

8th International
Conference on
BIG DATA
& Data Science for Official Statistics

BILBAO 2024

Informing Climate Change and
Sustainable Development Policies
with Integrated Data

BILBAO, SPAIN | **10-14 JUNE 2024** | **#UNBigData2024**



UNITED NATIONS



**Data Science and
SDG Localization**

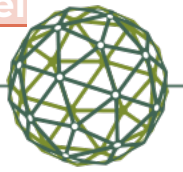
12 June 2024

Digital technologies to integrate statistical and geospatial data for informed decision-making at the local level

AUTHOR Rolando Ocampo

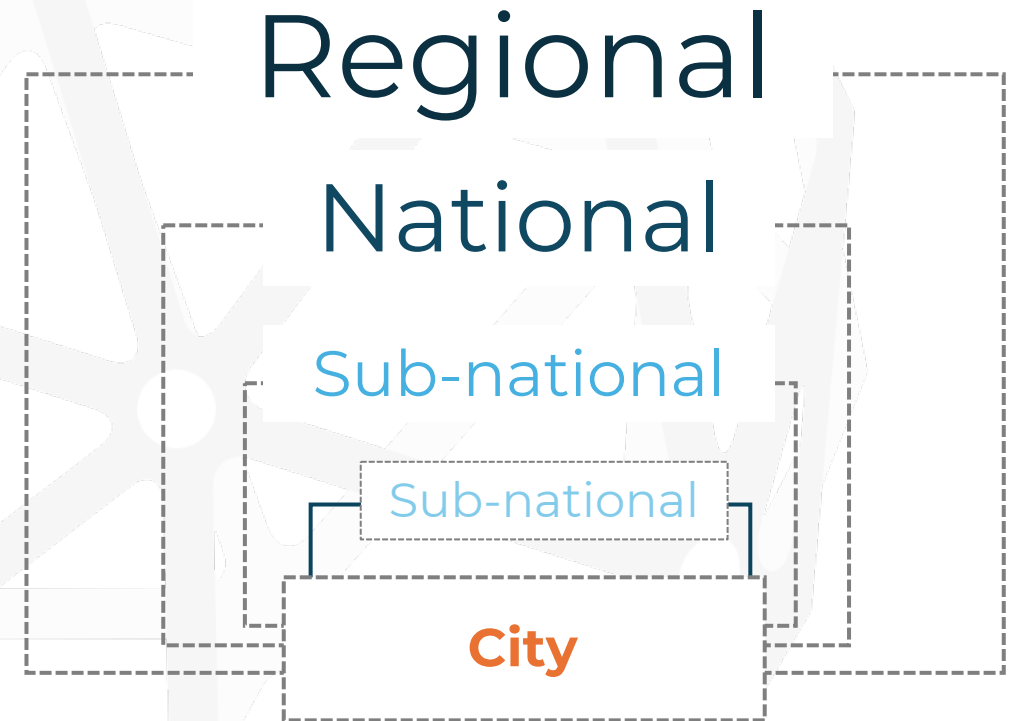
ORGANIZATION Statistics Division, Economic Commission for Latin America and the Caribbean (ECLAC)



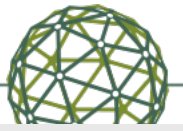


Since the adoption of the 2030 Agenda, ECLAC has been working in the production and dissemination of SDG data

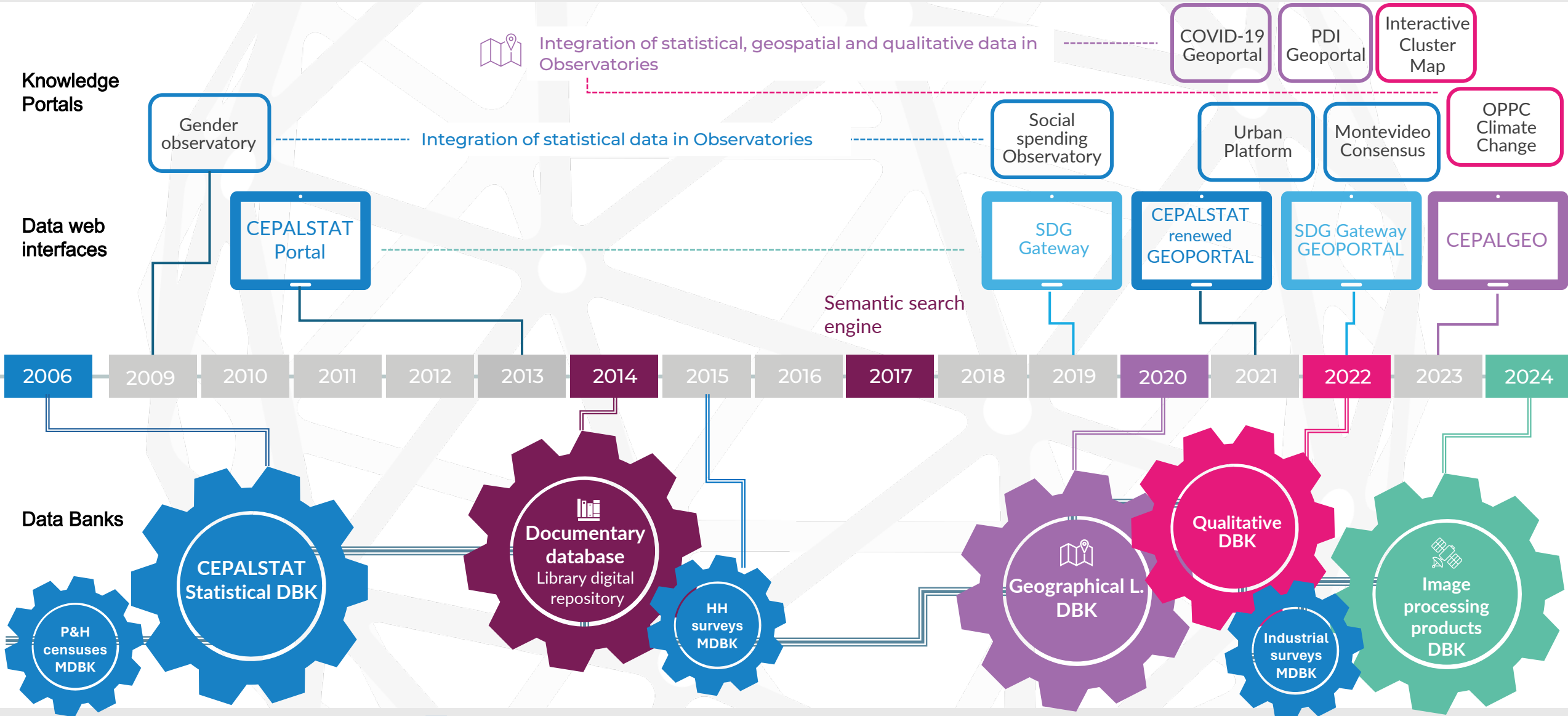
- Traditional sources of statistical information.
- Integration of statistical and geospatial data.
- Implementation of methodological procedures to obtain data at the subnational level.
- Promotion of the development of administrative registers for statistical purposes.



Continuous process of implementing innovative solutions to collect, produce, integrate and disseminate statistical information

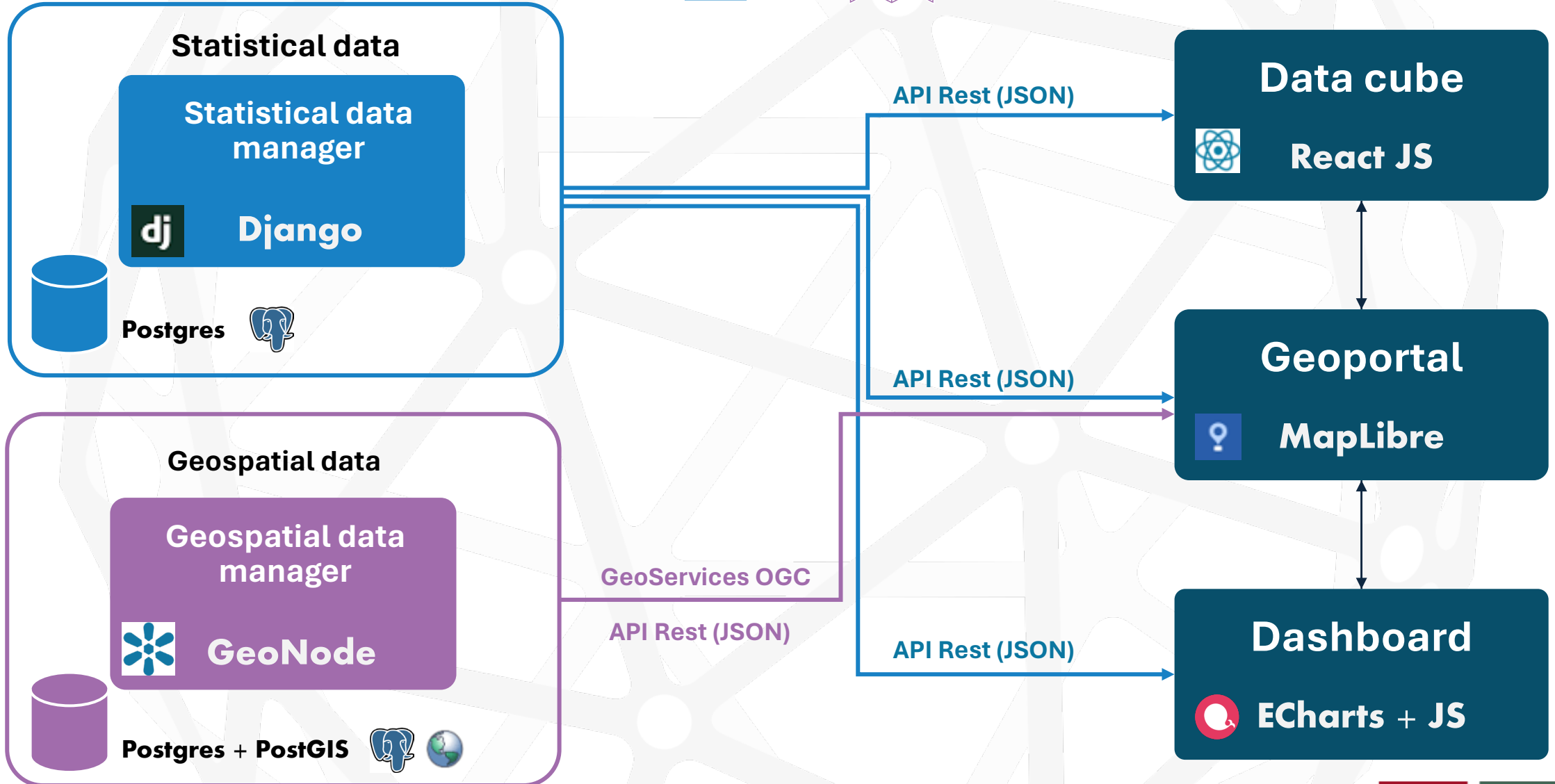
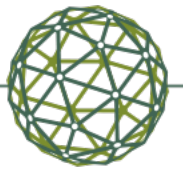


MORE INTEGRATED KNOWLEDGE DISSEMINATION

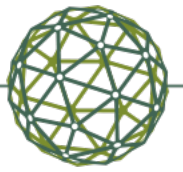


MORE AND BETTER DATA PRODUCTION

Integrating Statistical and Geospatial data



Integrating Statistical and Geospatial data



SDG Geoportal
Latin America and the Caribbean

ESPAÑOL
SUSTAINABLE DEVELOPMENT GOALS

Selected layers Add indicators Geographical data

7 TARGET 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services

INDICATOR 7.1.1 Proportion of population with access to electricity

Proportion of population with access to electricity, by urban/rural (%) EG_ACS_ELEC
Percentage
Reporting Type: Global
Location: Rural
Years: 2020

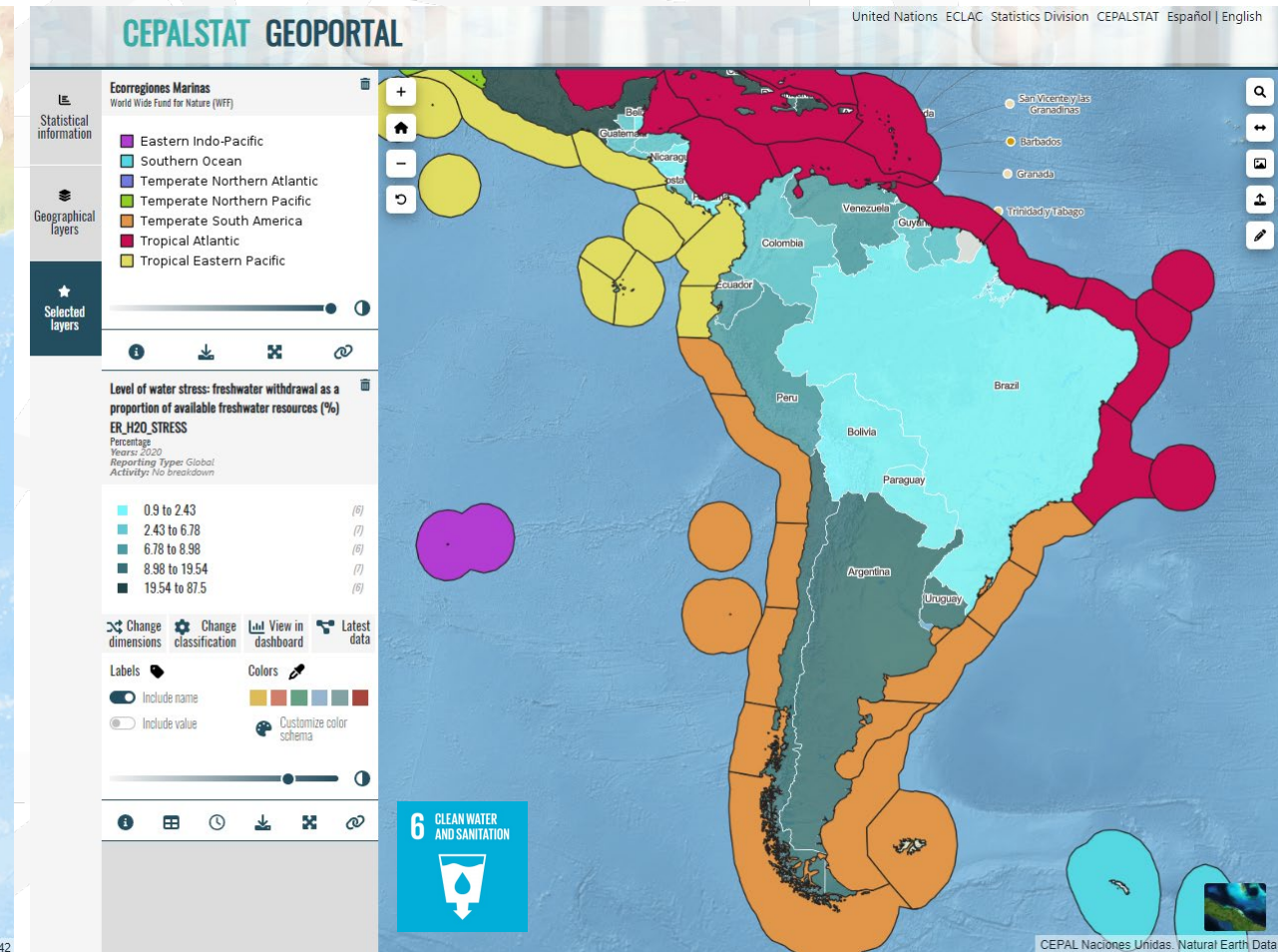
65.9 to 99
98.7 to 100
100 to 100

Change dimensions Change classification Visualize in dashboard Latest available data

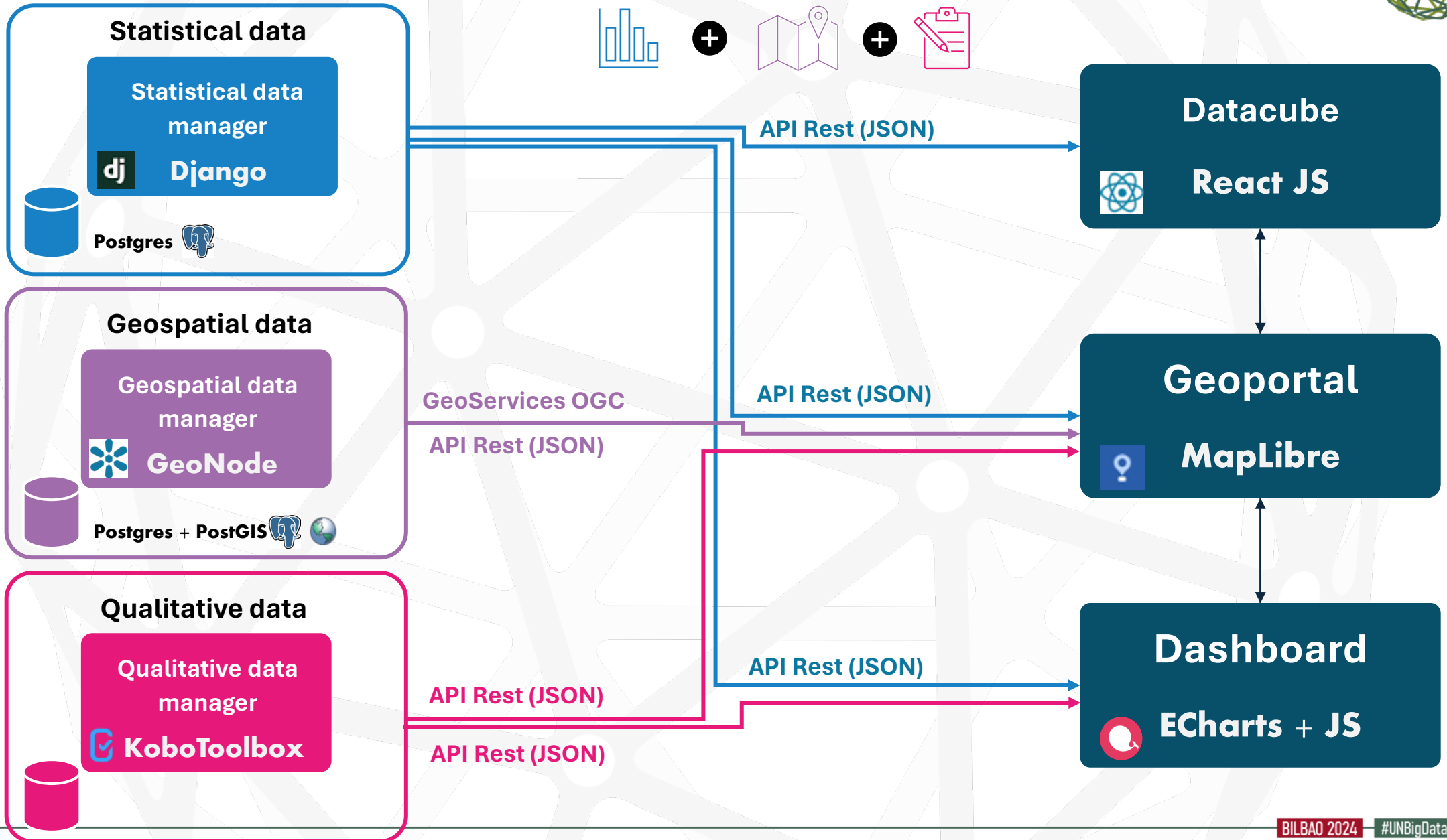
Customize your map

Include names Include value

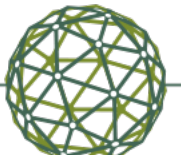
Colors



Integrating Statistical, Geospatial and Qualitative data



Integrating Statistical, Geospatial and Qualitative data



opcc Parliamentary Observatory on Climate Change and Just Transition

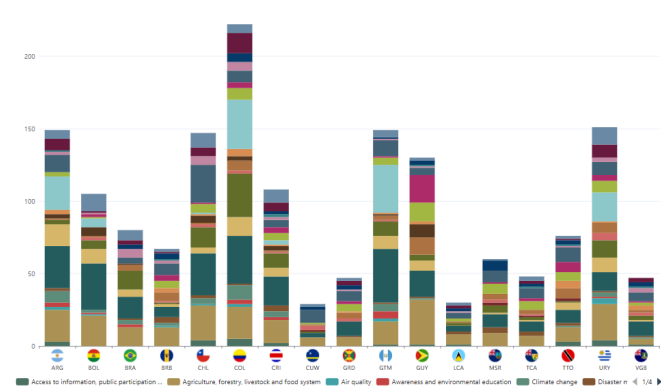
Environmental Legislation | Climate Change Framework | Bills and Proposals

Environmental Laws

Country: 17 | Topic: 23 | Year: 1 | APPLY | CLEAR FILTERS

Country: Select all | Topic: Select all | Year: All period (accumulated)

Environmental laws by country and topic, (1876-2022)
(Number of laws)
Last update: 2023-10-03



List of environmental laws

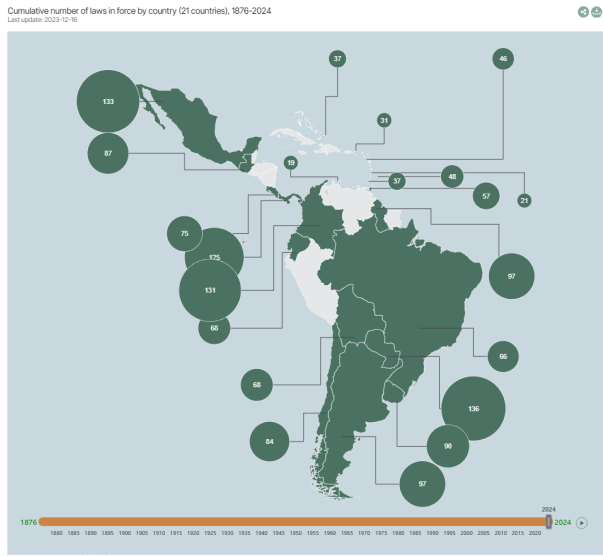
Country: Ecuador | Topic: Ley orgánica para la racionalización, reutilización y reducción de plásticos de un solo uso

Country: Ecuador | Topic: Ley que protege la biodiversidad en el Ecuador

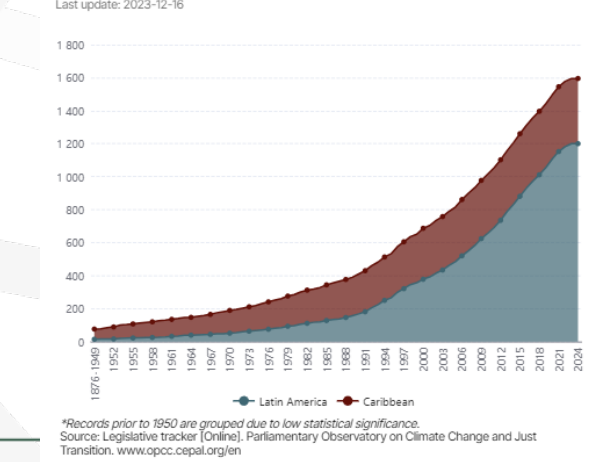
Country: Panama | Topic: Que reconoce los derechos de la naturaleza y las obligaciones del estado relacionadas con estos derechos.

Country: Panama | Topic: Que establece la protección integral de los sistemas de arrecifes corallinos, ecosistemas y especies asociadas en Panama.

Environmental legislation in the region



Latin America and the Caribbean (21 countries). Evolution of environmental laws in force by subregion, 1876-2024



Platform for cluster and other territorial productive articulation initiatives

Interactive map of cluster and other territorial productive articulation initiatives

Cluster initiatives and TPAI | Cluster programs and TPAI | Geographical layers | Statistical information | Selected layers

VIEW THE INFORMATION ACCORDING TO CRITERIA

- Economic sector
- Initiative type
- Main activity area
- Group initiatives

Legend

- Social services, health, public administration, education and defense
- Construction
- Agriculture, livestock, hunting, forestry and fishing
- Manufacturing Industries
- Financial intermediation, real estate, business and leasing activities
- Arts, entertainment and recreation
- Tourism
- Electricity, gas and water supply
- Transport and ICT Transporte e TIC
- Mining and quarrying
- Wholesale and retail trade and repair of goods, hotels and restaurants

Filter your results according to criteria

Country: Chile

Subnational division: VALPARAISO

Municipality: San Antonio

Other municipalities: El Quisco; El Tabo; Cartagena; Algarrobo; Santo Domingo

Type of initiative: Cluster initiative

Start date: 2021-03-15

Number of companies that make up the initiative: 78

STATISTICS BY TYPE

Information updated to: 2023-08-21

All types

Latin America and the Caribbean

General characteristics

- Number of initiatives: 290
- Number of companies that integrate the initiatives: 58 022

Type of initiatives

- Cluster initiative: 72.0%
- Social productive initiative: 18.9%
- Value chain initiative: 8.1%
- Business network initiative: 0.0%
- Supply chain initiative: 0.0%
- NO: 0.0%

Type of institutional framework that manages the initiatives (Percentage)

- Public: 12.8%
- Private: 62.4%
- Mixed: 21%
- Cooperative: 1.9%
- Other: 0.0%

Initiatives with its own legal status: 29%

Initiatives that have adopted collective action statutes: 68%

Main area of activity of the initiatives

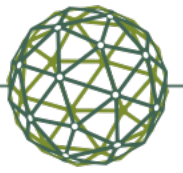
Initiatives by economic sector (Number)

Strategic focuses of the initiatives (Percentage)

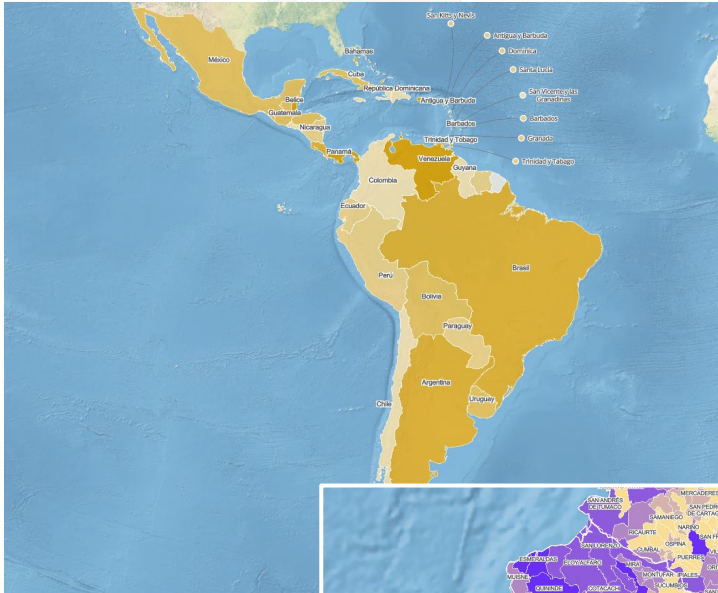
- Access to new markets / intern.: 20.6%
- Productive linkage: 18.1%
- Improved commercial and trade: 18.1%
- Reduction of gaps in the prod.: 18.1%
- Process of product innovation: 18.1%
- Human talent development: 18.1%
- Research agencies: 18.1%
- Quality improvement: 18.1%
- Technological extension: 18.1%
- Attraction of investment: 18.1%
- New entrepreneurship: 18.1%

Initiatives by year of establishment (Number)

Integrating information at subnational level



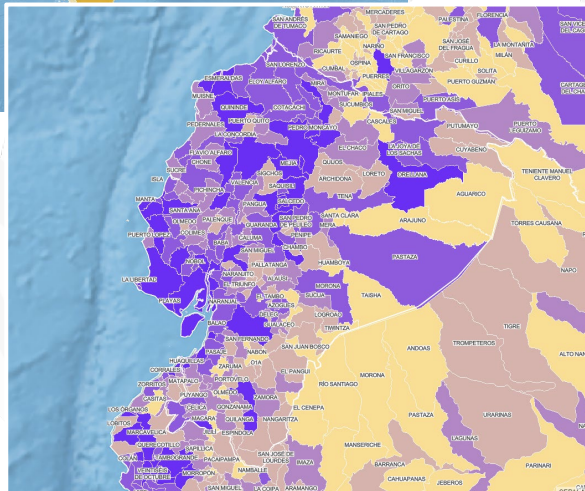
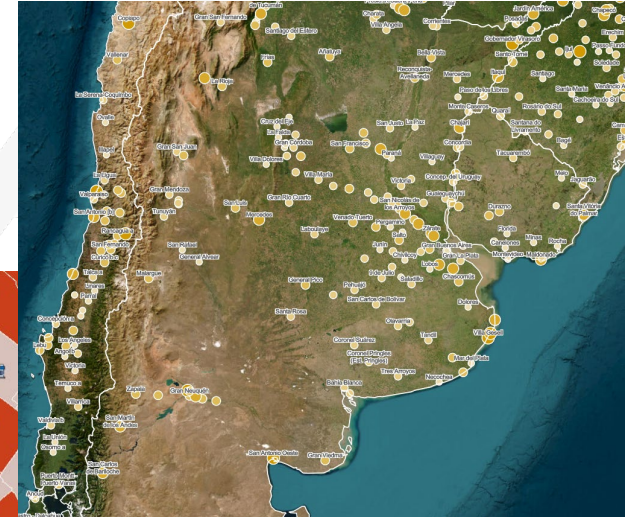
National



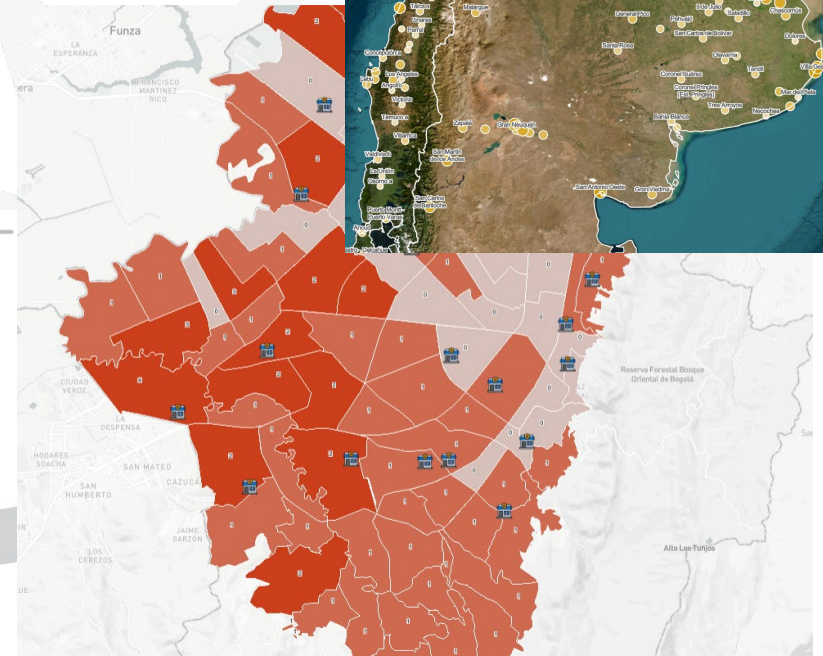
Opportunities for monitoring the Sustainable Development Goals



Cities

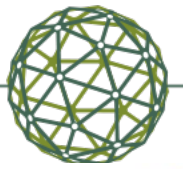


Sub-national



Intra-urban (Metropolitan area)

Education completion rate / Housing and Population CENSUS data



statistics.cepal.org/geo/geo-cepalstat/?lang=en&indicator_id=4426&members=29172%2C29173%2C29175%2C29177%2C29180%2C29181%2C29182%2C29183%2C29187%2C29188%2C85258

United Nations ECLAC Statistics Division CEPALSTAT Español | English

CEPALSTAT GEOPORTAL

Primary completion rate
Percentage
Years: 2018

Geographical layers

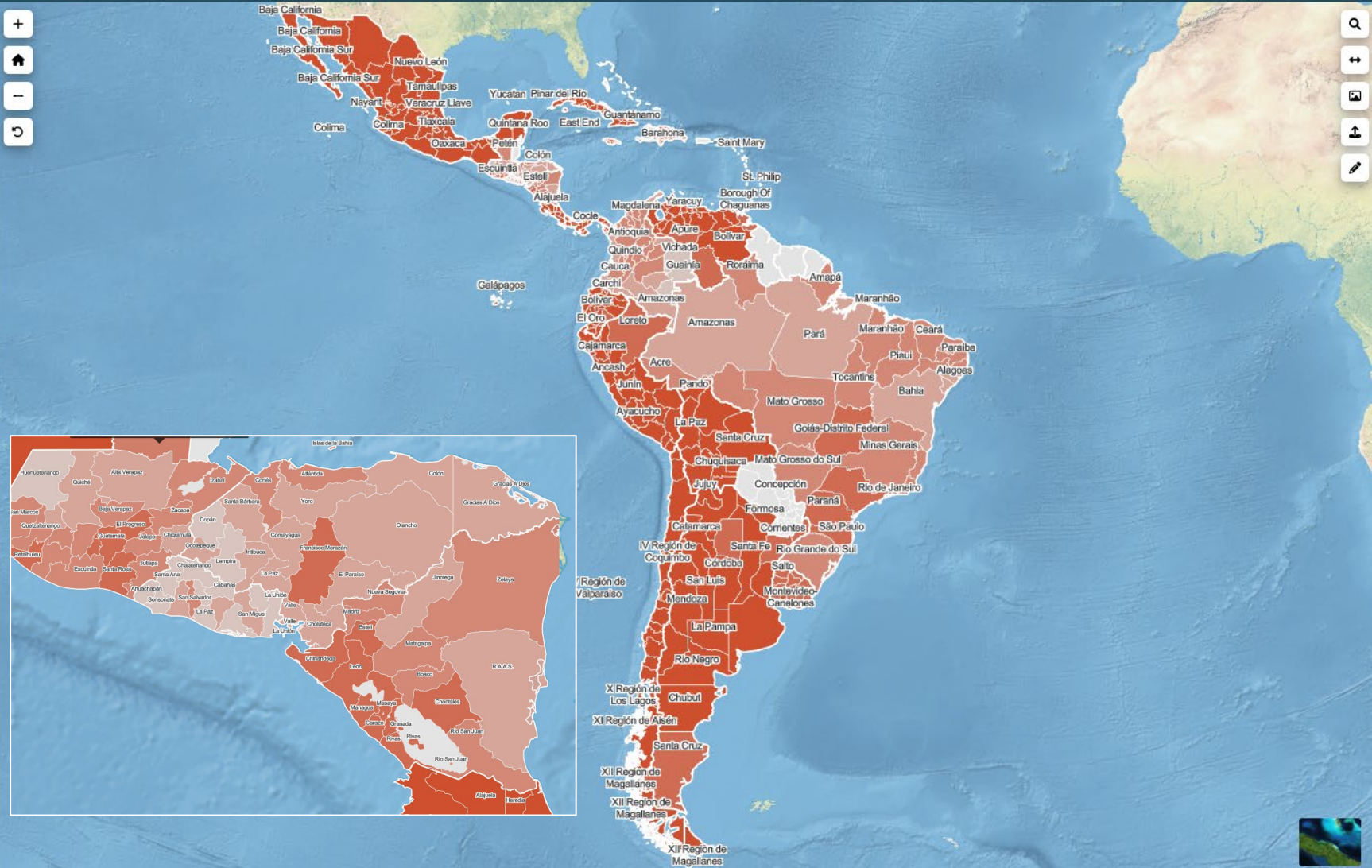
- 13.95 to 31.16 (31)
- 31.16 to 48.37 (37)
- 48.37 to 65.58 (79)
- 65.58 to 82.79 (68)
- 82.79 to 100 (283)

Selected layers

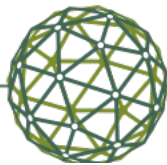
Change dimensions | Change classification | View in dashboard | Latest data

Labels: Include name | Include value

Colors: Customize color schema



GDP by economic activity/ Sub-national accounts



CEPALSTAT GEOPORTAL

COLOMBIA Total annual gross domestic product (GDP) by economic activity per capita at current prices in local currency by subnational area

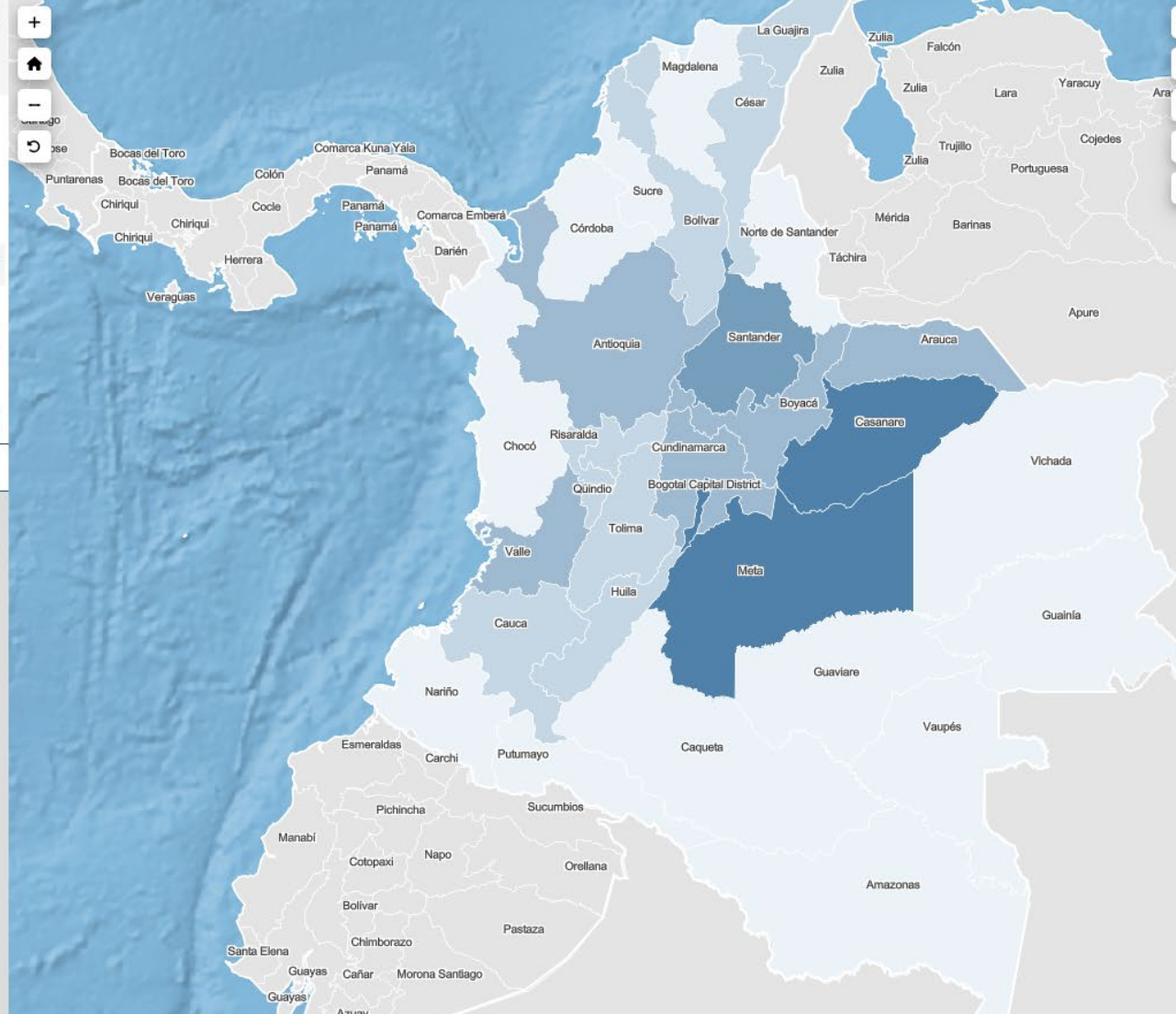
Billions of pesos
Years: 2021
Economic activity: [B1GQ]Gross domestic product

6,848,370.978 to 13,349,134.704 (12)
 13,349,134.704 to 19,849,898.43 (10)
 19,849,898.43 to 26,350,662.156 (5)
 26,350,662.156 to 32,851,425.882 (2)
 32,851,425.882 to 39,352,189.608 (3)

Change dimensions Change classification View in dashboard Latest data

Labels Colors Customize color schema

Include name Include value



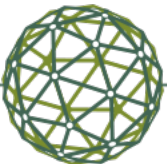
Data

COLOMBIA Total annual gross domestic product (GDP) by economic activity per capita at current prices in local currency by subnational area

Unit ↓	Value ↑
Casanare	39,352,189.6
Bogotal Capital District	38,253,592.9
Meta	37,428,926.4
Santander	32,049,143
San Andrés y Providencia	26,493,072.2
Antioquia	25,983,588.8
Valle	24,496,019.5
Boyacá	24,174,541.4
Arauca	23,451,243.4
Cundinamarca	23,123,502.4
Atlántico	19,520,714.4
Risaralda	19,512,160.2
Bolívar	19,034,273.6
Caldas	18,778,656.3
César	18,019,480.5
Tolima	17,887,167.6
Quindío	17,195,362.2
Huila	16,881,711.8
La Guajira	15,240,633.3
Cauca	13,607,052.9



Climate change scenario / CCAFS-Climate



CEPALSTAT GEOPORTAL

Average Temperature. RCP 4.5 Scenario
Degrees Celsius
Stages: 2030 (2020 - 2049)
Months: September

Geographical layers

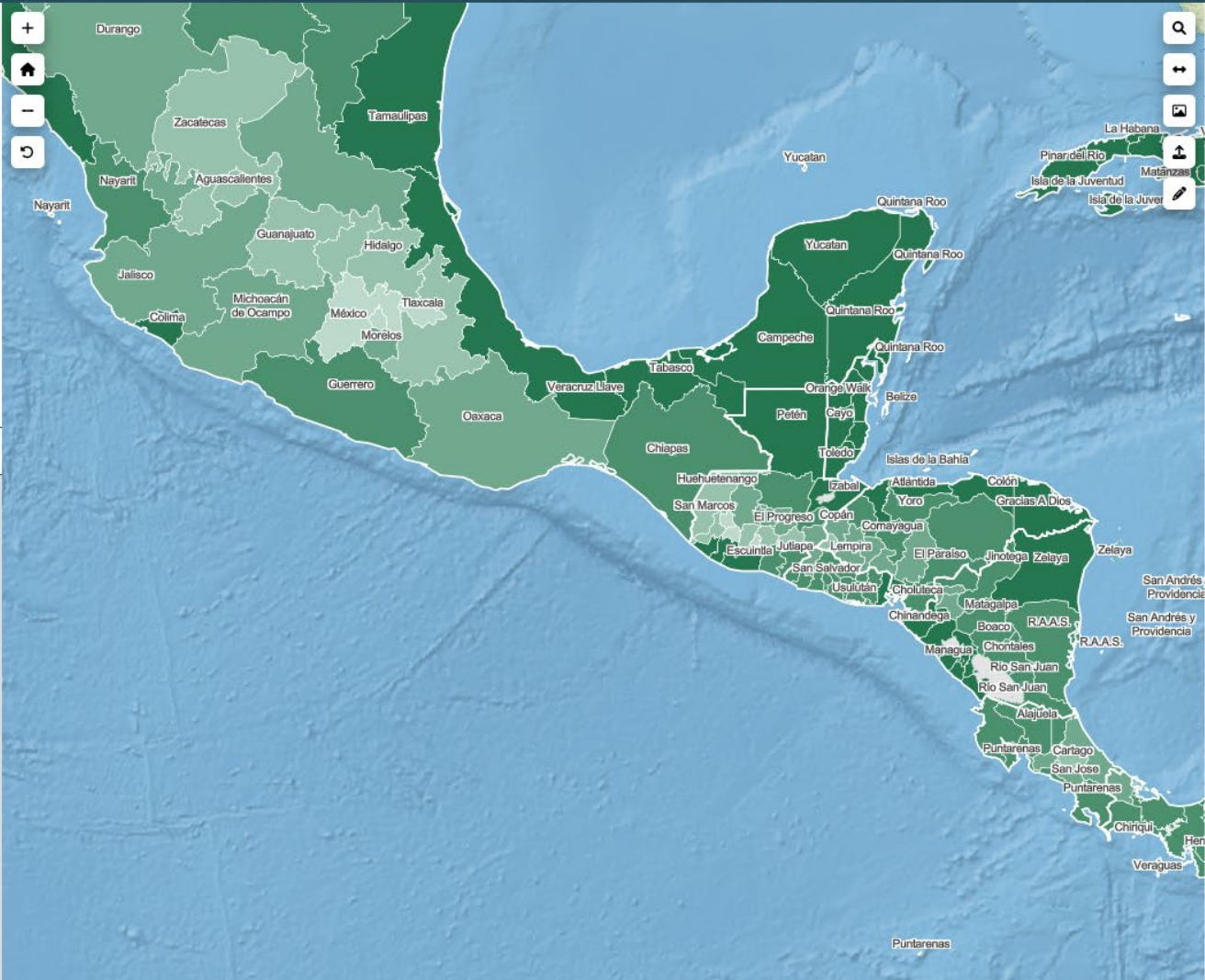
- 15.87 to 18.544 (7)
- 18.544 to 21.218 (14)
- 21.218 to 23.892 (29)
- 23.892 to 26.566 (50)
- 26.566 to 29.24 (77)

Selected layers

Change dimensions | Change classification | View in dashboard | Latest data

Labels: Include name | Include value

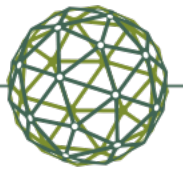
Colors: Customize color schema



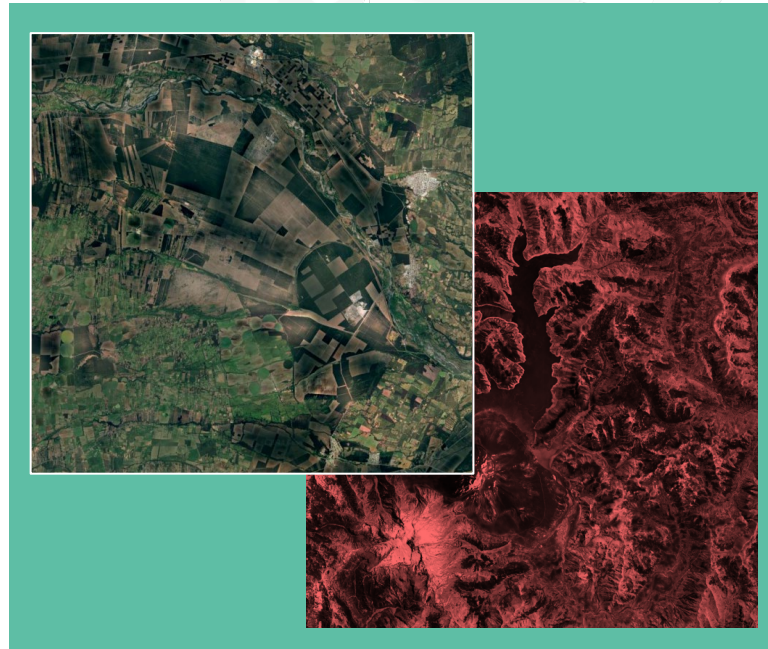
Data	
Average Temperature. RCP 4.5 Scenario	
Unit	Value
Monte Cristi	29.24
Tabasco	29.04
Valverde	29.03
Sinaloa	29.01
Sonora	28.94
Las Tunas	28.88
Campeche	28.88
Islas de la Bahía	28.76
Ciego de Ávila	28.73
La Altagracia	28.73
Yucatan	28.72
Isla de la Juventud	28.7
Camagüey	28.63
Quintana Roo	28.57
La Romana	28.54
Sancti Spiritus	28.53
Matanzas	28.38
Holguín	28.37
Corozal	28.35
San Pedro de Macoris	28.29
Pinar del Río	28.28



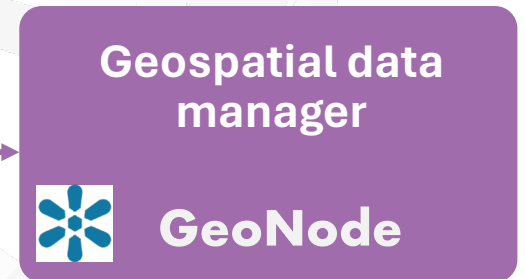
Integrating satellite image, Geospatial and Statistical data



Indicators update

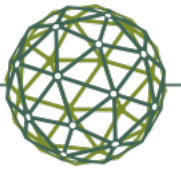


Periodic collection of Satellite data



New geographical layers

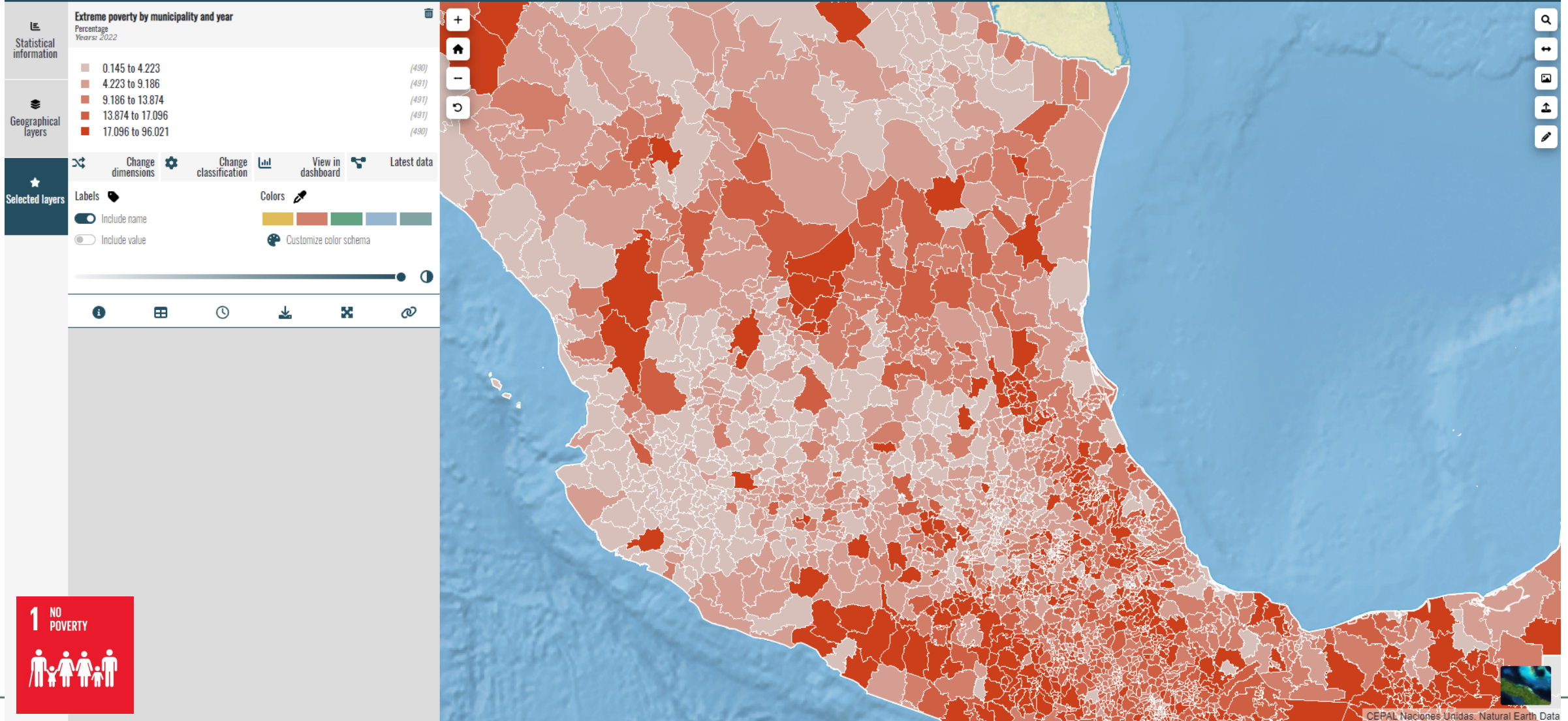
Extreme poverty by municipality/ SAE (integrating household survey, CENSUS and satellite image data)



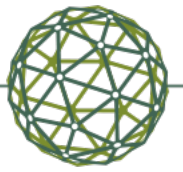
statistics.cepal.org/geo/geo-cepalstat/?lang=en&indicator_id=4751&members=29184%2C29187%2C29188%2C29192%2C90242%2C90240%2C90239

United Nations ECLAC Statistics Division CEPALSTAT Español | English

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Average height of forests by municipality / (Integrating statistical, geospatial and satellite image data)



CEPALSTAT GEOPORTAL

Naciones Unidas CEPAL División de Estadísticas CEPALSTAT Español | English

Altura promedio de bosques
Metros
Años: 2020

de 0 a 6,289	(10834)
de 6,289 a 12,577	(3329)
de 12,577 a 18,866	(1227)
de 18,866 a 25,155	(409)
de 25,155 a 31,443	(194)

Etiquetas
 Incluir nombre
 Incluir valor

Colores
Personalizar esquema de colores

Ver en dashboard | Datos más recientes



Descripción / Ficha técnica

Altura promedio de bosques

Definición
Altura promedio de los bosques

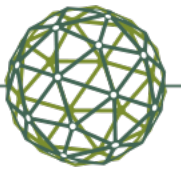
Unidad de medida
Metros

Metodología
Este indicador se obtiene a partir del producto elaborado por GLAAD a partir de imágenes Landsat y modelos de Machine Learning. El procesamiento del producto original para obtener el indicador comprende: intersección con las unidades administrativas de interés, cálculo del promedio de altura de bosque para cada unidad administrativa. Se obtiene un producto vectorial y un producto raster (resolución espacial 30 metros) para Latinoamérica.



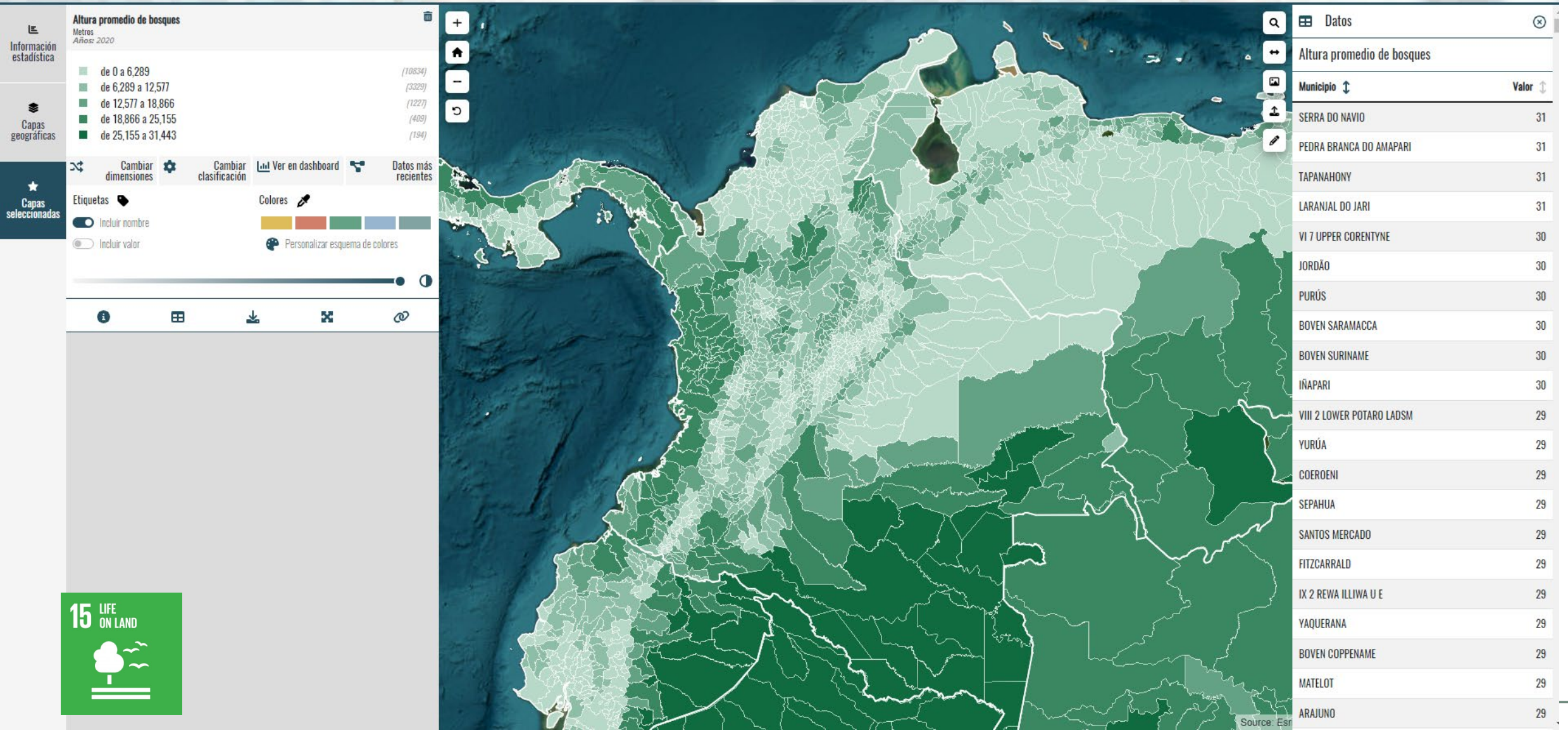
Source: Esri

Average height of forests by municipality / (Integrating statistical, geospatial and satellite image data)



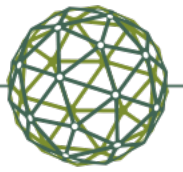
CEPALSTAT GEOPORTAL

Naciones Unidas CEPAL División de Estadísticas CEPALSTAT Español | English



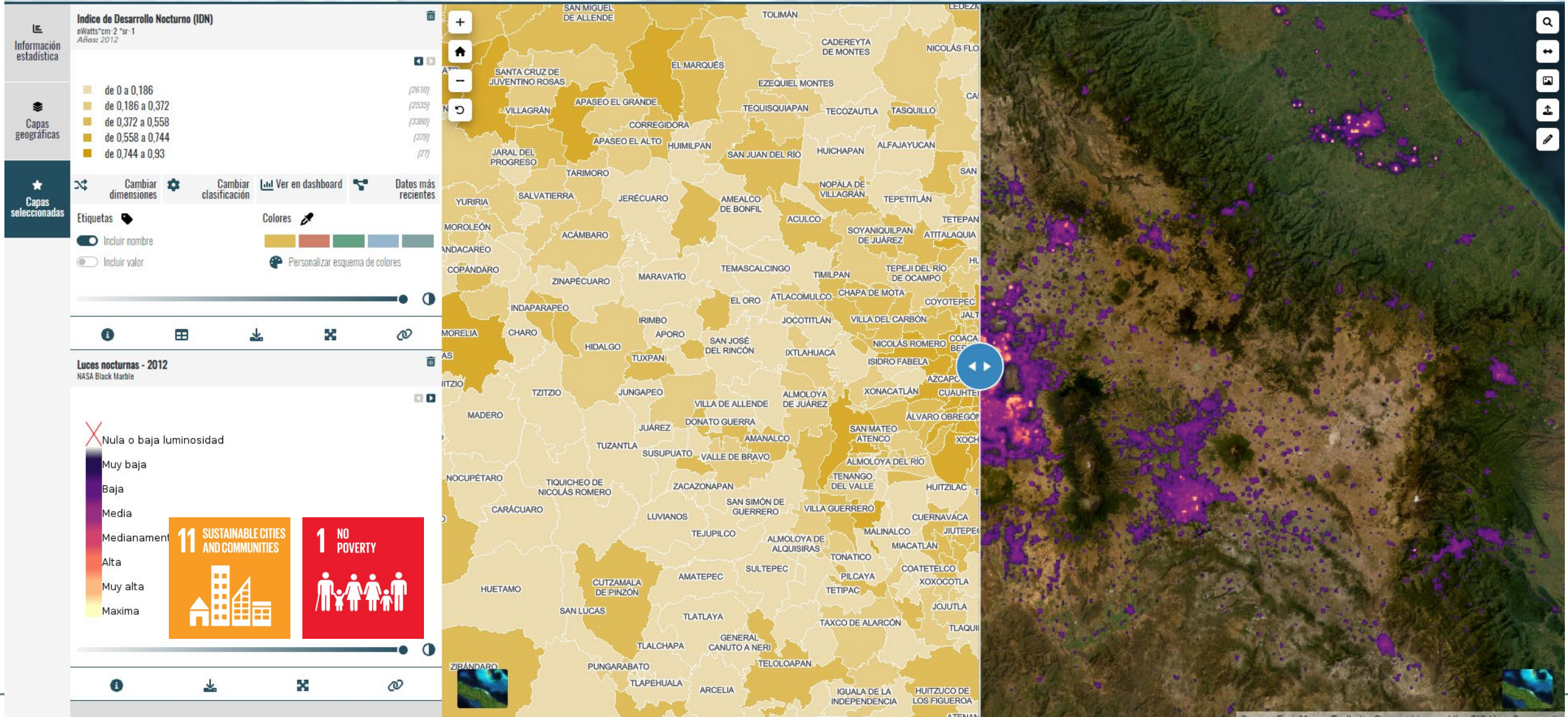
Night Lights Index by municipality

/ (Integrating satellite image, geospatial and statistical data)

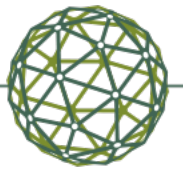


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Urban expansion by municipality and ports localization / (Integrating satellite image, geospatial and statistical data)



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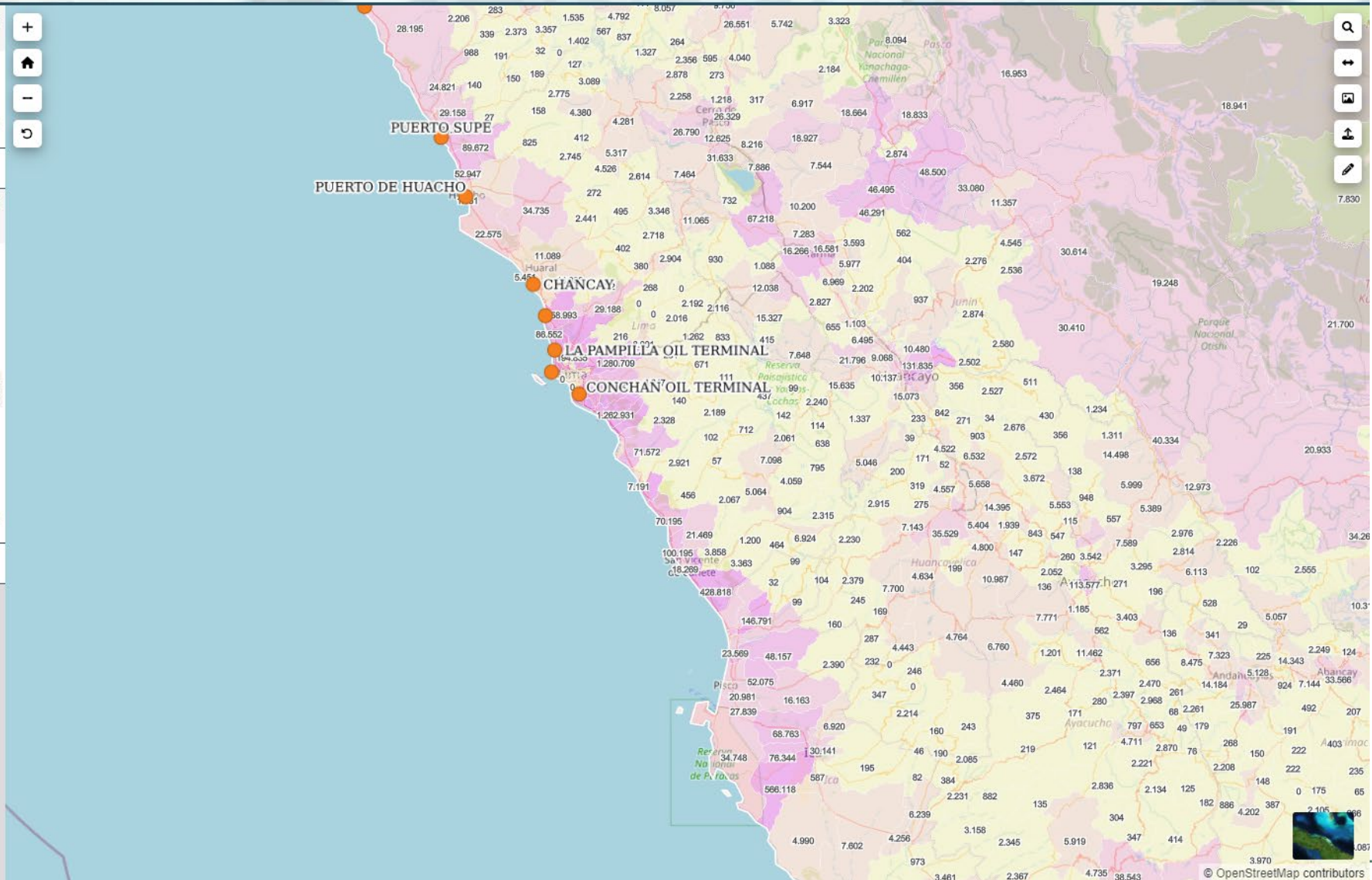
Puertos principales - 2019
Índice Portuario Mundial (NGA - 2019)

Crecimiento urbano
m2
Años: 2020

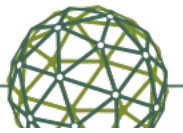
de 0 a 4.119	(2570)
de 4.119 a 15.667	(3265)
de 15.667 a 43.345	(3266)
de 43.345 a 137.833	(3265)
de 137.833 a 7.483.875	(3265)

Etiquetas: Incluir nombre, Incluir valor

Colores: Personalizar esquema de colores



Consolidated ECLAC data ecosystem and web data platforms



INTEGRATED

OPEN DATA

More and better information at subnational level

INTEROPERABLE

Communicational assets DBK

Geographical layers DBK

Documentary database

Qualitative DBK

Census MDBK

Industrial surveys MDBK

Statistical

HH surveys MDBK

CEPALSTAT

Portal of Inequalities in LA

CEPALGEO: Spatial data infrastructure of ECLAC

Interactive map of cluster

Parliamentary Observatory on Climate Change and Just Transition

COVID-19 Observatory in Latin America and the Caribbean: Measures and actions at the national level

Comprehensive Development Plan website/geoportal

Digital Repository

Observatories which track the region's economic and social situation

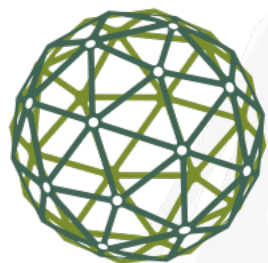
Information system on UN capacity building activities on SDG monitoring and reporting

Information system on National Statistical Capacities for the production of the SDG Indicators

Web statistical yearbook

SDGs in Latin America and the Caribbean: Statistical knowledge management hub





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UNITED NATIONS



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