

## Introduction to open source GIS and remote sensing data

No.	Data Source	Link	General purpose
1	National Centers for Environmental Information	<a href="http://www.ngdc.noaa.gov/mgg/shorelines/gshhs.html">http://www.ngdc.noaa.gov/mgg/shorelines/gshhs.html</a>	Land and ocean boundaries
2	Land processes distributed active archive center (LPDAAC) NASA USGS	<a href="https://gdex.cr.usgs.gov/gdex/">https://gdex.cr.usgs.gov/gdex/</a>	Elevation
3	Worldclim	<a href="http://www.worldclim.org/">http://www.worldclim.org/</a>	Weather and climate
4	Hydrological data and maps based on Shuttle Elevation Derivatives at multiple Scales (HydroSHEDS)	<a href="http://hydrosheds.cr.usgs.gov/">http://hydrosheds.cr.usgs.gov/</a>	Hydrology
5	Center for Sustainability and the Global Environment (SAGE)	<a href="http://nelson.wisc.edu/sage/data-and-models/datasets.php">http://nelson.wisc.edu/sage/data-and-models/datasets.php</a>	Global land cover, Crop Calendar GIS
6	Socioeconomic Data and Applications Center (SEDAC)	<a href="http://sedac.ciesin.columbia.edu/search/data?contains=global+agricultural+land&amp;facets=theme:agriculture">http://sedac.ciesin.columbia.edu/search/data?contains=global+agricultural+land&amp;facets=theme:agriculture</a>	Global Agricultural Lands
7	EarthStat	<a href="http://www.earthstat.org/">http://www.earthstat.org/</a>	Agricultural Land Use and potential use
8	History Database of the Global Environment (HYDE)	<a href="https://themasites.pbl.nl/tridion/en/themasites/hyde/index.html">https://themasites.pbl.nl/tridion/en/themasites/hyde/index.html</a>	Land-use, agricultural areas, yields and greenhouse gas emissions
9	Food and Agriculture Organization (FAOSTAT)	<a href="http://www.fao.org/faostat/en/#home">http://www.fao.org/faostat/en/#home</a>	Agriculture data
10	Global Agro-ecological zones (GAZE)	<a href="http://gaez.fao.org/Main.html#">http://gaez.fao.org/Main.html#</a>	Agricultural related–consumption, suitability, yields, production etc.
11	EarthExplorer	<a href="https://earthexplorer.usgs.gov/">https://earthexplorer.usgs.gov/</a>	Remote sensing Data Landsat, AVHRR, DEM etc.
12	Copernicus Open Access Hub	<a href="https://sentinel.esa.int/web/sentinel/sentinel-data-access">https://sentinel.esa.int/web/sentinel/sentinel-data-access</a>	Sentinel data SAR, Optical
13	Alaska Satellite Facility	<a href="https://www.asf.alaska.edu/">https://www.asf.alaska.edu/</a>	SAR data

## Open Source GIS and Remote Sensing Software/Tool box

Software	Use	Source
The Sentinel Toolbox 1	SAR applications	<a href="https://sentinel.esa.int/web/sentinel/toolboxes">https://sentinel.esa.int/web/sentinel/toolboxes</a>
The Sentinel Toolbox 2/3	High resolution optical applications	
GRASS: Geographic Resources Analysis Support System	geospatial data management and analysis	<a href="https://grass.osgeo.org/">https://grass.osgeo.org/</a>
gvSIG	Have GIS data input format and has nice vector data editing functions	<a href="http://www.gvsig.org/en/web/guest/products/gvsig-desktop/downloads">http://www.gvsig.org/en/web/guest/products/gvsig-desktop/downloads</a>
ILWIS: Integrated Land and Water Information System	geospatial data management and analysis	<a href="https://52north.org/software/software-projects/ilwis/">https://52north.org/software/software-projects/ilwis/</a>
SPIRITS	Analyzing satellite derived image time series for crop and vegetation monitoring	<a href="https://mars.jrc.ec.europa.eu/asap/download.php">https://mars.jrc.ec.europa.eu/asap/download.php</a>