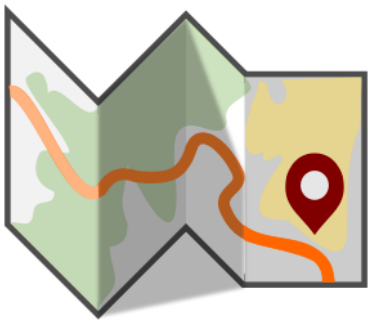
Open BIL, BIP or BSQ files in QGIS

QGIS Tutorials and Tips



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Translations by
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BIL, BIP □□ BSQ □□ □□

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Band interleaved by line (BIL), band interleaved by pixel (BIP), □□□ band sequential (BSQ)□ □□ □□□ □□ □□□□□□ □□□□ □□□□ □□□□□. (□□□ □□□ □□ □ □□□□□ □□□□ <http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=BIL,_BIP,_and_BSQ_raster_files>`_)

□□□□□ □□□ □□□□ ***.hdr*** □□□ □□□□□. □□ □□□□□ ***.hdr***``■■■ ■■■ ***.bil, .bsq*** ■ ■ ***.b*** ``image.bil``□□□□ □□ □□□□□ □□□ □□□. □□□ □□ □□□ --> □□□ □□□ □□ :menuselection:`Layer --> Add Raster Layer`□ □□ □ ``image.bil``□ □□□□ □□□□ □□ □□□□.

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□□□□ `Global Land Cover Facility <http://glcf.umd.edu/>`_□ `AVHRR Global Land Cover Classification data <http://glcf.umd.edu/data/landcover/data.shtml>`□ □□□ □□□□.

Global Coverage □□□□□ BSQ □□□ □□□□□. 1 Degree pixel resolution □□□□□ □□□□ □□□□.

For convenience, you may directly download a copy of the dataset from the link below:

gl-latlong-1deg-landcover.bsq.gz

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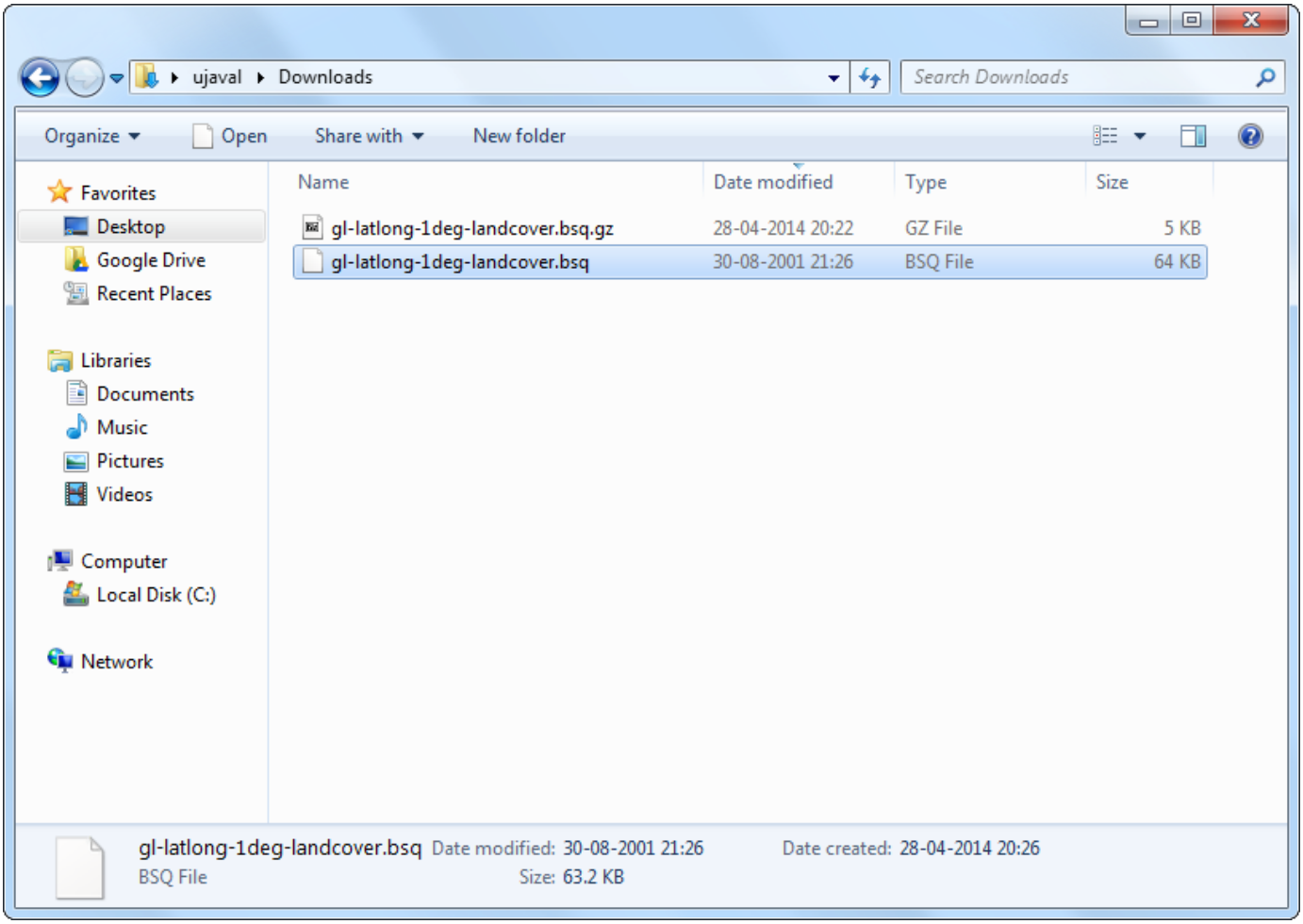
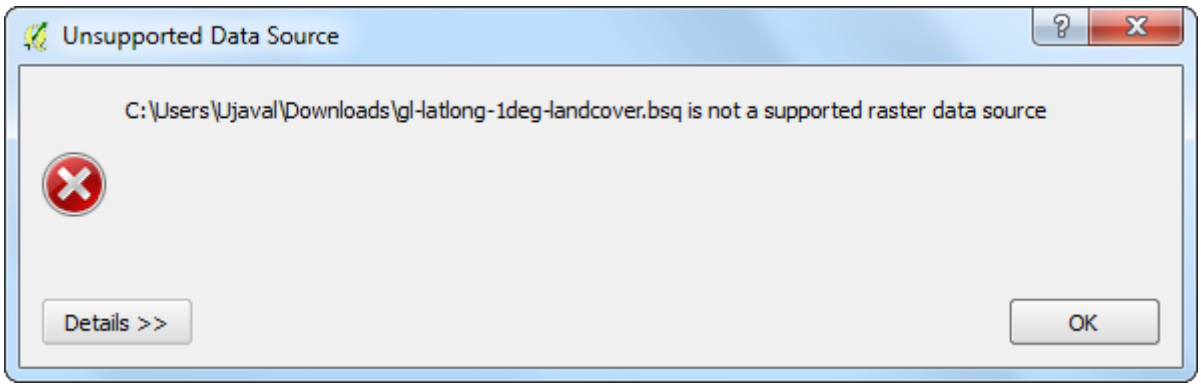
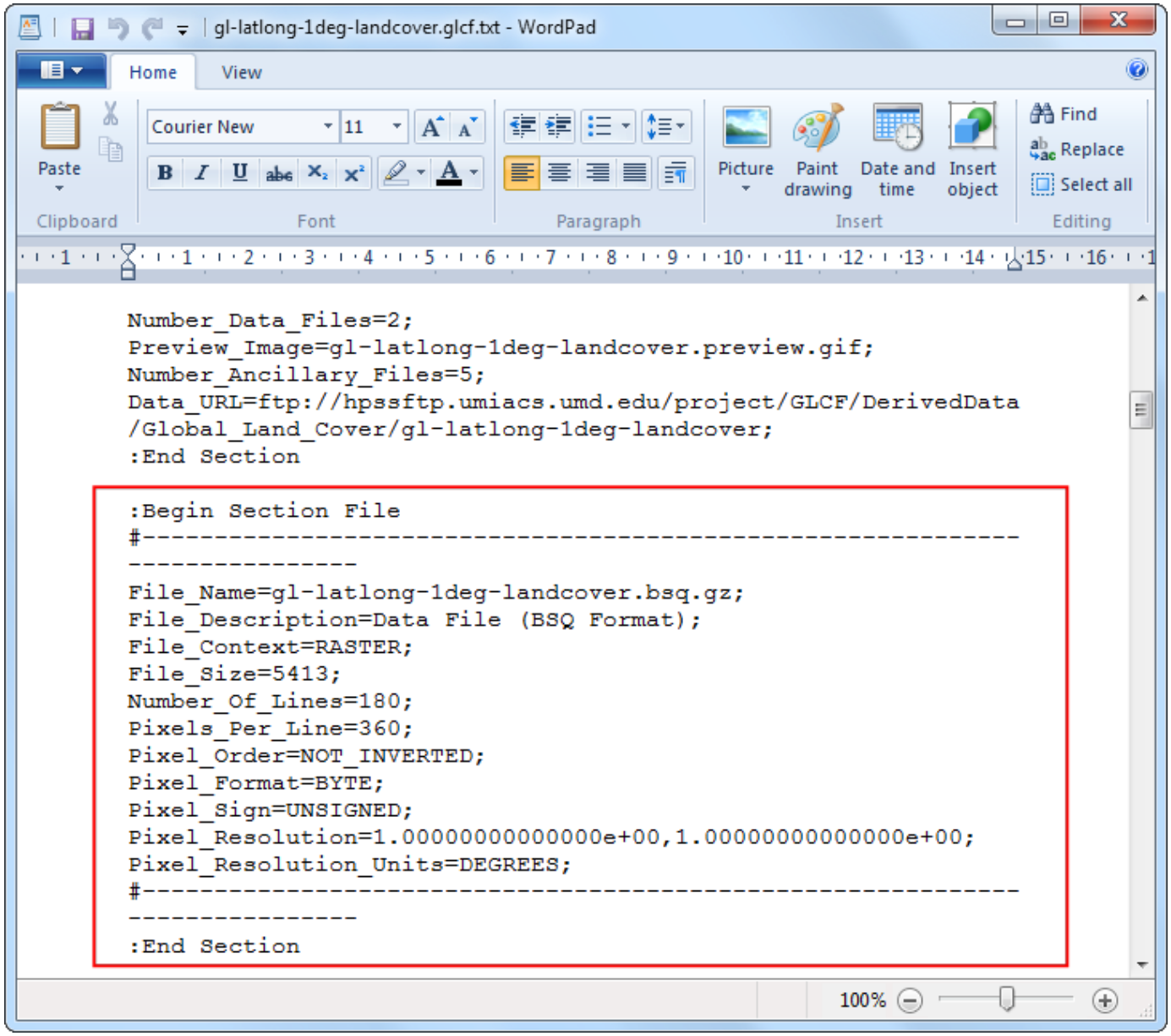
1. Unzip and extract the .bsq file. On Windows, you may use the excellent 7-Zip utility to read and extract .gz file. You will see that you only have a .bsq file named ***gl-latlong-1deg-landcover.bsq***. There is no hdr file.



2. QGIS□□ ``gl-latlong-1deg-landcover.bsq``□□□ □□□ □□□ □□ □□□□ □□□ □□□□ □□ □□□□□□.



3. □ □□□ □□□ □□□□ ``.hdr``□□ □□□□ □□ □□□□□ □□□□ □□□. □□ □□□ □□□□□ □□ □□□ □□□ □□ □□□□□□□□ □□□□□□. □□□□□ □ □□□ □□□□□ □□ □□□□□□ □□□□□ □□□□□□□. □□ □□□□□□ □□ □□□□□□ □□□□ □□ □□□ □□□□□□. □□□ □□□□□ □□□ □□□ □□□ □ □□□□. □ □□□□□ □□□□ □□ □□□□ □□□ □□□ `metada <ftp://ftp.glcf.umd.edu/glcf/Global_Land_Cover/Global/1deg/gl-latlong-1deg-landcover.glcf>`_ □ □□□□ □□□□. □□□□□□ □□□□□□ □□□□.

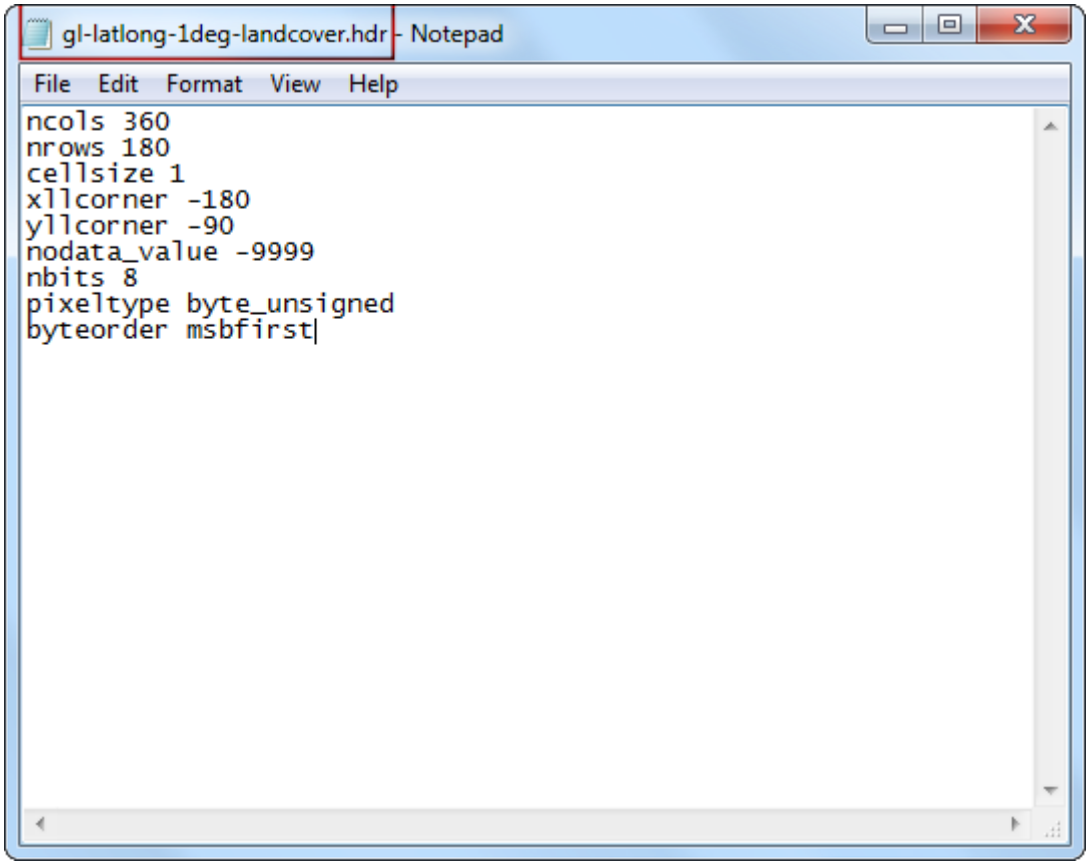


4. .hdr □□□ □□ □□□□□□ □□□ □□□□. □□□ □□□□□ □□□ □□□□ □□□ □□□□ □□□ □□□□. □□□ □□ □ □□□ □□□ Learn more about the format.

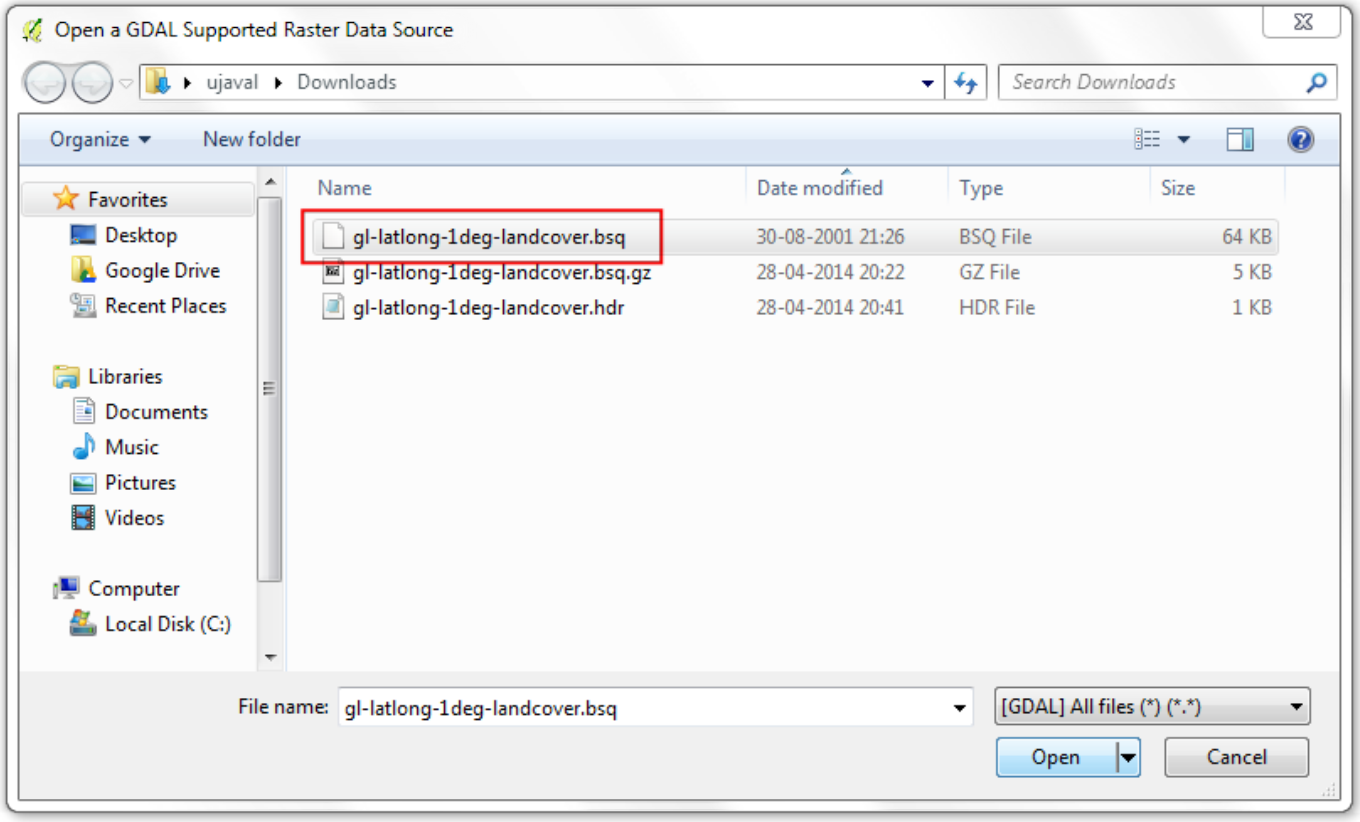
```
ncols <number of columns or width of the raster>
nrows <number of rows or height of the raster>
cellsize <pixel size or resolution>
xllcorner <X coordinate of lower-left corner of the raster>
yllcorner <Y coordinate of the lower-left corner of the raster>
nodata_value <pixel value to be ignored>
nbits <number of bits per pixel>
pixeltype <type of values stored in a pixel, typically float or integer>
byteorder <byte order in which image pixel values are stored, msb or lsb>
```

5. Open a text editor and create a file in the format specified in the previous step. Save the file as ***gl-latlong-1deg-landcover.hdr***. Make sure the file doesn't have ***.txt*** at the end. Some of the values in the text files are easy to understand. The ncols and nrows come from the metadata as the Number of Lines and Number of Pixels per Line. The cellsize is 1 as the Pixel resolution from the metadata. The X,Y coordinate of lower-left corner needs to be worked out by us. Since the file

covers the entire world and units are lat/long, xllcorner and yllcorner are -180 and -90 respectively. We do not have any information about the nodata_value, so -9999 is a safe bet. From metadata again, Pixel Format is Byte, so nbits will equal to 8 and pixeltype will be byte_unsigned. We do not have information about the byteorder, so leave it as msbfirst. You may download the correctly formatted HDR file from here.



6. □□ □□□□□ □□□□□. ``gl-latlong-1deg-landcover.bsq``□□□ □□ □□□□□ □□□□. □□ QGIS□□ □□ □□□ --> □□□ □□□ □□ :menuselection:`Layer --> Add Raster Layer`□ □□□. □□□□ ``gl-latlong-1deg-landcover.bsq``□ □□□□ □□ :guilabel:`Open`□ □□□□□.



7. □□ □□□□ □□□□ □□□□□ □□ □□□□□□. □□□□ □□/□□□□□ □□□□ **WGS84 EPSG:4326**□ □□□□□. □□ QGiS□ □□□□□ □□□□□□ □□ □□□□□.