QGIS Application - Bug report #8558
Switching CRS On The Fly messes up area calculations

2013-09-03 12:07 AM - Charles Rethman

Status:	Closed		
Priority:	Normal		
Assignee:			
Category:	Projection Support		
Affected QGIS version:	master	**Regression?:**	No
Operating System:		**Easy fix?:**	No
Pull Request or Patch supplied:	No	**Resolution:**	duplicate
Crashes QGIS or corrupts data:	No	**Copied to github as #:**	17307

Description

My data covers whole Southern Africa region -- South Africa up to DRC-- therefore it is stored in Long-Lat WGS84. However, I need to do many calculations with the data such as area, distances etc. and therefore I project to Albers EAC or Lamberts CC (I use UTM for Malawi, Swaziland and Lesotho). I have defined a set of "national" Albers EA CRSs and saved them as user-defined or custom CRSs in QGIS 1.9. The bug happens as follows: I load a set of data that are in Long-Lat and then enable Set CRS On The Fly and change project CRS to my user-defined (custom) one. All the layers are reprojected. If I now load a layer that is in the custom CRS, and then use the Field Calculator to add a column and calculate something on the geometry (such as $Area), I get nonsense numbers in the new calculated field. To get a sensible result, I must first close the file with the long-lat dat in it, and then open the file with the only the custom projection data. I can then do the calculations I require.

In short, it appears QGIS does not like layers with different CRSs, even if they are reprojected On The Fly to whichever one is working in . It works reliably when all the layers have the same CRS.

My Albers EA proj4 definition is +proj=aea +lat_1=-19.3 +lat_2=-25.38 +lat_0=0 +lon_0=24.69 +x_0=500000 +y_0=3000000 +ellps=WGS84 +towgs84=0,0,0,0,0,0,0 +units=m +no_defs.

Example data for Botswana also supplied.

History

#1 - 2013-09-03 07:37 AM - Giovanni Manghi

- Status changed from Open to Feedback

- OS version deleted (10.8)

- Operating System deleted (Mac OS X Mountain Lion)

- Priority changed from High to Normal

it seems duplicate of #4564 - please leave feedback.

#2 - 2013-09-03 09:56 AM - Charles Rethman

- Assignee set to Giovanni Manghi

Looking at #4564, my issue is similar, although more specific to 1.9 (2.0 alpha) because the Field Calculator is now a part of the core app functionality. It would make sense to merge the two issues if you like but I think it's important to this release. Also, my feature request #8559--Field Calculations on geometry (such as $Area) should take place in the Project CRS (even that has been re-projected "on the fly") and not in the CRS of the original file--is related to this bug.

#3 - 2014-10-11 07:06 AM - Giovanni Manghi

- Assignee deleted (Giovanni Manghi)

#4 - 2015-05-10 05:00 AM - Giovanni Manghi

- Resolution set to duplicate

- Status changed from Feedback to Closed

see #12057

Files

demog_eas.prj	412 Bytes	2013-09-02	Charles Rethman
demog_eas.cpg	5 Bytes	2013-09-02	Charles Rethman
demog_eas.shp	1.33 MB	2013-09-02	Charles Rethman
demog_eas.dbf	3.2 MB	2013-09-02	Charles Rethman
demog_eas.shx	11.3 KB	2013-09-02	Charles Rethman
demog_eas.qpj	447 Bytes	2013-09-02	Charles Rethman