

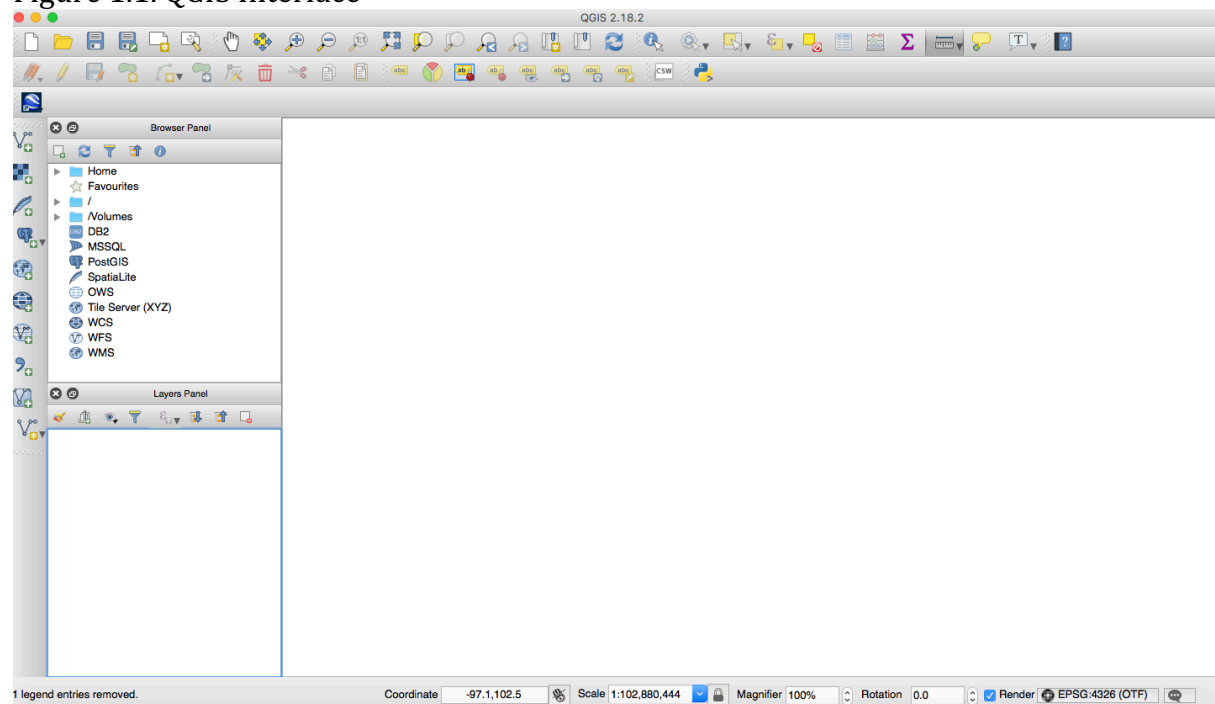
Getting Started with QGIS

Adding some useful toolbars:

- Layers: View | Panels | Layers
- Browser: View | Panels | Browser

Your interface should now look something like the following:

Figure 1.1. QGIS Interface



Active useful plugins:

- Go to Plugins | Manage and Install Plugins
- Activate:
 - Coordinate Capture
 - GdalTools
 - Processing
 - OpenLayers Plugin

The QGIS Interface

The three main panels are the **Map/Data** panel, the **Layers** Panel and the **Browser** panel (see Figure 1.1.).

At the bottom of the map, we find information about (see Figure 1.2)

- The location (**Coordinates**) of the cursor on the map.
- The Scale.
- The zoom level
- The rotation angle.
- The current Coordinate Reference System (CRS).

Figure 1.2. Footer Info Bar



To the left, you will find the **Manage Layers** toolbar (Figure 1.3.). This toolbar contains tools to add layers from vector or raster files, databases, web services, text files, or create new layers.

Figure 1.3. Manage Layers toolbar



The **Project** toolbar is located at the top (Figure 1.4). This toolbar includes tools for map navigation, attributes, selection, and distance measures, among others.

Figure 1.4. Project toolbar



Below the Project toolbar, you will find the **Digitizing** (Figure 1.5) and the **Layer Label** (Figure 1.6) toolbar. The Digitizing toolbar includes tools that allow you to edit existing features and create basic feature. The Layer label toolbar contains tools to add, configure, and modify feature labels.

Figure 1.5. Digitizing toolbar.

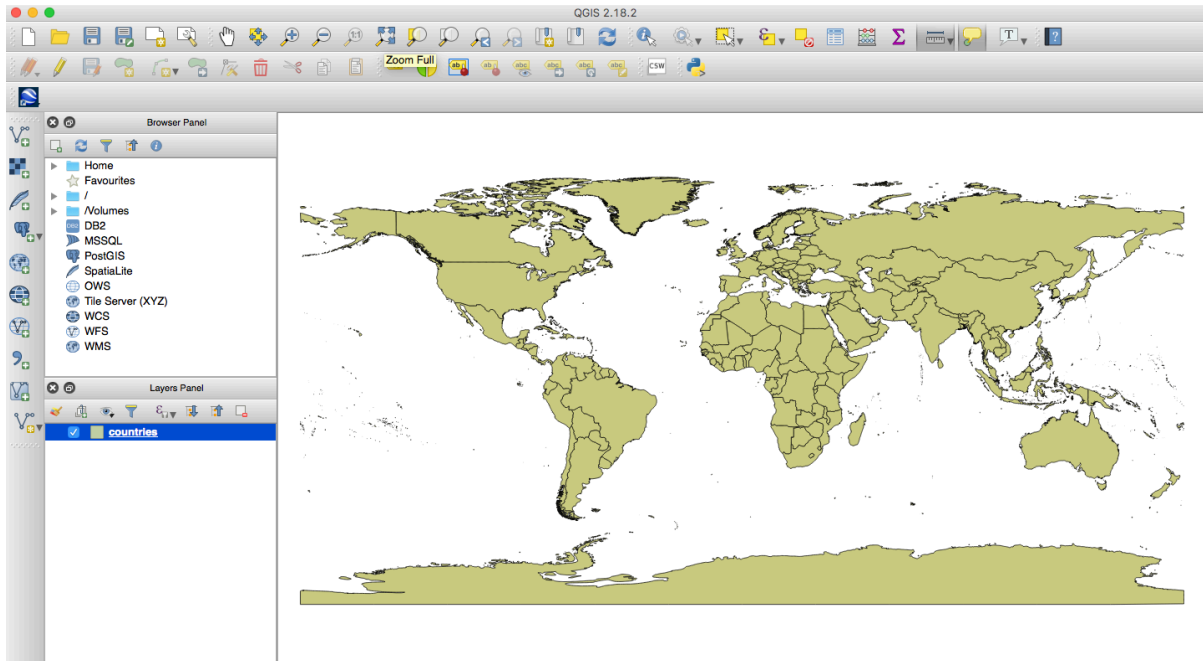


Figure 1.6. Layer Label toolbar

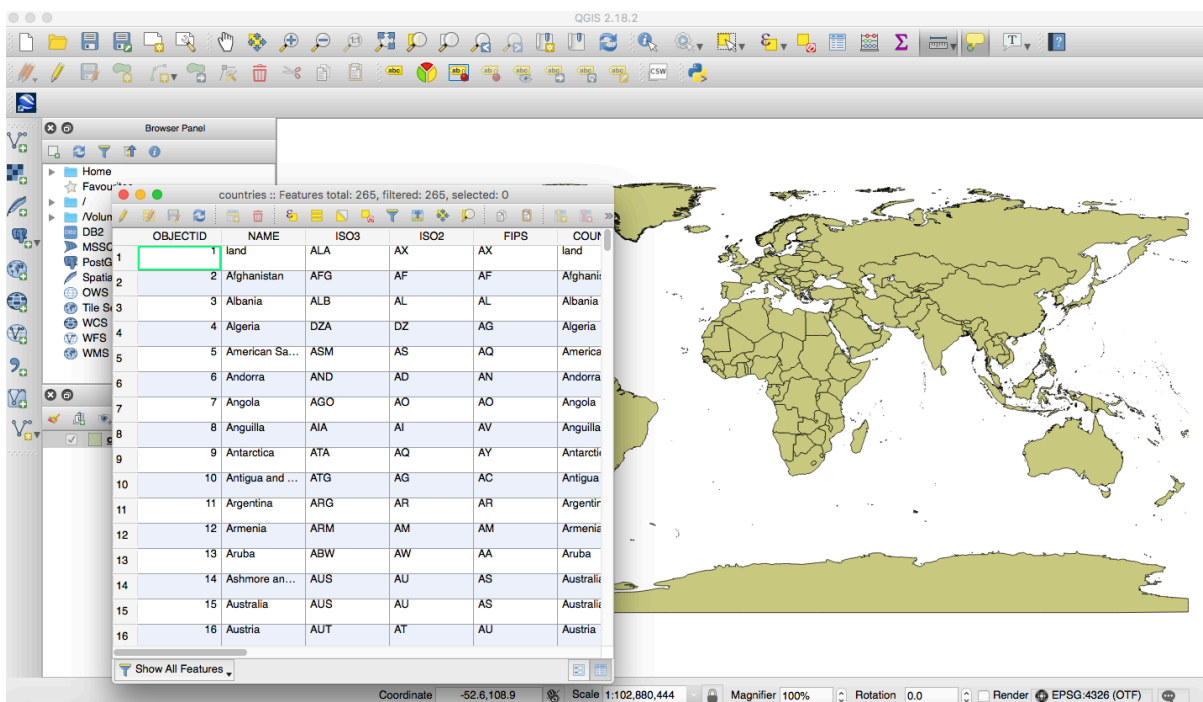


Exercise 1a – Vector file and CRS:

1. Add vector countries.shp using “Add Vector Layer” (or drag-and-drop)

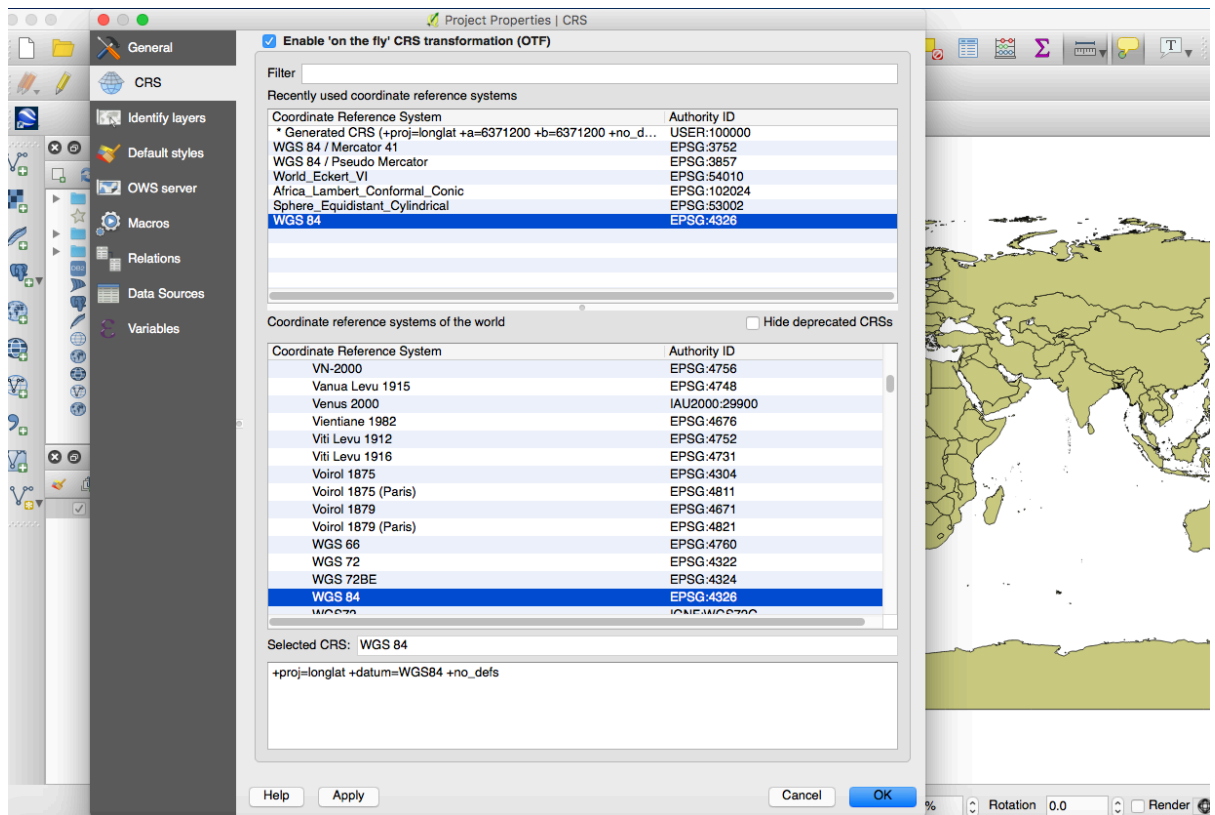


2. Check Attribute Table 

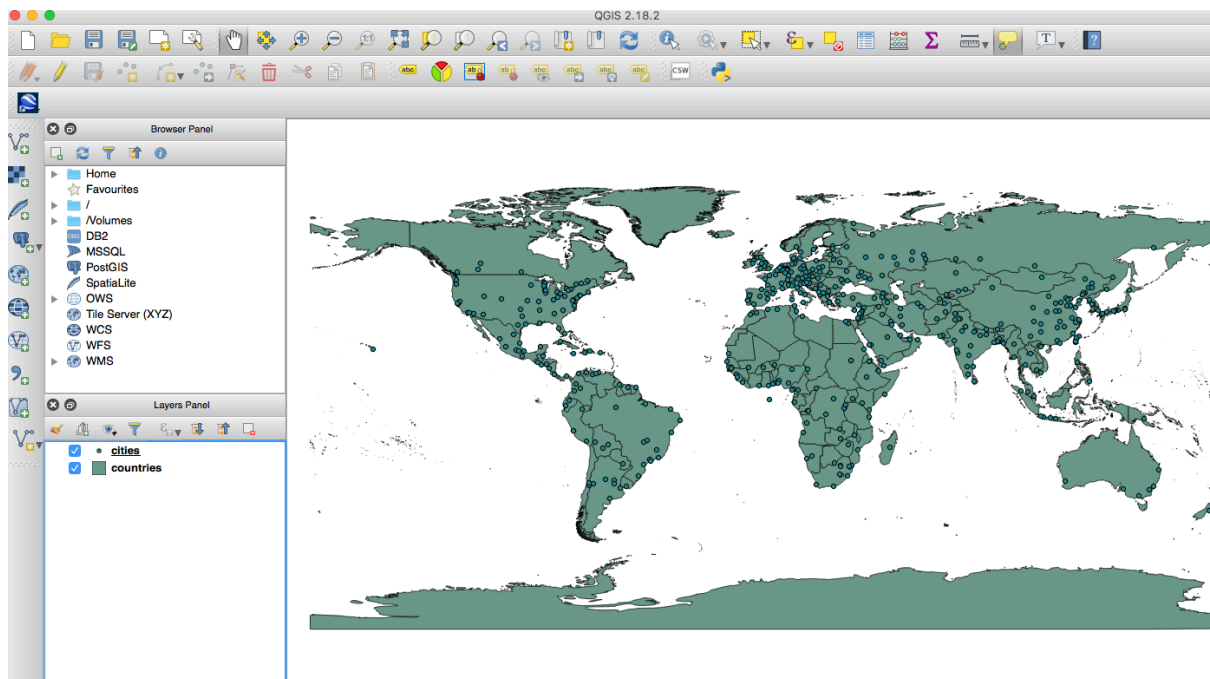


3. Check the CRS

Project | Project Properties | CRS



4. Add layer cities (cities.shp) and bring cities layer to the front:



5. Show Labels of city layer:

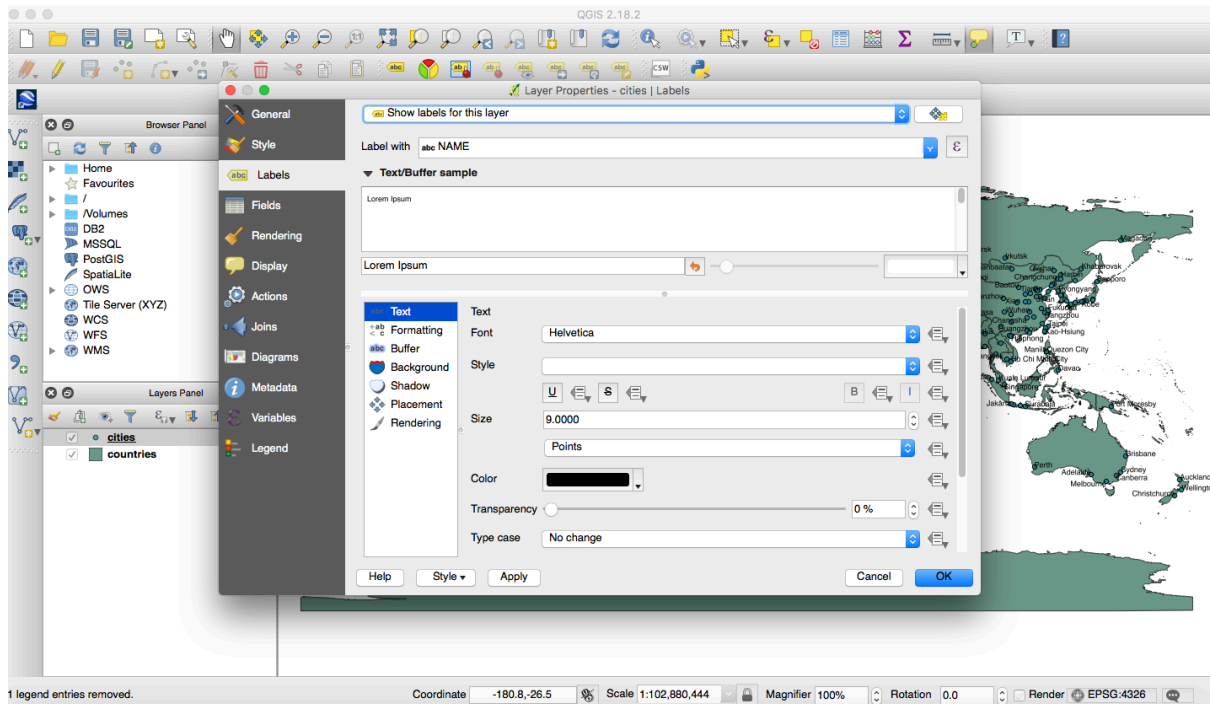
Double-click on cities.shp

Choose panel Labels.

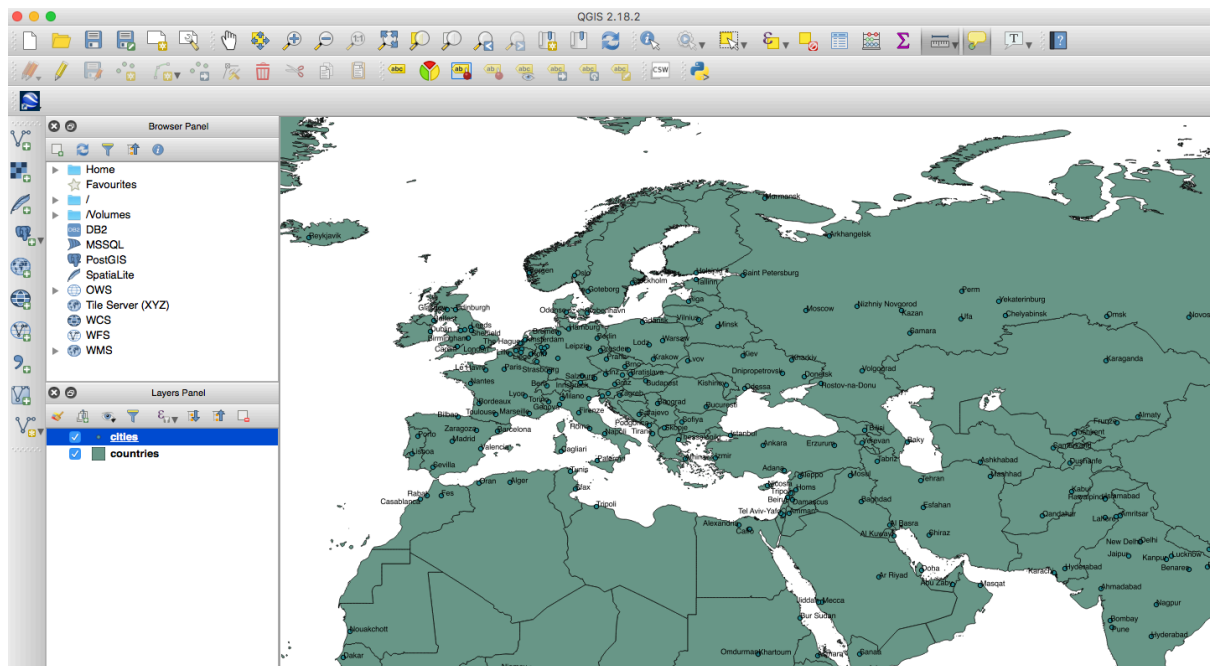
Switch on “Show labels for this layer”

For “Label with” select “NAME”

OK



6. Zoom in (Eurasia)



7. Export image

Project | Save Image as

Save in your local directory “Exercise 1” under “Eurasia_WGS84”

8. Measure distance between Bern and Moscow using the tool “Measure Line”



Choose kilometres as unit.

Note down the distance.

Close the tool.

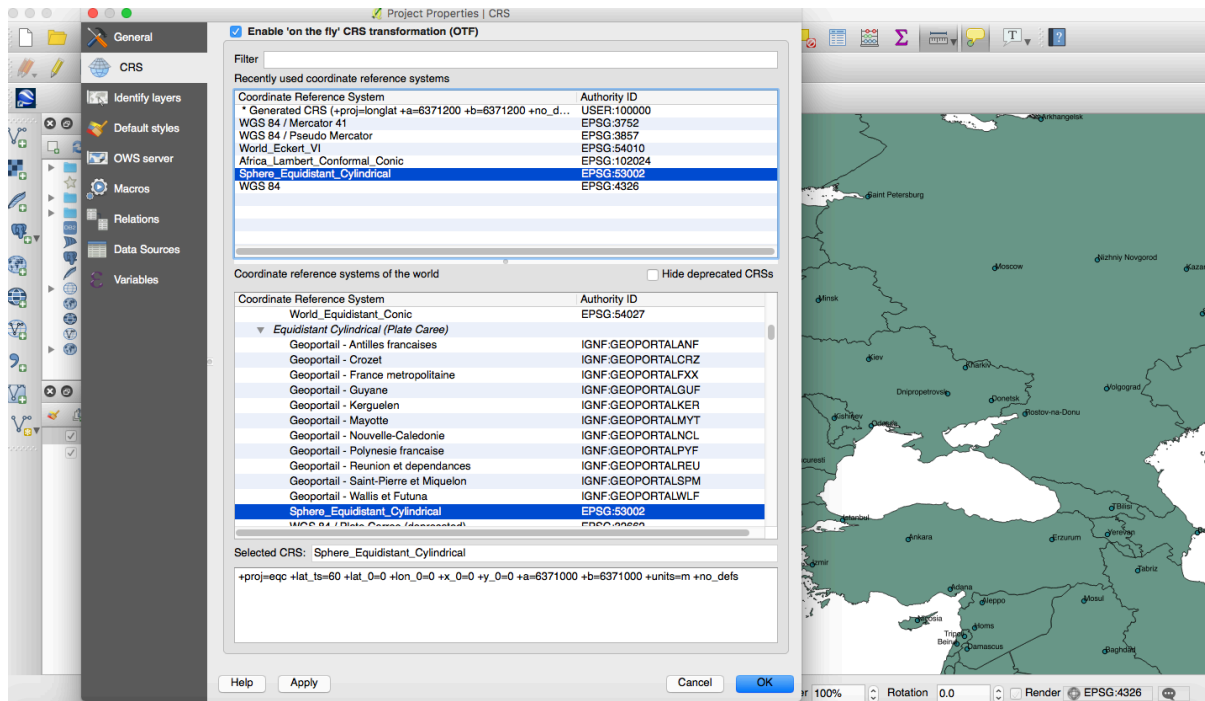
9. Change the project’s CRS.

Project | Project Properties

Enable OTF

Find “Sphere_Equidistant_Cylindrical CRS

OK



10. Repeat steps 7. And 8. Using the new CRS. Save the image under “Eurasia_Sp_EquiDist”, note down the new distance (in km)

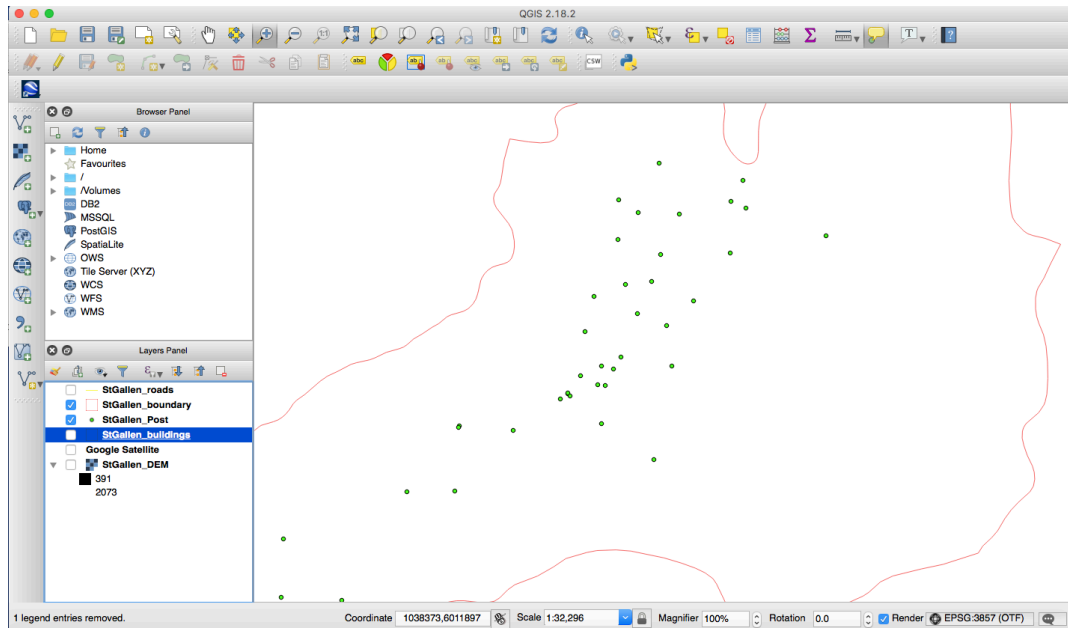
OUTPUT EXERCISE 1A.

One document that contains the images Eurasia_WGS84 and Eurasia_Sp_EquiDist and the respective distance measures between Bern and Moscow.

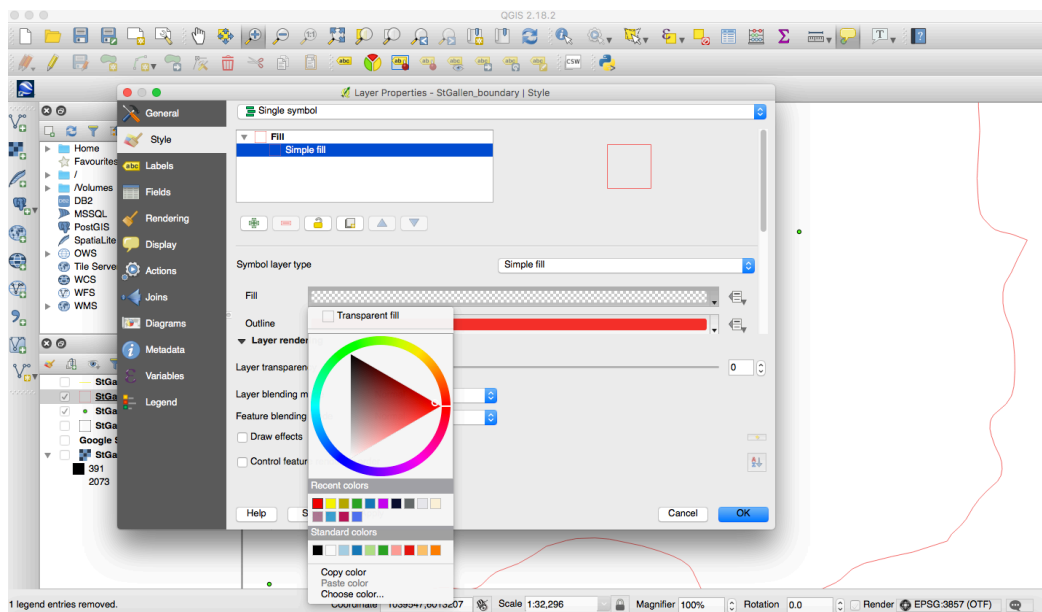
Save the exercise in the following format: GIS_Econ_Ex1a_[YourSurname].pdf

Exercise 1b – Visualisation of Vector and Raster data:

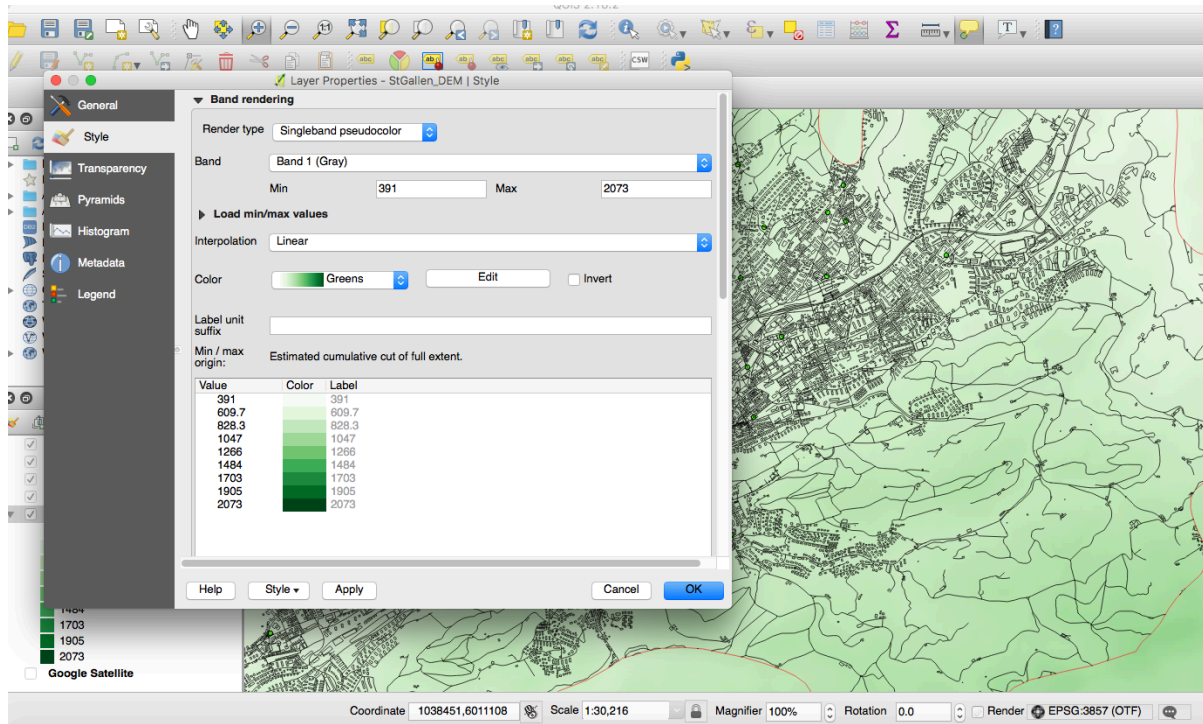
1. Add vectors:
 - StGallen_boundary
 - StGallen_post
 - StGallen_roads
 - StGallen_buildings



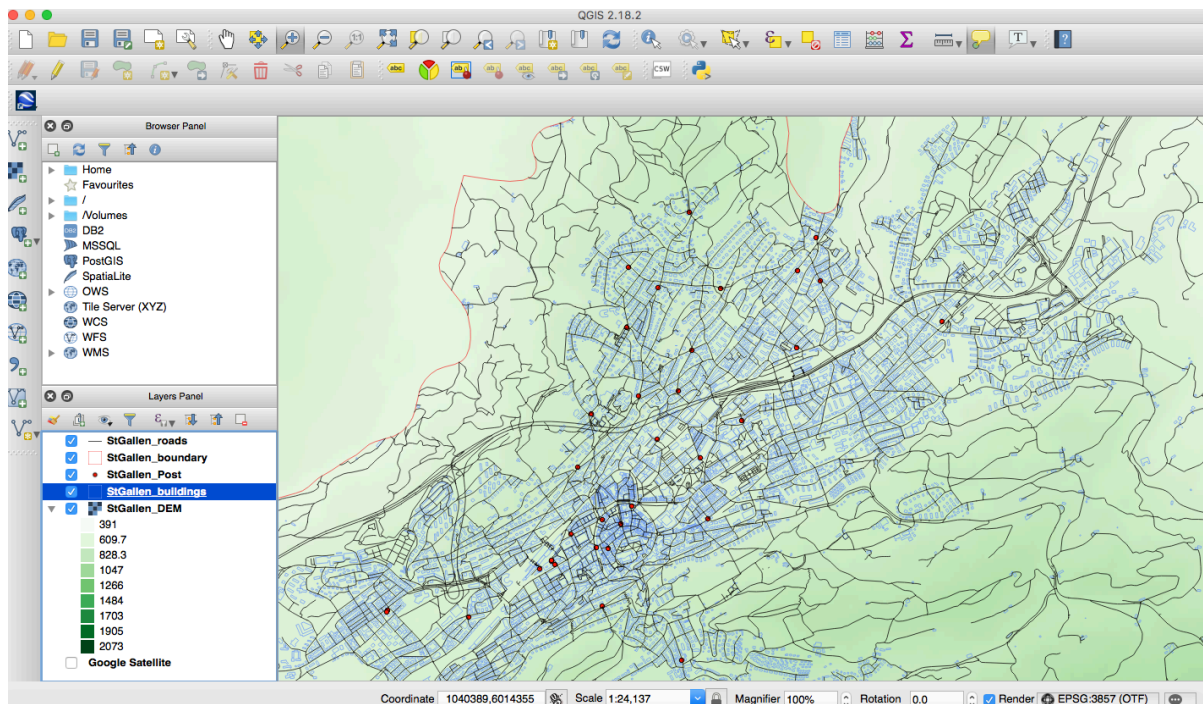
2. Change polygon layers (_buildings and _boundary) to transparent fill



3. Check attribute tables of buildings and road layer.
4. Change Style of DEM raster to Singleband pseudocolour and Greens



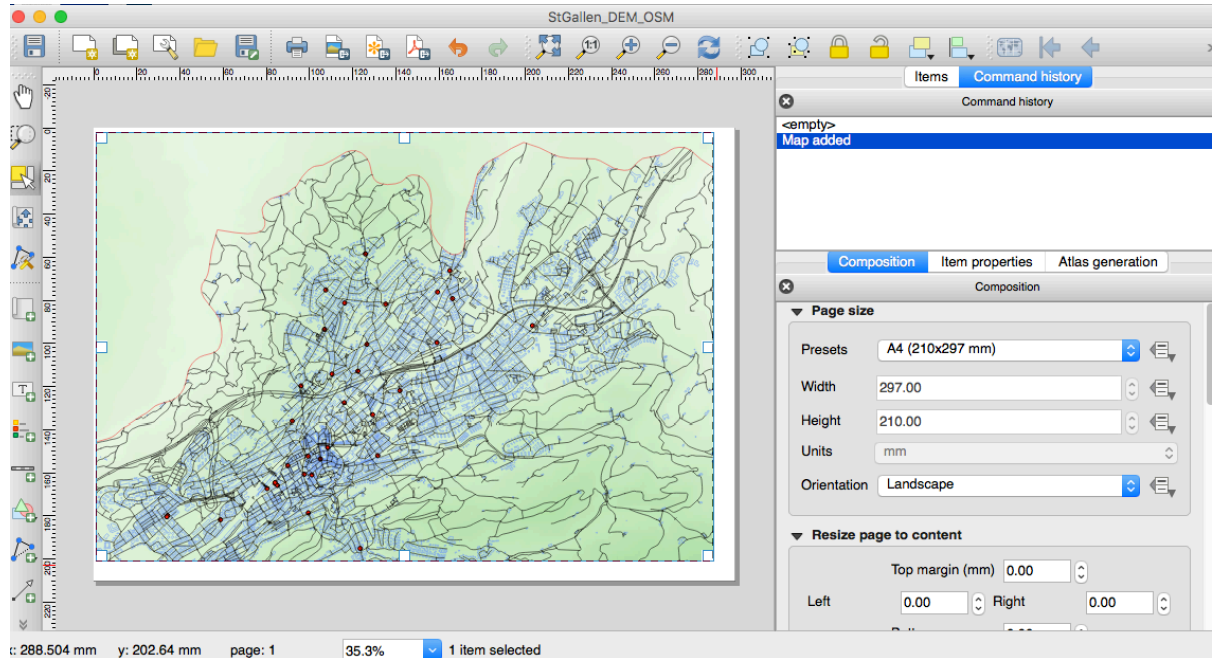
5. Change colour of the outlines of the buildings, roads, and post features to your liking.



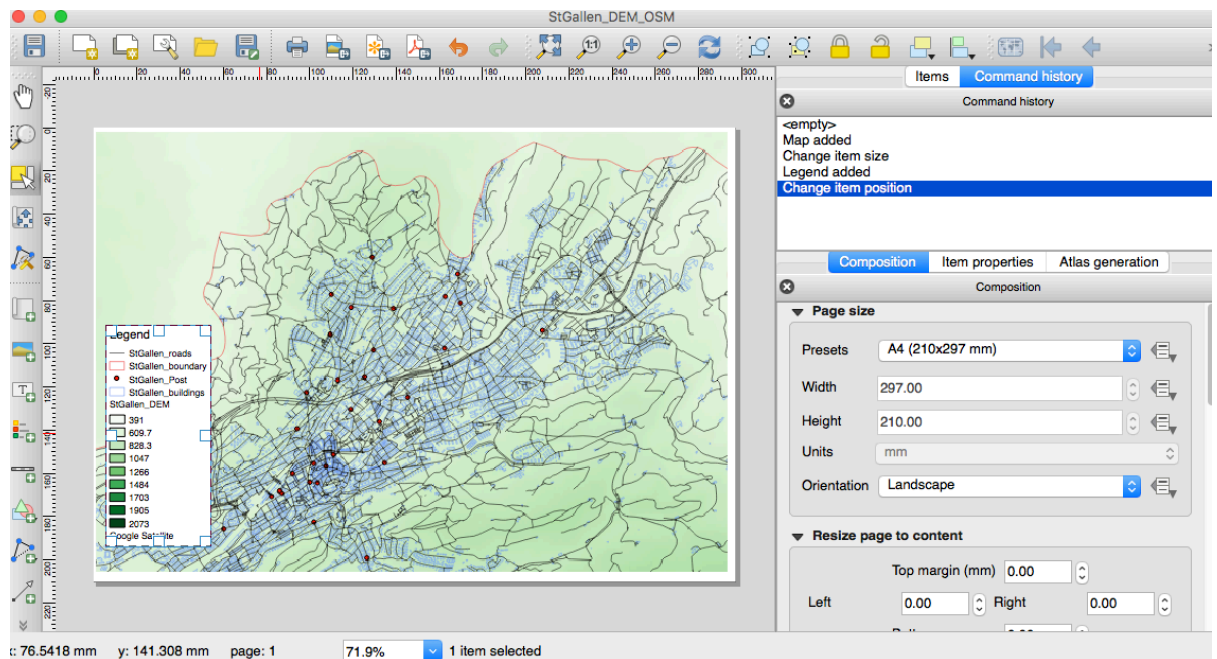
6. Create new print composer

Project | New Print Composer | StGallen_DEM_OSM

Layout | Add Map | [Select Area on blank sheet]

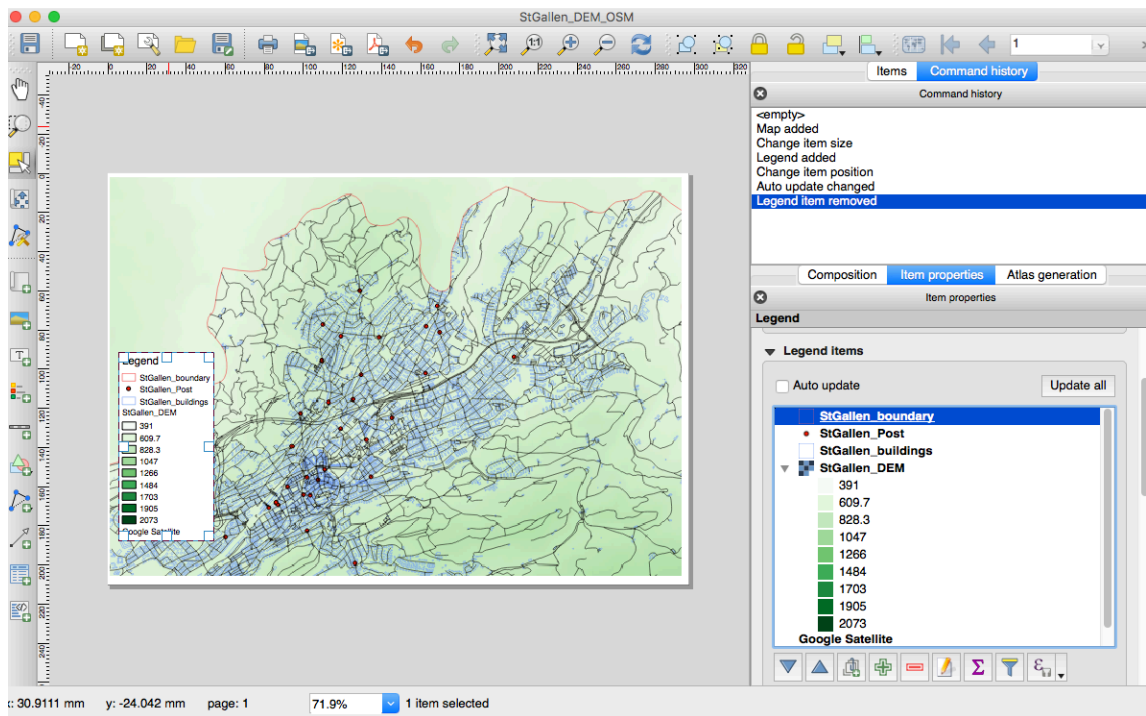


Layout | Add Legend | [Select Area on map]



Customize Legend:

Item Properties | Switch off “Auto update” | Delete Unwanted items

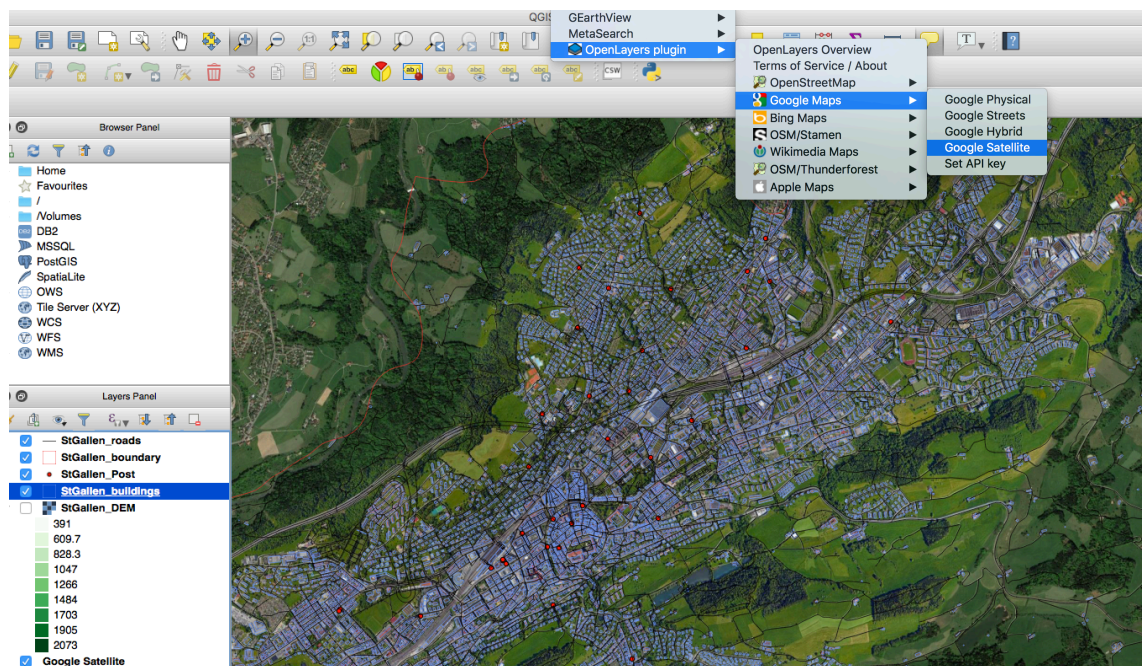


Export as image



“StGallen_DEM_OSM.png”

7. Unclick StGallen_DEM and Import Google Satellite Image Web| OpenLayers Plugin | Google Maps | Google Satellite



8. Export image as “StGallen_DEM_Google.png”

OUTPUT EXERCISE 1B.

One document that contains the images StGallen_DEM_OSM.png and StGallen_DEM_Google.png

Save the exercise in the following format: GIS_Econ_Ex1b_[YourSurname].pdf