QGIS Application - Feature request #3649
Raster calculator should work on raster files in different CRS

2011-03-20 01:47 PM - Tim Sutton

Status:	Closed		
Priority:	Low		
Assignee:	Marco Hugentobler		
Category:	Rasters		
Pull Request or Patch supplied:		**Resolution:**	
Easy fix?:	No	**Copied to github as #:**	13708

Description

Take a simple raster e.g. a [[GeoTiff]] in UTM. Open the raster calculator and create a simple product based on that raster e.g.

raster@1 * 1

Save the output and load it. Look in the general properties of raster layer dialog. The CRS shown is 4326, but it does not show overlaid on [[LatLon]] data. Still in the general properties tab, assign the CRS manually to the original dataset's CRS. The raster now overlays properly with other datasets in in the projected CRS.

It would be great if the new raster calculator carried the CRS of the original dataset from which it derives.

Associated revisions

Revision 559d7bb9 - 2015-06-10 01:45 PM - Nyall Dawson

[rastercalc] Rework raster calculator to use QGIS raster classes

...rather than reading input layers directly through GDAL.
Benefits include more robust handling of nodata/data type conversions,
less code duplication, also being able to take advantage of features
in QGIS raster code like handling gain/offset in rasters. (fix #12450)

Also, add a choice of output projection to the raster calculator.
Previously the output CRS would be taken from the first raster, with
no guarantees that the output extent matched the output CRS. This
resulted in empty/misplaced rasters. (fix #3649)

History

#1 - 2011-03-23 09:14 AM - Marco Hugentobler

commit:f1527c7f (SVN r15582) implements a solution where the crs is copied from the first layer involved in the calculation.
It however has two disadvantages:
- If there is a constant expression (e.g. '42'), the result has no CRS assigned. A solution could be to have a crs button in the dialog (but it is string freeze now).
- The CRS is passed to GDAL as WKT, and there can be some loss of information depending on the format. E.g. for [[GeoTiff]], the doc says 'Note that the [[GeoTIFF]] format does not support parametric description of datums, so TOWGS84 parameters in coordinate systems are lost in [[GeoTIFF]] format'.

Let me know if there is a better approach to deal with this.

#2 - 2011-04-23 01:18 PM - Marco Hugentobler

implements a better solution by going over the epsg code and OGRSpatialReferenceH if it is an epsg projection. Like this, the projection is recognized better by QGIS.

For a perfect handling of CRS, the calculator should be ported to the new raster provider functions such that calculation can be done on rasters in different CRS. This is out of scope for 1.7, so I'm changing version and title of the ticket.

#3 - 2012-10-06 02:35 AM - Pirmin Kalberer

- Target version changed from Version 2.0.0 to Future Release - Nice to have

#4 - 2015-06-10 04:46 AM - Nyall Dawson

- Status changed from Open to Closed

Fixed in changeset commit:"559d7bb943f02660694b37a701d8483106011df1".