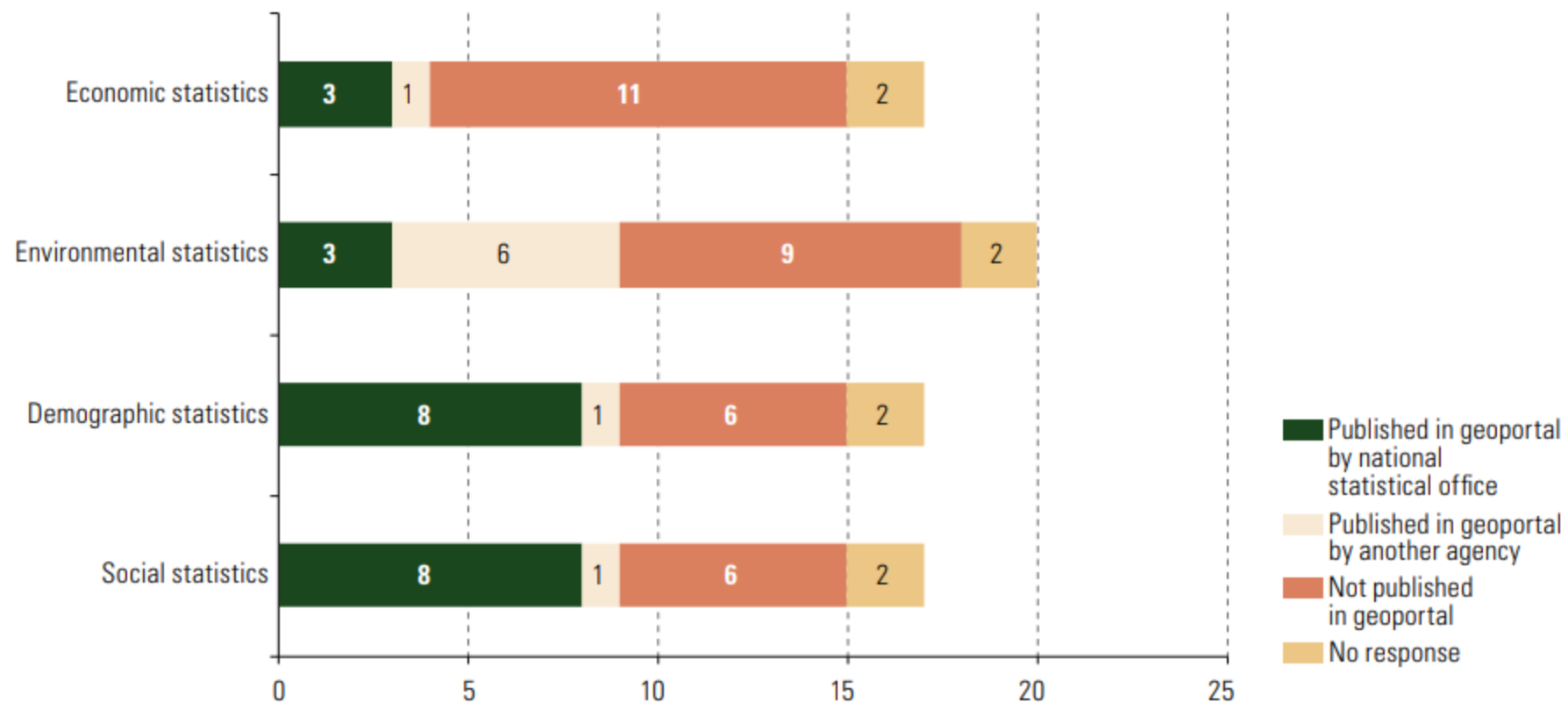
2.A. Applying regional base line assessments on the integration of statistical and geospatial information

Latin America and the Caribbean (19 countries): use of geospatial inputs for producing statistics, by type of input and statistics
(Number of countries)



2.A. Applying regional base line assessments on the integration of statistical and geospatial information

Latin America and the Caribbean (19 countries): use of geospatial technology for dissemination of statistics
(Number of countries)



2.B. Documenting and disseminating experiences in the integration of statistical and geospatial information

Project name

Objective(s)

Executing organization (s)

Geographic extent

Information outputs and sources (statistical and geospatial)

Utilized tools and methods

Partial or final outputs

Graphic (visual) support

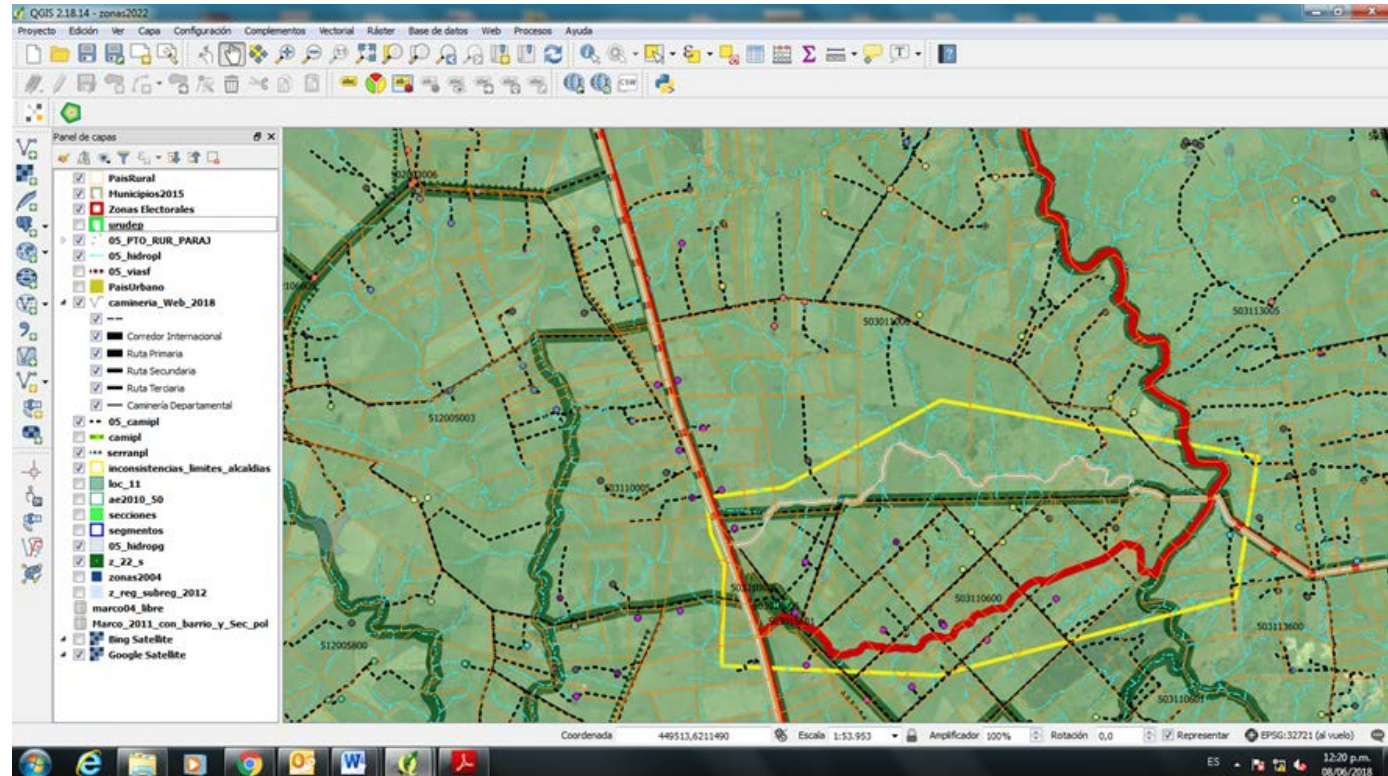
The image shows three pages of a project report. The first page is the title page, the second is a table of contents, and the third is a detailed description of the project. Red text labels are overlaid on the document to identify key sections: 'Project name' points to the title, 'Objective(s)' to the project description, 'Executing organization (s)' to the list of participating entities, 'Geographic extent' to the project area, 'Information outputs and sources (statistical and geospatial)' to the list of data sources, 'Utilized tools and methods' to the methodology section, 'Partial or final outputs' to the list of products, and 'Graphic (visual) support' to the list of maps and graphics.

2.B. Documenting and disseminating experiences in the integration of statistical and geospatial information

Adjustment of Geostatistical Units corresponding to Round 2020 Censuses

Make compatible the limits of the Geostatistical Units corresponding to Census 2020 INE and of the Enumeration Units of Agricultural Statistics Directorate of the Ministry of Livestock, Agriculture and Fisheries (DIEA) with the limits of Municipalities and Electoral Zones

Military Geographic Service
National Statistic Institute
Cadastral National Agency
Budget and Planning Office
Housing, Land Planning and Environment



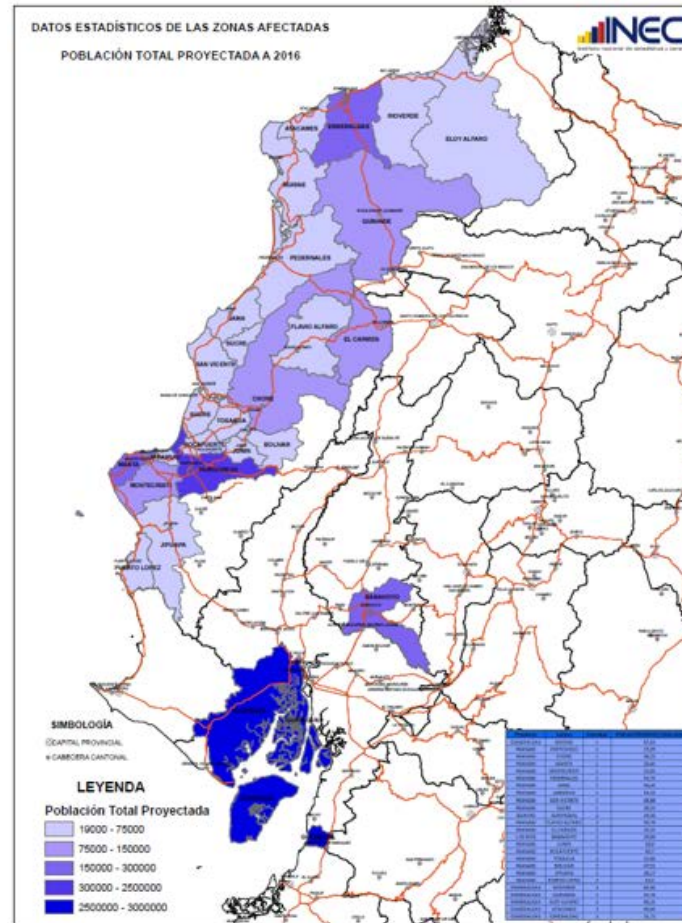
URUGUAY

2.B. Documenting and disseminating experiences in the integration of statistical and geospatial information

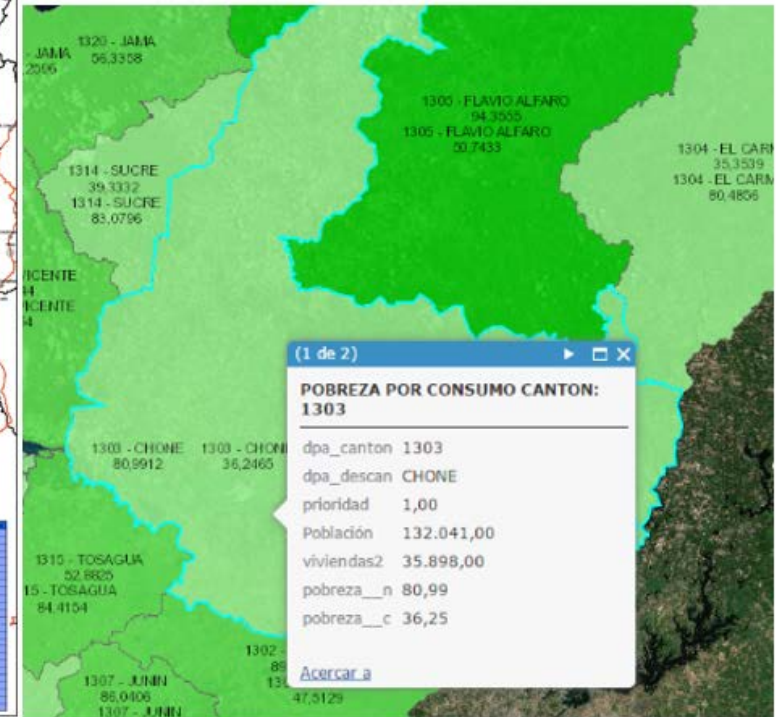
Unique Register of Damaged - to identify those affected by the Manabí earthquake on April 16, 2016

A GIS software platform was used to integrate the statistical information with the geospatial information, through the identification codes (geocodes) that the National Institute of Statistics and Censuses assigns to the vector representation elements of its national geodatabase.

Secretaría Nacional de Planificación y Desarrollo - SENPLADES
Instituto Geográfico Militar – IGM
Instituto Nacional de Estadística y Censos – INEC
Ministerio Coordinador de Seguridad – MCS
Ministerio de Inclusión Económica y Social – MIES
Ministerio de Desarrollo Urbano y Vivienda - MIDUVI
Instituto Geofísico
Instituto Espacial Ecuatoriano



ECUADOR

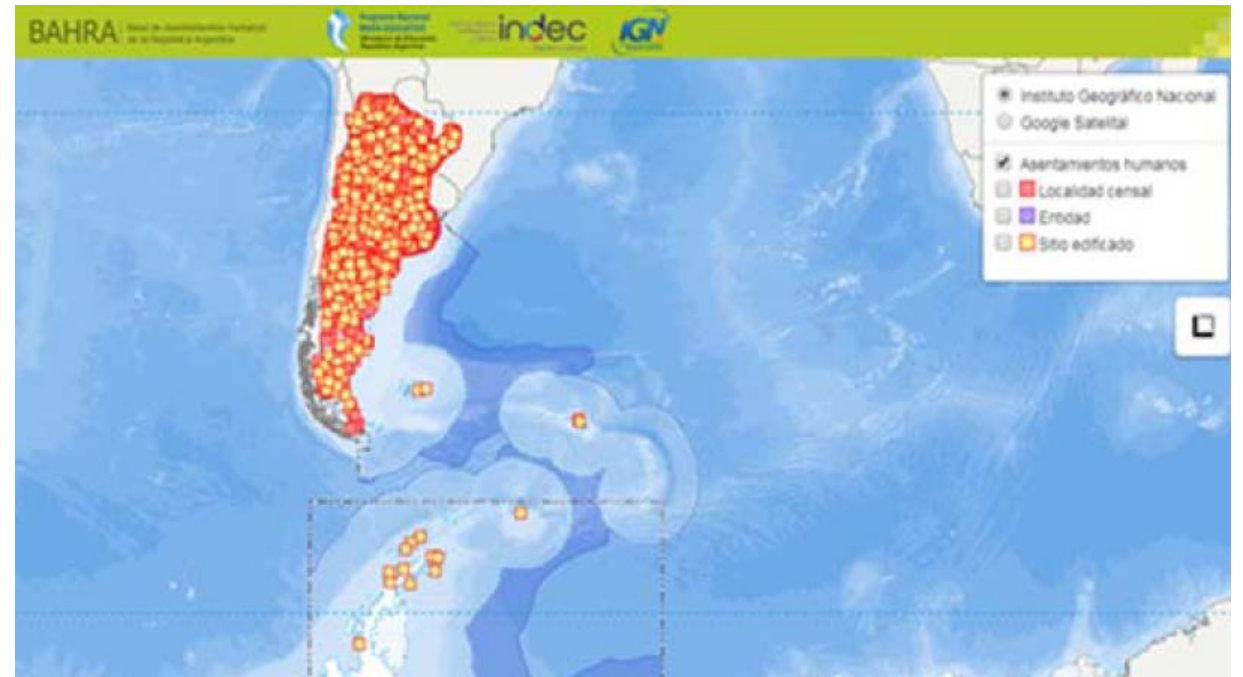


2.B. Documenting and disseminating experiences in the integration of statistical and geospatial information

Base of Human Settlements of the Argentine Republic

Conform an official and standardized database of towns and built sites of the Republic Argentina, having a data registry that allows identifying each and every one of the Human Settlements (census sites or places, built sites) with a unique name, a geographic coordinate and a unique code, regardless of the categorization used by the different government agencies.

National Geographic Institute
National Statistics and Census Office
Ministry of Education



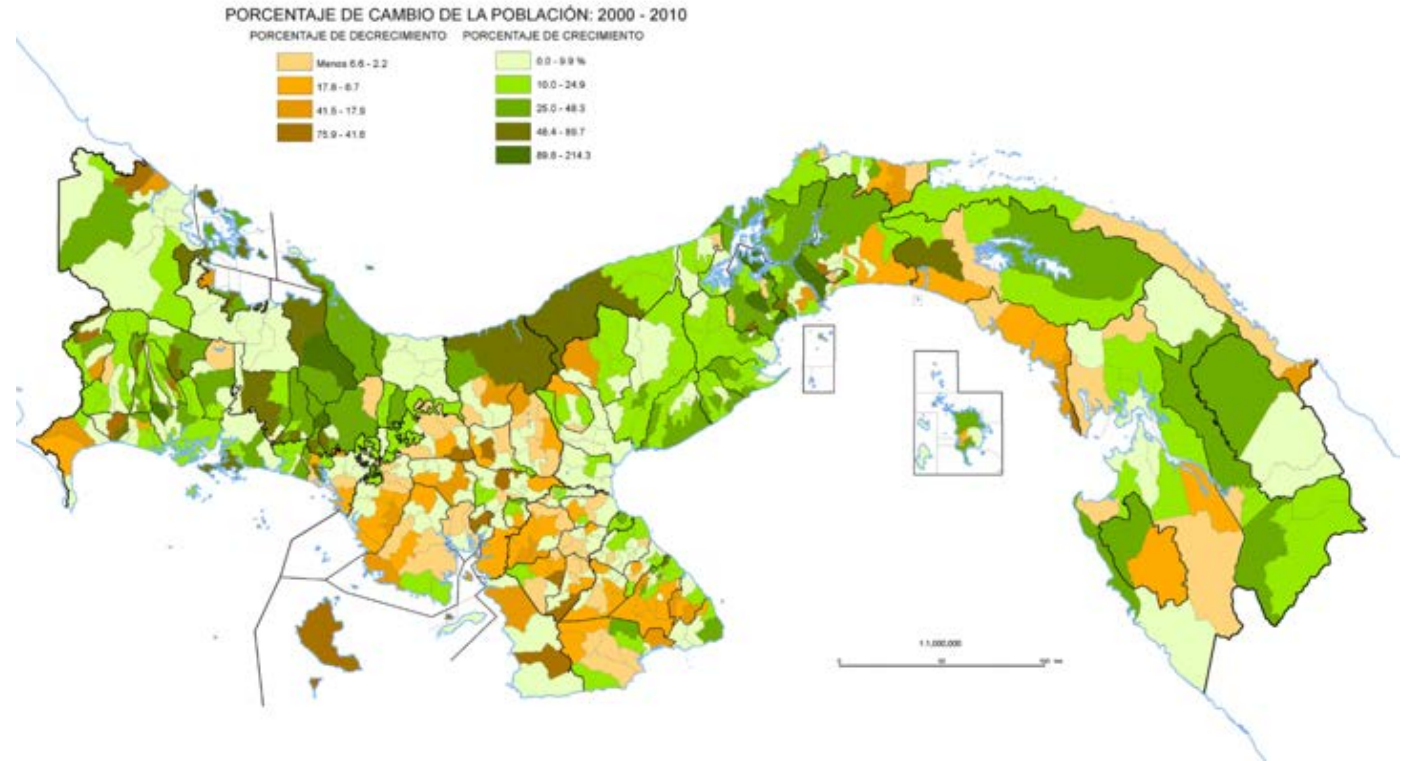
ARGENTINA

2.B. Documenting and disseminating experiences in the integration of statistical and geospatial information

National Atlas of the Republic of Panama, 2016

Implemented to satisfy the initial inventory requirements in the planning of socio-economic development programs, as well as to serve as a source for research in education and reference on the national territory. Also to prepare and process geospatial thematic databases that allow different analysis of the management and ordering of resources.

National Statistic and Census Institute
National Geographic Institute Tommy Guardia
Ministry of Health



PANAMA

3. Promoting the use of geospatial and Earth Observation information to support Agenda 2030 implementation

Bringing global guidelines as reference to incorporate into the national geospatial and statistical roadmaps



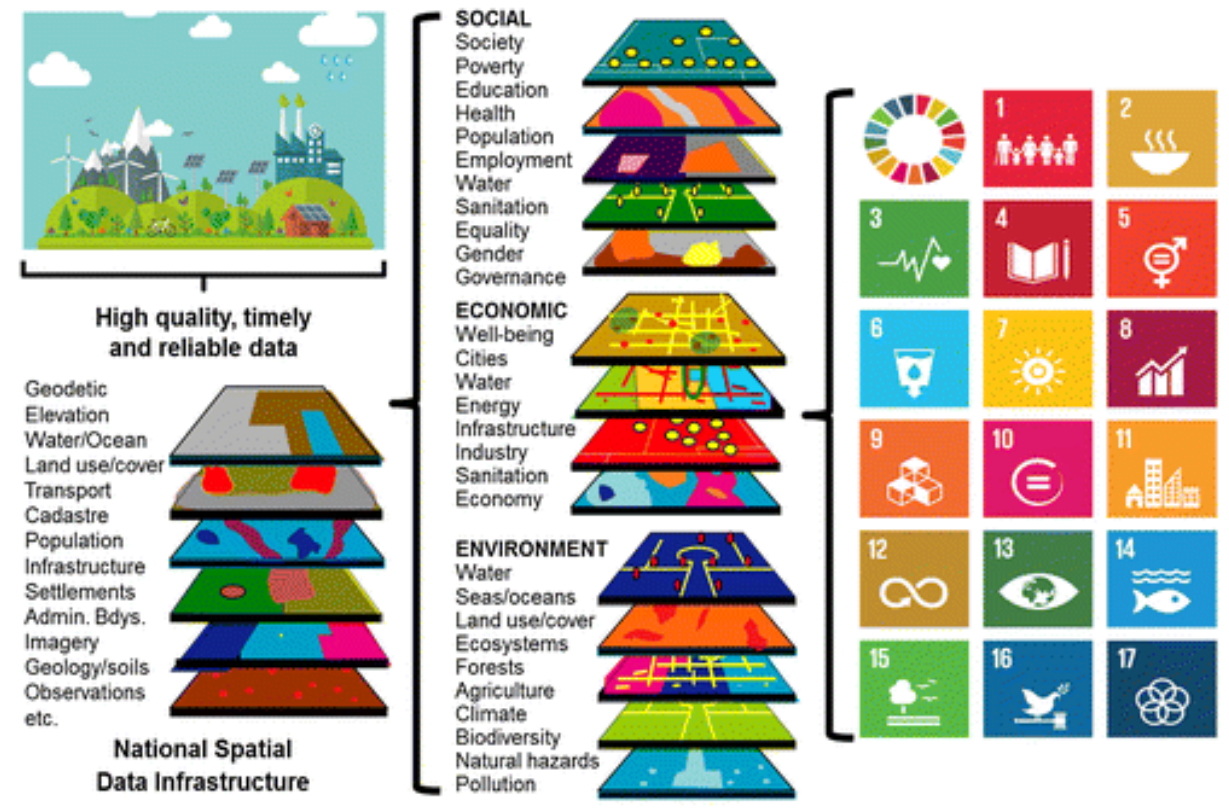
Working Group on Geospatial Information

IAEG-SDGs: Working Group on Geospatial Information
Results of Analysis of the Global Indicator Framework with a “geographic-location” lens

Initial Short-list

3. Promoting the use of geospatial and Earth Observation information to support Agenda 2030 implementation

Assessing the national geospatial and Earth Observation capacities to best contribute in the production and dissemination of SDG indicators



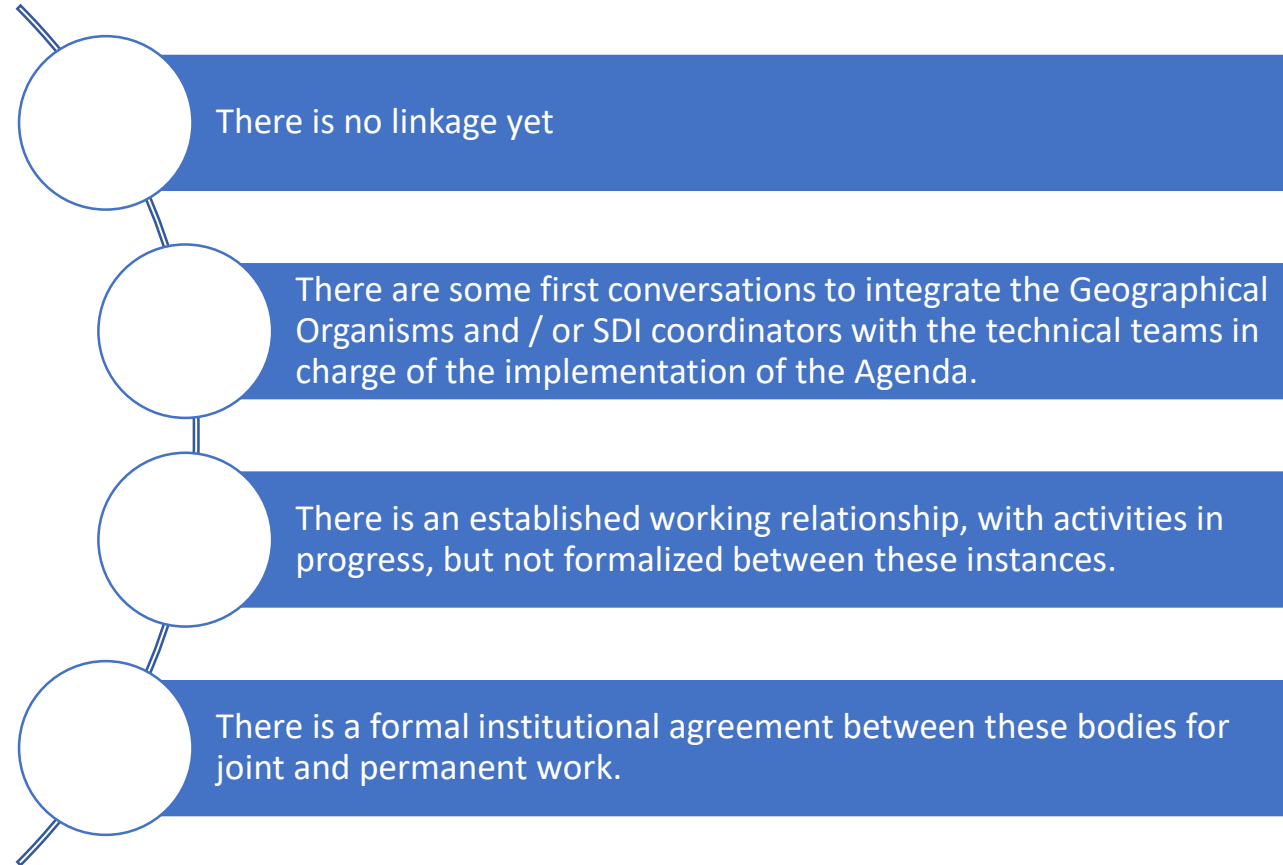
3. Promoting the use of geospatial and Earth Observation information to support Agenda 2030 implementation

Diagnosing the current use of geospatial information in the production of SDG indicators

- ✓ Geospatial information and/or processes still are still not used to territorially disaggregate some ODS indicator
- ✓ Sources of geospatial information have been identified and geospatial processes are being studied to produce one or more indicators, but they are not yet produced.
- ✓ One or more indicators have already been produced, using information and geospatial processes

3. Promoting the use of geospatial and Earth Observation information to support Agenda 2030 implementation

Promoting the **articulation** and engagement between national **statistics offices**, national **geospatial organisms** and the bodies in charge of the **Agenda 2030** at the national level



3. Promoting the use of geospatial and Earth Observation information to support Agenda 2030 implementation

Strengthening skills in the use of geospatial and Earth Observation for the production and dissemination of the SDGs



Earth Observations and Geospatial Information for the Monitoring of the Sustainable Development Goals

Course/Workshop for Members of the Caribbean Project and the Americas

UN-GGIM 8

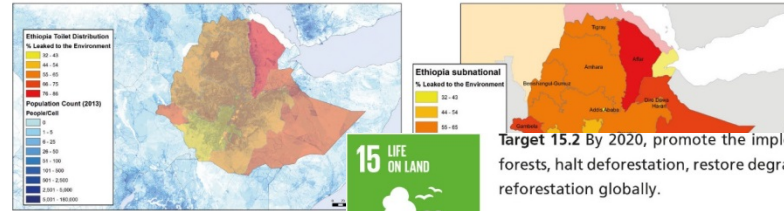
3. Promoting the use of geospatial and Earth Observation information to support Agenda 2030 implementation

Collecting and disseminating experiences and best practices in the use of geospatial and Earth Observation for the production and dissemination of the SDGs



Target 6.3 By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing the least hazardous chemicals and materials, halving the proportion of untreated waste water and substantially increasing recycling and safe reuse globally.

POPULATION DENSITY OVERLAID ON UNTREATED WASTEWATER LEAKING TO THE ENVIRONMENT, ETHIOPIA SUB NATIONAL



Int. Monitoring Programme (IMP)
Water and Sanitation

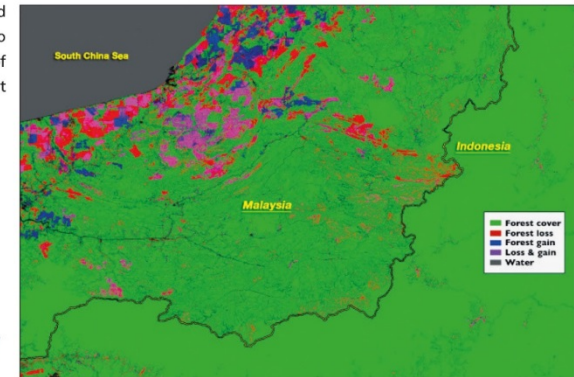
Integrating data from Earth observations and geospatial information to assess the impact of untreated wastewater on the population. The maps show population density and grey water, with areas in red denoting extent and grey water, with areas in red denoting extent where there is high impact, i.e., high leakage in



Target 15.2 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.

EARTH-OBSERVING SATELLITES CAN TRACK TREE COVER EXTENT AND FOREST LOSS AND GAIN OVER TIME

The border between Malaysia and Indonesia on the island of Borneo stands out in the Landsat-based map of forest disturbance. Red pixels represent forest loss between 2000 and 2012.



NASA Goddard, based on data from Hansen et al., 2013.

"Mapping SDG-related data will improve measuring and monitoring of progress toward the SDG Indicators."

Closing remarks

- ✓ An **integrated geospatial information framework** is crucial to enrich the national data ecosystem for sustainable development.
- ✓ Regional bodies have a fundamental role to **bridge the global with the national**.
- ✓ There are **significant advances** (institutional and technical) in promoting the **integration of statistical and geospatial information**: assessments, best practices documentation and MEGA project ongoing.
- ✓ Implementation of the global statistical geospatial framework at the national level is still a **challenge in most of the countries in the region**.
- ✓ The use of geospatial, statistical and Earth Observation information to support agenda 2030 implementation will **continue demanding a strong collaborative work** between national, regional and global stakeholders



Thank you !



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Economic Commission for Latin America and the Caribbean, Statistics Division