Open Source technologies for geospatial information management and their role in the implementation of the IGIF

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OSGEO and Geolibres: Empowering Global Geoinformation

OSGEO (Open Source Geospatial Foundation)

- Open source geoinformation promoters
- Boosters of globally renowned projects, such as:
  - QGIS Desktop
  - GRASS GIS
  - PostGIS
  - GeoServer
  - OpenLayers
  - MapServer

Geolibres - Geoinquit@s Argentina - Local Chapter

- Promotes open access in geoinformation and mapping
- Advocates for the democratization of geospatial data
- Encourages the creation of open spatial data infrastructures
- Drives collaboration and adoption of open standards in the geospatial community
- Contributes to equity and sustainability in the access and use of geographic information.

They work together to democratize geoinformation and geospatial technologies
Objectives

- Examine the implementation of the Integrated Geospatial Information Framework (IGIF) in an accessible and sustainable manner through open-source technologies.

- Explore effective strategies for integrating statistical and geospatial information in an open-source environment. [USE CASE]

- Demonstrate the role of geoinformation and open-source technologies in disaster management and decision-making. [USE CASE]
The framework is structured using 9 strategic pathways associated with three levels: governance, technology and people.

Each strategic pathway contains a set of specific elements to organize the definition of activities, outcomes and outputs.

Fuente: UN-GGIM Integrated Geospatial Information Framework
Introduction

• What do we consider as a sustainable solution?
What do we consider as a sustainable solution?

A sustainable solution in the context of open source technologies refers to the implementation of tools and systems that promote environmental, social and economic sustainability, while fostering transparency, collaboration and open access.
Thinking in open source
Use Cases
Use Cases

Dominican Republic

- Data Cube
- Statistical data manager
- GeoNode
- Geoportal (Viewer)

Argentina

- Data Cube
- Statistical data manager
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The Global Statistical and Geospatial Framework (GSGF) is a comprehensive strategy that merges statistics and geospatial information to improve decision making. It is central to the UN-GGIM Americas initiative and allows for a more complete and accurate view by combining statistical and geographic data.
Proyecto Facility - CEPAL

Global Statistical and Geospatial Framework (GSGF)

1. Use of fundamental geospatial infrastructure and geocoding
2. Geocoded data unit records in a data management environment
3. Common geographies for the dissemination of statistics
4. Statistical and geospatial interoperability
5. Accessible and usable

Proposal of technological components

Data integration processes

Data orchestrator

Data collector
Microdata manager
Geocoder

Metadata Manager

Geospatial data manager
Statistical data manager
Statistical data dashboard
Data as a Service
Statistical geoportal
Data bank
Target countries

- Guatemala
- Ecuador
- Argentina
- Dominican Republic
- Honduras
- El Salvador
- Paraguay
- Costa Rica
Modular components

Components

Includes these elements

- Repository code
- Usage Guide
- Methodology Guide
Gitlab Repository

Data Collector
Statistical Data Manager
Geospatial Data Manager
Statistical Dashboard
Statistical Geoportal

https://git.cepal.org/geo

7 más ...
INDEC- Argentina
Bienvenidos al Gestor de datos geoespaciales
Geoportal INDEC

Search for Data.
INDEC- Argentina

Indicadores de la Geoportal INDEC

Selezionados indicadores:
- Distribución de viviendas particulares por jurisdicción

-Viviendas
Distribución de viviendas particulares por jurisdicción
(Porcentaje)

Provincias
- search...
- Select by level
- Santa Fe
- Santiago del Estero
- Tierra del Fuego, Antártida e Islas del Atlántico Sur
- Tucumán
- Total

Año
- search...
- Select by level
- 2022

Options
- Table: FLAT (TDR), PIVOT

Organize data

Rows
- Año

Columns
- Provincias
Gestor Estadístico API

https://datosestadisticos.indec.gob.ar/api/v1

Filter by tag

area

dato

dimension

fuente

indicator

nota

thematic-tree
Challenges

- Technical knowledge for the implementation of the components
- Strong encapsulation in proprietary technologies that does not allow communication with other components.
- Lack of data integrity
Use case (2) Map Viewer
Data Collector

IT HELPS ORGANIZATIONS WITH NON-EXISTENT OR INCOMPLETE DATA

ALLOWS YOU TO CREATE CUSTOM FORMS AND SURVEYS

HOST AND INTEGRATE WHERE AND WITH THE APPLICATIONS YOU WANT
Workflow Example | Risk Management

- Incident registration
- Automation
- Viewer
Example | HOT - Open Litter Map
Q&A
Thanks!