



QGIS

Overview of Data Layers (02.09)

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ABOUT QGIS

QGIS is a free and open source Geographic Information System (GIS), or geodatabase, licensed under the GNU General Public License. QGIS runs on Linux, Unix, Mac OSX, Windows and Android and supports numerous vector, raster, and database formats and functionalities. QGIS users can view, edit, and analyze spatial and locational information through its free software toolkit.

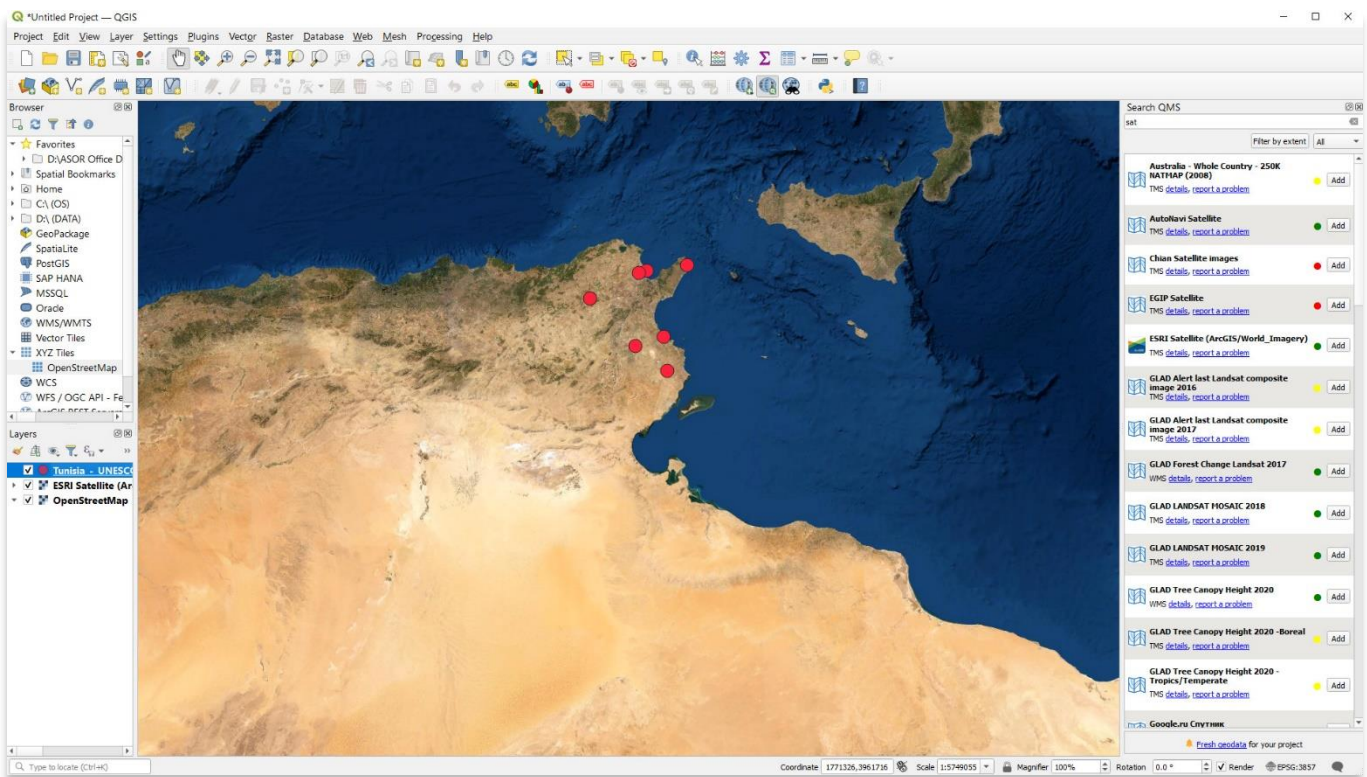
Download QGIS here: <https://qgis.org/>

Documentation: <https://docs.qgis.org/3.16/en/docs/index.html>

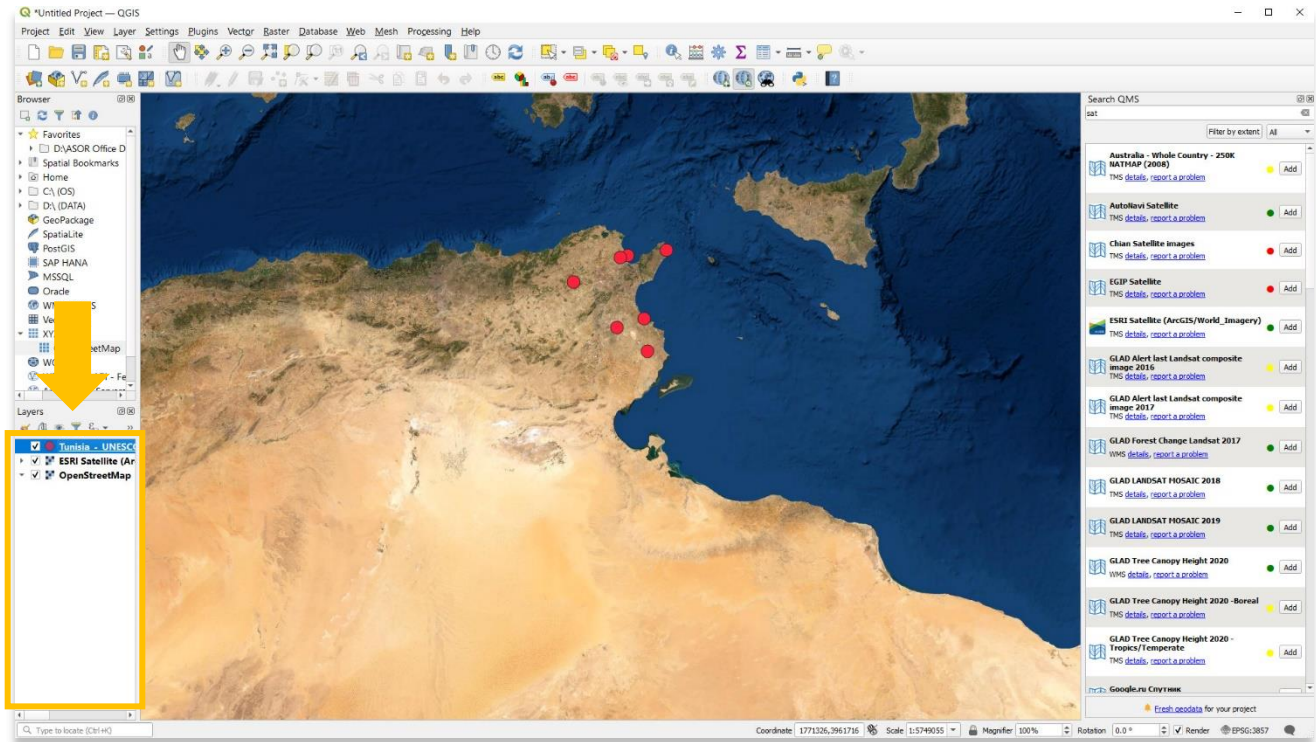
This **ASOR Tutorial (02.09)** will provide an overview of how to understand and use data layers in QGIS.

CHANGING DATA LAYER VISIBILITY

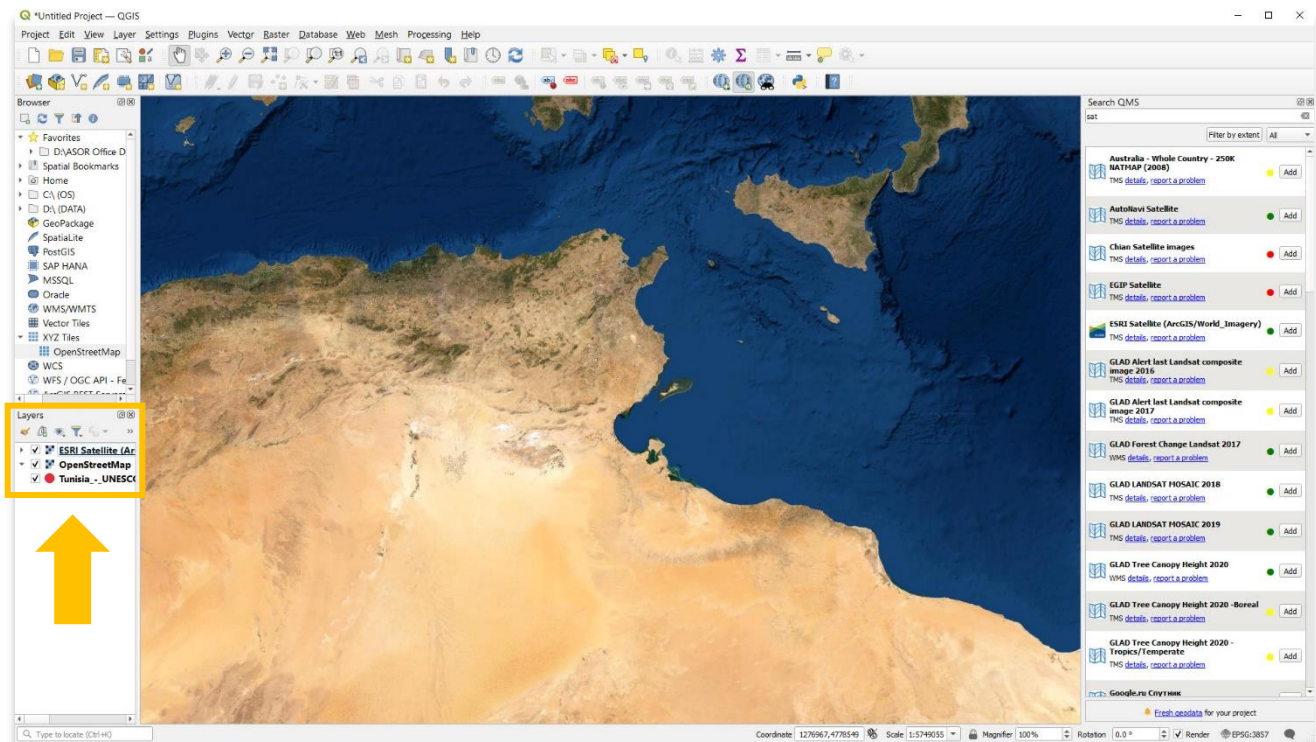
1. Open the same QGIS project created from OpenStreetMap data and your KoboToolbox sample data from in [ASOR Tutorials 02.05 \(Adding a Basemap on QGIS\)](#) and [02.08 \(Importing KoboToolbox Data to QGIS\)](#).



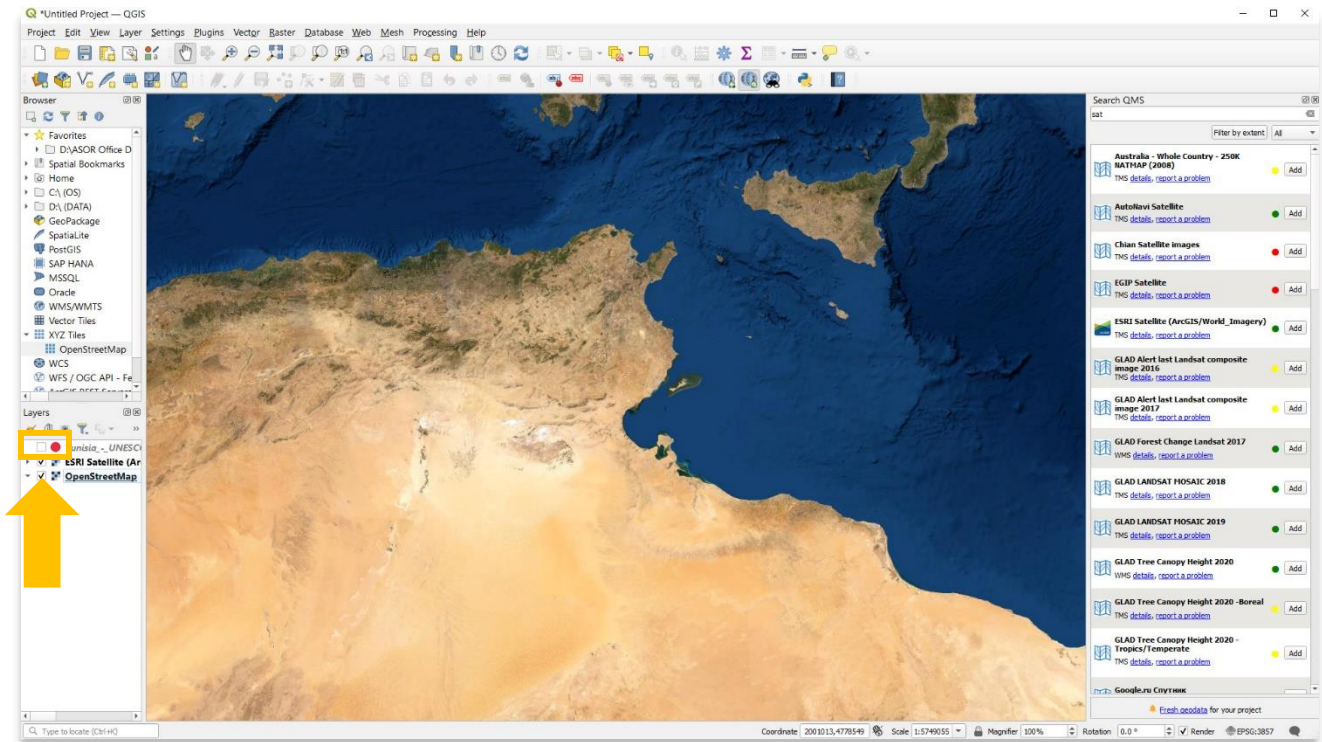
- All data layers that are currently visible for this project are listed in the **Layers** pane in the bottom left of your project. The layers will appear in the order they are listed. In the example below, the Kobo CSV layer (red dots) is at the top of the list, thus it is visible.



- Move data layers with your mouse by left-clicking on a specific layer and dragging it lower on the list. In the example below, the “test points from Kobo” layer (red dots) has been moved below the “Map multipolygons” layer (brown polygons) and is now hidden from view.



4. You can also hide data layers without changing their order in the **Layers** panel, by unchecking the box next to each layer.



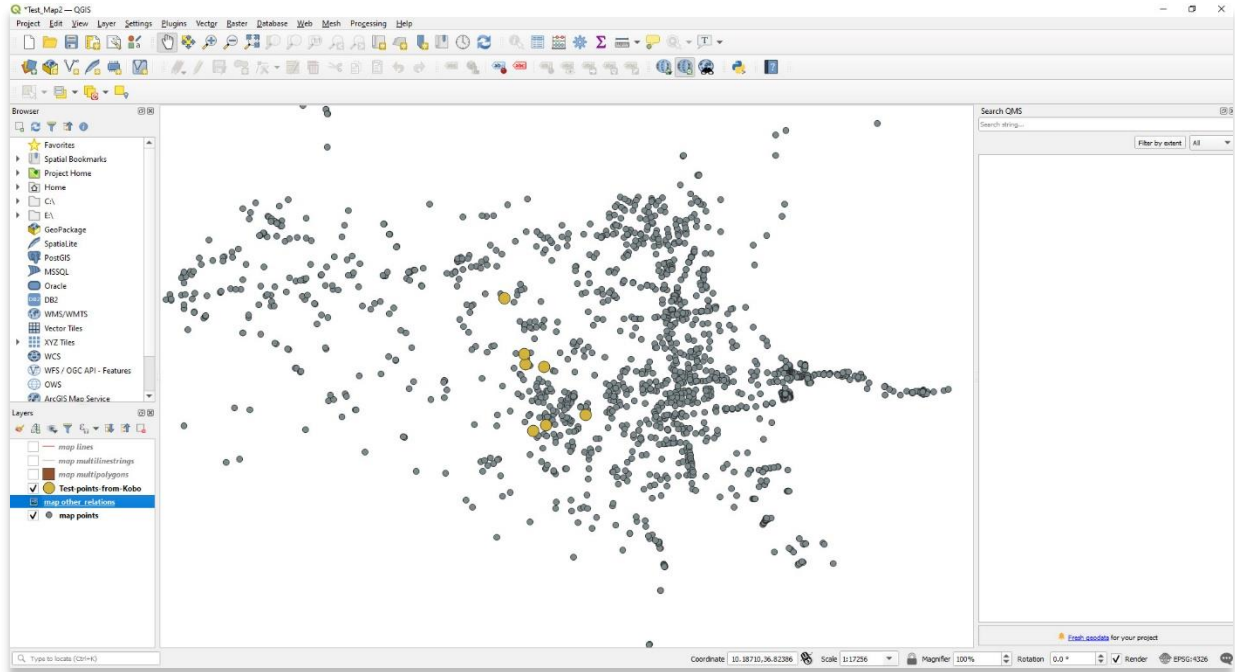
LAYERS & TYPES OF DATA

GIS projects contain three types of data:

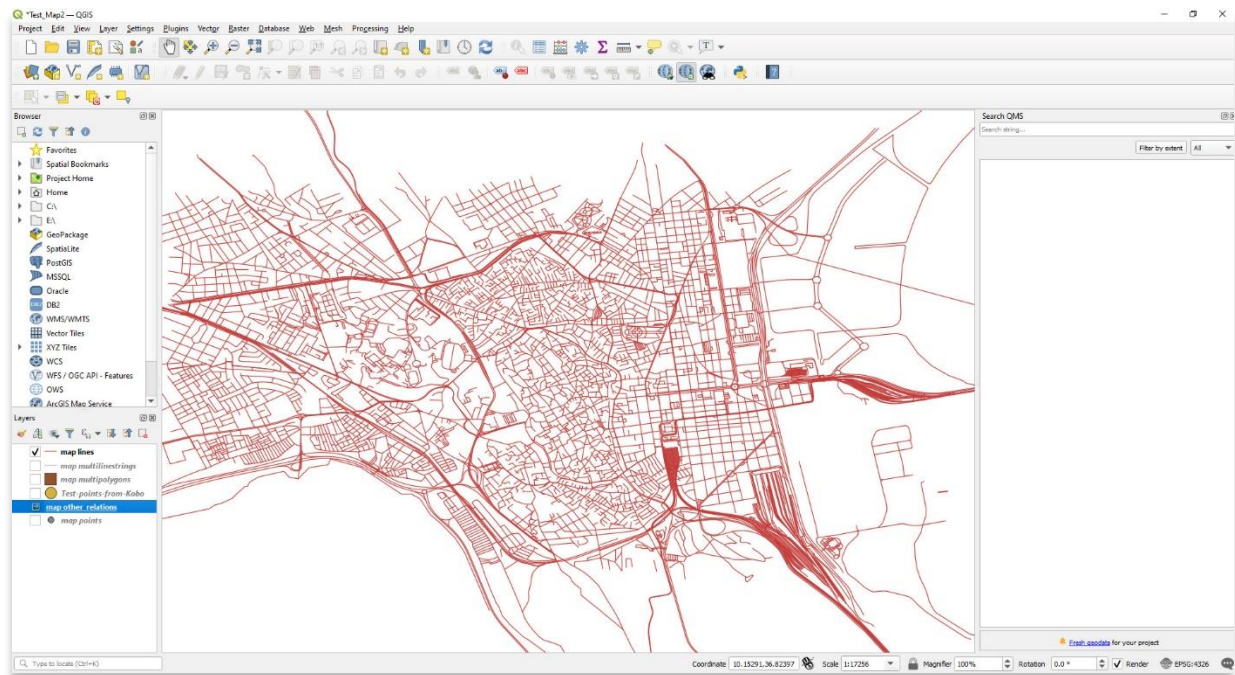
1. Spatial

a. Vector Data

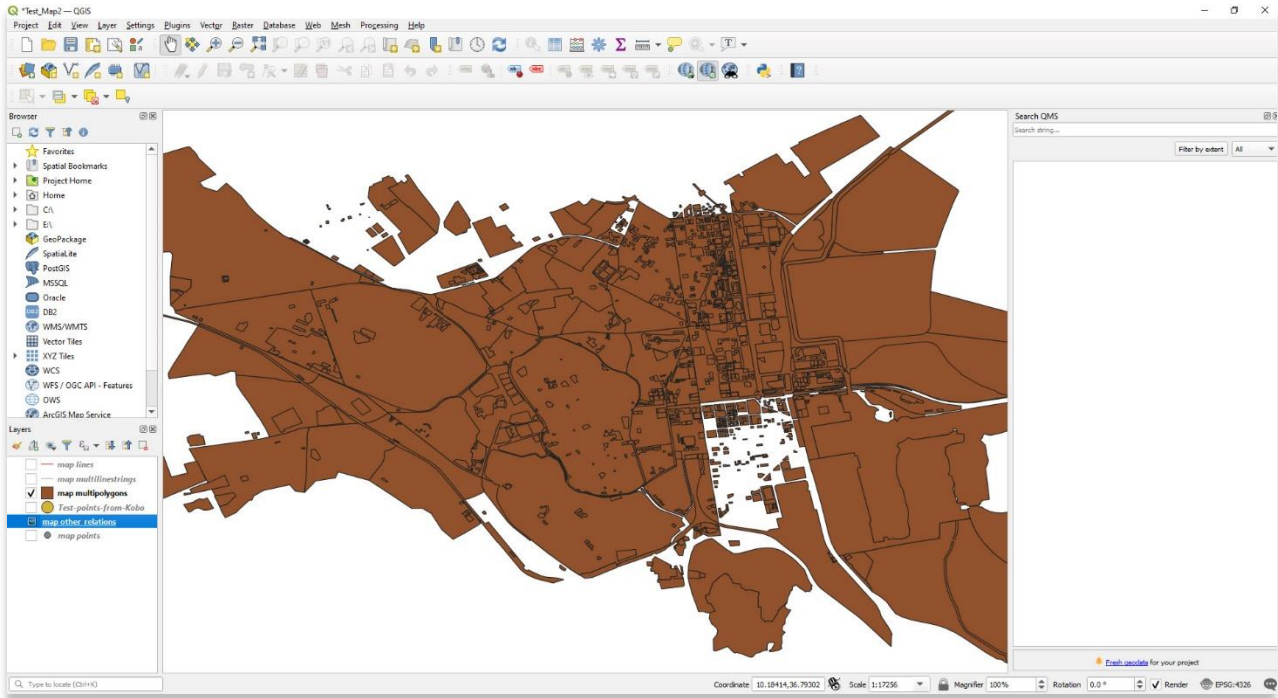
i. **Point Data** — Points described by x,y coordinates (lat, long; easting, northing)



ii. **Line/Polyline Data** — Line data have x,y points and lines between points.

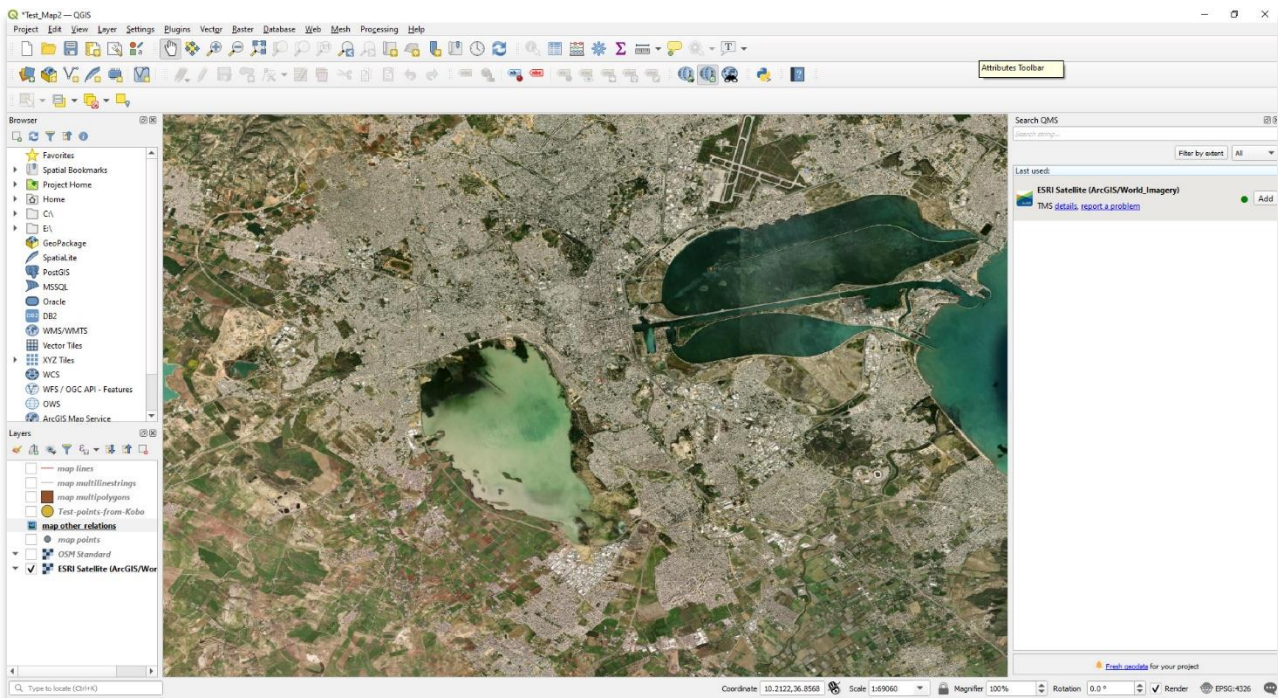


iii. Polygon Data — Connected line segments enclosing areas

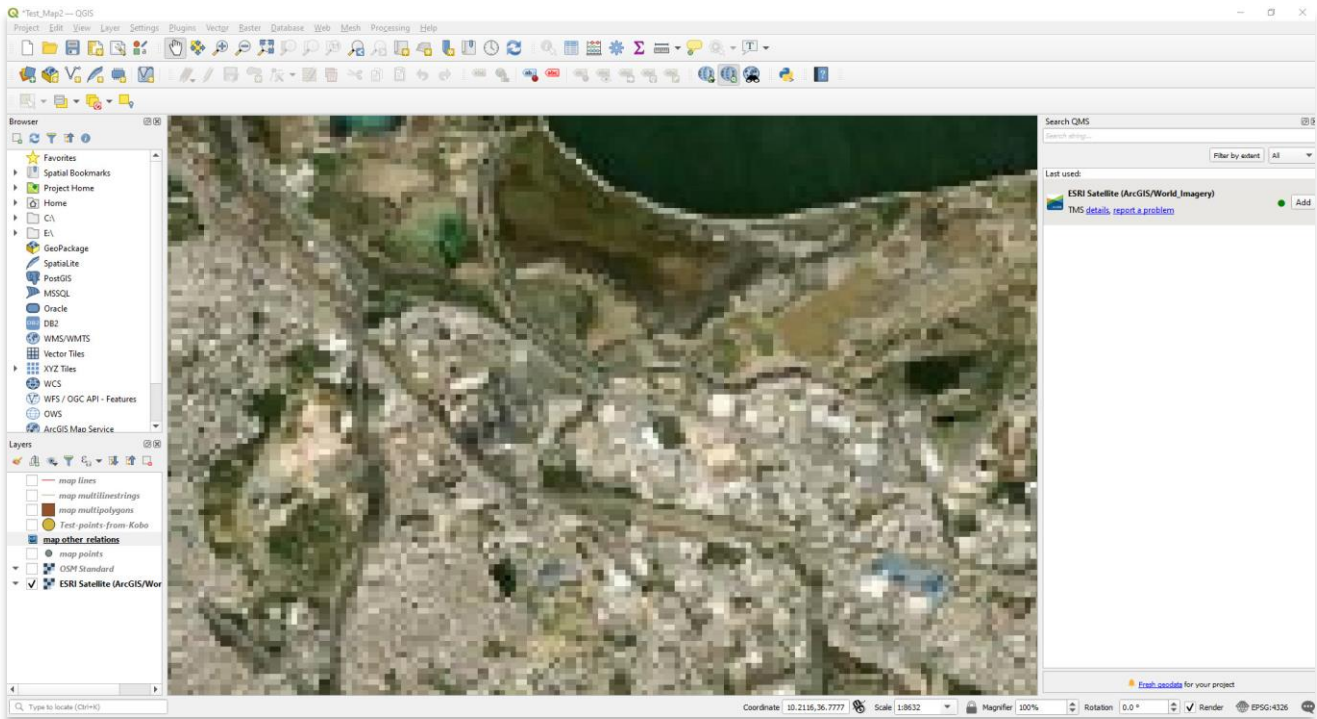


2. Raster / Images

- i. Raster or “grid” data can be used to display gradients of spatial data e.g., elevation, population, artifact density...etc.
- ii. Examples include remote sensing data, scans of maps, or other photos. This is a type of raster data where the number in each cell describes a specific color that are stitched together to form an image.

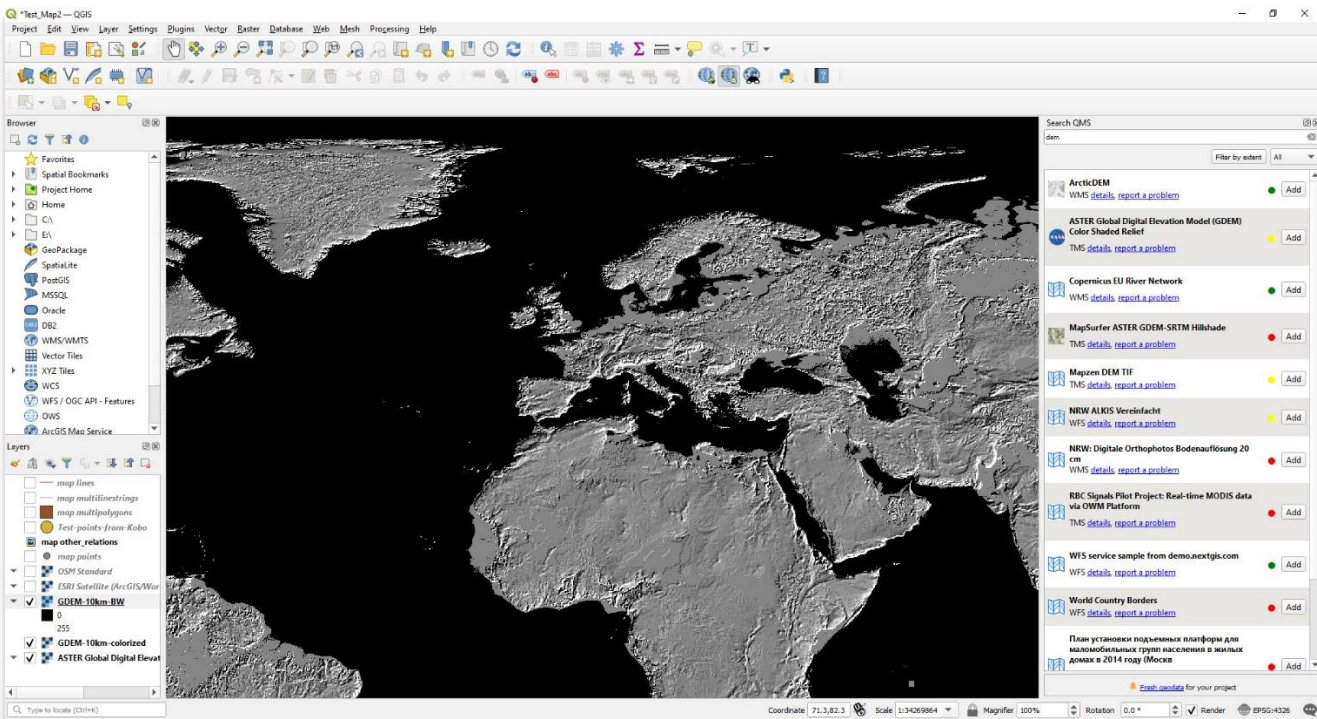


- iii. Raster data are grids of information, with each cell containing attribute (description, non-spatial) data. If you zoom in on the satellite image above, you can see the distinct cells (or pixels).



3. Terrain and Elevation Models

- i. Datasets built from lidar and other point clouds.
- ii. Provide topographic maps of landscapes.



For more detailed information on anything within this tutorial, please visit QGIS Documentation:

<https://docs.qgis.org/3.16/en/docs/index.html>



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