

## Climate Research Campaign: how to identify and counter the flood consequences?

### Description of a good practice:

The project was conducted in the frame of module A of the Climate Research Campaign, part of the GLOBE Program in Poland. It focused on identification of the flood negative impacts and possible ways of their interaction. The aim of the project was to improve research competences among students. The students' task was to make field research in the area of flood risk. On the basis of observations and measurements, students had to identify environmental impacts of flood in a given (research) area.

The research was conducted on the basis of protocols and experience from GLOBE Program database in cooperation with scientists. The module was prepared in close cooperation with the GLOBE Program teachers, so all educational materials are tested and well adjusted to the reality of Polish school education.

Activities realized in this module were divided into four main stages:

- Stage I: Choosing and defining characteristics of surface water basin (April – June 2012);
- Stage II: Initial field research (September 2012 – February 2013);
- Stage III: Regular research of surface water properties (February – June 2013 and September – November 2013);
- Stage IV: Research documentation work out – summarizing report (until 15 November 2013).

### Strong points and opportunities:

- Improving students' competences in field research;
- Measurement equipment used by students is so simple that it does not require special knowledge;
- Students can get to know their region better through activities requiring the cognition of their surroundings (i.e. interviews with inhabitants);
- Getting competences in group work – students had to work together as an expert team;
- During the lesson, students used various information sources (i.e. historical maps, geographic maps, Internet resources, map services, statistic data, interviews with local inhabitants, measurements, observations etc.);
- Interdisciplinary measurements (students had to look at the problem from interdisciplinary perspective);
- Both teachers and students were able to acquire new experience and new skills by the work with modern technology (ICT tools during lessons);

- Students conduct individual field research (learning by experience) and draw conclusions from the gathered information;
- During lessons students had to go through all stages of the research project, getting new skills, which prepare them to self-sufficient research work.
- Workshops for teachers allowed them to get new skills within the scope of using ICT tools during classes.

Limitations:

- Logistic problems – making measurements (which must take place regularly) often interfere with other lessons, class tests or student trips;

Added value with regard to the 3 topics of the MASS project:

- Working with Google Earth application – getting skills by the use GIS applications;
- Appropriate measurement equipment use during class lessons (and beside them);
- Students get new practical and research skills (cause and effect thinking);
- An enhanced interest in the region;
- Aroused curiosity among students, encouraging them to science education;

Prerequisites needed:

- Appropriate equipment for field measurements and observations;
- Availability of chemical reagents;
- Teacher trained in an appropriate way.

Age of students:

12 – 18 years (junior high school, high school in Poland)

Links, resources:

<http://globe.gridw.pl/projekty/badawcza-kampania-klimatyczna/o-projekcie>

<http://globe.gridw.pl/projekty/badawcza-kampania-klimatyczna/modul-a>