

## Software

ArcMap has the ability to execute any geoprocessing model or script as well as to view and work with the results through map visualization

QGIS is a open-source cross-platform desktop geographic information system (GIS) application that supports viewing, editing, printing, and analysis of geospatial data. ENVI

ERDAS IMAGINE is easy-to-use, raster-based software designed specifically to extract information from images

OpenDroneMap is an open source photogrammetry toolkit to process aerial imagery (usually from a drone) into maps and 3D models.<sup>1</sup>

Agisoft Metashape is a stand-alone software product that performs photogrammetric processing of digital images and generates 3D spatial data to be used in GIS applications

GeoServer is a Java-based server that allows users to view and edit geospatial data. Using open standards set forth by the Open Geospatial Consortium (OGC), GeoServer allows for great flexibility in map creation and data sharing

PostGIS is a spatial database extender for PostgreSQL object-relational database. It adds support for geographic objects allowing location queries to be run in SQL.

gvSIG Online is the integral platform for the implementation of Spatial Data Infrastructures (SDI) and corporate GIS in free software

## Remote Sensing (RS) Satellite Images and GIS Format

GIS, geographic information system is a computer system for capturing, storing, checking, and displaying data related to positions on Earth's surface. By relating seemingly unrelated . data, GIS can help individuals and organizations better understand spatial patterns and relationships.. GIS technology is a crucial part of spatial data infrastructure

Remote sensing is the acquisition of information about an object or phenomenon without making physical contact with the object, in contrast to in situ or on-site observation. The term is applied especially to acquiring information about the Earth and other planets. Remote sensing is used in numerous fields, including geography, land surveying

Raster graphic represents a two-dimensional picture as a rectangular matrix or grid of square pixels, viewable via a computer display, paper, or other display medium. A raster is technically characterized by the width and height of the image in pixels and by the number of bits per pixel. Raster images are stored in image files with varying dissemination, production, generation, and acquisition formats

Shapefile The shapefile format is a geospatial vector data format for geographic information system (GIS) software. It is developed and regulated by Esri as a mostly open specification for data interoperability among Esri and other GIS software products. The shapefile format can spatially describe vector features: points, lines, and polygons, representing, for example, water wells, rivers

Keyhole Markup Language (KML) is an XML notation for expressing geographic annotation and visualization within two-dimensional maps and three-dimensional Earth browsers. KML was developed for use with Google Earth, which was originally named Keyhole Earth Viewer

USGS DEM Digital Elevation Model is a digital representation of ground surface topography or terrain.

DTED Digital Terrain Elevation Data is a standard of digital datasets which consists of a matrix of terrain elevation values, i.e., a Digital Elevation Model. This standard was originally developed in the 1970s to support aircraft radar simulation and prediction