

Open BIL, BIP or BSQ files in QGIS

QGIS Tutorials and Tips



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BIL, BIP and BSQ files

GDAL is a library that can read and write BIL, BIP and BSQ files. The GDAL library <<http://www.gdal.org>> is used by QGIS to read and write BIL, BIP and BSQ files. QGIS can read and write BIL, BIP and BSQ files.

Band interleaved by line (BIL), band interleaved by pixel (BIP), and band sequential (BSQ) are three different ways of storing multi-band raster data. (For more information see <http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=BIL,_BIP,_and_BSQ_raster_files>)

GDAL uses the .hdr file to store metadata. The .hdr file is a text file that contains information about the raster data. The .bil, .bip, and .bsq files are the actual raster data. The .bil file is band interleaved by line, the .bip file is band interleaved by pixel, and the .bsq file is band sequential. The .bil file is the most common format for multi-band raster data.

GDAL can read and write BIL, BIP and BSQ files. The .hdr file is a text file that contains information about the raster data. The .bil, .bip, and .bsq files are the actual raster data. The .bil file is band interleaved by line, the .bip file is band interleaved by pixel, and the .bsq file is band sequential. The .bil file is the most common format for multi-band raster data.

Global Land Cover Facility

Global Land Cover Facility <<http://glcf.umd.edu/>> is a project of the University of Maryland, System. It provides AVHRR Global Land Cover Classification data <<http://glcf.umd.edu/data/landcover/data.shtml>>.

Global Coverage is available in BSQ format. 1 Degree pixel resolution is available.

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

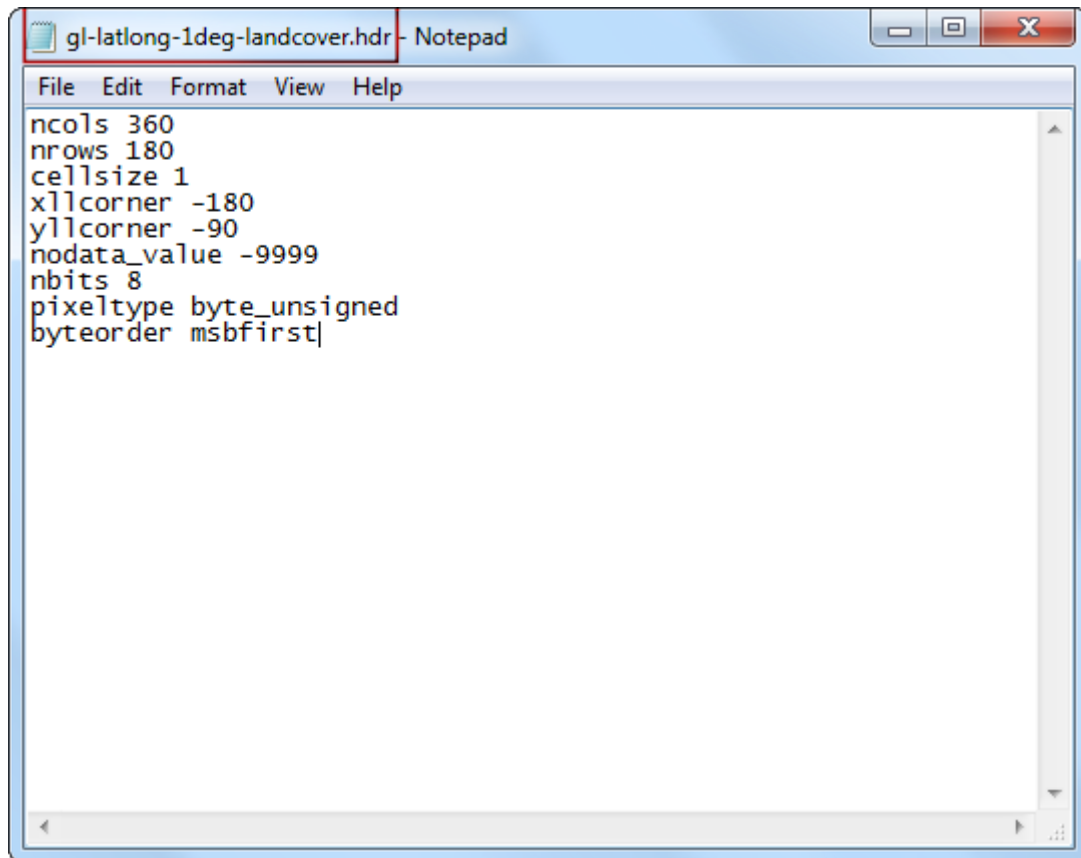
[gl-latlong-1deg-landcover.bsq.gz](#)

Source: [GLCF]

Steps

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.

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](#).



```

gl-latlong-1deg-landcover.hdr - Notepad
File Edit Format View Help
ncols 360
nrows 180
cellsize 1
xllcorner -180
yllcorner -90
nodata_value -9999
nbits 8
pixeltype byte_unsigned
byteorder msbfirst
  
```

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

