QGIS Application - Bug report #19302
[processing] Modeler and Raster Calculator fail to calc

2018-06-29 09:54 AM - Luigi Pirelli

Status:	Closed			
Priority:	High			
Assignee:	pablotcarreira -			
Category:	Processing/Core			
Affected QGIS version:	3.2		**Regression?:**	Yes
Operating System:	Linux, Win		**Easy fix?:**	No
Pull Request or Patch supplied:	Yes		**Resolution:**	fixed/implemented
Crashes QGIS or corrupts data:	No		**Copied to github as #:**	27130

Description

2 issues here. I'm working on that , but I open it because probably Nyall can solve faster than me.

context: Raster Calculator added in a Processing model + 1 rasters as input

1) Expression in Raster Calculator widget shows the Layer object and not the layer name

issue is here:

https://github.com/qgis/QGIS/blob/master/python/plugins/processing/algs/qgis/ui/RasterCalculatorWidgets.py#L217

should be:

"lyr.parameterName()" instead of "lyr"

a TODO:

Check if in https://github.com/qgis/QGIS/blob/master/python/plugins/processing/algs/qgis/ui/RasterCalculatorWidgets.py#L220

have to use tghe same code (or a lambda) as in

https://github.com/qgis/QGIS/blob/master/python/plugins/processing/algs/qgis/ui/RasterCalculatorWidgets.py#L204

2) Running the model with expression "<input raster>@1" e.g. copy the input raster in the output => generate always a float raster with [-1.7:1.7]

this happend for every expression you can set

Associated revisions

Revision 580ecafa - 2018-09-04 06:13 PM - Luigi Pirelli

Merge pull request #7396 from luipir/rastercalculator_model_fix

[processing] Rebirth RasterCalculator in Modeler. Fixes #19302

History

#1 - 2018-06-29 09:57 AM - Luigi Pirelli

nyall feel free to assign to me, I assigned to you just to ping you and if you can drive me faster where is the problem

#2 - 2018-06-29 11:55 AM - Rudi von Staden

- File raster_calculator.PNG added

I just ran into this issue myself. I can confirm that the fix suggested works for simple models where it's a direct input to the raster calculator. It doesn't work when the input to the raster calculator is the output from another algorithm (in that case the expression resolves to "@1").

In the attached screenshot, the 'Output' file is generated correctly, but lyr.parameterName() is empty for the "'Output' from algorithm 'Raster calculator'" layer.

#3 - 2018-06-29 12:39 PM - Luigi Pirelli

tnx @rudi for the test and confirmation

#4 - 2018-06-29 02:56 PM - Rudi von Staden

- File rastercalculator_test.zip added

I've done a bit more testing, and it seems it worked because the layer name in the layer index of the project and the parameter name were coincidentally the same. If they are different, it won't work.

I have also found that using "OUTPUT@1" works if you add the input layer as a 'Reference layer', but if you are using two 'output' layers as input, then I'm not sure how to resolve it.

I've attached a test project if anyone wants some input data to test. I included a sample model which demonstrates some of the problems.

#5 - 2018-06-29 04:12 PM - Luigi Pirelli

really useful to replicate different kind of problems, really tnx

#6 - 2018-06-29 10:56 PM - Rudi von Staden

Glad to help, @luigi. There's a related issue at
https://github.com/qgis/QGIS/blob/master/python/plugins/processing/algs/qgis/RasterCalculator.py#L125

layersDict = {os.path.basename(lyr.source().split(".")[0]): lyr for lyr in layers

The layer indexing is based on the file name. Most algorithms use OUTPUT as the file name, which means you won't be able to reference more than one of them in the raster calculator. I have a way to resolve that, but I don't think it's a perfect solution because it would be hard to predict in the Expression builder:

```
    layersDict = {}
      def _lyrIndex(lyrName):
        lyrIndex = lyrName
        lyrNumber = 0
        while lyrIndex in layersDict:
          lyrNumber +=1
          lyrIndex = f"{lyrName}{lyrNumber}"
        return lyrIndex
      if layers:
        for lyr in layers:
          name = _lyrIndex(os.path.basename(lyr.source().split(".")[0]))
          layersDict[name] = lyr
```

I'm not sure if this should be reported as a separate issue? I also have some broader thoughts on how to improve the Raster calculator for use in models, which I've sent to the qgis-developer list (also not sure where's the best place for such discussions).

#7 - 2018-07-10 07:09 PM - Luigi Pirelli

- Assignee changed from Nyall Dawson to pablotcarreira -

- Pull Request or Patch supplied changed from No to Yes

a preliminary PR https://github.com/qgis/QGIS/pull/7396

#8 - 2018-09-04 06:12 PM - Luigi Pirelli

- Status changed from Open to Closed

- % Done changed from 0 to 100

Applied in changeset commit:qgis|580ecafa3265d508d8f44efb08c3d04f43e0510d.

#9 - 2018-09-04 08:07 PM - Giovanni Manghi

- Resolution set to fixed/implemented

Files

raster_calculator.PNG	16.3 KB	2018-06-29	Rudi von Staden
rastercalculator_test.zip	709 KB	2018-06-29	Rudi von Staden