

A brief introduction to QGIS

QGIS (short for Quantum GIS) is a user friendly open source Geographic Information System. The QGIS project has been running since 2002 and has tens of thousands of users around the world. Being open source, the software is free to download, distribute and use. It is designed to be available on almost all operating systems with a standard interface. It is a direct competitor to commercial GIS applications such as Arcgis. There is an active developer community working on analytical tool development, and a simple plugin interface that enables users/researchers to write their own 'plugin' tools in the python programming language.

You can read more about the project at the QGIS website (<http://www.qgis.org/>).

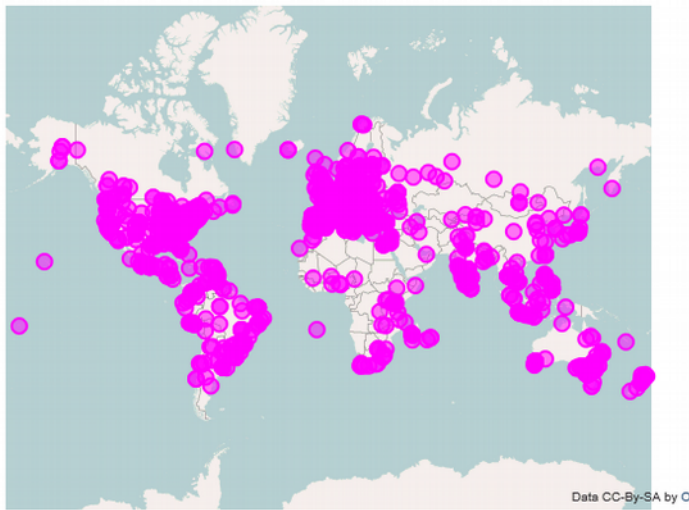


Illustration 1: Registered QGIS users
(<https://plugins.qgis.org/community-map/>)

QGIS resources

The following resources could be useful when starting out with QGIS:

- The QGIS website (<http://www.qgis.org/>)
- Introduction to QGIS
(http://www.qgis.org/en/docs/gentle_gis_introduction/index.html)
- The QGIS manual (<http://qgis.org/en/documentation/manuals.html>)
- “How do I do that in QGIS?” (http://hub.qgis.org/projects/quantum-gis/wiki/How_do_I_do_that_in_QGIS)
- The open source GIS mailing lists (<http://osgeo-org.1560.x6.nabble.com/>)
- Tutorials by Chris Yesson (<http://www.zsl.org/science/ioz-staff-students/dr-chris-yesson/yessonteaching.1398.AR.html>)

Data resources

When using a GIS, you need some GIS data. There are many data available on the web. Here are some useful sites with freely accessible GIS layers

Reference

- (<http://www.diva-gis.org/Data>) A list of free spatial data and links to lots of useful boundary shape files, such as political boundaries, roads, railways, rivers & lakes
- (<http://protectedplanet.net/>) Protected planet is the new version of the world database of protected areas providing vector files of protected areas

Elevation/bathymetry

- (<http://gdem.ersdac.jspacesystems.or.jp/search.jsp>) ASTER GDEM – elevation at 1"x1" (~30m) for land between ~82°N and 82°S (requires registration and login)
- (<http://www2.jpl.nasa.gov/srtm/cbanddataproducs.html>) SRTM provide global elevation data at a local scale up to 3"x3" (~90m)
- (http://topex.ucsd.edu/WWW_html/srtm30_plus.html) The SRTM has combined dem & bathymetry grid at 30"x30" (~1km)
- (<http://www.eea.europa.eu/data-and-maps/data/eu-dem>) EU DEM has terrestrial elevation for europe at 25m x 25m resolution
- (<http://www.ngdc.noaa.gov/mgg/bathymetry/arctic/arctic.html>) Integrated bathymetry/elevation for the arctic.

Terrestrial Environment

- (<http://www.worldclim.org/>) Worldclim provide raster grids of environmental data such as elevation, surface temperature and precipitation up to 30"x30" (~1km)
- (<https://www.climond.org/>) An alternative to worldclim
- (<http://meta2.isric.org/geonetwork/srv/en/main.home>) World Soil Information
- (<http://landsatlook.usgs.gov/>) LANDSAT has satellite derived data freely available. LANDSAT8 is 30m x 30m resolution (Images, NDVI etc).

Marine environment

- (<http://www.myocean.eu/>) MyOcean has a variety of oceanographic data from a variety of models (Temp, Currents, Chemistry, etc)
- (<http://www.oracle.ugent.be/>) Marine environmental layers on a consistent grid 5' x 5' grid (~9km)
- (<http://oceancolor.gsfc.nasa.gov/>) Ocean colour web provides data access to satellite data including MODIS and SeaWiFS (e.g. NDVI, SST, SAT)
- (http://www.nodc.noaa.gov/OC5/WOA09/pr_woa09.html) The world ocean atlas a 3 dimensional grid of the oceans at 1° x 1° x 33 depth levels (Temp, Salinity etc)