

QGIS Application - Bug report #3788

Problem Datum Transformation

2011-04-29 07:05 AM - ImPreZa -

Status:	Closed	
Priority:	Low	
Assignee:		
Category:	Projection Support	
Affected QGIS version:	master	Regression?: No
Operating System:	Windows	Easy fix?: No
Pull Request or Patch supplied:	No	Resolution:
Crashes QGIS or corrupts data:	No	Copied to github as #: 13846
Description		
<p>Hey!!</p> <p>I've tried to transform a shapefile from EPSG:4618 (SAD69) to EPSG:4674 (SIRGAS2000), but the product of this transformation doesn't shift. It seems that QGIS exports a shapefile with the new projection, but it is unable to apply (in fact) the values of the new ellipsoid.</p> <p>Here are the official parameters for transformation between the two datums:</p> <p>DX = -67,35 DY = +3,88 DZ = -38,22</p> <p>Unfortunately, I couldn't upload the .gsb files (NTV2 transformation, 800kb) used by the department of the Brazilian government, IBGE, which is responsible for cartography etc. But you can download it here (http://geoftp.ibge.gov.br/programa/Transformacao_de_Coordenadas/ [ProGRID] IBGE). You'll find the .gsb files here (C:\Program Files\Progrid\GridFiles).</p> <p>SAD69 Original (SAD69_003.GSB) SAD69 reviewed in 1996 (SAD96_003.GSB)</p> <p>If I open in QGIS a shapefile originally created in [ArcGIS] in SAD69 and other in SIRGAS2000, also transformed from SAD69 to SIRGAS in [ArcGIS], without activating OTF, I can see the displacement between them. But when I transform the [ArcGIS]-shapefile-SAD69 to SIRGAS2000 in QGIS, the QGIS is unable to show their displacement, even with OTF activated. Why does this happen with shapes transformed in QGIS?</p> <p>And the last problem: The QGIS doesn't create properly the .prj file, both for SAD69 and SIRGAS2000, as exposed here:</p> <p>SIRGAS2000</p> <p>GEOGCS[[GRS 1980(IUGG 1980)"DATUM*["D_unknown"*SPHEROID["GRS80"6378137298257222101]]PRIMEM["Greenwich"0]UNIT["Degree]]</p> <p>And the correct one, from [ArcGIS] is:</p> <p>GEOGCS[[GCS_SIRGAS_2000"DATUM["D_SIRGAS_2000"SPHEROID["GRS_1980"63781370298257222101]]PRIMEM["Greenwich"00]UNIT["Degree]]</p>		

SAD69:

```
GEOGCS[[Australian Natl & S Amer  
1969"DATUM["D_unknown"SPHEROID["aust_SA"637816029825]]PRIMEM["Greenwich"0]UNIT["Degree]]
```

And the correct one, from [[ArcGIS]] is:

```
GEOGCS[[GCS_South_American_1969"DATUM["D_South_American_1969"SPHEROID["GRS_1967_Truncated"63781600298  
25]]PRIMEM["Greenwich"00]UNIT["Degree"00174532925199433]]VERTCS["WGS_1984_Geoid"VDATUM["WGS_1984_Geoid"]PARAMET  
]PARAMETER["Vertical_Shift"00]PARAMETER["Direction"10]UNIT["Meter]]
```

Here are the original data that I'm working with. These data are mineral rights from Rio Grande do Sul State, south Brazil:

[Shapefiles in SAD69](#)

[Shapefiles in SIRGAS](#)

I asked for help at the [QGIS Forum](#). They've found the same problem and couldn't solve it.

Thanks!!

History

#1 - 2011-12-16 12:45 PM - Giovanni Manghi

- Target version changed from Version 1.7.0 to Version 1.7.4

#2 - 2012-04-16 06:27 AM - Paolo Cavallini

- Crashes QGIS or corrupts data set to No

- Affected QGIS version set to master

- Target version changed from Version 1.7.4 to Version 1.8.0

#3 - 2012-09-04 12:00 PM - Paolo Cavallini

- Target version changed from Version 1.8.0 to Version 2.0.0

#4 - 2012-09-13 01:22 PM - Magnus Homann

- Pull Request or Patch supplied set to No

- Assignee deleted (nobody -)

- Status changed from Open to Closed

It seems to work now, I have gdal 1.9.1. I can see a difference when setting different projections for the layers. Save as yields:

```
GEOGCS["SIRGAS  
2000",DATUM["D_SIRGAS_2000",SPHEROID["GRS_1980",6378137,298.257222101]],PRIMEM["Greenwich",0],UNIT["Degree",0.017453292519943295]]  
5]]
```

and

```
GEOGCS["SAD69",DATUM["D_South_American_1969",SPHEROID["GRS_1967",6378160,298.247167427]],PRIMEM["Greenwich",0],UNIT["Degree",  
.017453292519943295]]
```

in respective project file.

Closing, please reopen if it persists.