Final assignment

In the final assignment, you can carry out an independent analysis, including all the necessary steps. The assignment will be handed in via e-mail to aha-anmeldungen@akademie.ruhr-uni-bochum.de.

General notes

The assignment is submitted via e-mail.
A maximum of 100 points can be scored.
Read all instructions before you start working on the exercises.
Submission **until 13th February 2022**.

Description of tasks

You have two options

> *Option 1:* Work on given data and tasks. You find all the information here in the GitLab.
>
> *Option 2:* Work in your own area of interest with your own data. Hence, you can decide which of the analysis tools and approaches you are using.

Materials available:

Use the wikis from the GitLab, here you will also find an overview of geodata sources.

You have to hand in:

- A PDF with the final map
- A PDF with the final draft (~750 words) outlining the important intermediate steps (including screenshots) and data sources

Assessment criteria
The reader should be able to understand and reproduce the content of the analysis based on this document. The assessment of the final project is based on the written paper and includes the following components:

1. Form (25 points):

    - Language (among other things, sentences are complete, not too long, understandable, spelling is observed).
    - Citation of sources and references, bibliography (e.g. sources are cited, the citation style is consistent, there is a bibliography).
    - Correct use, labelling of tables and figures (e.g. tables and figures are labelled, have an appropriate resolution, are included in the text).

- Length (~750 words)

2. Introduction (15 points):

   - Relevance of the topic (among other things, a topic is taken up and embedded, the relevance is justified (e.g. with the help of sources))
   - Formulation of a research question (e.g. a proper question is formulated)
   - Overview of the structure of the paper (among other things, the structure of the paper is presented)

3. Main part (50 points):

   - Geodata acquisition and preparation (among other things, all data used are named and described, the sources of the data are mentioned)
   - Methodology raster operations (among other things, basic raster operations are correctly applied)
   - Methodology Vector operations (e.g. basic vector operations are applied correctly)
   - Presentation of results in map/table (e.g. results are presented appropriately (e.g. as map or table), maps have a scale, legend etc.).

4. Conclusion (10 points):

   - Explanation of the results with reference to the research question (among other things, the results are described in the text).
   - Discussion of possible consequences (e.g. the results are assessed and discussed in relation to the research question, limitations of the analysis (e.g. regarding data or methodology) are mentioned).

Procedure:

1. Define an analysis task that is as meaningful as possible: This must include a research question. If you chose Option 1, please also define the task for yourself and the respective research question.

2. Obtain the necessary data: Use the given data (Option 1) or choose yourself. In the Gitlab you have an overview of different resources.

3. Choose appropriate tools to answer the question.

4. Present the results: Be sure to address your research question in this process. Use tables and maps to illustrate the results.

5. Document your approach in a concise written document.