

# PENGENALAN QGIS

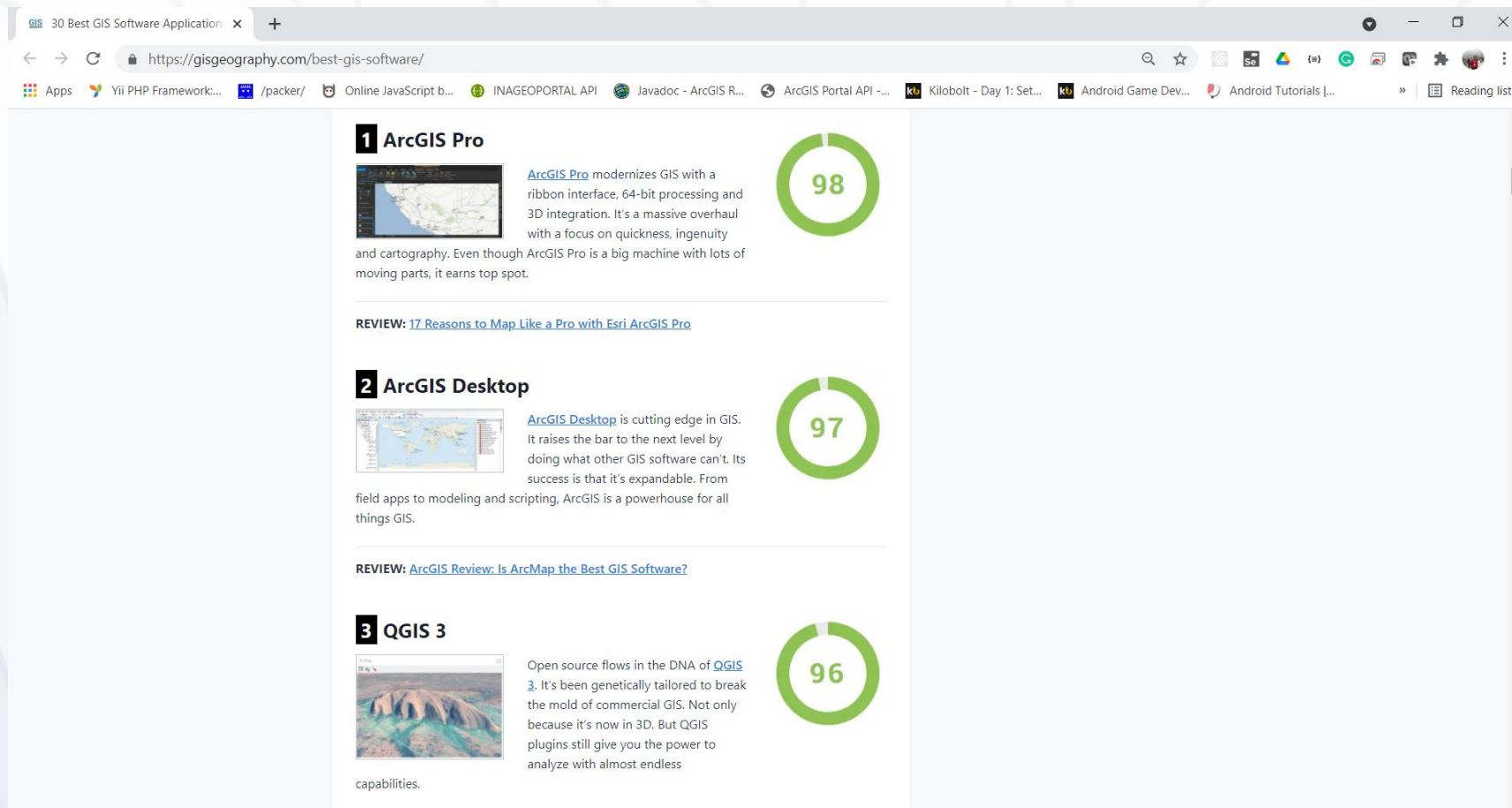
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Pranata Komputer Muda

**Pusat Pengelolaan dan Penyebarluasan Informasi Geospasial**  
**Badan Informasi Geospasial**

# Perangkat Lunak SIG



# Paling populer



The screenshot shows a web browser window with the URL <https://gisgeography.com/best-gis-software/>. The page lists the top 30 GIS software applications. The top three are:

- 1 ArcGIS Pro** (Score: 98)  
ArcGIS Pro modernizes GIS with a ribbon interface, 64-bit processing and 3D integration. It's a massive overhaul with a focus on quickness, ingenuity and cartography. Even though ArcGIS Pro is a big machine with lots of moving parts, it earns top spot.  
REVIEW: [17 Reasons to Map Like a Pro with Esri ArcGIS Pro](#)
- 2 ArcGIS Desktop** (Score: 97)  
ArcGIS Desktop is cutting edge in GIS. It raises the bar to the next level by doing what other GIS software can't. Its success is that it's expandable. From field apps to modeling and scripting, ArcGIS is a powerhouse for all things GIS.  
REVIEW: [ArcGIS Review: Is ArcMap the Best GIS Software?](#)
- 3 QGIS 3** (Score: 96)  
Open source flows in the DNA of QGIS 3. It's been genetically tailored to break the mold of commercial GIS. Not only because it's now in 3D. But QGIS plugins still give you the power to analyze with almost endless capabilities.

<https://gisgeography.com/best-gis-software/>

# Kriteria Peringkat

## Ranking Criteria

We didn't rank GIS software with just one or two factors. Instead, we used a range of criteria by testing out each GIS software package. It considers the following:

- **ANALYSIS:** Vector/raster tools, temporal, geostatistics, network analysis, and scripting.
- **CARTOGRAPHY:** Map types, coordinate systems, map layouts/elements, labeling/annotation, 3D capabilities, animation, map automation, and symbology.
- **EDITING:** Table manipulation, creating/modifying features, geocoding, topology fixing, conflation, interoperability, metadata editing, and catalog/browser.
- **IMAGERY:** Image classification, LiDAR integration, remote sensing tools, georeferencing, and photogrammetry.
- **INNOVATION:** Machine learning, AI, IoT, indoor mapping, web mapping integration, and data science capabilities.
- **SUPPORT:** Community/forums and documentation.

We also took into account the whole user interface, speed, and the number of errors we encountered when running the application.

# QGIS 3.22 Białowieża

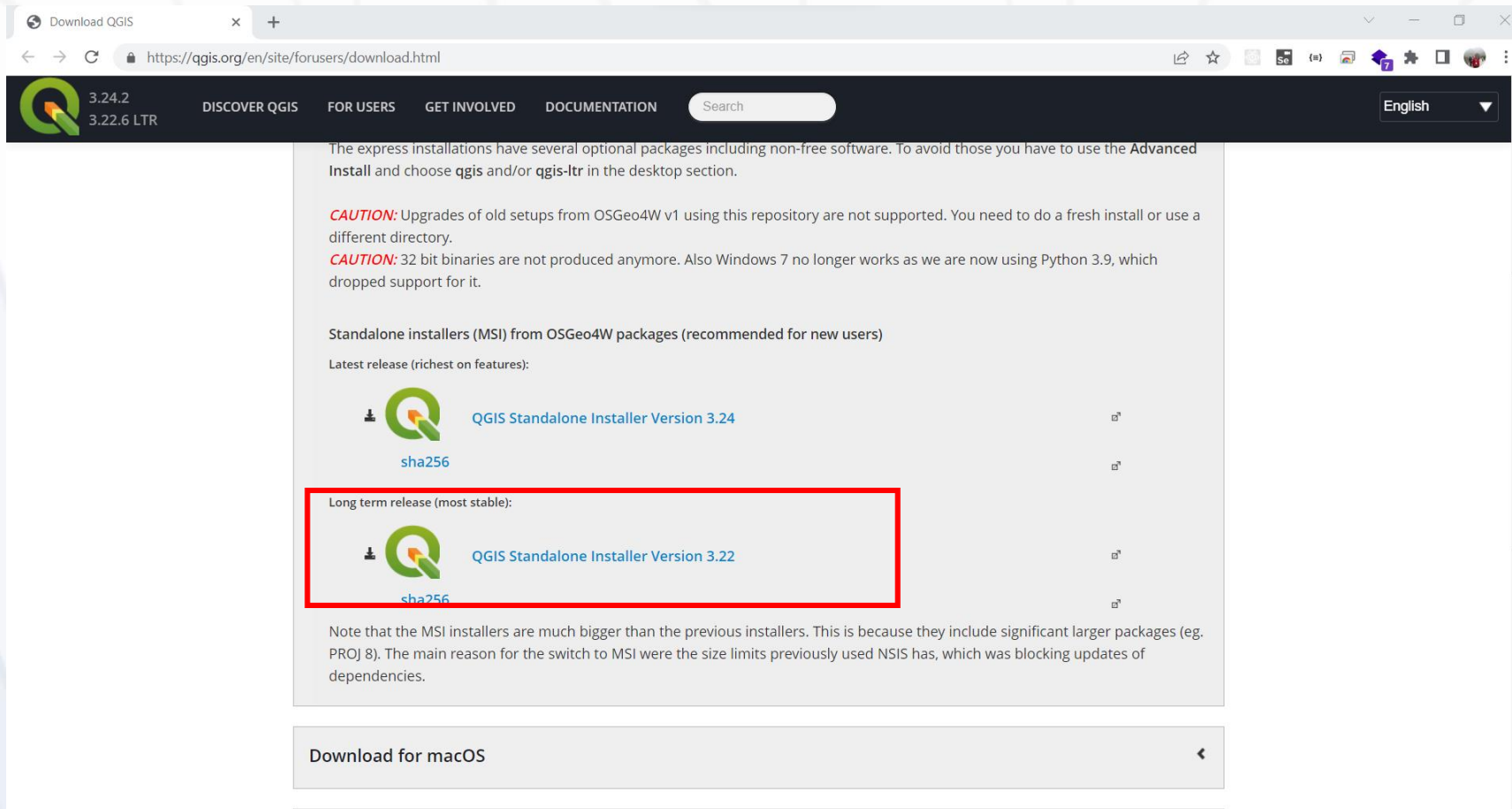


- Quantum GIS adalah perangkat lunak Sistem Informasi Geografis (SIG) yang bersifat terbuka (free/open), mudah digunakan dan dapat dijalankan pada LINUX, Unix, Mac OSX, dan WINDOWS.
- QGIS mendukung vector, raster dan database format. Rilis hingga saat ini adalah 3.22 Białowieża.

# Prasyarat Minimal Spesifikasi QGIS

	<b>Minimum</b>	<b>Recommended</b>
Processor - CPU	Core i3 2.7Ghz	Core i7 3.5Ghz
Memory RAM	2Gb	8Gb or more
Hard Disk	500 Gb SATA	SSD de 128Gb or 500Gb SATA
Graphic card	1Gb RAM	2Gb RAM (NVIDIA Geforce)
Operating System	Windows 7-10 Mac Linux (Various) Android	Windows 7-10 Mac Linux (Various) Android

# Unduh Installer QGIS



The screenshot shows a web browser window displaying the QGIS download page. The browser's address bar shows the URL <https://qgis.org/en/site/forusers/download.html>. The page header includes the QGIS logo, version numbers (3.24.2 and 3.22.6 LTR), navigation links (DISCOVER QGIS, FOR USERS, GET INVOLVED, DOCUMENTATION), a search bar, and a language dropdown set to English.

The main content area contains the following text:


The express installations have several optional packages including non-free software. To avoid those you have to use the **Advanced Install** and choose **qgis** and/or **qgis-ltr** in the desktop section.

**CAUTION:** Upgrades of old setups from OSGeo4W v1 using this repository are not supported. You need to do a fresh install or use a different directory.


**CAUTION:** 32 bit binaries are not produced anymore. Also Windows 7 no longer works as we are now using Python 3.9, which dropped support for it.

Standalone installers (MSI) from OSGeo4W packages (recommended for new users)

Latest release (richest on features):

-  [QGIS Standalone Installer Version 3.24](#) sha256

Long term release (most stable):

-  [QGIS Standalone Installer Version 3.22](#) sha256

Note that the MSI installers are much bigger than the previous installers. This is because they include significant larger packages (eg. PROJ 8). The main reason for the switch to MSI were the size limits previously used NSIS has, which was blocking updates of dependencies.

Download for macOS

# Tahapan instalasi

- Setelah proses unduh selesai. Jalankan file installer QGIS dengan cara klik dua kali (dobel klik)

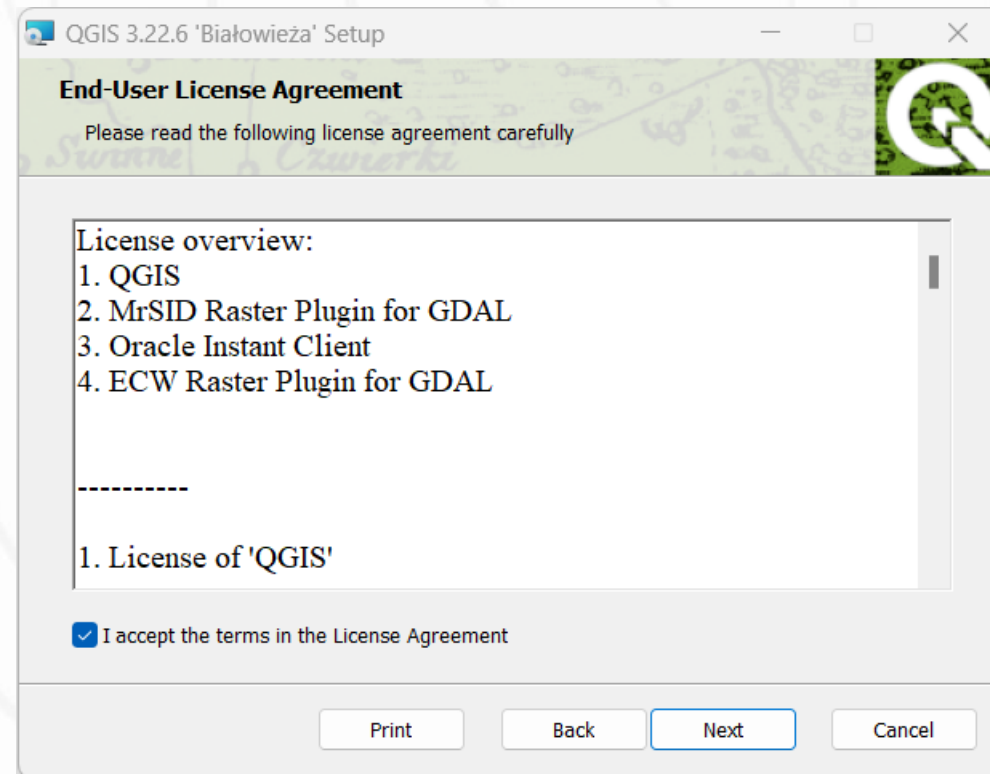
 QGIS-OSGeo4W-3.22.6-1.msi



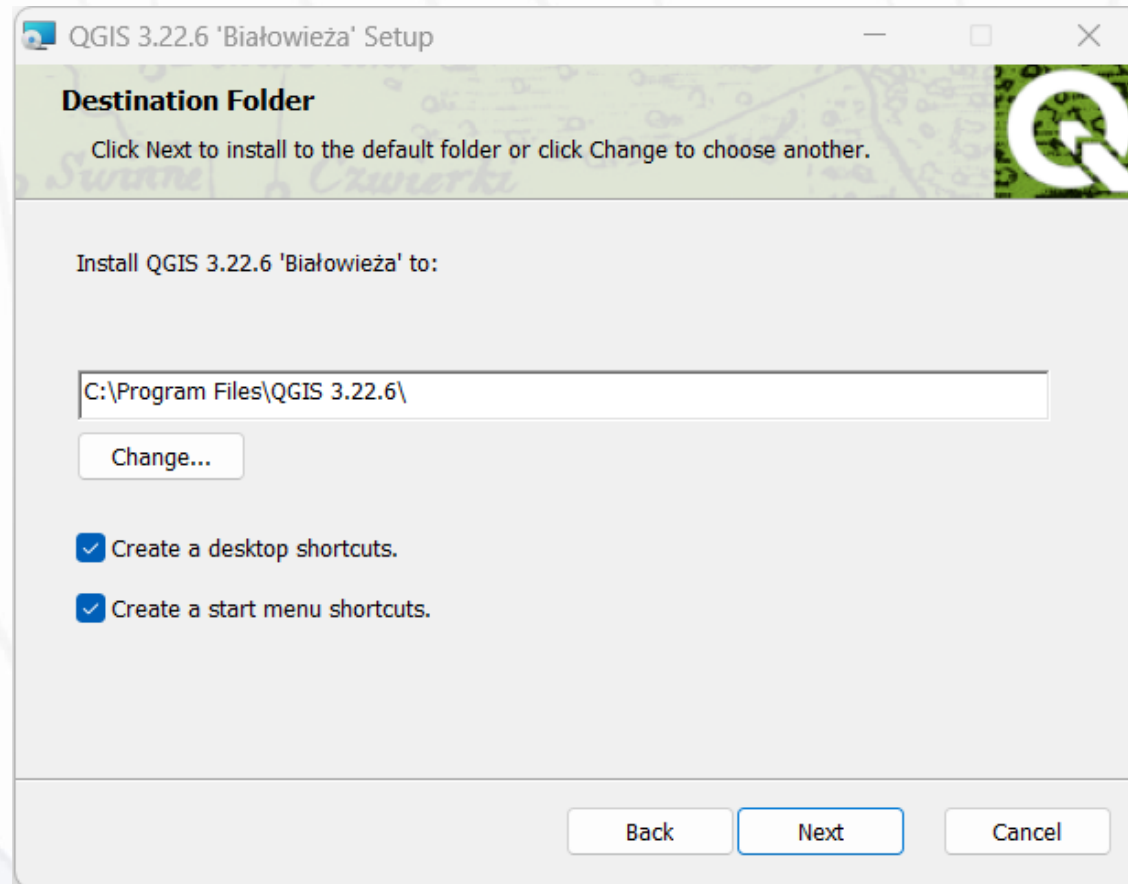
# Klik 'Next' untuk memulai instalasi



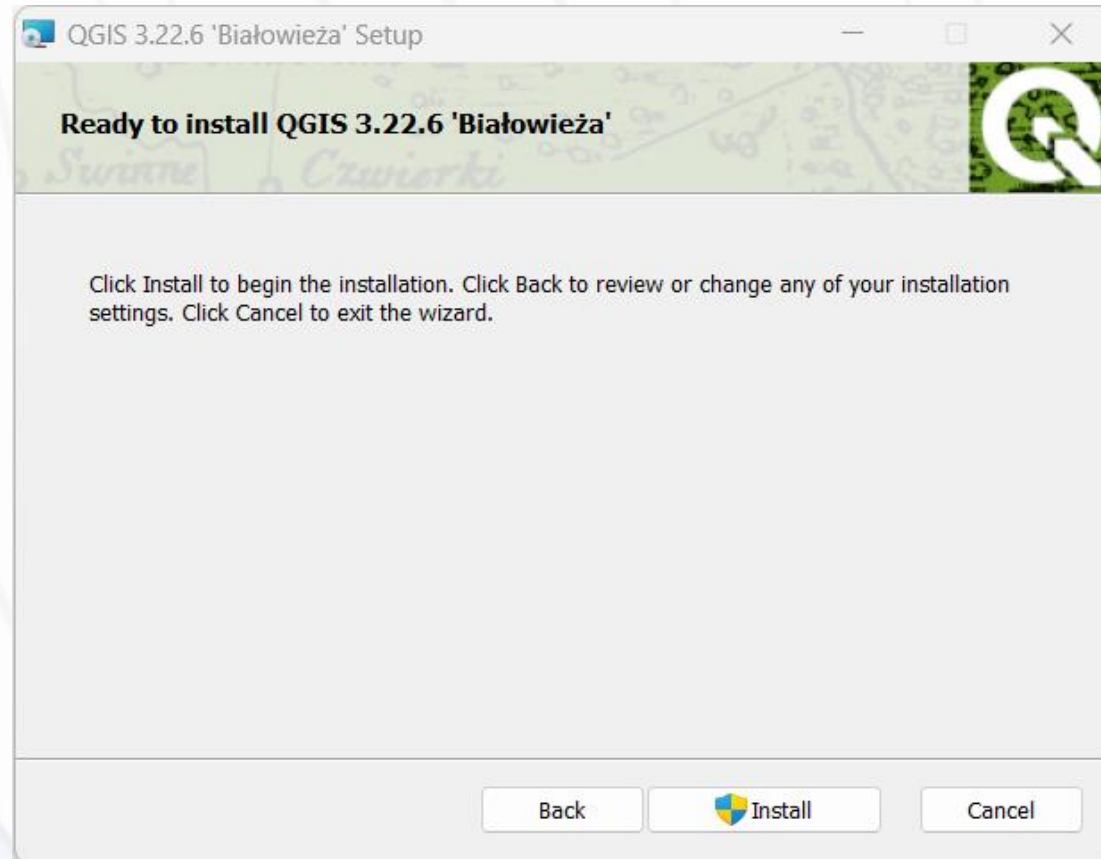
# Check 'I Accept' dan Klik 'Next'.



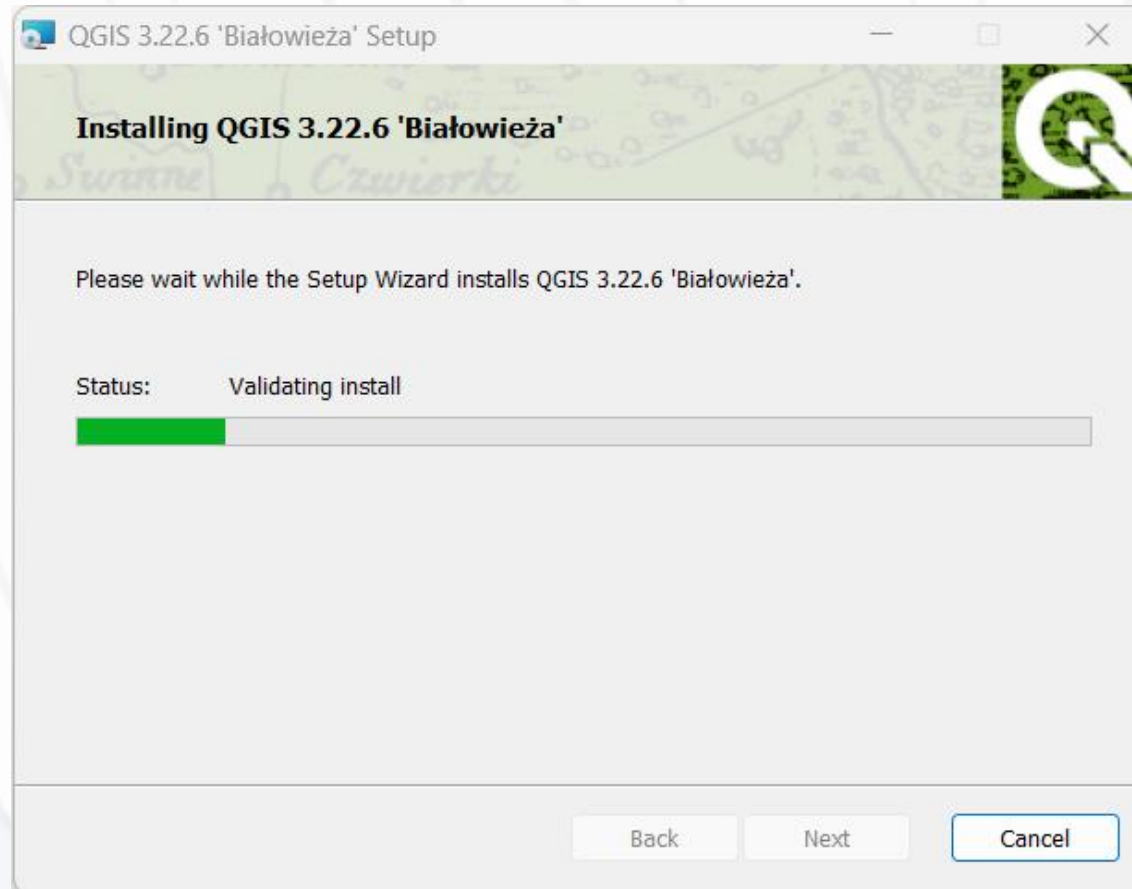
# Tentukan path folder lokasi instalasi. Klik 'Next'.



# Klik 'Install'



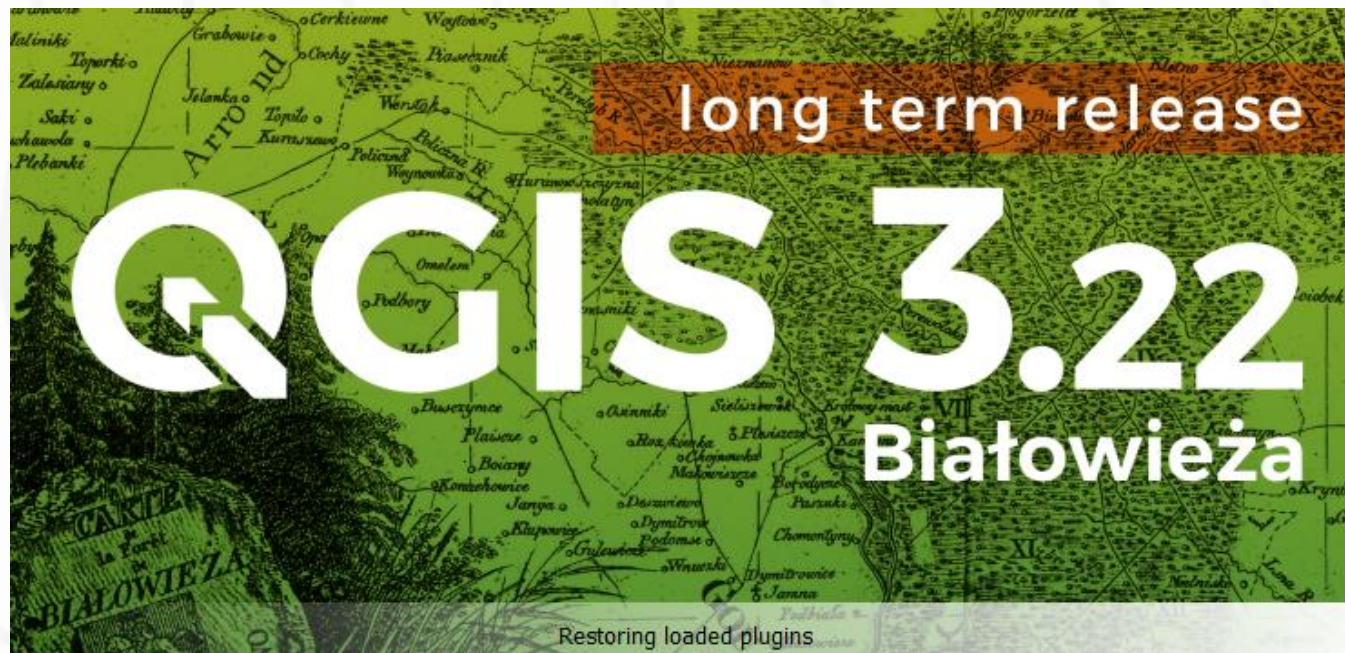
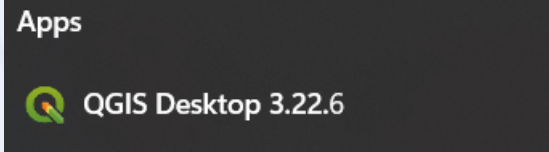
Klik 'Yes' pada jendela persetujuan. Tunggu proses instalasi berjalan hingga selesai.



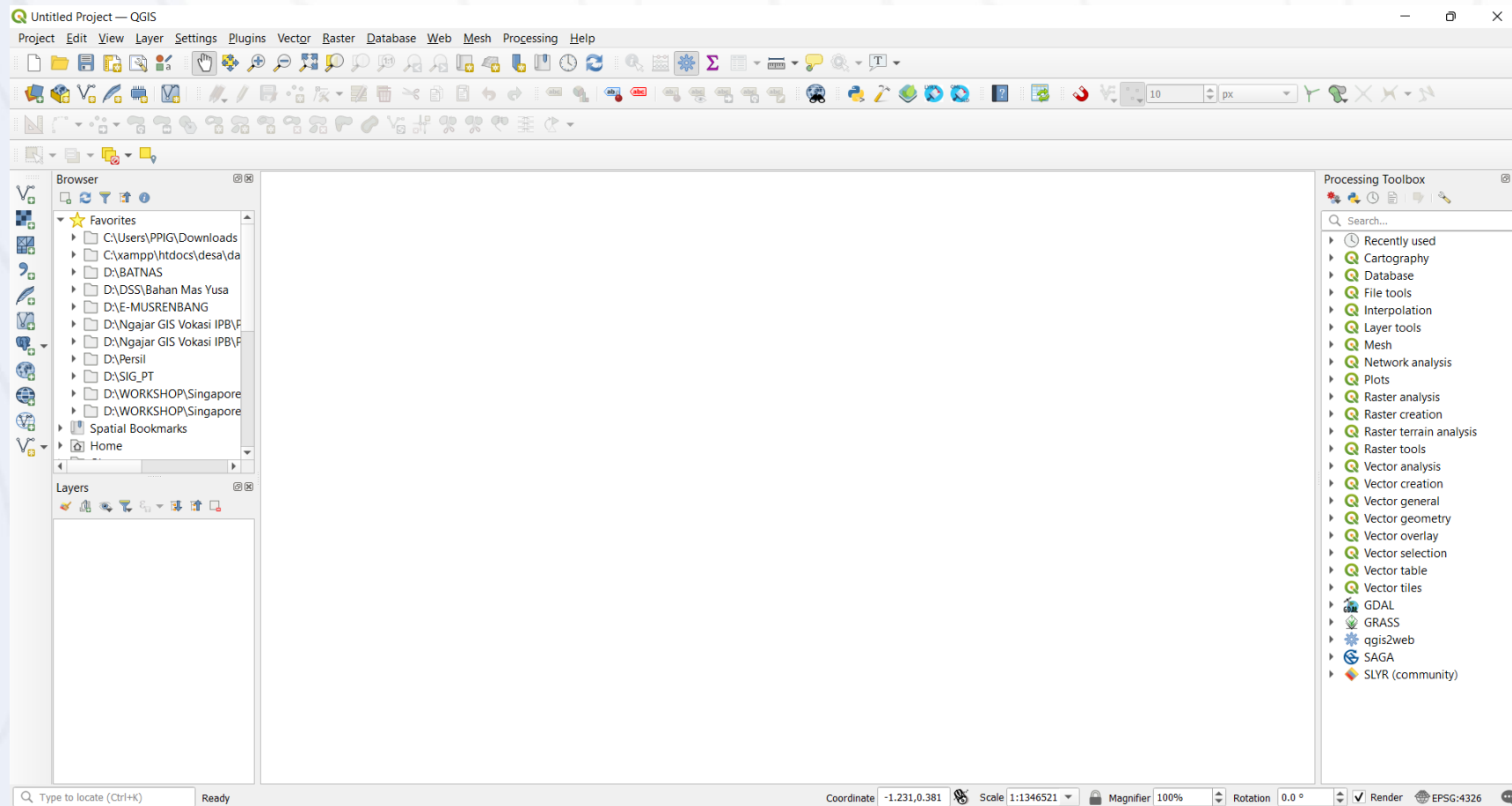
# Klik 'Finish' untuk mengakhiri proses instalasi.



# Uji coba dan mengenal antar muka QGIS



# Tampilan awal QGIS

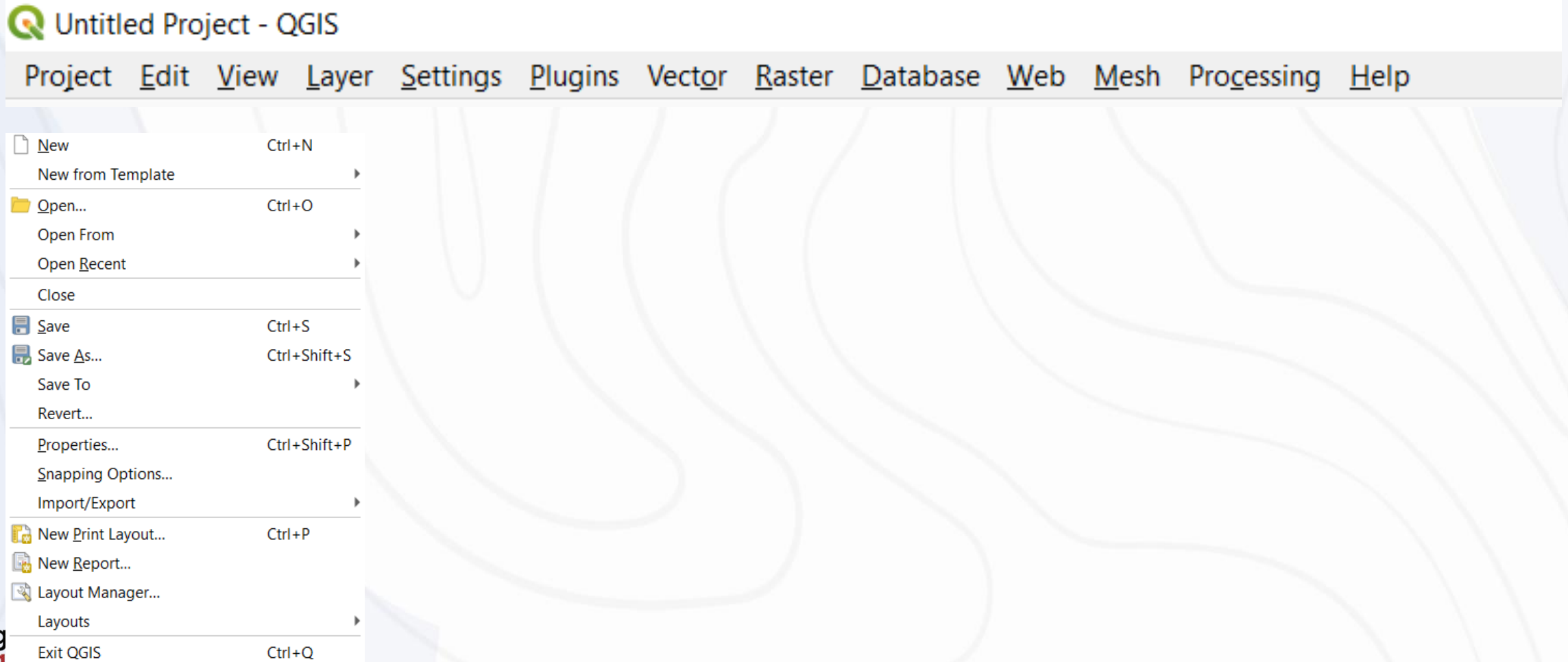


1. Menu Bar
  - Project
  - View
  - ...
2. Toolbars
  - Navigation Tools
3. Panels
  - Processing Toolbox
  - ..
4. Map View/Canvas
5. Status Bar



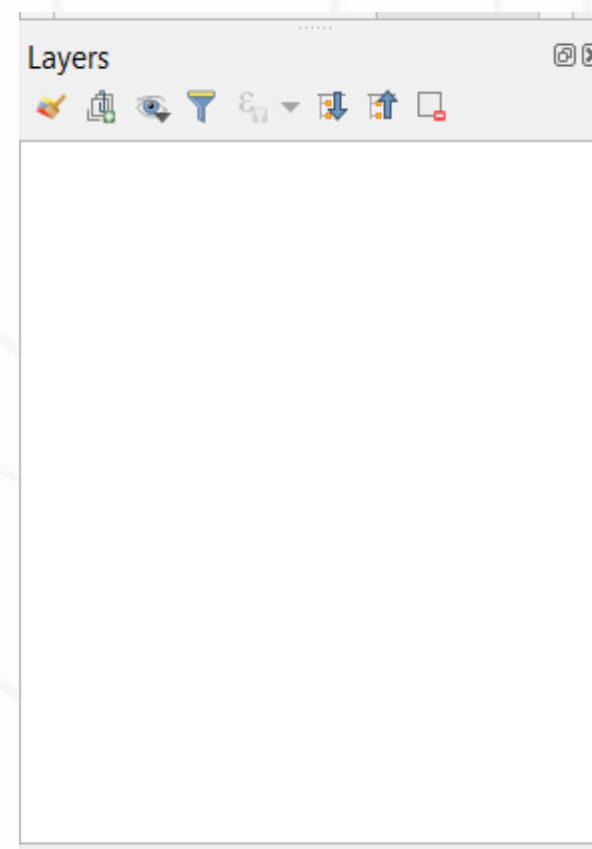
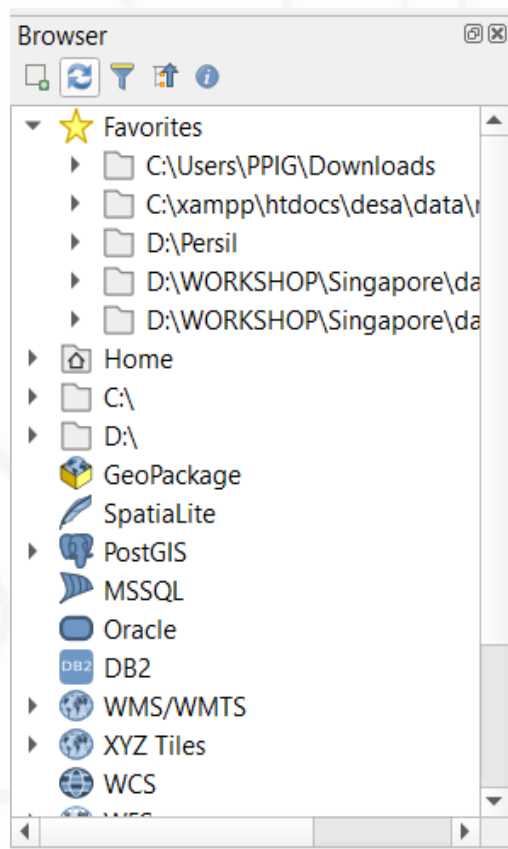
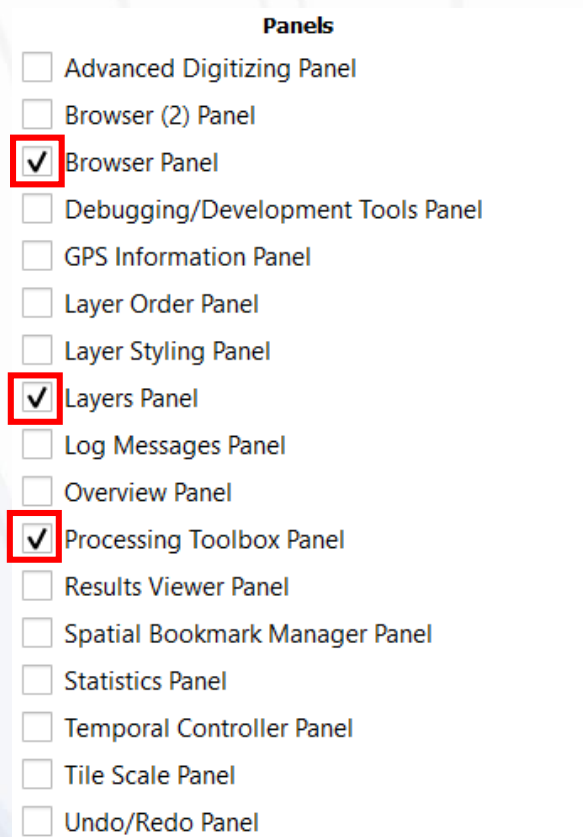
# Bagian-Bagian QGIS

- Menu



# Bagian-Bagian QGIS

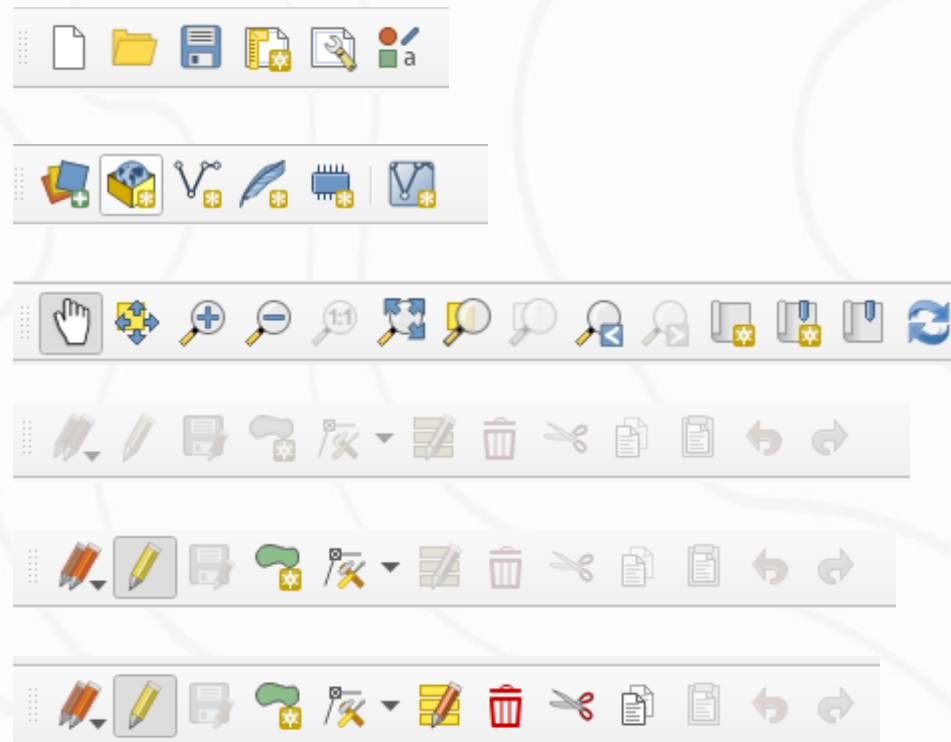
- Panels



# Bagian-Bagian QGIS

- Toolbars

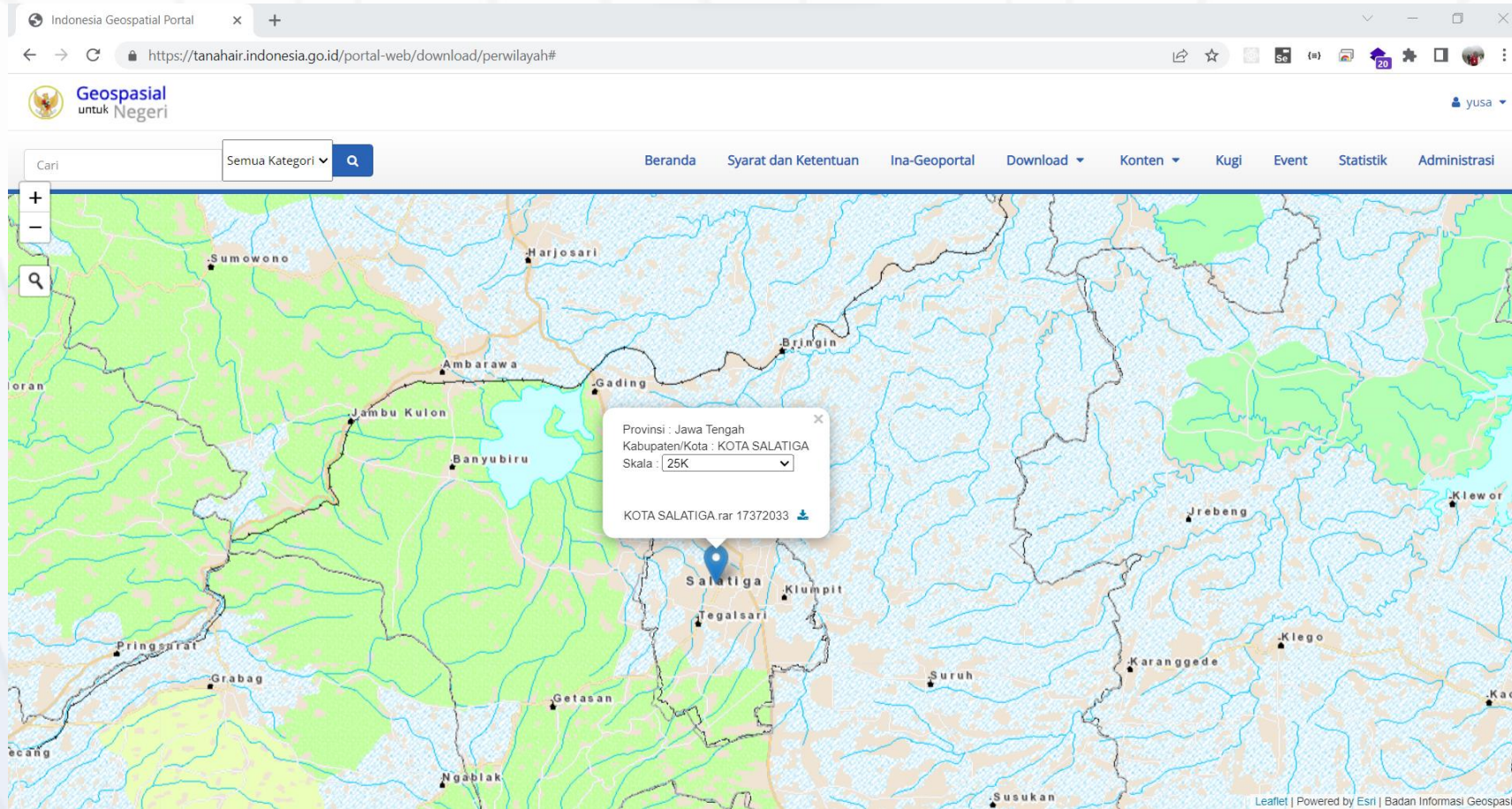
- Toolbars**
- Advanced Digitizing Toolbar
  - Attributes Toolbar
  - Data Source Manager Toolbar
  - Database Toolbar
  - Digitizing Toolbar
  - Help Toolbar
  - Label Toolbar
  - Manage Layers Toolbar
  - Map Navigation Toolbar
  - Plugins Toolbar
  - Project Toolbar
  - Raster Toolbar
  - Selection Toolbar
  - Shape Digitizing Toolbar
  - Snapping Toolbar
  - Vector Toolbar
  - Web Toolbar



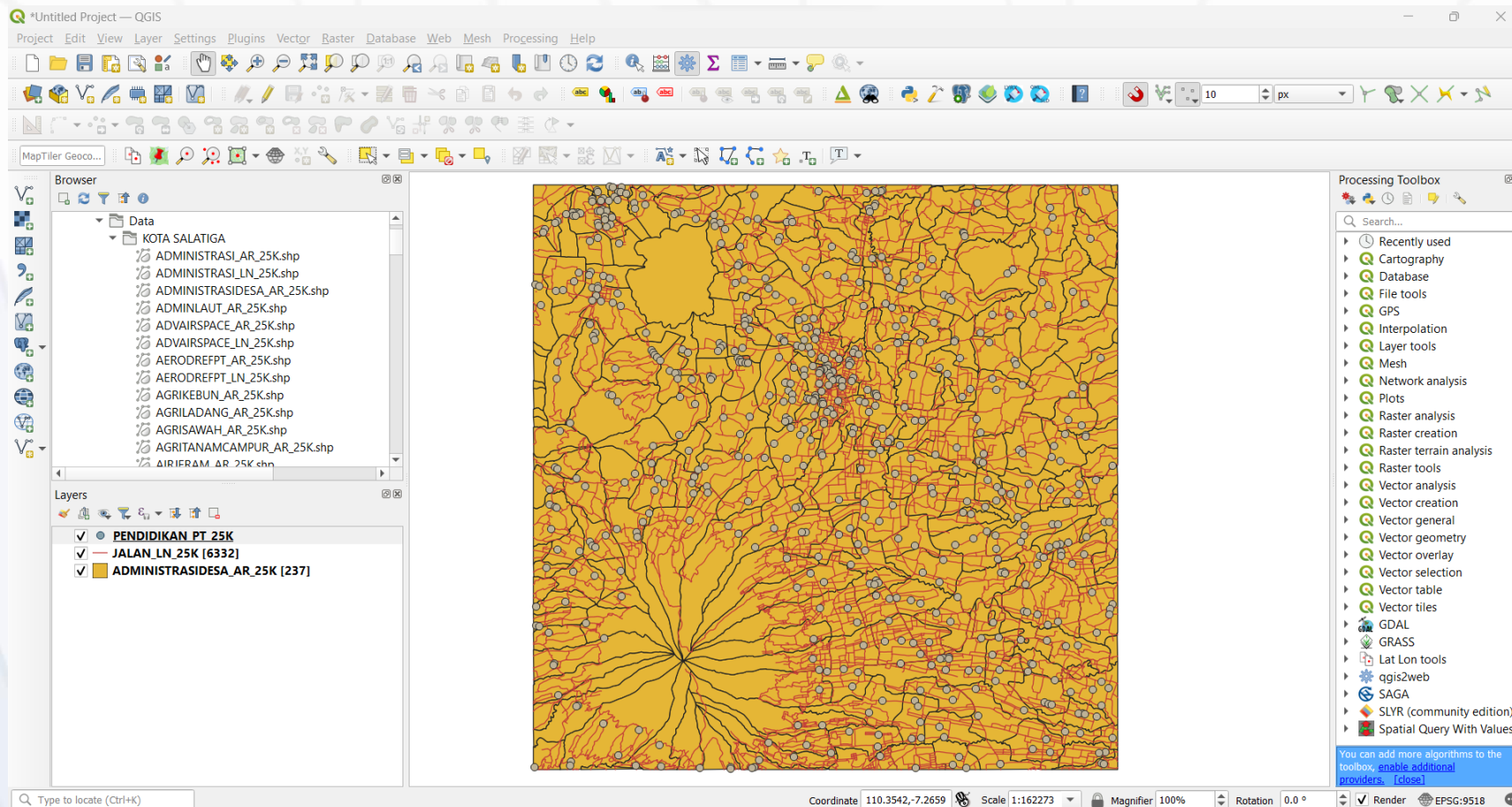
# Unduh data spasial dari tanahair.indonesia.go.id

The screenshot shows the Geospasial website interface. At the top, there is a search bar with the text "Carli" and a dropdown menu for "Semua Kategori". The main navigation bar includes "Beranda", "Syarat dan Ketentuan", "Ina-Geoportal", "Download", "Konten", "Kugi", "Event", and "Statistik". The "Download" menu is open, displaying a list of options: "Peta AOI", "Peta Per Wilayah", "Peta RBI Terdampak Bencana", "DEM Nasional", "Peta KSP", and "Peta Cetak". A secondary menu is visible over the satellite map, listing download formats: "RBI format jpeg/pdf", "LLN/LPI format jpeg/pdf", "ZEE format jpeg/pdf", and "Kebencanaan format jpeg/pdf". The main content area features a satellite map of a residential area with a "Kebijakan Satu Peta" button. The footer contains the text "Badan Informasi Geospasial - Citra Satelit Resolusi Tinggi - Ortho" and a news ticker: "Presiden Joko Widodo Meluncurkan Geoportal Kebijakan Satu Peta (KSP) | BIG luncurkan atlas mudik 2018 yang dapat diunduh di sini. | Bagi pen".

# Unduh RBI per Wilayah

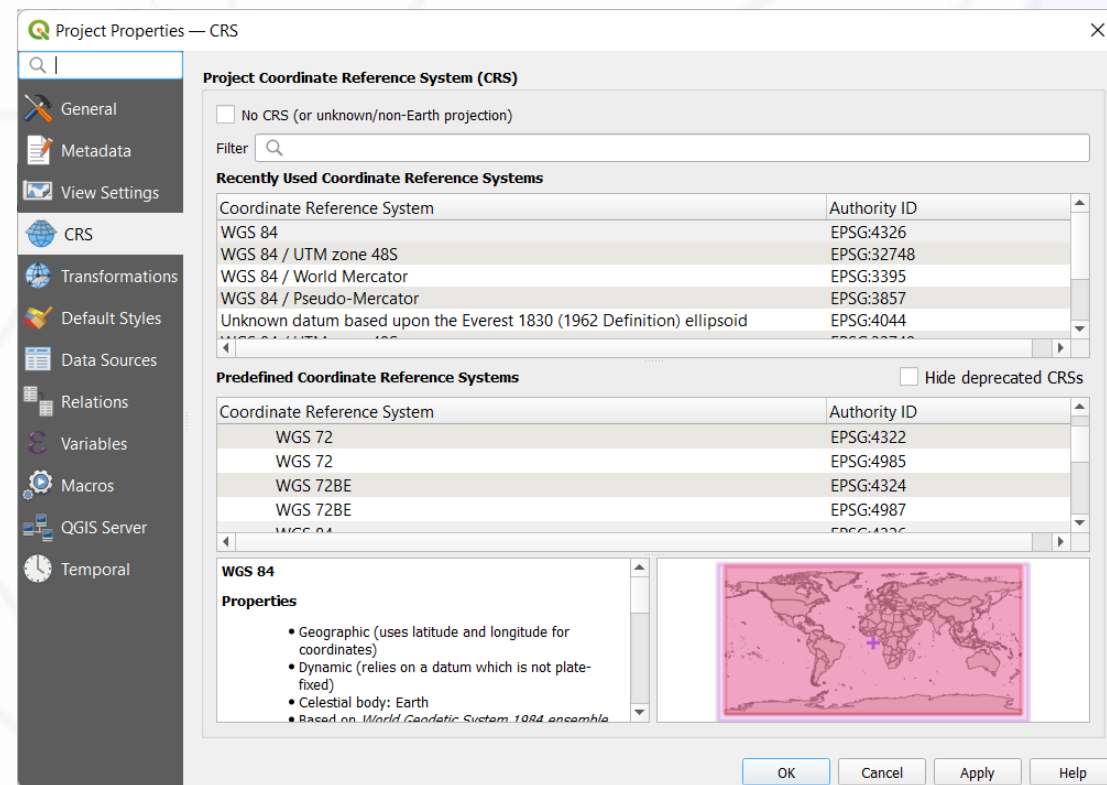
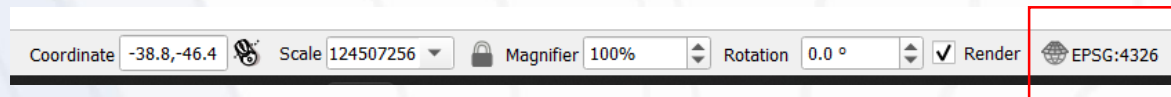


# Membuka data shape file



# MENGETAHUI SISTEM KOORDINAT REFERENSI

1. Buka QGIS lalu tambahkan data world countries
2. Klik kanan bawah pada status bar



# MENGETAHUI SISTEM KOORDINAT REFERENSI PADA SHAPEFILE

1. Klik kanan pada layer dan pilih [Properties](#)
2. Pilih tab information.

The screenshot shows the 'Layer Properties' dialog box for a layer named 'World\_Countries'. The 'Information' tab is selected, and the 'Coordinate Reference System (CRS)' section is highlighted with a red box. The CRS details are as follows:

Coordinate Reference System (CRS)	
Name	EPSG:4326 - WGS 84
Units	Geographic (uses latitude and longitude for coordinates)
Method	Lat/long (Geodetic alias)
Celestial body	Earth
Accuracy	Based on <i>World Geodetic System 1984 ensemble</i> (EPSG:6326), which has a limited accuracy of at best 2 meters.
Reference	Dynamic (relies on a datum which is not plate-fixed)

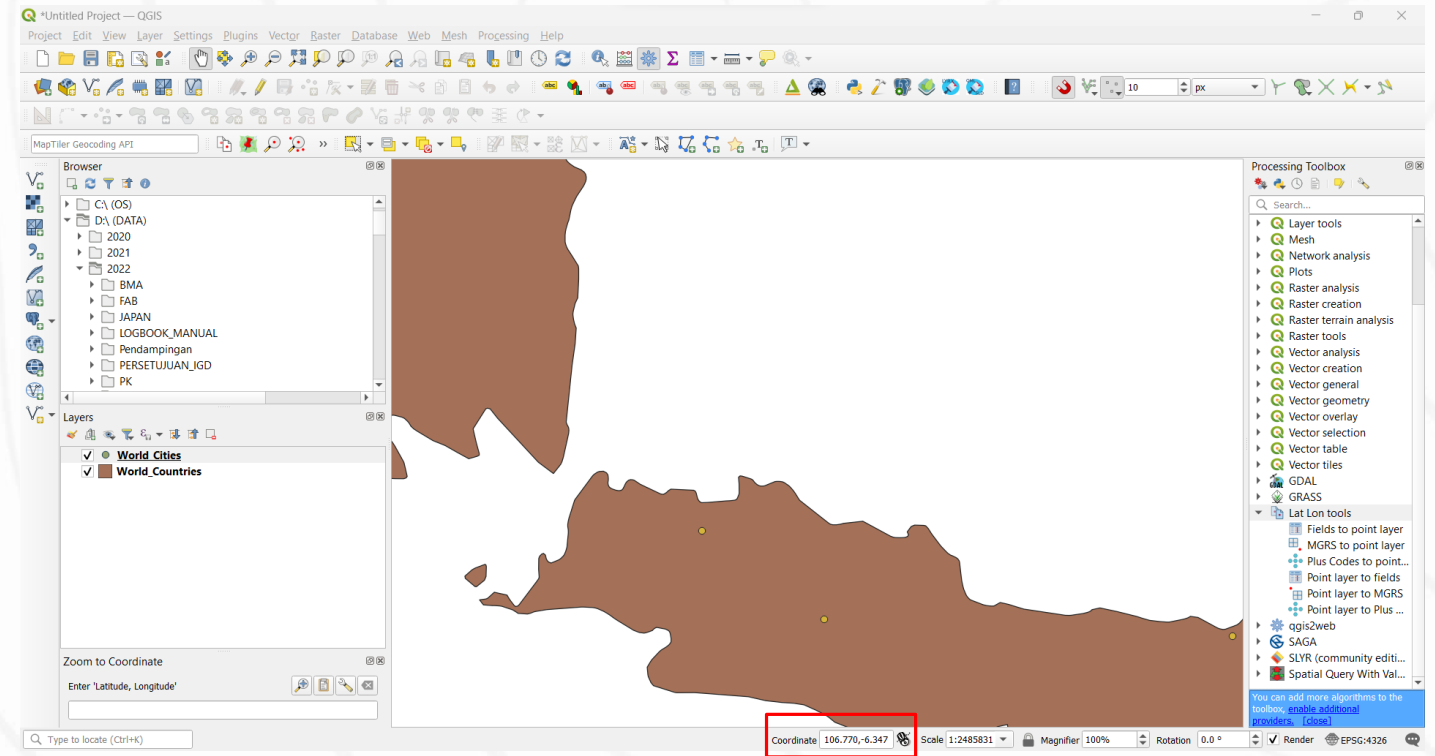
Other visible sections in the dialog include:

- General:** Name: World\_Countries; Path: D:\2022\SALATIGA\Data\World\_Countries\World\_Countries.shp; Total size: 3.68 MB; Last modified: Tuesday, December 30, 2014 4:13:40 PM; Provider: ogr.
- Information from provider:** Storage: ESRI Shapefile; Encoding: windows-1252; Geometry: Polygon (MultiPolygon); Extent: -180.0000000000000000,-90.0000000000000000 : 180.0000000000000000,83.6235961914062500; Feature count: 252.
- Identification:** Identifier: dataset; Type: dataset.



# BERAPA KOORDINAT KOTA JAKARTA?

- Tambahkan data world cites
- Arahkan kursor pada kota Jakarta



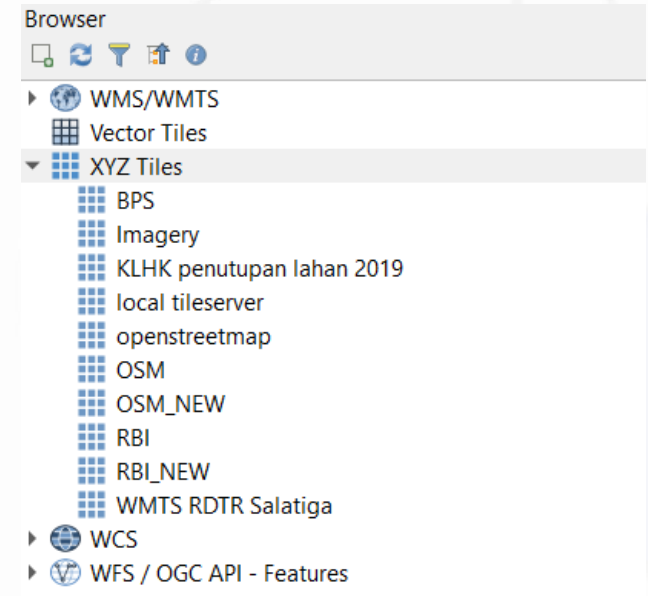
↓

Titik  
Koordinat

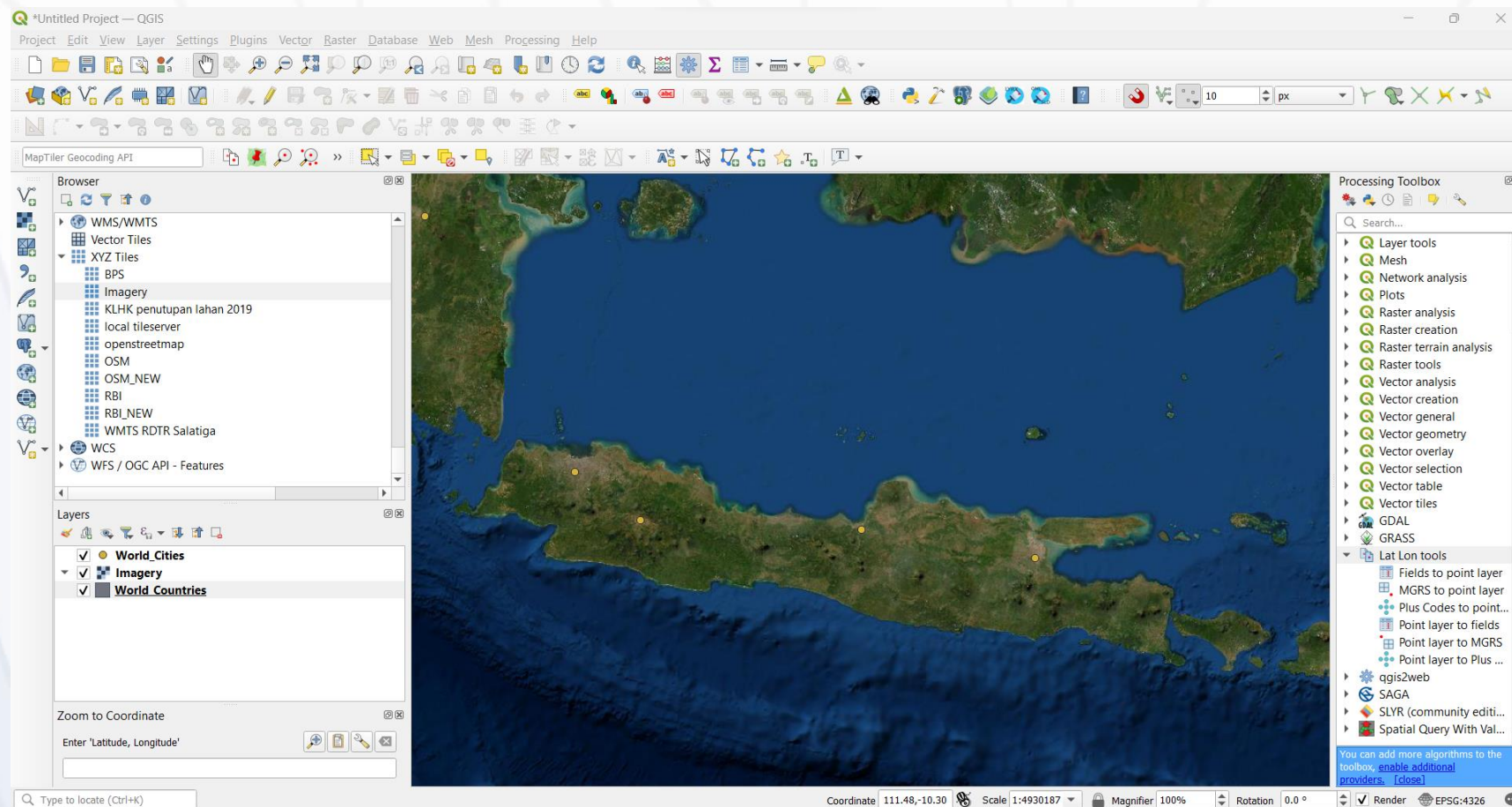
# Menambahkan Basemap

## XYZ TILES

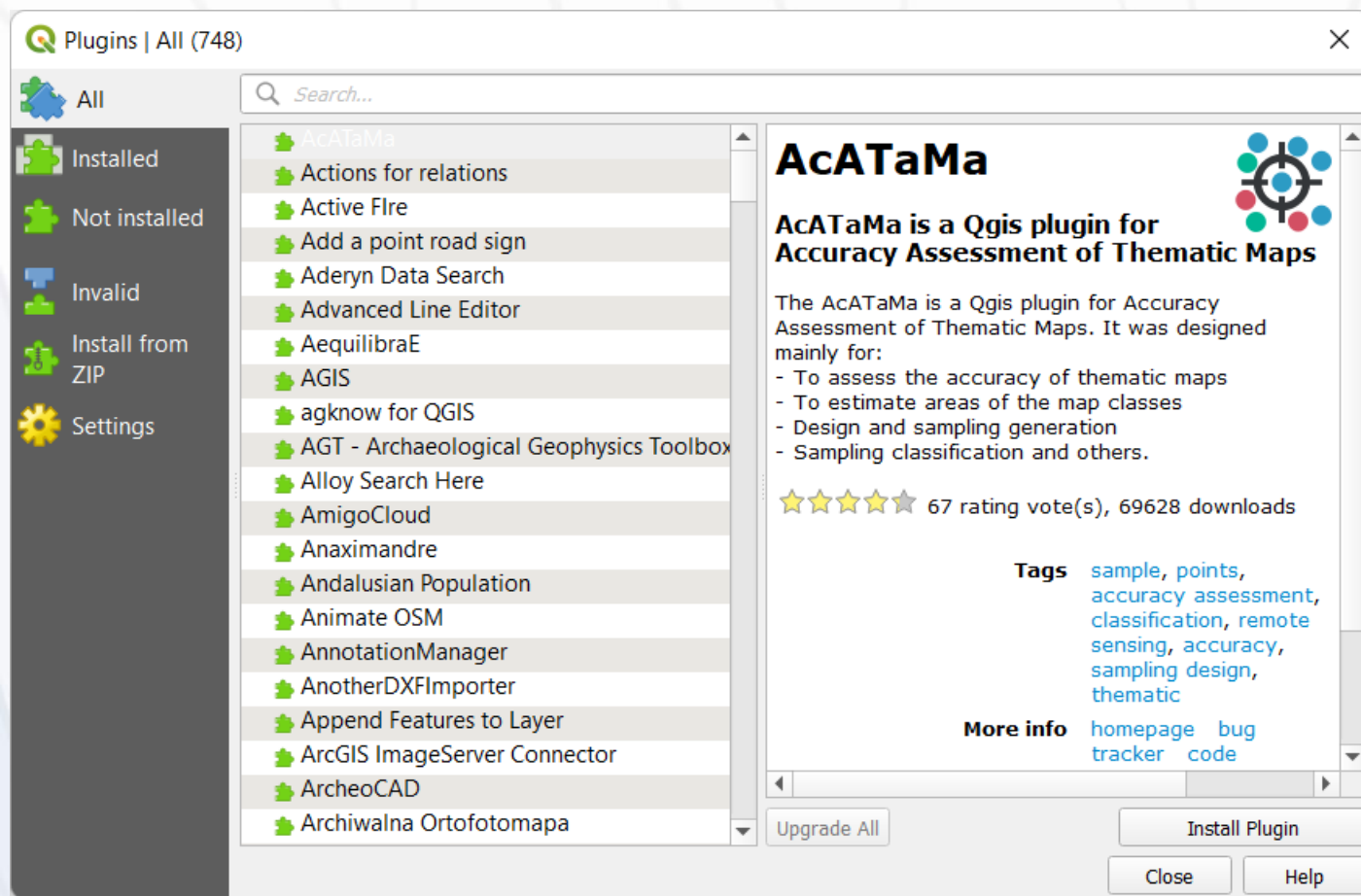
- OSM
  - <http://tile.openstreetmap.org/{z}/{x}/{y}.png>
- RBI
  - [https://geoservices.big.go.id/rbi/rest/services/BASEMAP/Rupabumi\\_Indonesia/MapServer/tile/{z}/{y}/{x}](https://geoservices.big.go.id/rbi/rest/services/BASEMAP/Rupabumi_Indonesia/MapServer/tile/{z}/{y}/{x})
- ESRI IMAGERY
  - [http://server.arcgisonline.com/ArcGIS/rest/services/World\\_Imagery/MapServer/tile/{z}/{y}/{x}](http://server.arcgisonline.com/ArcGIS/rest/services/World_Imagery/MapServer/tile/{z}/{y}/{x})



# Basemap Imagery

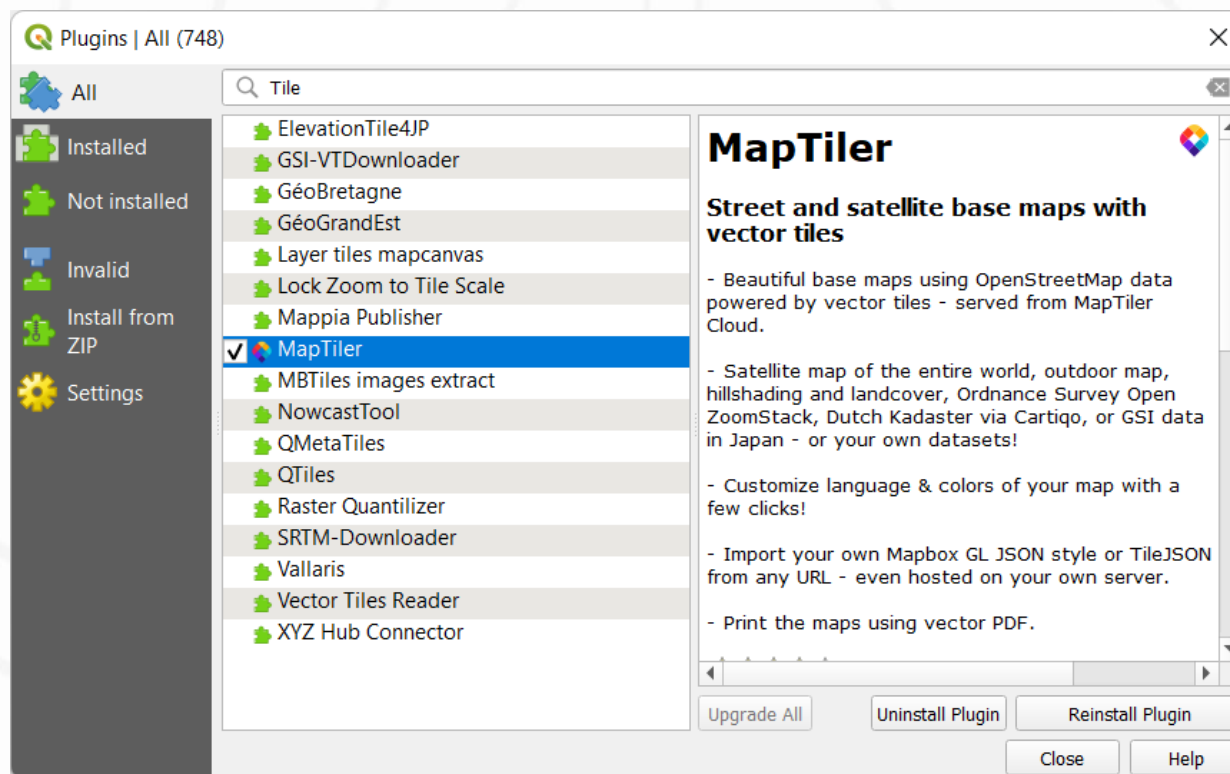
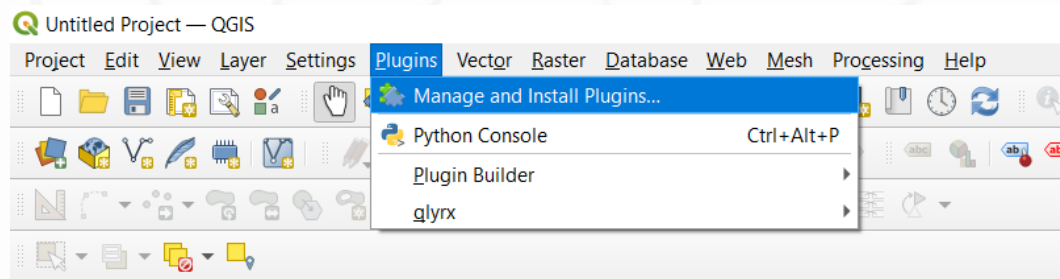


# PENGELOLAAN DAN INSTALASI PLUGIN



# PLUGIN PADA QGIS

- MapTiler
- Lat Lon Tools
- OSM place Search





**TERIMAKASIH**