

Synopsis/ Motivation

Our goal was to create a useful map for cyclists to help them to find bathing places in the county of Salzburg, which are close to bicycle routes. As first step, we had to prepare all the necessary data. We found two useful shapefiles on data.gv.at (bathing places in Salzburg, bicycle routes) which we used in our python script. In this context, we extended the geoprocessing tool “Buffer” by using the processing modeler in QGIS Desktop 2.18. In the next chapter we will introduce the workflow.

Workflow

As mentioned in the first chapter, we used the processing modeler to create the fundament for our script tool (see Figure 1).

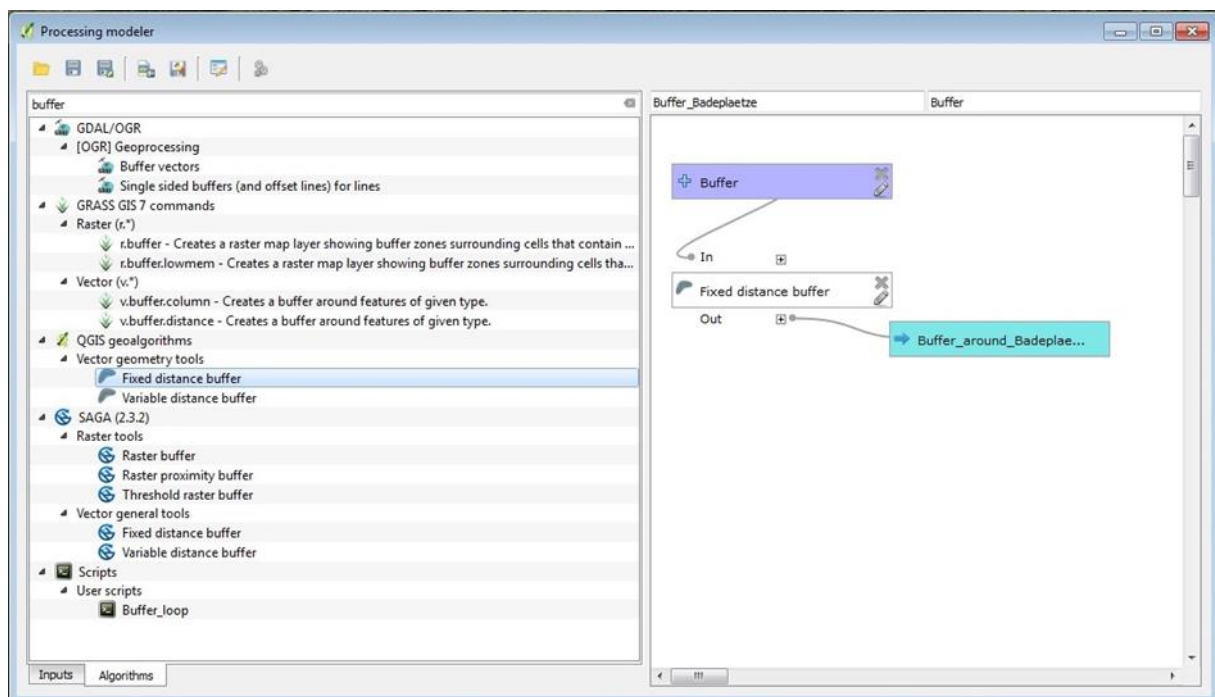


Figure 1: First steps in the Processing modeler

So we executed the “Buffer” and recognized that the size was too small. This means, the “Buffer” did not reach any bicycle route (see Figure 2).



Figure 2: bad visualization after executing the tool with a small Buffer

Because of that, we enlarged the “Buffer” around the bathing places. After creating the fundament for our script tool, we added the necessary data into the script. For this reason, we loaded the two shapefiles I mentioned in the previous chapter. Fortunately, the tool worked after running the script. In the next step, we extended the “Buffer” by adding a loop, which generates different buffer sizes. In addition to that, we changed the order of the buffer sizes in the script from ascending to descending because we wanted to get a good order inside the table of content. Otherwise, only the biggest buffer would be visible inside the map. Furthermore, we wanted to generate the process more efficiently. In this context, we added a raster layer into the script, which automatically loads a base map after running the script. Moreover, we were looking for a possibility to change the symbology of the layers inside the script. This means, we changed the color and the line width of the layer “Touristische Radwege”. In addition to that, we also changed the color of the layer “Badestellen”. We decided to set up scale-dependent layer visibility for the bike path layer because on a large scale the layer looked like a red spot. The final result after executing the tool you can see in Figure 3:

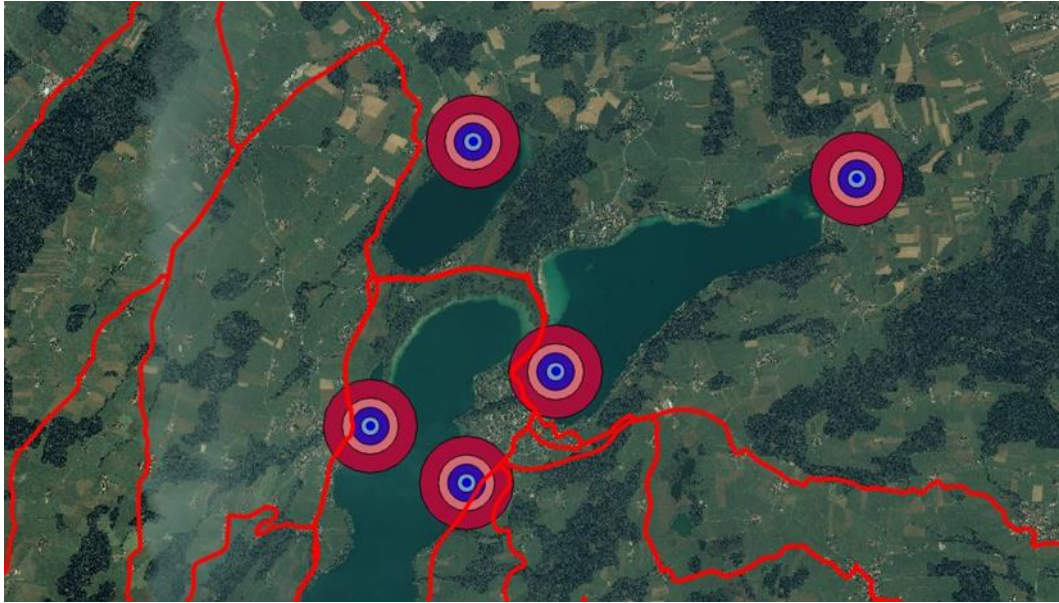


Figure 3: The final result

How to execute the tool:

In the first step, you have to select the layer “Badestellen”. After that, you can change the buffer values. Then you can select a name for your output layer, which will appear in the layer of content.

Data sources

We were thinking about an interesting topic related to Salzburg. For this reason, we decided to create a touristic map for cyclists. We found the data for our project on data.gv.at.

Installation

For this project, it is necessary to have installed QGIS Desktop 2.18 and Python. Moreover, you need the shapefiles on your computer and you have to change the path, otherwise you cannot run the tool.

Difficulties

As we were writing the script, we also had some problems. First of all, we were not able to figure out how to automatically move the layers “Touristische Radwege” and “Badestellen” on the top of the table of content. This means, you have to switch the layers manually by drag and drop to get a good visualization (Figure 4).



Figure 4: Table of Content

Furthermore, we tried to implement the function “Zoom to layer” automatically by using the widget map canvas but unfortunately it did not work.

Contributors

We are going to share our project via github.com.