



Mario Blersch¹, Johannes Keller¹, Christian Plass¹, Alexander Siegmund^{1,2}

¹Department of Geography – Research Group for Earth Observation ('geo), Heidelberg University of Education, Germany

²Heidelberg Center for the Environment (HCE) & Institute of Geography, Heidelberg University, Germany

Geo:spektiv2GO – making remote sensing mobile for students

Abstract

The impact of climate change and anthropogenic influences can be also seen in various aspects within our local environment. Remote sensing offers important data to analyse, model, visualize and evaluate environmental changes and hence, can have a transformational impact to address a range of Sustainable Development Goals (SDGs).

The project Geo:spektiv2GO combines digital geo-media in the classroom with problem- and action-based field work. This synergy illustrates students realistically the procedure of remote sensing in environmental sciences and encourages to work in the field of earth observation (EO) or other STEAM related areas. Due to the didactic principle of real-life encounter learning processes can be improved significantly with thematic and spatial issues of students' everyday environment and therefore, motivation and interest for modern remote sensing technology can be promoted.

The aim of the project at the Department of Geography – Research Group for Earth Observation ('geo) from Heidelberg University of Education is the conceptual development, realization, evaluation, and dissemination of a mobile app. The app enables students to learn and work with remote sensing data during field work. The mobile app extends the interactive, adaptive e-learning platform Geo:spektiv and the web-based satellite imagery analysis tool BLIF with the significant aspect of location based mobile learning.

The framework of the project includes the advancement of e-learning modules and remote sensing tools methodically and didactically. The thematic focus will be enlarged by the topics agriculture, forestry, and biodiversity (SDG 2, 15). The mobile app expands functions of the tools Geo:spektiv and BLIF to implement the goal of interactive and environment-related field work to motivate students according to education for sustainable development (SDG 4). Field work is an important method in geography and the usage of remote sensing data and methods expands this and other environment-related disciplines. Thereby, the Geo:spektiv2GO app offers new opportunities to integrate remote sensing in school curricula.