

User Manual for Rapid Mapping Application

MEAZANESH ASRES ALEMU

meazanesh.alemu@un.org

GEOSPATIAL INFORMATION MANAGEMENT SECTION (GIMS)

AFRICA CENTER FOR STATISTICS (ACS)

UNITED NATIONS ECONOMIC COMMISSION FOR AFRICA (UNECA)

FEBRUARY 2026

Contents

1.	Introduction	2
2.	Major componets of the application.....	3
3.	Header of the application.....	Error! Bookmark not defined.
4.	Supported Data Types and maximum file size	3
5.	Left Sidebar	4
6.	Right Sidebar.....	5
7.	Zoom in (+) /Zoom Out (-):.....	5
8.	Drawing Toolbar.....	5
9.	Pop-Up / Attribute Information	5
10.	Disclaimer.....	6
11.	Classification Table (Collapse/Expand)	6
12.	Demonstrations.....	6

1. Introduction

The ECA Rapid Mapping Application (UNECA-RMA) is a fully browser-based, client-side web mapping tool designed for instant visualization. It enables ECA staff, member-country experts, and the wider United Nations community to upload and explore geospatial datasets (in formats such as GeoJSON, Shapefiles, and comma-separated values [CSV]) directly within the application—without requiring prior mapping expertise or professional GIS software. The tool automatically renders and symbolizes data based on selected attributes, ensuring intuitive and efficient visualization.

To guarantee compliance with United Nations mapping standards, the application embeds the UN-standardized basemap and disclaimers by default. While similar tasks can be performed using platforms such as Power BI (for CSV files only), those platforms do not provide basemaps that meet UN compliance requirements. The primary purpose of UNECA-RMA is to enable instant mapping while ensuring outputs that conform to UN standards for diverse uses, including reports and presentations.

The tool also includes additional functionalities such as exporting maps in PDF and PNG formats, selecting color palettes, defining the number of classes for numerical data, adjusting the size of line and point datasets, and choosing among different classification techniques (Equal Interval, Natural Breaks, and Quantile) for numerical data visualization.

Although the application supports multiple layers, complex projects requiring advanced visualization remain better suited to specialized software such as ArcGIS Pro. UNECA-RMA is specifically designed for quick, professional map preparation, making it particularly valuable for presentations and reporting.

2. Application home page

The screenshot shows the UN Topo map application. At the top left is the ECA logo. In the center is a map of Africa and the surrounding region, with a legend titled "Custom Map Title". To the right of the map are "User manual", "Sample datasets", and "Contact" links. On the left, there's a sidebar for file uploads and URLs, and buttons for "Export as Image" and "Export as PDF". On the right, there are "Layers" and "Legend" sections, with "UN Topo" selected. A disclaimer at the bottom of the map states: "Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined." The footer reads: "United Nations Standardized Rapid Mapping Tool Powered by GIMS/ACS/UNECA © 2025".

3. Header

- **Custom Map Title:** To type your own map title
- **User manual:** To download the user manual of this application, this manual itself.
- **Sample datasets:** To download valid and supported sample datasets for testing, demonstration of this application and for a reference.
- **Contact:** Email addresses for reporting any issue related to the application

4. Supported Data Types and Maximum File Size

In order to avoid freezing the browser due to large datasets, the application is limited to uploading and loading files with a maximum supported size of 1 GB. This limit can be increased if necessary.

Data Type	Description	Requirements
Zipped Shapefile	Standard ESRI Shapefile packaged as a .zip archive containing all required files (.shp, .shx, .dbf, etc.).	Must include all component files in the zipped folder.

Data Type	Description	Requirements
CSV (well-formatted)	Comma-separated values file containing latitude and longitude coordinate points.	Latitude and longitude columns must be properly formatted and consistently named.
GeoJSON	JSON-based format for encoding a variety of geographic data structures.	Must follow valid GeoJSON schema.
URL (GeoJSON or CSV)	Remote datasets served via a URL in either GeoJSON or CSV format.	Cross-Origin Resource Sharing (CORS) must be enabled on the hosting server.

Note: Sample valid datasets are attached within the application for demonstration and testing purposes.

5. Left Sidebar

- **File upload and URL loading**

Upload GeoJSON, zipped Shapefile or CSV:

Choose File(s)

Add GeoJSON or CSV via URL:

Add

- **Attribute and Classification Types Selections**

- The **Select Attribute** dropdown option will be displayed when a layer is uploaded or loaded

Select Attribute:
F1970

Classification Type:
Equal Interval

Number of Classes:
5

- **Export as Image and PDF:** To export the map as PNG or PDF, including the map, disclaimer, title, and legend, you must ensure the map is properly positioned and fully visible before exporting so that it is not cropped.

6. Right Sidebar

- **List of Layers:** When a user uploads or loads a layer, it will be listed in the right sidebar. Once the layer is added on the map, you can **Toggle on/off** the layer by clicking the checkbox aside each layer. If multiple layers are to be visualized (polygon, line, and point layers), they should be uploaded or loaded in the following order: polygon layer first, line layer second, and point layer last. This ensures that polygons do not obscure points and lines.
- **Legend:** After uploading or loading a layer and selecting the attribute to be symbolized, the legend will be displayed in the right sidebar below the list of layers.

7. Zoom in (+) /Zoom Out (-):

- **Zoom In (+):** Brings the map closer, showing a smaller geographic area with more detail.
- **Zoom Out (-):** Moves the map farther away, showing a larger geographic area with less detail.

8. Drawing Toolbar

Provides tools for manual drawing points, lines, or polygons. Users can edit or delete their drawings as required. E.g. In the map below, the points were placed using the point-drawing tool and the map exported as image.

9. Pop-Up / Attribute Information

After adding a layer, it is possible to display the attribute information of each individual feature by clicking on it.

10. Disclaimer

In addition to the administrative boundaries, disclaimer is one of the requirements as per the United Nations map standard.

11. Classification Table (Collapse/Expand)

The classification table appears when a layer is added or loaded and an attribute is selected. It allows users to choose colors using the color-picker according to their needs. The colors selected in the classification table are automatically applied to the map and reflected in the legend. The screenshot below shows the classification table and the color palette.

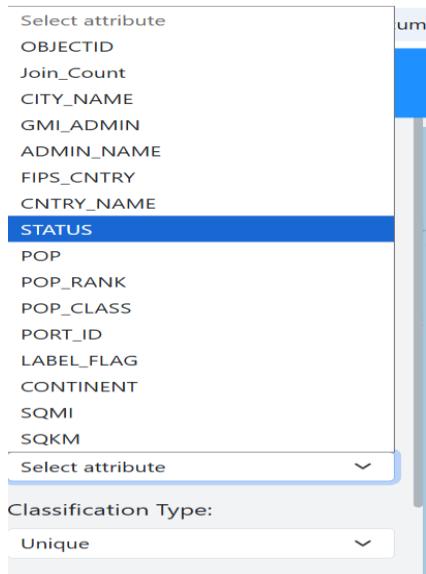
Classification Table (click to collapse/expand)	
Category	Color
National and provincial capital	
National capital	
Provincial capital	
Other	
National capital and provincial capital enclave	



12. Demonstrations

Example: map a point layer in shapefile

1. Go to the application left sidebar and click on **Choose file**, then **Select Africa_Cities** zipped shapefile in the sample dataset
2. **Select Status** in the attribute list under **select attribute dropdown**



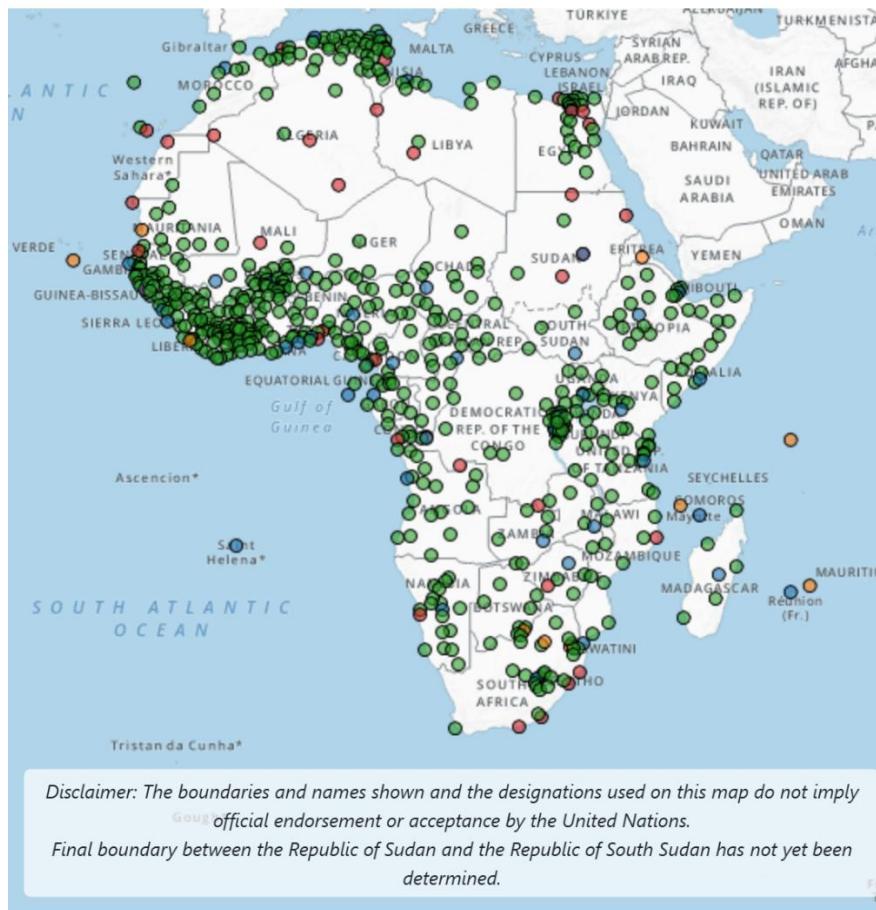
3. Reduce the Point size to **4** as the default point size is **8**

Point Size:

4

4. Edit **Custom Map title** to **Africa Cities**
5. You can change the color of any point in the category in the classification table
6. Export the map as image and you will get a map as below

Africa Cities



Africa_Cities-shp.zip: STATUS

- National and provincial capital
- National capital
- Provincial capital
- Other
- National capital and provincial capital enclave

In a similar way, it is possible to upload CSV (with Latitude and Longitude) or GeoJson file from your local files.

Exmaple-2: Mapping GeoJson served via static URL. In the <https://geojson.xyz>, you will find several GeoJSON datasets. The website is an open-source website and content delivery network (CDN) that provides fast, ready-to-use GeoJSON datasets for web mapping experiments, demos, and applications. Assume you find an important layer and want to include it in your presentation or report, however, the basemap is not as per Un mapping standard. Therefore, you can just copy the GeoJSON URL and visualize it in this application and get your map ready within less than five minutes.

1. Go to <https://geojson.xyz>
2. Copy one geojson Url you are interested in. Eg. Copy the GeoJSON URL of **rivers lake centerlines** as below:
https://d2ad6b4ur7yvpq.cloudfront.net/naturalearth-3.3.0/ne_50m_rivers_lake_centerlines.geojson
3. Paste the URL in the placeholder as below and click **Add**. Wait for loading to finish

Add GeoJSON or CSV via URL:

Add

4. Select **scalerank** in the attribute listed in the select Attribute dropdown as shown below

Select Layer:

Select Attribute:

Classification Type:

Number of Classes:

Line Width:

5. Since the **scalerank** attribute has numerical values, you can choose different classification types, the default is **Equal Interval**. In addition, you can also increase or decrease the number of classes as needed, the default is **5**.
6. The default line-width size is **3**. You can increase or decrease as required. Take the default for this example.
7. Change the color of the first class to blue as below

Classification Table (click to collapse/expand)

Class	Range	Color
Class 1	0.00 - 1.20	
Class 2	1.20 - 2.40	
Class 3	2.40 - 3.60	
Class 4	3.60 - 4.80	
Class 5	4.80 - 6.00	

8. You can Zoom in by clicking the + sign above the drawing toolbar and click on one of the lines to display the popup information of each river segment.
9. Zoom out back to its previous state by clicking the – sign
10. Change the Maps title to **Rivers and Lake centerlines**
11. Export and you will get a map as below

Rivers and Lake centerlines



Disclaimer: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined.

ne_50m_rivers_lake_centerlines.geojson: scalerank

- 0 – 1.2
- 1.2 – 2.4
- 2.4 – 3.6
- 3.6 – 4.8
- 4.8 – 6

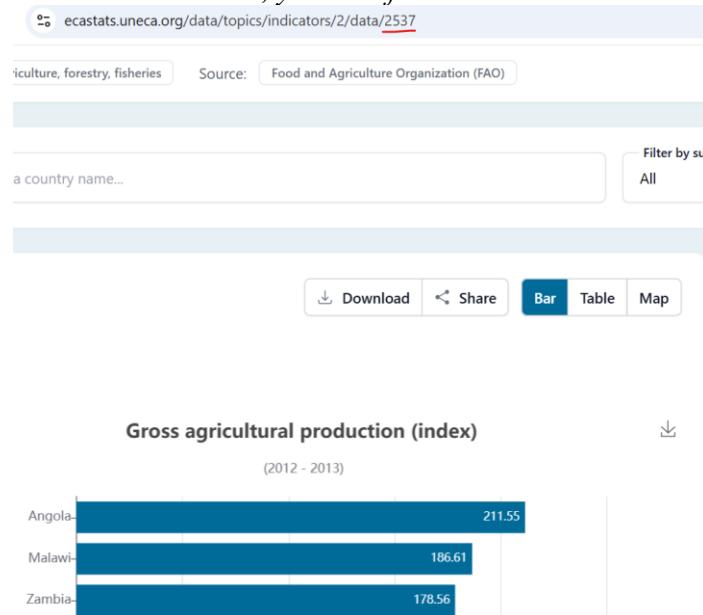
Example-3 Mapping Dynamic GeoJSON APIs. E.g from ECASats database

The base url for geosjon data feching from ECA stats database is the green colored one and 649 is the spesfic indicayor ID.

<https://ecastats.uneca.org/ecastats.api/api/data-viz/geojson?indicatorid=649>

To map a specific indicator, exmaple *Gross Agricultural Production (Index)*

1. Go to <https://ecastats.uneca.org/data>
2. Open *Gross Agricultural Production (Index)* by searching or under topics as shown below
3. Then on url on the browser, you will find the Indicator ID:2537



4. In the first URL, replace **649** with the new indicator ID, **2537** and as below:
<https://ecastats.uneca.org/ecastats.api/api/data-viz/geojson?indicatorid=2537>
5. Then, paste this URL and load in a similar way as in the exmaple-2

Example-4; Mapping using the Drawing Tools

Assume you have a list of countries where a project is to be implemeted and you wan to indicate which countries are implemetation target on the map instead of listing their names for a powerpoint prsentation or including into a report.

1. In the drawing toolbar,Click on a draw marker,
2. Click on each county you want to place the point marker
3. Update the Map Title as needed
4. Then, export the map and you will find a map as below

Implementation Target Countries

