Handout 4: Data Import and Visualization, Map Export

Exercise 1: Visualizing Distributions

You will load the Excel file „AlpiLinK_S13_DottoratoLinguistica.xlsx“ into the REDE SprachGIS and visualize the distribution data it contains as pie charts and bar charts.

Step 1: Import Data

- Click on the cloud icon in the layer manager and drag the Excel file into the drag & drop area of the data import window.
- Alternatively: Open the file, copy the data into the text input area, and then click once outside the text field.

Step 2: Check the Data to Be Imported

- Verify that the GIDs are correctly identified (highlighted in green).
- You can choose to ignore some columns that you do not need for the data visualization (e.g., “Stimulus”, “User ID”, “Comments”).
- Then click on `Import data into map`.
- You will then be prompted to enter a layer title for your layer. `Confirm`.

Step 3: Save Layer as Map

- Save the map by clicking `Save as User Map` in the layer manager.
- Enter a name for the layer and `Confirm`. (You can keep the same name.)

Step 4: Creating Pie Charts

- Open the `Visualization` tool (`Select Tools` > `Visualization & Export` > `Visualization`).
- Stay directly in the first tab. The tool is called `Visualization: Pie Chart`.
- In the tree structure, you will now find the sub-items `Variety`, `Location`, and `Numerical Values (numbers)`. De-select `Variety` and `Location`.
- `Numerical Values (Numbers)` contains the individual variant categories. The colors can be customized. Clicking `Visualize` will then display the distribution of variants as pie charts at the respective locations.
- Under `Advanced options`, you can adjust the size of the pie charts and decide whether they should be scaled (scaling enables relative adjustment of the pie size). You can also add a border around the pies. Every change must be confirmed by clicking on `Visualize`.

Step 5: Creating Bar Charts

- Now switch from `Pie Chart` to `Bar Chart` (the second tab at the top of the tool). All settings made for the pie chart will be retained.

- Clicking `Visualize` will now display the distribution of variants as bar charts at the respective locations.

Step 6: Styling the Map

- You will notice that you can see all the municipalities in green.
- Open the Style Editor, select all elements and adjust the opacity of the lines and the filling to 0%.

Step 7: Save

- Save your map by clicking the icon .

Exercise 2: Exporting Maps as Image Files or PDFs

Arrange your layers in the layer manager so that the map section you wish to export is clearly visible. Then export this section either as an image (.png or .tiff) or as a PDF.

Step 1: Preparing the Map

Add the base map ("NorthernItaly_BaseMap") created earlier. The easiest way to do this is via the history in the layer manager. Note: You can hide unnecessary layers using the eye icon next to the layers in the layer manager.

Step 2: Exporting the Pie-Chart Map

- Open the pie chart created in this unit.
- Adjust the background to `Single-colored`.
- Open the image export under the `Visualization & Export` tool and click on `Image Export`.
- A blue frame will appear, indicating the area to be exported. Adjust the frame so that it encloses your area of investigation.
- In the image export tool, you can specify the image format and export size. For simple purposes, such as embedding in a website, the *.png format is suitable. For publications, select *.tiff files with an export size greater than 1000. For maps consisting solely of vector layers, the PDF format can also be selected. The PDF format allows for lossless export, and adjusting the export size is not necessary.
- Clicking `Create image` will generate and save an image. After image creation, a gallery with your images will automatically open. Here, you can download or delete the image or add a description.
- ❗ Currently, you can store up to 100 maps or a total of 100MB in your gallery.
- ❗ When you select a vector format like PDF, raster maps cannot be exported. For legal reasons, OpenStreetMap as a background map cannot be exported.
- Close the `Image Export`.

Exercise 3: Choropleth Map

In a Choropleth map, you can visualize the distribution of one variable alone.

- Switch from `Bar Chart` to `Choropleth` (the fourth tab at the top of the tool).
- Select one variant you are interested in and click on `Visualize`.
- All municipalities with this variant will be highlighted.
- Note: Choropleth maps work best if you have percentages of a distribution of a variable.