

QGIS Application - Feature request #19733
make GPKG the default output format for GRASS tools

2018-08-30 11:03 AM - Markus Neteler

Status:	Closed	
Priority:	Normal	
Assignee:		
Category:	Processing/GRASS	
Pull Request or Patch Supplied:		Resolution: fixed/implemented
Easy fix?:	Yes	Copied to github as #: 27558
Description		
new description		
#19733-5		
old description		
Processing > GRASS 7 > v.rast.stats is not functional (reported also in several forums [1]). The reason is apparently a parse error since column names have multiple "_". When reducing the statistical measures to those without underscore (e.g."sum") it works. When having "percentile" is doesn't since the percentile value is transferred via underscore, e.g. "percentile=95" becomes "percentile_95" which is not parsed properly in QGIS processing.		
By default all measure are active, i.e. number,minimum,maximum,range,average,stddev,variance,coeff_var,sum,first_quartile,median,third_quartile,percentile		
Issue is in both QGIS 2.18.x as well as 3.2.x.		
Log:		
Algorithmus v.rast.stats - Calculates univariate statistics from a raster map based on vector polygons and uploads statistics to new attribute columns. startet...		
g.proj -c proj4="+proj=sterea +lat_0=52.15616055555555 +lon_0=5.387638888888889 +k=0.9999079 +x_0=155000 +y_0=463000 +ellps=bessel +towgs84=565.2369,50.0087,465.658,-0.406857,0.350733,-1.87035,4.0812 +units=m +no_defs"		
v.in.ogr min_area=0.0001 snap=-1 input="/home/user/geodata_dav/mundialis_daten/projekte/who_geodata/data/Districts" layer=Districts		
output=tmp15356101025715 --overwrite -o		
r.external input="/home/user/ES5_TemperatureCoolingModul/actualT_dailymean.tif" band=1 output=tmp15356101025716 --overwrite -o		
g.region n=322441.565 s=312777.529 e=180172.152 w=172817.428 res=10.0064272109		
v.rast.stats -c map="tmp15356101025715" raster="tmp15356101025716" column_prefix="s" method="third_quartile,percentile"		
percentile="2" --overwrite		
v.out.ogr --overwrite -s -e input=tmp15356101025715		
output="/tmp/processing5113522d9c174e7bb445f24ef38c5f5a/135e78c4ae1d430da568b502506b4ab0" format=ESRI_Shapefile		
output_layer=output		
[...]		
Preprocessing input data...		
Processing input data (7 categories)...		
0..3..6..9..12..15..18..21..24..27..30..33..36..39..42..45..48..51..54..57..60..63..66..69..72..75..78..81..84..87..90..93..96..99..100		
Updating the database ...		
ERROR 6: Failed to add field named 's_third_quartile'		
ERROR 6: Failed to add field named 's_percentile_2'		
Exporting 13 areas (may take some time)...		
7..15..23..30..38..46..53..61..69..76..84..92..100		
Assumed solution: fix the parsing of the column names (allow for multiple underscores).		
[1] Reported without solution here:		

- <https://stackoverflow.com/questions/51244882/v-rast-stats-in-qgis-3-2>
- <https://github.com/jannes-m/RQGIS/issues/99>
- ...

History

#1 - 2018-08-30 04:43 PM - Giovanni Manghi

- *Affected QGIS version changed from 2.18.22 to 3.2.2*
- *Status changed from Open to Feedback*

Did it worked as expected in older qgis releases?

#2 - 2018-08-30 06:42 PM - Markus Neteler

Unfortunately no idea. But some of the related reports I found are also older than one year.

Potential example (4 years ago but no log provided):

<https://gis.stackexchange.com/questions/75254/how-to-perform-grass-v-rast-stats-via-qgis/75283>

#3 - 2018-08-30 07:18 PM - Giovanni Manghi

- *Status changed from Feedback to Open*
- *Regression? changed from Yes to No*

#4 - 2018-08-31 10:37 PM - Markus Neteler

I suspect that the underscore parsing error happens in

`plugins/processing/algs/grass7/Grass7Algorithm.py`

around line 553.

#5 - 2018-09-01 08:38 PM - Markus Neteler

- *Subject changed from `v.rast.stats` is broken due to parsing error of double underscore in column names to `v.rast.stats` support is broken due to column name length issue*

Update from grass-dev [1, 2]: it appears to not be an underscore problem but a result of the column name length limit of 10 chars since SHP is used for data exchange in GRASS-Processing.

Proposed solution: switch to GeoPackage (in Grass7Algorithm.py)

[1] <https://lists.osgeo.org/pipermail/grass-dev/2018-September/089579.html>

[2] <https://lists.osgeo.org/pipermail/grass-dev/2018-September/089580.html>

#6 - 2018-09-03 11:21 AM - Giovanni Manghi

- *Subject changed from `v.rast.stats` support is broken due to column name length issue to make GPKG the default output format for GRASS tools*
- *Tracker changed from Bug report to Feature request*
- *Description updated*

#7 - 2018-09-04 02:54 PM - Jürgen Fischer

- Description updated

#8 - 2018-09-04 11:39 PM - Markus Neteler

Could you please indicate where the SHP format is hardcoded so that I can potentially provide a GPKG patch? I didn't find the respective line of code.
Thanks

#9 - 2018-09-05 09:14 AM - Giovanni Manghi

Markus Neteler wrote:

Could you please indicate where the SHP format is hardcoded so that I can potentially provide a GPKG patch? I didn't find the respective line of code. Thanks

I think is the other way: QGIS uses the v.out.ogr default format (shapefile) when outputting to a temp file, so in this case I think that is GPKG that needs to be hardcoded.

#10 - 2018-09-09 11:53 AM - Markus Neteler

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We switched 11 months to GPKG as default vector export format:

https://trac.osgeo.org/grass/log/grass/branches/releasebranch_7_4/vector/v.out.ogr

@71597 11 months neteler v.out.ogr: Set OGC GeoPackage? as default export format (see #3428); ...

This was published with GRASS GIS 7.4.0,

<https://trac.osgeo.org/grass/wiki/Release/7.4.0-News#Majormodulechanges>

So, if a user has G7.4.x installed, then the problem might be gone.

However, I agree to your suggestion that GPKG needs to be hardcoded in Processing/GRASS to avoid that users with G7.2 installed face this issue. If I am not mistaken, that would be some additional lines in
plugins/processing/algs/grass7/Grass7Algorithm.py around l314?

#11 - 2018-09-10 10:52 AM - Giovanni Manghi

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So, if a user has G7.4.x installed, then the problem might be gone.

I have 7.4.0 installed here on Kubuntu 18.04 but still seems to output (temp files) to shp, so it seems it not that simple.

However, I agree to your suggestion that GPKG needs to be hardcoded in Processing/GRASS to avoid that users with G7.2 installed face this issue. If I am not mistaken, that would be some additional lines in `plugins/processing/algs/grass7/Grass7Algorithm.py` around l314?

My hunch is that the format should be hardcoded here

<https://github.com/qgis/QGIS/blob/master/python/plugins/processing/algs/grass7/Grass7Algorithm.py#L879> but I gave it a try and didn't change anything (possibly because at the end shp is really hardcoded somewhere else).

#12 - 2018-09-10 10:16 PM - Markus Neteler

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...

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Yes, probably 4 lines above in <https://github.com/qgis/QGIS/blob/master/python/plugins/processing/algs/grass7/Grass7Algorithm.py#L876> :

```
outFormat = QgsVectorFileWriter.driverForExtension(os.path.splitext(fileName)[1]).replace(' ', '_')
```

This will predefine it (to whatever, this I didn't manage to find out).

#13 - 2018-09-11 01:38 PM - Giovanni Manghi

Yes, probably 4 lines above in <https://github.com/qgis/QGIS/blob/master/python/plugins/processing/algs/grass7/Grass7Algorithm.py#L876> :

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maybe worth commenting on github on those lines and pingging @nyalldawson and/or @volaya and/or @alexbruy

#14 - 2018-11-01 07:07 PM - Markus Neteler

Giovanni Manghi wrote:

maybe worth commenting on github on those lines and pingging @nyalldawson and/or @volaya and/or @alexbruy

No answers from anyone :-(

#15 - 2018-11-01 11:16 PM - Nyal Dawson

- Status changed from Open to Feedback

Try adding an override like source:python/plugins/processing/algs/saga/SagaAlgorithmProvider.py#L134

(but adapted for gkpg) to source:python/plugins/processing/algs/grass7/Grass7AlgorithmProvider.py

#16 - 2018-11-06 08:02 PM - Markus Neteler

- Status changed from Feedback to Open
- Pull Request or Patch supplied changed from No to Yes
- Easy fix? changed from No to Yes

Thanks for the valuable hint!

I have prepared a PR against QGIS 3.4 accordingly: <https://github.com/qgis/QGIS/pull/8431>

Importantly, this should also reach QGIS 2.18 by a backport.

#17 - 2018-12-24 09:30 AM - Alexander Bruy

- Resolution set to fixed/implemented
- Status changed from Open to Closed

Fixed in master.

#18 - 2018-12-24 10:42 AM - Markus Neteler

Alexander Bruy wrote:

| *Fixed in master.*

In which version will this update be shipped?