

QGIS Application - Feature request #4475

Add Data Type to Raster Calculator

2011-11-01 05:04 AM - alobo -

Status:	Closed	
Priority:	Normal	
Assignee:	Marco Hugentobler	
Category:	Rasters	
Pull Request or Patch supplied:	Yes	Resolution: fixed/implemented
Easy fix?:	No	Copied to github as #: 14402
Description The former plugin Raster Calc had the option of selecting a given Data Type (i.e Int16, Float32 etc) for the output. This was most useful and is not present in the current Raster Calculator		

History

#1 - 2011-11-12 05:51 AM - Tim Sutton

- Target version changed from Version 1.7.1 to Version 1.7.2

#2 - 2011-11-23 05:56 AM - Zdenek Ruzicka

- File patchRastCalc added

Hi, I have tried to write patch.

#3 - 2011-11-23 07:22 AM - Giovanni Manghi

- Pull Request or Patch supplied changed from No to Yes

#4 - 2011-11-24 12:01 PM - Richard Duivenvoorde

- Status changed from Open to Feedback

- Target version changed from Version 1.7.2 to Version 1.8.0

Hi Zdenek, thanks for the patch! thought to give the patch a try :-)

Gui looks nice (maybe a little less wider?)

Trying the datatype dropdown on a ecw I have here (I'm no rasterman...), selecting certain types from the dropdown will more or less hang qgis, showing zillion of warnings in the debug window:

"Warning: GDAL data type is not supported " (eg with the type CInt32).

Is the elements of the Pixel format dropdown dynamic? I mean, should it maybe be checked by the underlying lib which types are available or so? Or maybe testing after one pixel if there is this warning and then come back with some message to optionally break off?

Please let us know if you find time to have a look in it, otherwise maybe somebody else should have a look into it.

#5 - 2011-11-25 08:24 AM - Zdenek Ruzicka

Hi Richard, thanks for trying.

Elements of the Pixel format dropdown are chosen dynamically from metadata of each driver (using `GDALGetMetadataItem( )` and look for `GDAL_DMD_CREATIONDATATYPES`), only if in metadata is nothing about supported pixel data types, it show you all GDAL supported pixel data formats.

It looks that there is some problem with that complex pixel data types, Raster Calculator write into the file, problem 'begin' during opening it :). It looks that `gdalinfo` has no problem with it. I tried save data using python plugin `RasterCalc` and there is same problem.

I will look at it more in deep.

#6 - 2011-11-25 11:18 AM - Zdenek Ruzicka

Does QGIS support raster data saved in complex pixel data types (eg `CFloat32`) at all?

I am asking, because I tried open file which I created using Raster Calculator (`GeoTIFF,CFloat32`) and opened it in Grass with success. And I also made `GeoTIFF` with `CFloat32` pixel data format using Grass and I can't open it in QGIS (same warnings: "Warning: GDAL data type is not supported").

#7 - 2011-12-25 12:32 AM - Giovanni Manghi

Can someone review the attached patch?

#8 - 2011-12-25 12:43 AM - Richard Duivenvoorde

I tested it (see #4) and found some issues. But I cannot answer the question of Zdenek.

Maybe he (or we) can ask the question on the devlist? And then based on that he can do an updated patch?

#9 - 2011-12-30 03:53 AM - Marco Hugentobler

- Assignee set to Marco Hugentobler

#10 - 2011-12-30 04:22 AM - Marco Hugentobler

The patch looks good and adds important functionality to the raster calculator.

There is however one problem with the patch. The GDAL doc says that the array passed to `RasterIO` for writing needs to have output type. With the patch, `calcData` is still hardcoded `float*`, even though the output type can be different:

```
float* calcData;
.....
GDALDataType pixelFormatDGT = GDALGetDataTypeByName( mOutputPixelFormat.toLocal8Bit().data() );
    if ( GDALRasterIO( outputRasterBand, GF_Write, 0, i, mNumOutputColumns, 1, calcData, mNumOutputColumns, 1, pixelFormatDGT, 0, 0 ) !=
CE_None )
```

It would be great if you could improve that part of the patch.

#11 - 2011-12-30 06:03 AM - Zdenek Ruzicka

Thanks, I will look at this (`float* calcData;...`).

But still I am not sure whether QGIS can read rastar data saved in complex pixel data types (eg CFloat32). I made one file using gdal_translate (gdal_translate -ot CFloat32 -of GTiff elevation.tif elevationGDAL_CFloat32.tif) and still I can't open it in QGIS.

#12 - 2012-04-15 10:06 AM - Giovanni Manghi
- Target version changed from Version 1.8.0 to Version 2.0.0

#13 - 2012-10-06 02:16 AM - Pirmin Kalberer
- Target version changed from Version 2.0.0 to Future Release - Nice to have

#14 - 2017-05-01 12:50 AM - Giovanni Manghi
- Easy fix? set to No

#15 - 2019-02-13 09:43 PM - Nyall Dawson
- Status changed from Feedback to Closed
- Description updated
- Resolution set to fixed/implemented

This was done in 3.4

Files			
patchRastCalc	21.8 KB	2011-11-23	Zdenek Ruzicka