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MA/MSc Internship in Spring 2020

Title: Analysis and Visualization of CES Survey Data from Ramosch, Switzerland
Duration: 17 working days in May/June 2020, 1 MA/MSc student
Supervisor: Dr. K. Lambers in collaboration with Dr. S. Kosanic, University of Konstanz



Archaeological context:

The terraced landscape of the Lower Engadine, Switzerland is currently the subject of an interdisciplinary research project in collaboration with Swiss and German partner institutions. Near Ramosch, agricultural terraces cover large portions of the northern slope of the Inn valley (see photo). They are much better preserved than in other parts of the Alps. While written sources indicate their use since the Middle Ages, recent geoarchaeological studies show that their origin dates back to prehistoric times. The project investigates the emergence, development, use, preservation, and cultural significance of the terraces.



In 2018, a survey was conducted among local inhabitants and visitors of the region in order to analyze the Cultural Ecosystem Services (CES) that the terraces offer. CES are non-material benefits that people obtain from regional ecosystems, e.g. through recreation, inspiration, reflection, and creative and aesthetic experiences. CES conceptually link the study of ecosystems and cultural heritage, respectively.

The Ramosch survey resulted in a dataset of ca 50 structured verbal statements about specific locations in the study area and the CES that they afford.

Task:

The overall goal is to explore if and how cultural ecosystem services can be tied to specific locations, and how this structures our study area. Recent publications on this subject will serve as examples and guidelines for the internship, so a literature review will be a first step of the internship.

The task is then to process, visualize and analyze the survey dataset using quantitative and spatial tools. In a second step, a descriptive statistical analysis will reveal quantitative trends regarding the importance of specific CES. In a third step, a visualization of the dataset in GIS will reveal spatial trends and clusters within the study area. This requires the integration of open geodata from Swiss and other sources.

The goal is to use the data analysis and visualization as a basis for a peer-reviewed publication on the CES of the study region. Depending on the progress of the project and the outcome of the internship, the intern might be invited to co-author the publication.

Required skills:

- Knowledge of basic descriptive statistics in MS Excel or similar tools
- Knowledge of QGIS on the level of the BA2 course GIS
- Experience with the analysis of survey data is a plus, but not required.

Skills to be obtained:

- Introduction to Cultural Ecosystem Services (CES) research
- Quantitative and spatial data processing, analysis, and visualization
- Integration of quantitative, qualitative, and spatial data in GIS

For questions and applications, please contact me directly.

K. Lambes