

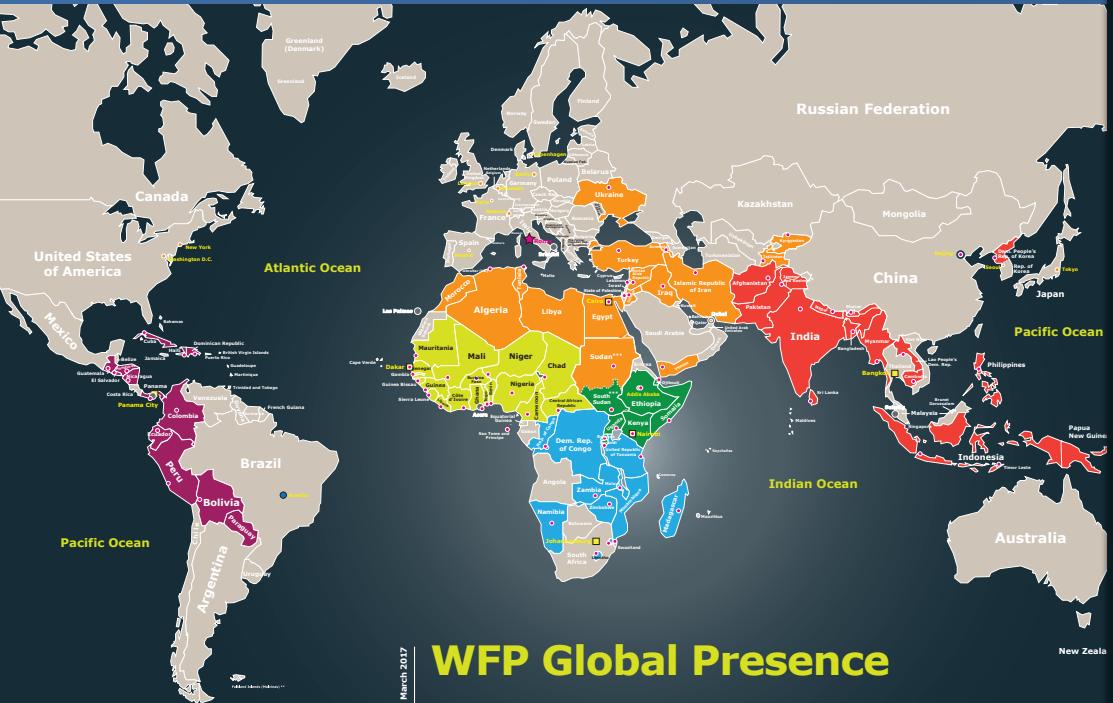
# **WFP GeoNode**

## *Use Cases and Roadmap*

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June, 2019

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Dimitris Karakostis  
Michael Andrew Manalili*



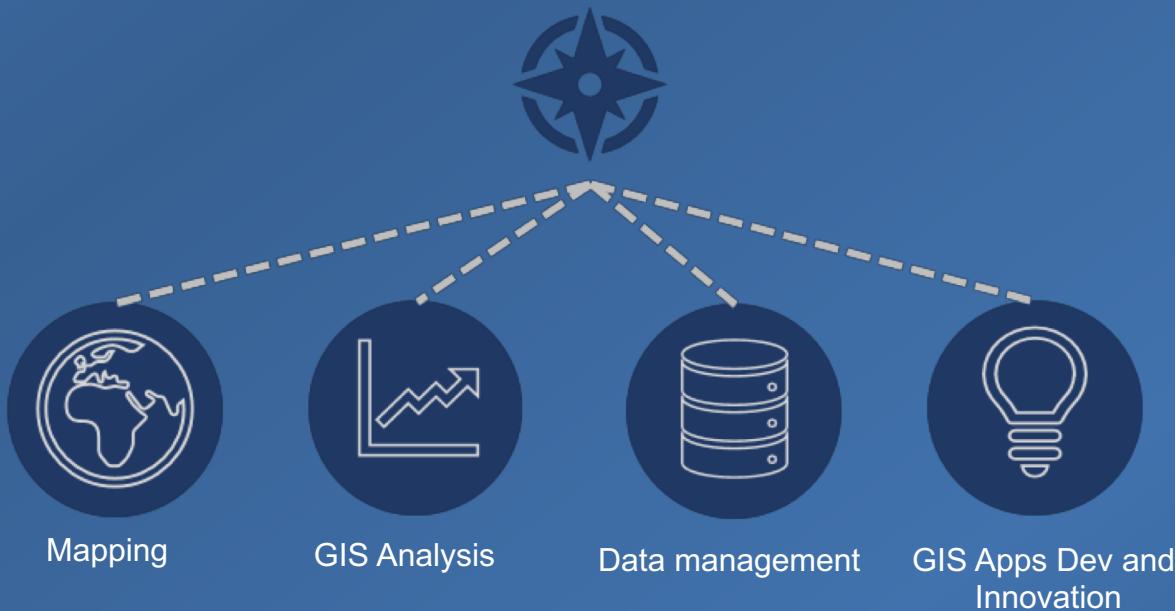
# GLOBAL PRESENCE

**WFP is headquartered in Rome.  
We have a global presence that includes:**

- 83 Country Offices worldwide
- 6 Regional Bureaux (Bangkok, Cairo, Dakar, Johannesburg, Nairobi and Panama)
- 14 offices in world capitals
- A vast supply chain logistics network that enables us to quickly deliver life-saving food assistance anywhere in the world
- Specialist centres for innovation and development of sustainable solutions to hunger.

# GEOSPATIAL SUPPORT UNIT - (Emergency Division – WFP HQ)

**OUR MISSION:** Assist WFP Operations at field-level  
Improve Situational Awareness at HQ/RB level + Preparedness



## 14 GIS PROFESSIONALS with a wide range of expertise

- Maps production for field operations, senior management, WFP led-clusters...
- GIS Analysis in support of WFP operations, programs design and early warning
- Prepare field offices to better respond in case of emergencies and GIS community
- Adopt cutting edge technologies in support of WFP Operations (Applications Development)

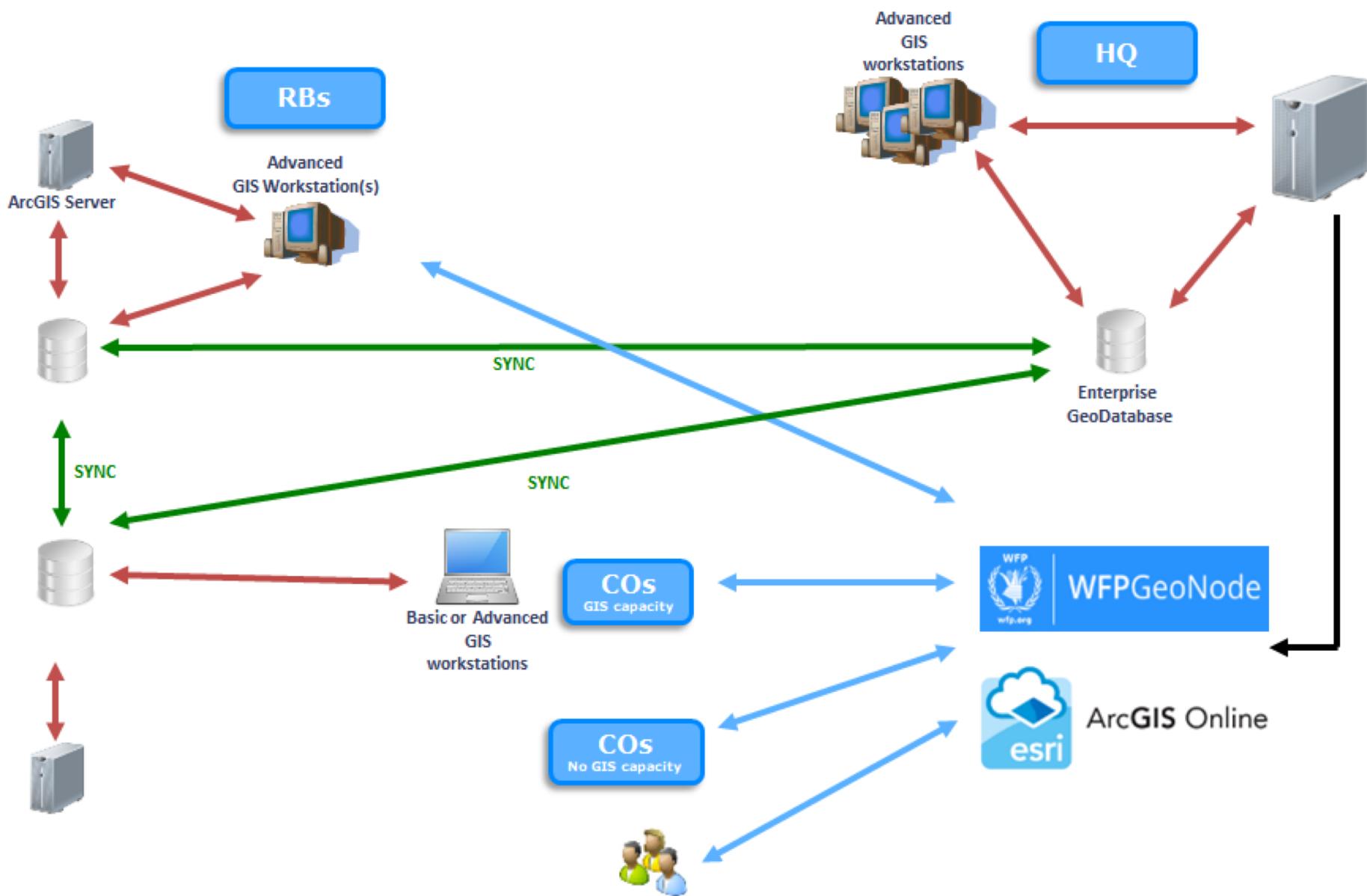
# GIS Officers Presence Map



~ 100 staff in WFP with GIS skills

~ 40 Countries Covered

# Global Spatial Data Infrastructure (SDI)



# The role of GeoNode within the GIS Infrastructure

**WFPGeoNode**

Layers Maps Resources Users Search Layers Sign in

**Interactive mapping**  
You can combine already existing layers with your own data to create powerful interactive maps accessible from all devices.

Explore Maps

Layers	843	Maps	78	Static Maps	3082	Users	384	
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Featured Maps



Burundi - Integrated Con... 1073



Sudan, 2018 - Integrated ... 193



WFP Presence by Region... 1752



CAR Operational OverVie... 1030

**Explore Data**  
Click to search for geospatial data from our corporate SDI or published by other users, organizations and public sources.

**Explore Maps**  
Data is available for browsing, aggregating and styling to generate maps which can be shared publicly or restricted to

**Upload Data**  
GeoNode allows registered users for easily upload geospatial data in several formats including shapefile, GeoTiff and KML

English

- \* Increasing need of a central platform to share and retrieve geospatial information.
- \* Our corporate web platform for uploading, sharing and creating geospatial data and maps designed for non-GIS experts.
- \* Customized widgets



~925



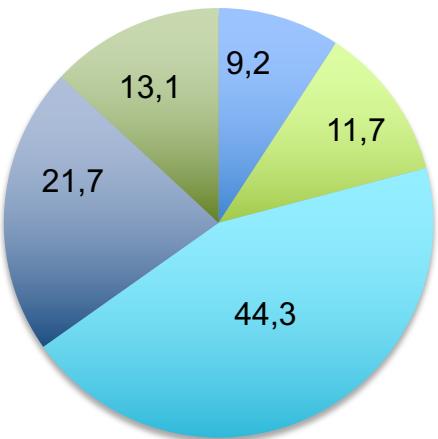
~3070

## Top 10 2019



±30%

## Monthly Data Download



■ Private Sector ■ Government ■ Academia  
 ■ UN Agency ■ Other

# Technical Update

## Layer Filtering

Download part of the layer using:

- query builder
- map selector

**Download Layer**

**Do you want to filter it?**

**Query Builder**   **Map Filter**

Match **all** of the following:

**iso3** =

**Pick your download format:**

**KML**   **GeoJSON**   **Excel**   **CSV**   **Zipped Shapefile**

**IMY** is selected in the dropdown menu.

**Close**

**Download Layer**

**Do you want to filter it?**

**Query Builder**   **Map Filter**

**Map Filter** is selected in the tab.

**Leaflet** | Map tiles by Stamen Design, CC BY 3.0 — Map data © OpenStreetMap contributors, CC-BY-SA

**Pick your download format:**

**KML**   **GeoJSON**   **Excel**   **CSV**   **Zipped Shapefile**

**Close**

# Technical Update

## Create Layer – Method I

Create a Layer with Administrative Boundaries (source Gaul2015):

### Create Layer

1 Create a layer by administrative levels

Choose an existing layer:

**Download a CSV file of a selected country**

---

### Upload Layer

Title

Layer type

Csv  No file chosen

Selected country

### Permissions

Who can view it?

Anyone

The following users:

The following groups:

Who can download it?

Who can change metadata for it?

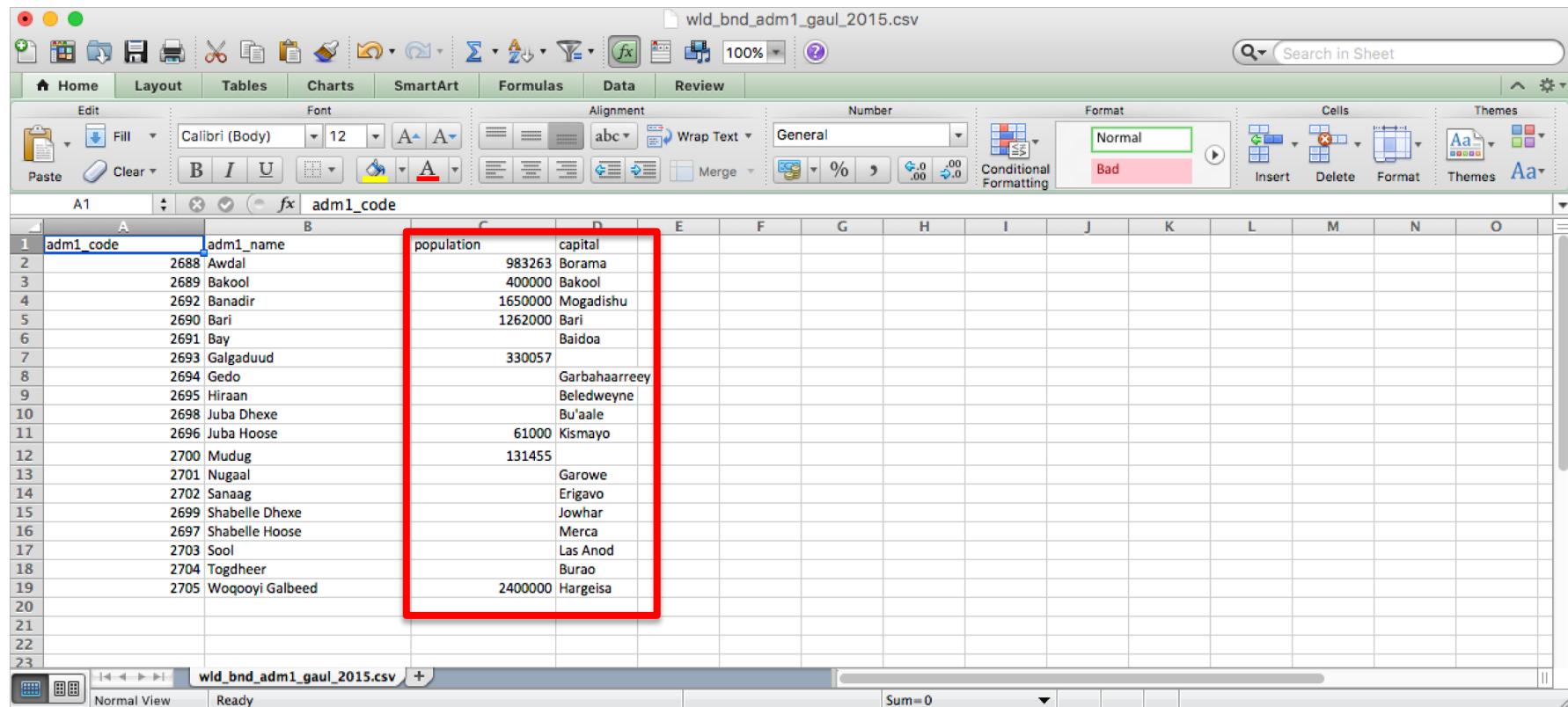
Who can edit data for this layer?

Who can edit styles for this layer?

Who can manage it? (update, delete, change permissions, publish/unpublish it)

# Technical Update

Open the CSV with Excel (e.g. Regions of Somalia). Add additional columns:



	adm1_code	adm1_name	population	capital
1	2688	Awdal	983263	Borama
2	2689	Bakool	400000	Bakool
3	2692	Banadir	1650000	Mogadishu
4	2690	Bari	1262000	Bari
5	2691	Bay		Baidoa
6	2693	Galgaduud	330057	
7	2694	Gedo		Garbahaarreey
8	2695	Hiraan		Beledweyne
9	2698	Juba Dhexe		Bu'aale
10	2696	Juba Hoose	61000	Kismayo
11	2700	Mudug	131455	
12	2701	Nugaal		Garowe
13	2702	Sanaag		Erigavo
14	2699	Shabelle Dhexe		Jowhar
15	2697	Shabelle Hoose		Merca
16	2703	Sool		Las Anod
17	2704	Togdheer		Burao
18	2705	Woqooyi Galbeed	2400000	Hargeisa
19				
20				
21				
22				
23				

Two added two columns:  
 1. Population of each region  
 2. Capital of each region

# Technical Update

## Create Layer – Method I

Upload the file:

### Create Layer

Create a layer by administrative levels

Choose an existing layer:

Global Layer    Country layer by region    Country layer by province

**Upload Layer**  
Fill in the necessary fields

Title:

Layer type: Global Layer

Csv: Choose File No file chosen

Selected country:  
World  
Abyei  
Afghanistan  
Aksei Chin

Click Upload –The layer will be created

Upload

Explore Layers

### Permissions

Who can view it?

Anyone  
The following users:  
 Choose users...

The following groups:  
 Choose groups...

Who can download it?

Who can change metadata for it?

Who can edit data for this layer?

Who can edit styles for this layer?

Who can manage it? (update, delete, change permissions, publish/unpublish it)

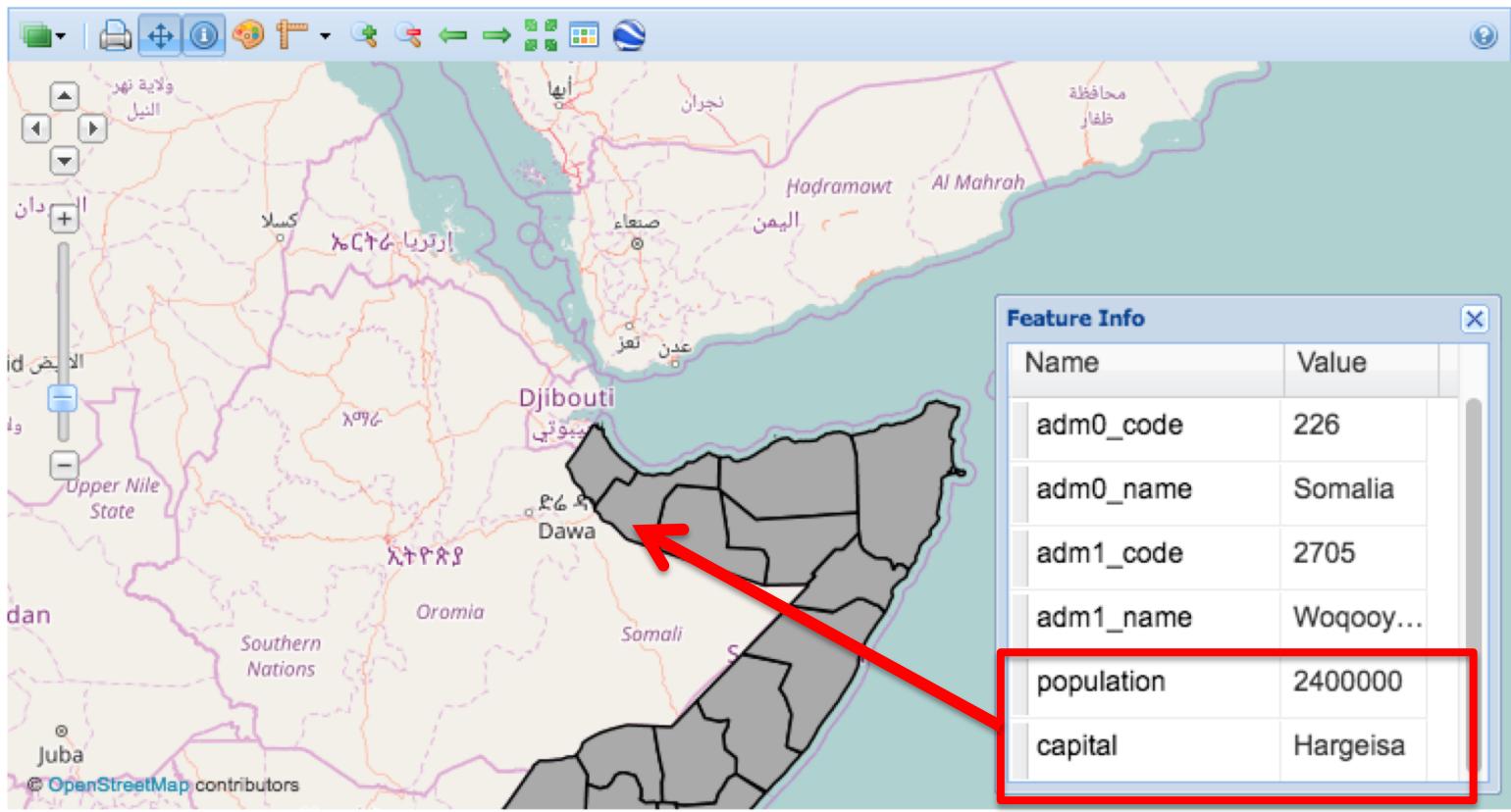
Set permissions

# Technical Update

## Create Layer – Method I

The Layer is Uploaded and can be retrieved in Layer List page

### Somalia Regions



Map showing Somalia regions. The 'Feature Info' table displays the following data for the highlighted region:

Name	Value
adm0_code	226
adm0_name	Somalia
adm1_code	2705
adm1_name	Woqooy...
population	2400000
capital	Hargeisa

# Technical Update

## Create Layer – Method II

Create an empty layer with specified geometry and attributes

**Create Layer**

Select the empty layer method

**Create Empty Layer**

Name of new Layer  
Iraq IDP Locations

Type of Data  
Points

name  
Character

Type  
Character

Population  
Integer

Add Another Attribute

Upload

Fill in the necessary fields

Add attributes

Click Upload –The layer will be created

Permissions

Who can view it?  
 Anyone  
The following users:  
Choose users...

The following groups:  
Choose groups...

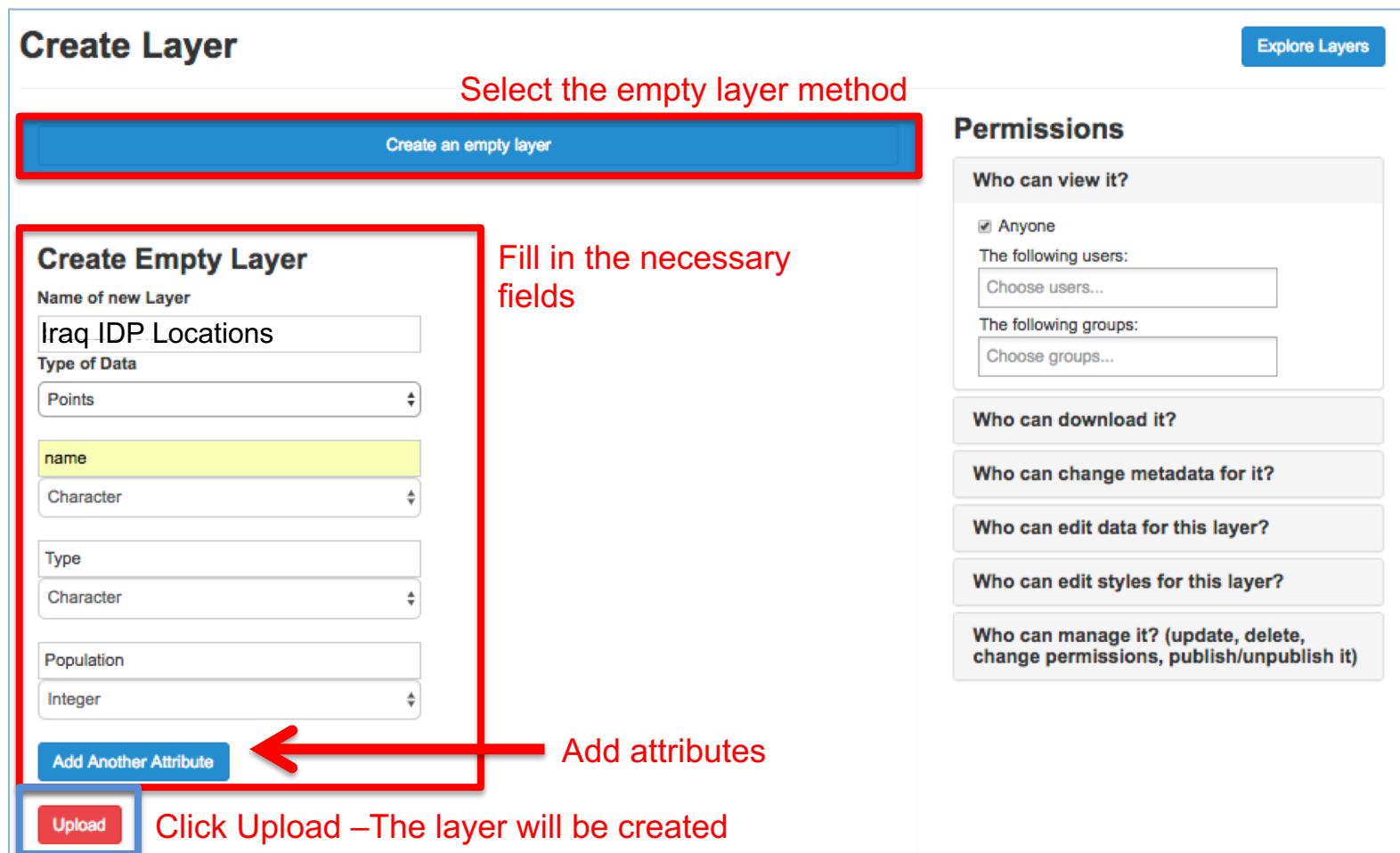
Who can download it?

Who can change metadata for it?

Who can edit data for this layer?

Who can edit styles for this layer?

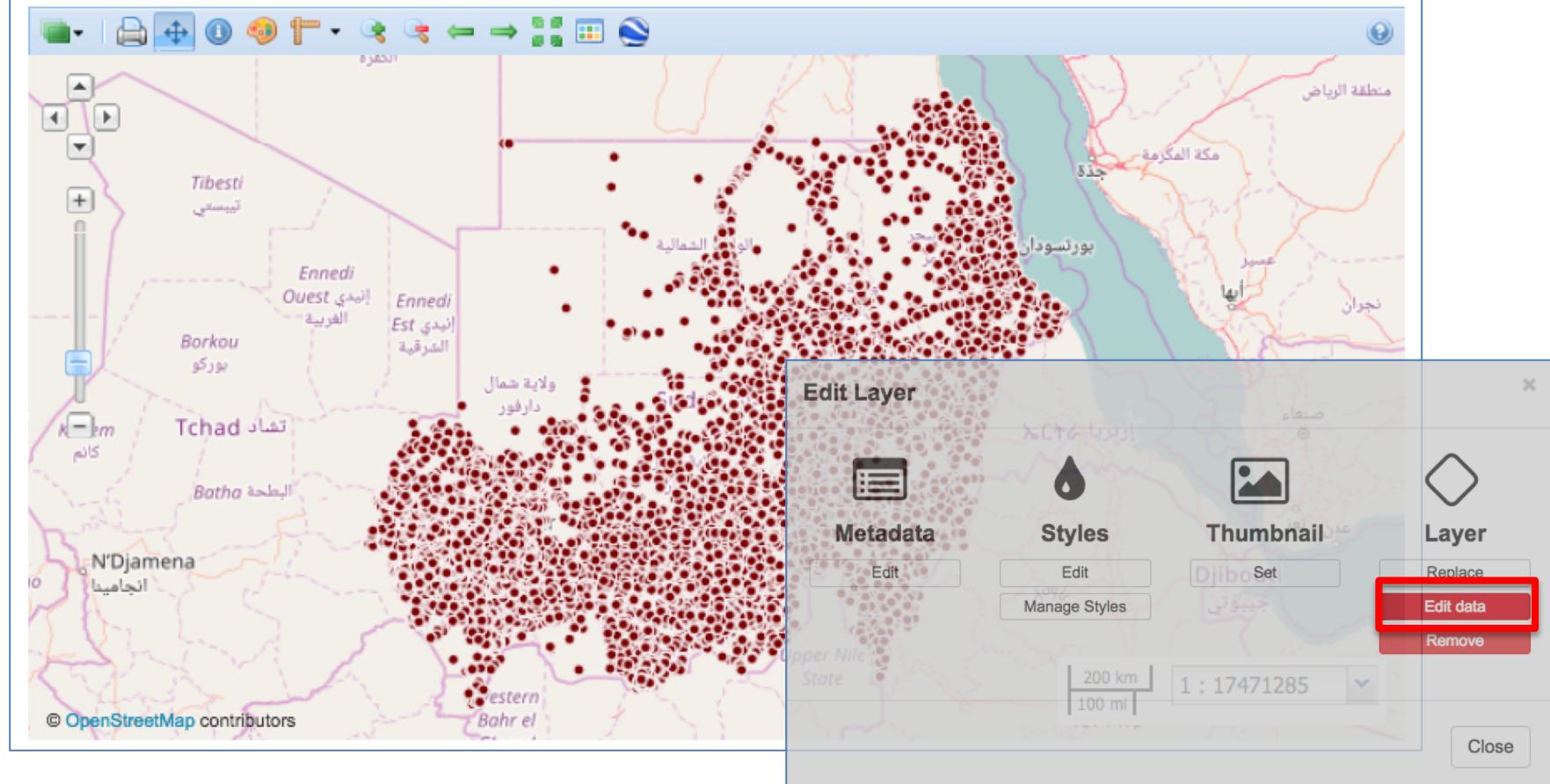
Who can manage it? (update, delete, change permissions, publish/unpublish it)



# Technical Update

Add\Edit Data

## Sudan Settlements



# Technical Update

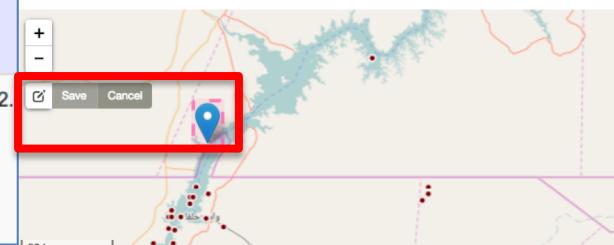
Current limitation: **Editing** works for points

Add\Edit Data

## Edit Layer Data: sdn\_poi\_settlem\_gov\_1

[View Layer](#)
[Explore Layers](#)

[Add a new entry](#)

	▲ type	source	name1	pcode	lccode	loc_count	state	x	y	type_text	locality	status	other_nam
<a href="#">Edit Attributes</a> <a href="#">Edit Geometry</a> <a href="#">Delete Row</a>	5	GPS	Faras	NF36050001	SU1103	Halfa	Northern	31.466667	22.2	Village	Halfa	Not Verified	Halfa
<a href="#">Edit Attributes</a> <a href="#">Edit Geometry</a> <a href="#">Delete Row</a>	5	GPS	Bi'r Jugub	NF36070001	SU1503	Halayeb	Red Sea	34.45	22.	Map	Click the button on the map to edit features.		
<a href="#">Edit Attributes</a> <a href="#">Edit Geometry</a> <a href="#">Delete Row</a>	5	GPS	Legag	NF36070004	SU1503	Halayeb	Red Sea	34.266667	22.	<input checked="" type="checkbox"/> Save <span style="margin-left: 10px;"><a href="#">Cancel</a></span>			

# Technical Update

## Remote Services

Modified the existing remote service application to be able to select the layers to be added:

- not cascaded
- non-authenticated layers (public)

### Register New Service

Service URL

Service Type

Available Layers Filter

Layer Name
geonode:arm_trs_roads_osm
geonode:arm_trs_streets_osm
geonode:asp_poi_amenities_osm
geonode:bfa_trs_roads_osm
geonode:bfa_trs_streets_osm

# WFP GeoNode Roadmap 2019-2020

## 4 KEY PRIORITIES

1. GeoNode as HUB for authoritative data and maps
2. Towards high availability and top performance
3. Upgrade to the latest stable version (2.10) and migration
4. New User interfaces
  - New Home Page to provide direct access to the most useful content
  - Projects catalog
  - Country pages

# 1. GeoNode as HUB for authoritative data and maps



Global



OSM



Alerts



Analysis



- \* Information and data are shared internally and externally

- \* ~80% of layers are public

# WFP GeoNode as Hub

Store data

**Internal**



Spatial Data  
Infrastructure

Request data

**Public**



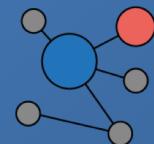
Humanitarian  
Topographic  
Atlas



Automatic  
Disaster  
Analysis &  
Mapping



Integrated  
Context  
Analysis (ICA)



Humanitarian  
Data Exchange  
(HDX)



OPWeb

# Interested to join our team?

## LET US KNOW!

**4 positions will open soon**

- ✓ GeoNode Developer with strong skills in cloud infrastructures and web dev ops
- ✓ 2 GIS Developers (Python and GIS libraries for data processing and mapping)
- ✓ GIS Developer – ESRI technologies

# Questions ?

