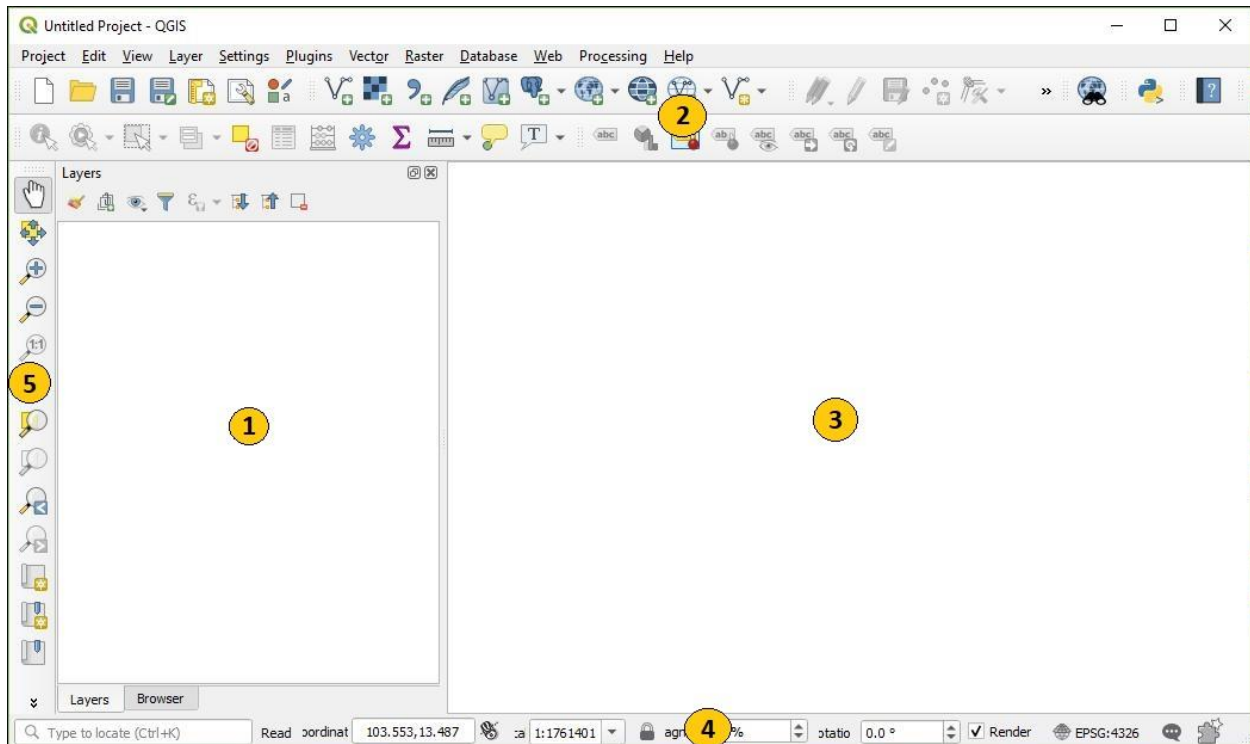# Session 10: Introduction to QGIS (interface, main functionalities)

Navigating the Interface:

Desktop

QGIS interface is divided into 5 main areas:

1. Layers List / Browser Panel
2. Toolbars
3. Map canvas
4. Status bar
5. Side Toolbar

Manage Layers Toolbars

- Add Vector Layer
- Add Raster Layer
- Add Delimited Text Layer

- Add SpatiaLite Layer
- Add/Edit Virtual Layer
- Add PostGIS Layers
- Add WMS/WMTS Layer
- Add WCS Layer
- Add WFS Layer
- New Shapefile Layer
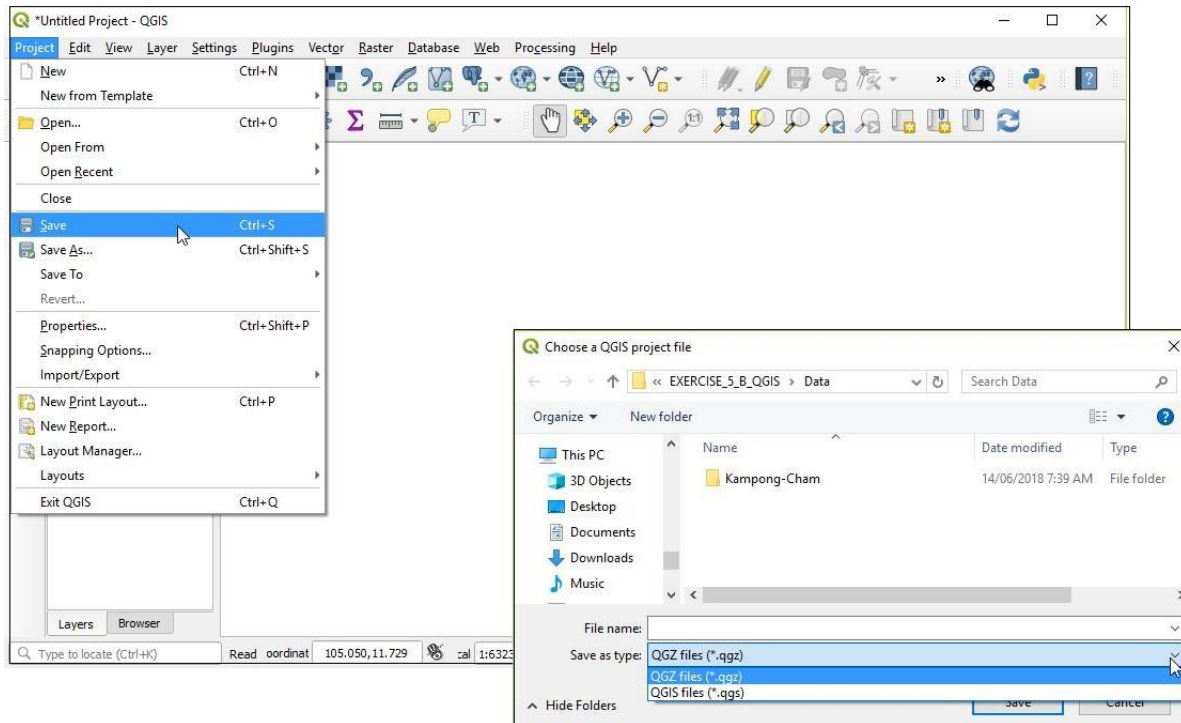
Map Navigation Toolbars

- Pan Map
- Pan Map to Selection
- Zoom In
- Zoom Out
- Zoom to Native Resolution
- Zoom Full
- Zoom to Selection
- Zoom to Layer
- Zoom Last
- Zoom Next

- New Map View
- New Bookmark
- Show Bookmarks
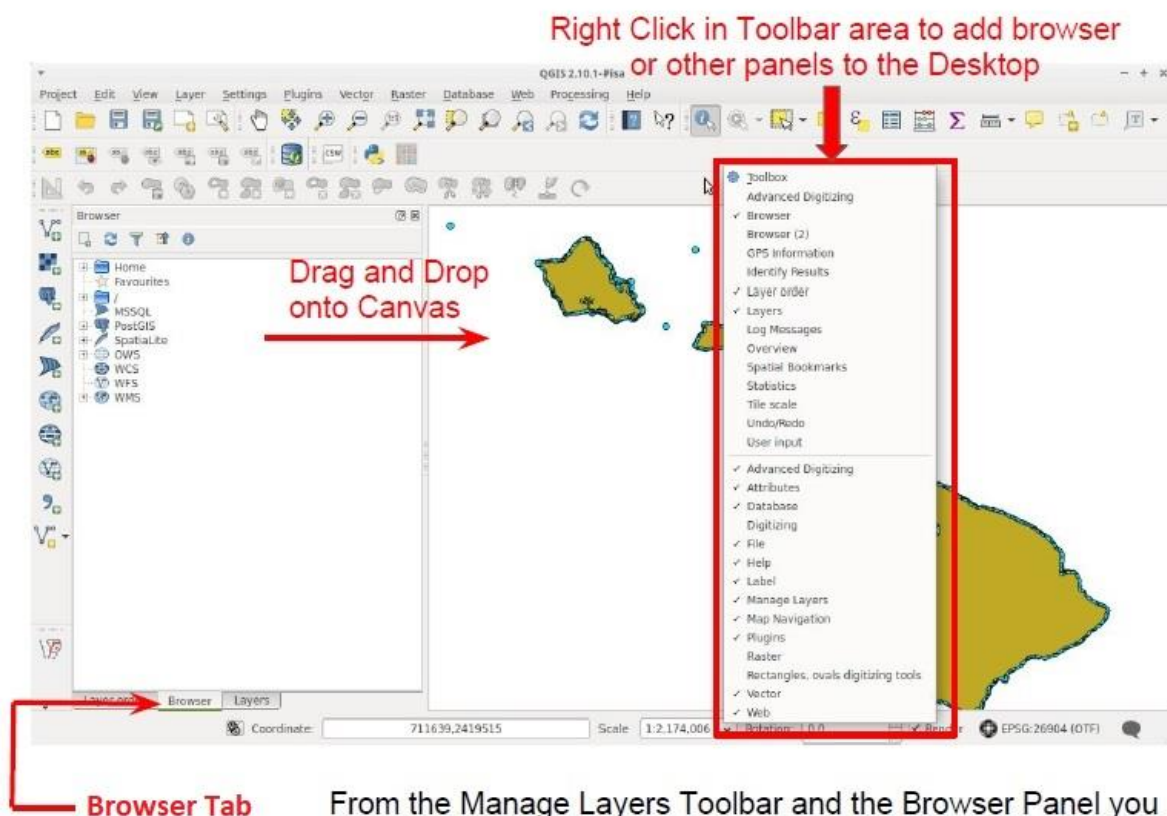- Refresh

Attributes Toolbar

- Identify Features

- Run Feature Action

- Select Features by area or single click

- Select Features by Value

- Deselect Features from All Layers

- Open Attribute Table

- Open Field Calculator

- Toolbox

- Open statistical summary

- Measure Line

- Show Map Tips
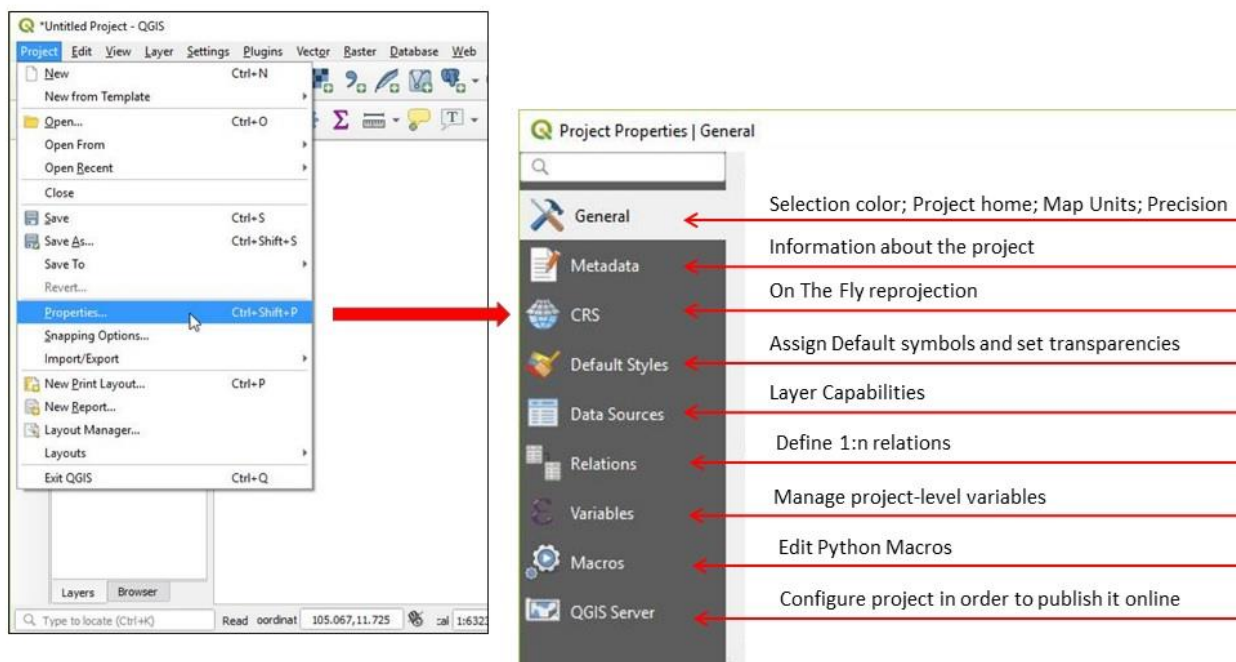
- Text Annotations

Saving Project Files

- QGIS can save user sessions. (A QGIS file is called a project.)

- Project > Save

- Type in a file name and save your project as a QGZ file (.qgz)

  - QGZ file format is a new default format for QGIS. It is a compressed format with the .qgs file (former default format) embedded in it together with its associated sqlite database (.qgd) for auxiliary data.

Browser Tab

Right Click in Toolbar area to add browser or other panels to the Desktop

Drag and Drop onto Canvas

Browser Tab

From the Manage Layers Toolbar and the Browser Panel you can add Shapefiles, Databases, WFS, WMS, and several other types of files.
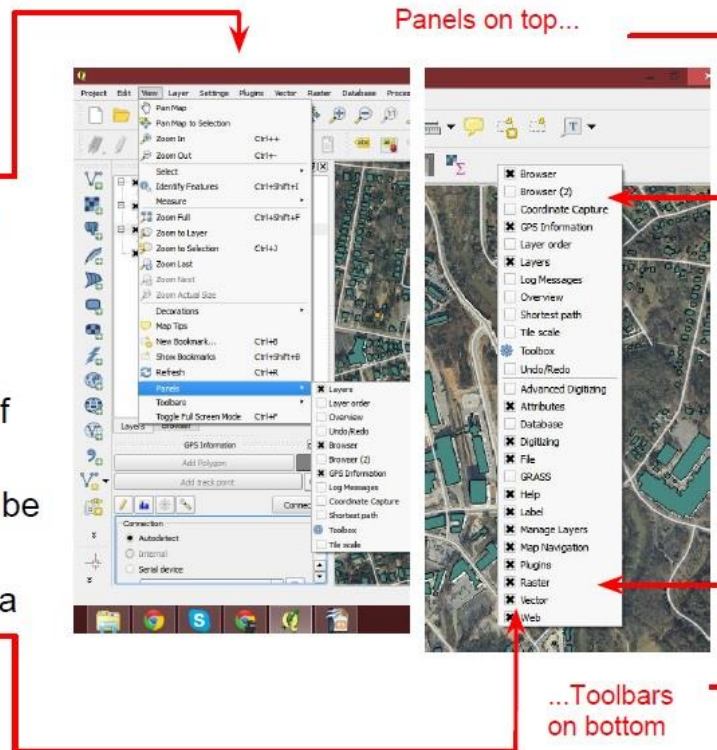
Project Properties

Project Properties changes the default project setting for the **CURRENT** QGIS project.

Panels and Toolbars

Panels and Toolbars:

- Turn them on and off by going to View > Panels or Toolbars.
- Panels provide interactive "windows". Examples: Layers, GPS Information, and toolbox
- Toolbars are a grouping of tools
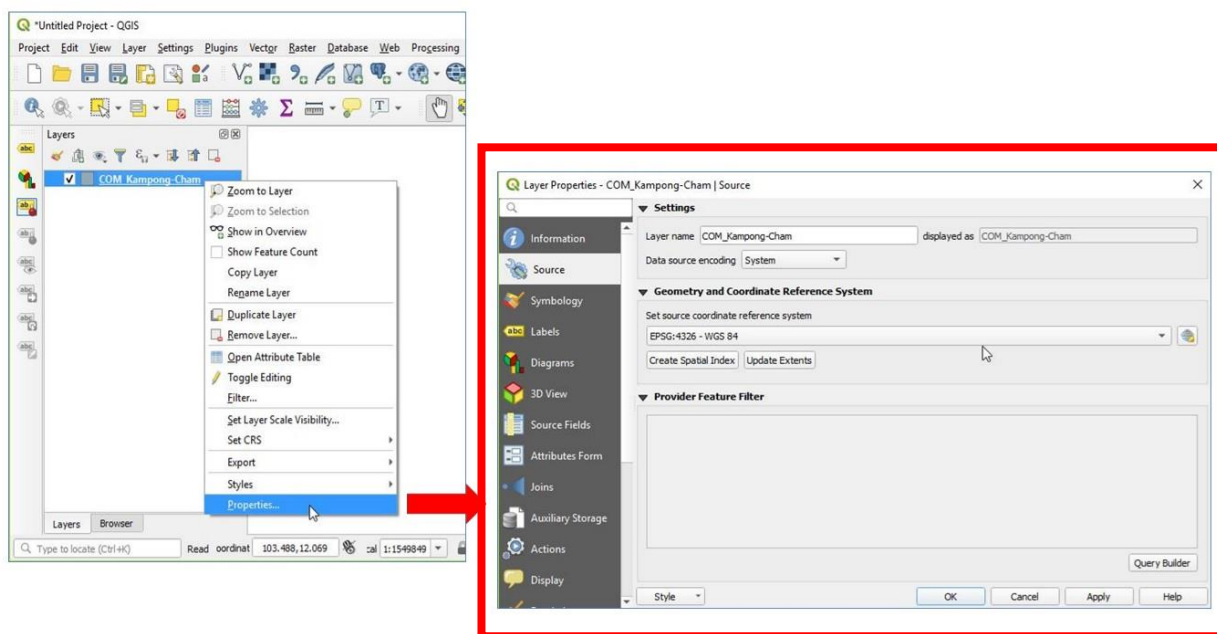- Panels/Toolbars can also be added/removed by right-clicking on the toolbar area

Panels on top...

...Toolbars on bottom

Vector Layer Properties

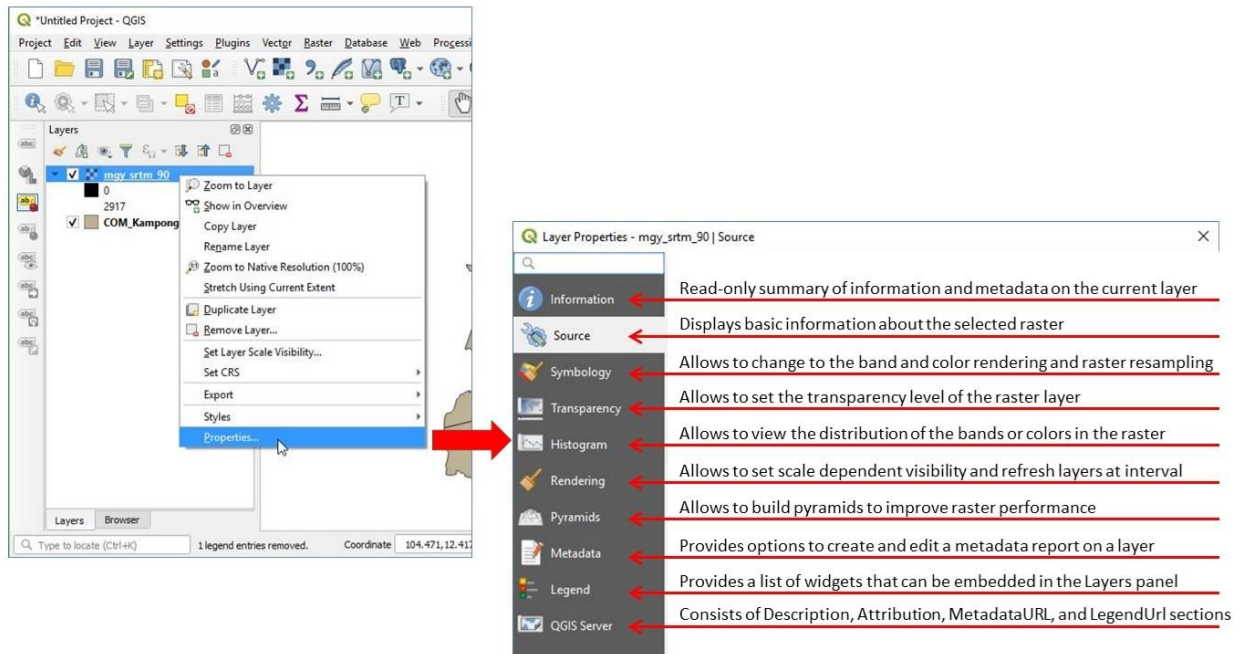The (Vector) Layer Properties window provides information about the vector layer and provides general settings to manage appearance of layer features in the map (symbology, labeling, diagrams) and interaction with the mouse (actions, map tips, form design).
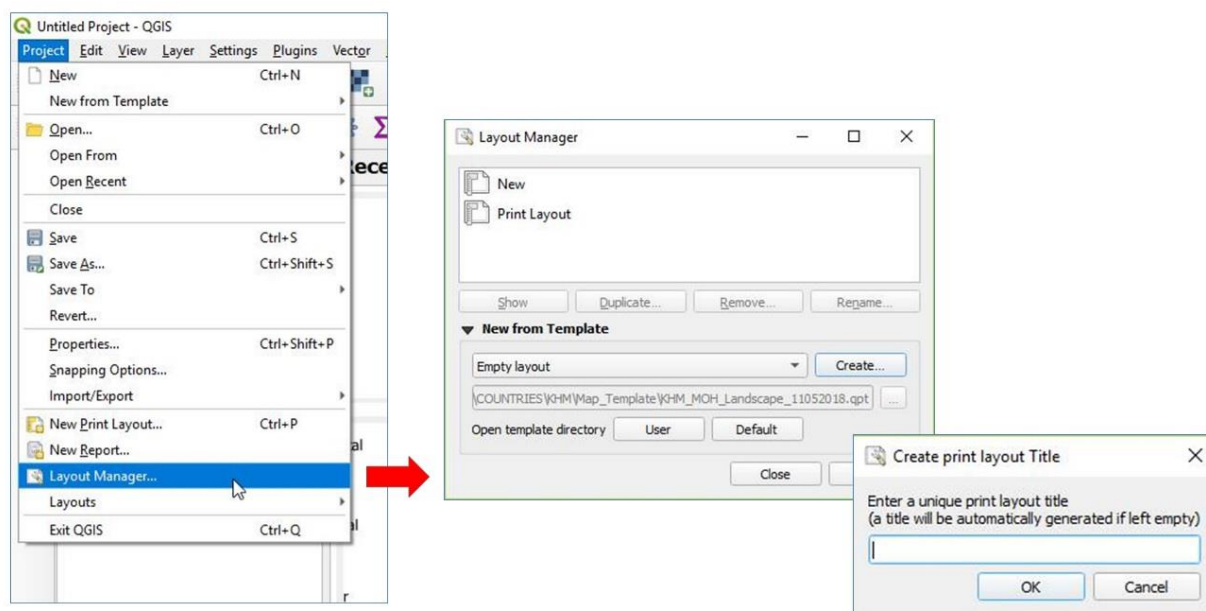
Data Projections

All vector/raster layers have a projection or CRS. The quickest way to check projections is to right click on the layer > Properties > Sources

Raster Layer Properties

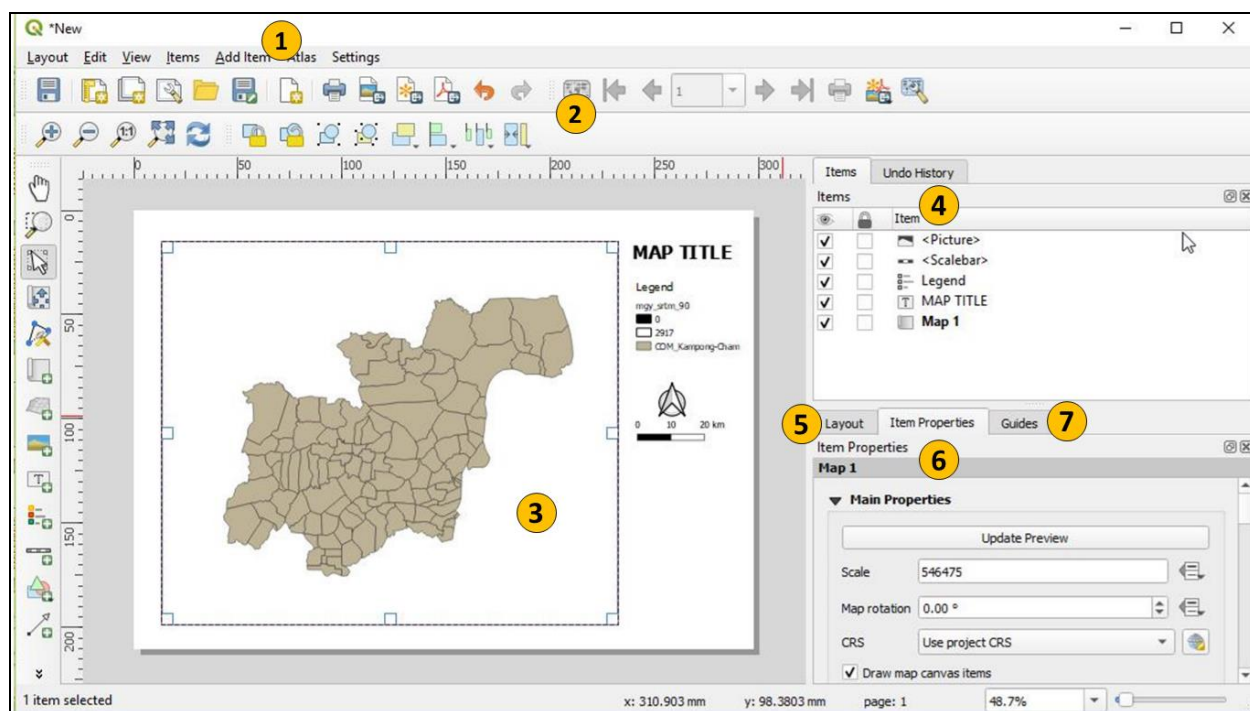The (Raster) Layer Properties window provides information about the layer as well as the ability to set pyramids levels, adjust appearance, and view the histogram.

Layout Manager

The Layout Manager allows you to create a new map layout either from an empty layout or a template. It can be accessed from the Project menu (Project > Layout Manager) or in the Print Layout window (Layout > Layout Manager).

Print Layout

Print Layout interface: 1. Menu Bar; 2. Toolbar; 3. Map Layout; 4. Items and Command History; 5. Layout Properties; 6. Item Properties; 7. Guides

Layout Toolbar

- Save project

- New layout

- Duplicate layout

- Layout manager

- Add items from template

- Save as template

- Add Pages…

- Print Layout

- Export as image

- Export as SVG…

- Export as PDF…
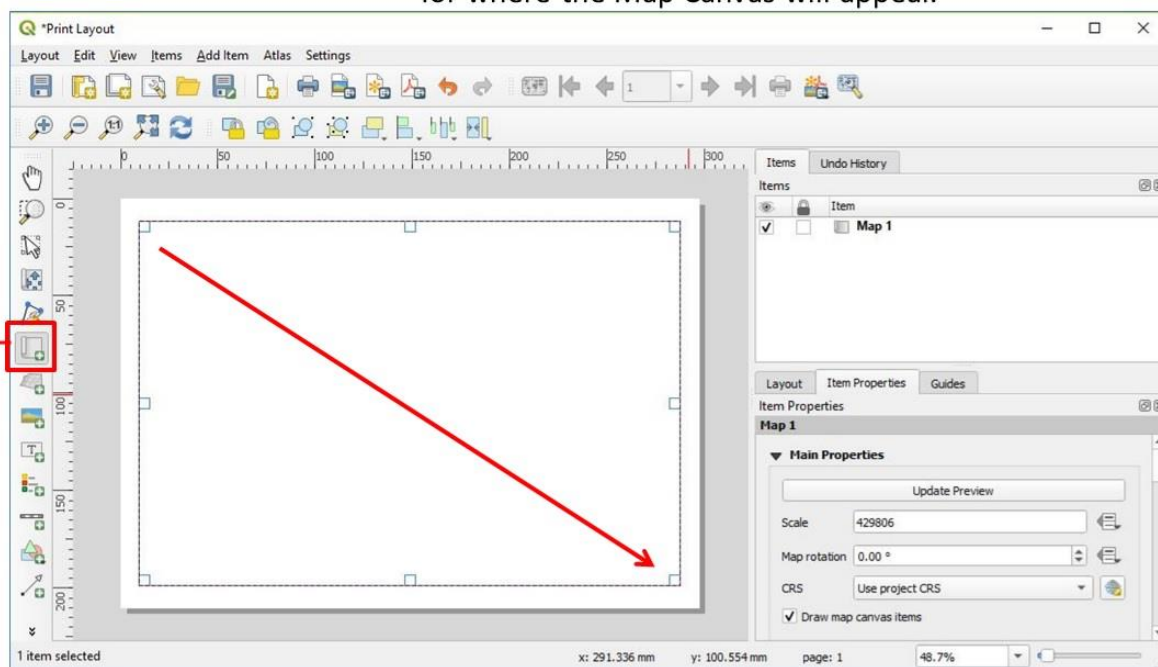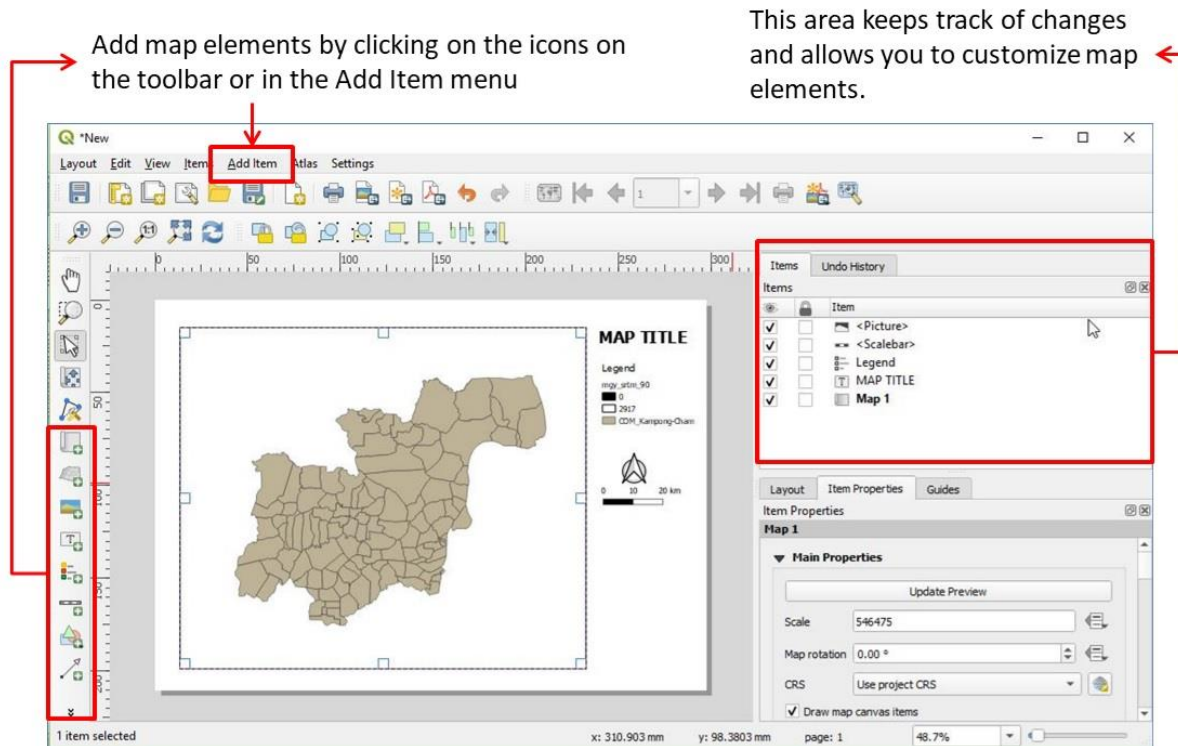
- Undo

- Redo

Navigation Toolbar

- Zoom in

- Zoom out

- Zoom to 100%

- Zoom full

- Refresh view

Print Layout

Click on the Add Map button then draw a rectangle for where the Map Canvas will appear.

Map Elements

Add map elements by clicking on the icons on the toolbar or in the Add Item menu

This area keeps track of changes and allows you to customize map elements.

Once the map has been added, the other map elements can be added. Their properties, as well as the page properties, can be viewed and modified. The Print Layout tracks changes in the Undo History window.

Layout	Item Properties
• Set the grid spacing and snap tolerance • Export settings • Resize layout to content	• Set the font • Set scale bar properties • Set legend properties • Set map element properties