

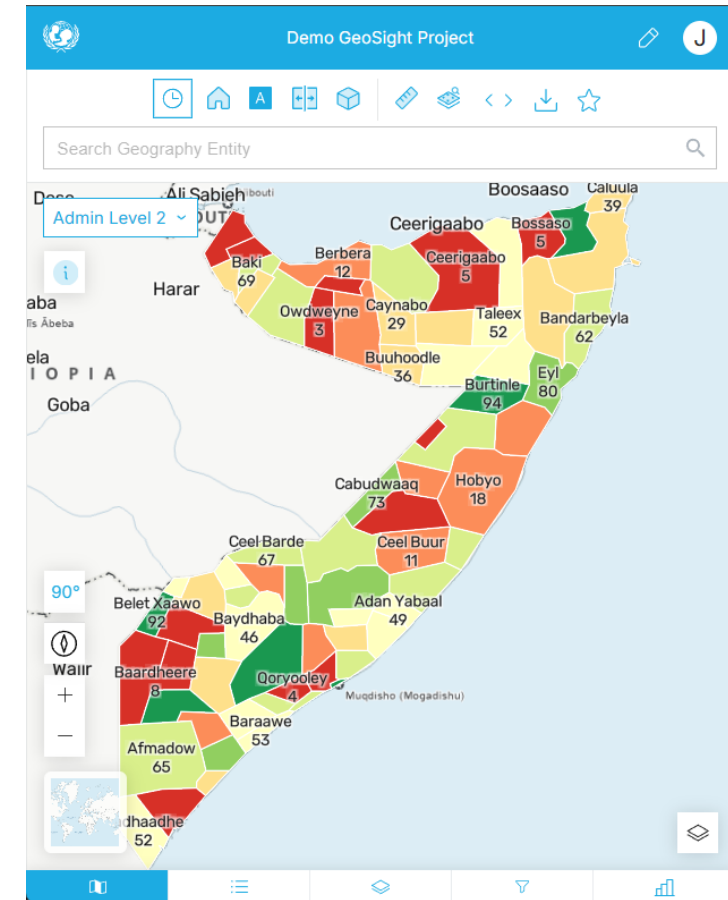
From Statistical Indicators to Geospatial Intelligence: UNICEF's open-source Geospatial SDMX Connector

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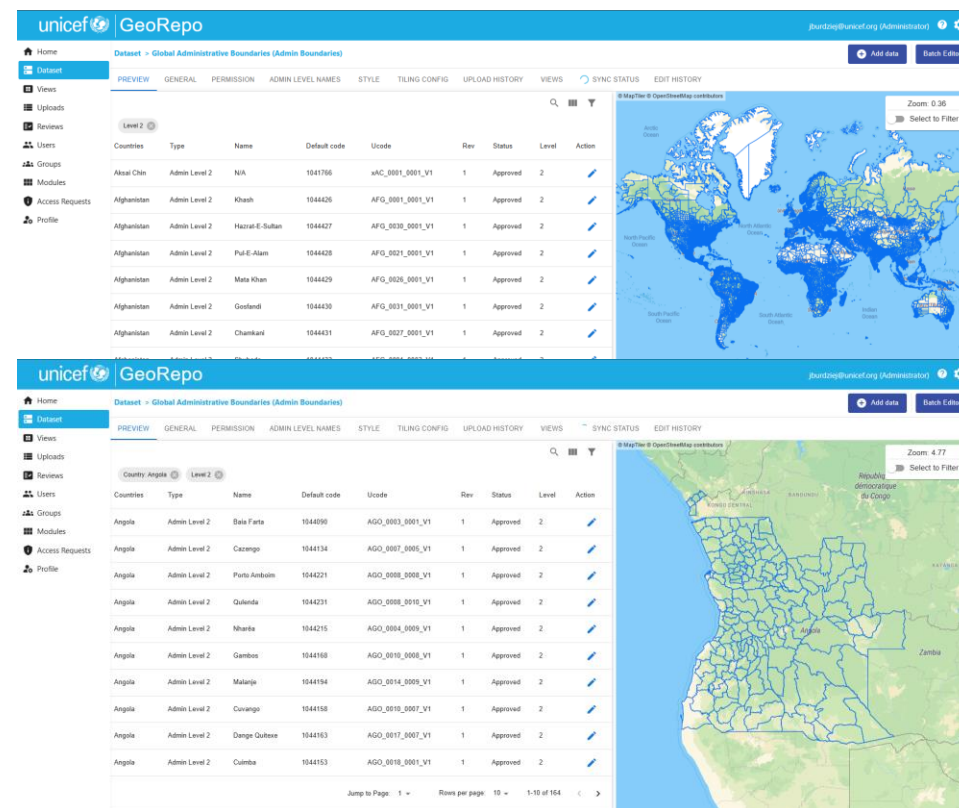
GeoSight

- UNICEF's open-source geospatial platform
- Purpose
 - Visualize subnational, multi-indicator time-series data for enhanced decision-making
- Three layer types:
 - Basemaps
 - Context Layers
 - Indicator Layers (designed for statistical indicators)
- GitHub:
 - <https://github.com/unicef-drp/GeoSight-OS/>



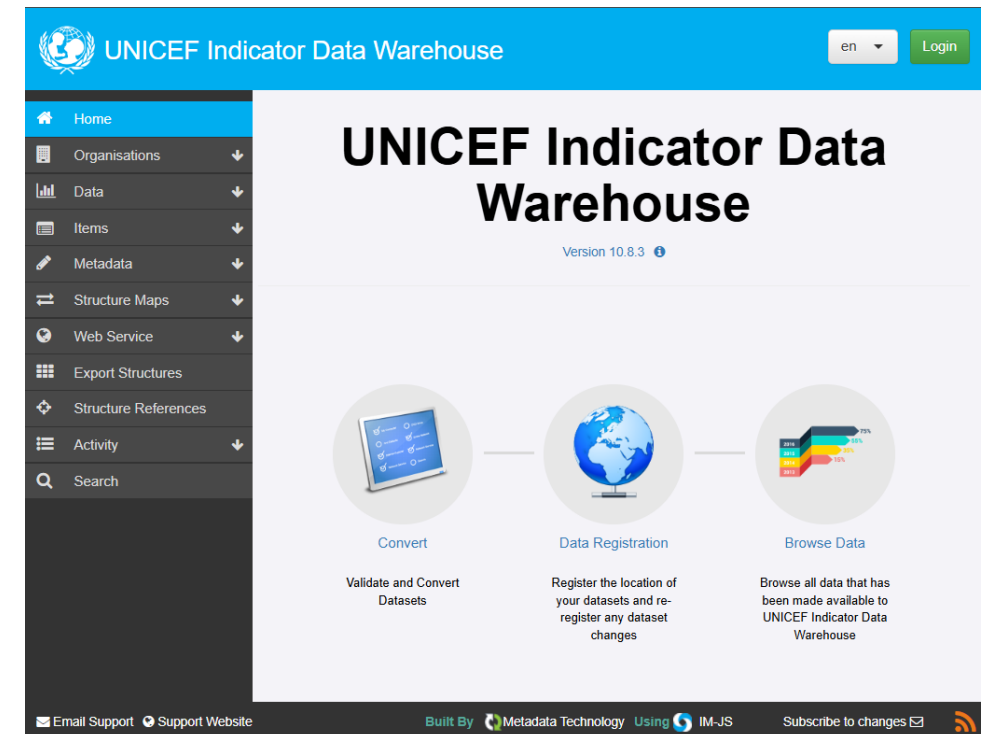
GeoRepo – admin boundary management

- GeoSight pulls admin boundaries from:
 - Local database – e.g. custom shapefiles
 - GeoRepo – UNICEF’s central repository of harmonized global admin boundaries
- GeoRepo
 - Open-source
 - Versioning over time
 - Smart matching
 - Robust APIs
 - Vector tiles
 - Geospatial Codelist for SDMX



UNICEF SDMX Indicator Warehouse

- UNICEF's official public repository of indicators
 - integrated with other UNICEF tools, such as a Data Explorer on data.unicef.org
 - <https://sdmx.data.unicef.org/overview.html>
- Many users are unfamiliar with SDMX
- Need: Simple way to bring UNICEF indicators into GeoSight maps



Collaboration – Power of Open-Source

- Partner:
 - Harvard Tech 4 Social Good
- Objective:
 - Integrate SDMX Data Browser into GeoSight
 - Direct connection to any SDMX registry
- Features:
 - Agency & dataflow selection
 - Dimension filtering
 - Data preview + import

The screenshot displays the 'Data Management > Import Data' configuration page. The left sidebar contains a vertical menu of icons. The main content area has a tabbed interface with 'General' selected. Under 'Import type *', the 'Indicator Value' option is chosen. The 'Input format *' section lists several options, with 'SDMX Format' being the selected one. A 'Submit' button is located in the top right corner of the main panel.

Implementation

Data Management > Import Data

General

Attributes

Reference Layer & Time

Schedule

Aggregations

Agency *

UNICEF - United Nations Children's Fund [UNICEF]

Dataflow *

WASH Household subnational [WASH_HOUSEHOLD_SUBNAT]

Dataflow Version *

Version 1.0 [1.0]

REF_AREAINDICATORSERVICE_TYPewealth QuintileWealth Quintiles

Select REF_AREASelect INDICATORSERVICE_TYPESelect WEALTH_QUINTILEWEALTH_QUINTILESELECT WEALTH QUANTILES

RESIDENCEADMIN_LEVELREF_AREA_PARENTDATA_SOURCE_MAINData Source Main

Select RESIDENCESelect ADMIN_LEVELSelect REF_AREA_PARENTElect DATA_SOURCE_MAINDATA SOURCE MAIN SELECT DATA SOURCE MAIN

TIME_PERIODTime Period

Select TIME_PERIODTIME PERIODSELECT TIME PERIOD

Load Data

Column Geograph Code *

REF_AREA (AFG001_2010_MS, AFG001_2011_MICS, ...)

Indicator *

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Load Data

Column Geograph Code *

REF_AREA (AFG001_2010_MS, AFG001_2011_MICS, ...)

Indicator *

Selected Indicator

Data-Driven Indicator Column

Access/Accessible area (Accessible area)

Value Column *

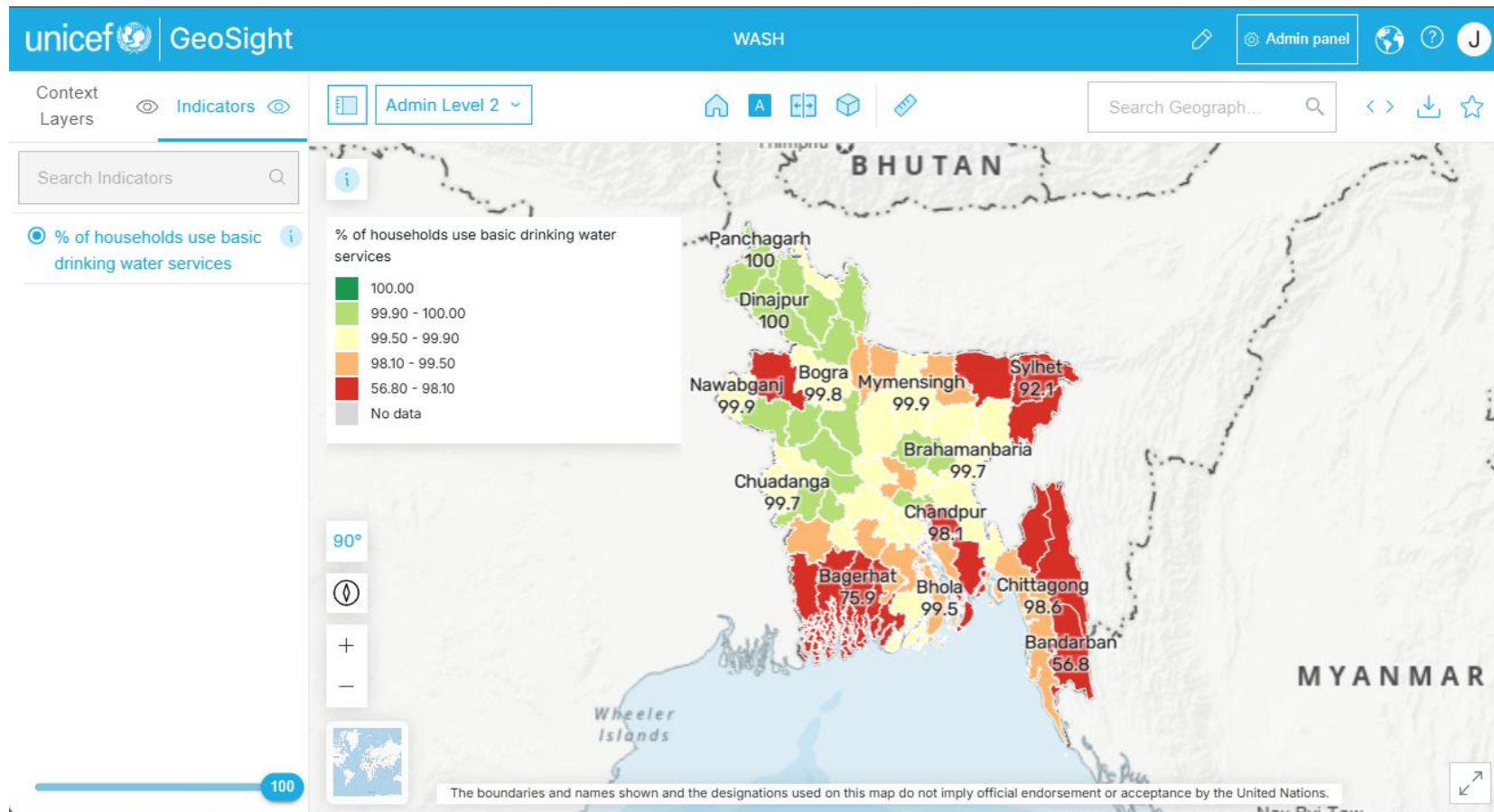
OBS_VALUE (27.03716520994548, 53.00732614398732, ...)

Retrieved data

REF_AREA	Geographic area	INDICATOR	Indicator	SERVICE_TYPE	Service Type	Value
AFG001_2010_MS	Capital	WS_PPL_S-ALB	Proportion of population using...	SAN	Sanitation	
AFG001_2010_MS	Capital	WS_PPL_S-B	Proportion of population using...	SAN	Sanitation	
AFG001_2010_MS	Capital	WS_PPL_S-I	Proportion of population using...	SAN	Sanitation	
AFG001_2010_MS	Capital	WS_PPL_S-L	Proportion of population using...	SAN	Sanitation	
AFG001_2010_MS	Capital	WS_PPL_S-LAT	Proportion of population using...	SAN	Sanitation	
AFG001_2010_MS	Capital	WS_PPL_S-OD	Proportion of population practi...	SAN	Sanitation	
AFG001_2010_MS	Capital	WS_PPL_S-SEP	Proportion of population using...	SAN	Sanitation	

Submit

Implementation



Summary

- Bridges statistics ↔ geospatial intelligence
- Empowers decision-makers with granular insights
- Promotes open data & open-source collaboration
- Builds scalable, reusable innovation across partners
- Next steps:
 - Pub/Sub data syncing
 - Real-time / live SDMX map layers

THANK YOU



FRONTIER
DATA
NETWORK

unicef 
for every child

CHAMPIONED BY



MINISTERIO
DE ASUNTOS EXTERIORES, UNIÓN EUROPEA
Y COOPERACIÓN

