

Final report on the project
AKTION 96p5
“Soil erosion – threat for our future”
“Eroze půdy – hrozba pro naši budoucnost”
for year 2023

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This is report of the project, which proposal was submitted in Spring 2023 for fall/winter 2023.

The topic of the project for 2023 had been at first exchange visit of teams of CTU Prague and BOKU Wien, to coordinate ongoing research projects and students activities. At second (and at the main) it was to realize main educational activities: two intensive student courses with duration of one week each (one week at CTU Prague and one week at BOKU Wien – one for Czech students in Vienna and second for Austrian students in Prague). Following activities were performed within the AKTION project during 2023:

- Intensive course for Czech students at BOKU Wien (3. – 7.12.2023) – 14 students + 2 staff CTU Prague (**“Applied methods of soil erosion research”**) (list of participants – see bellow)
- Intensive course for Austrian students at CTU Prague (32 students + 2 staff BOKU Vienna) (19.11. – 23.11.2023) (**“Soil erosion – threat for the future”** - Assessment of soil erosion and surface runoff from agriculturally used watersheds, using GIS techniques) (list of participants – see bellow)
- Visit of one BOKU PhD student (Cristina Ojeda) at CTU Prague during 15.11. – 17.11.2023 (3 days) - (planning of upcoming activities – both student courses)
- Visit of Dr.Strohmeier in Prague 23. – 26.11.2023, to conclude the results of the project just after end of course in Prague – he stayed in Prague after course end, to save funds for one way transportation.
- Visit of one Czech staff at BOKU Wien during 19.12 – 21.12.2023 (prof. Tomáš Dostál) – to conclude all year activities and prepare preliminary program for project application for 2023. T.Dostál was travelling with another person, therefore travelling expenses were not accounted to AKTION project.
- Visit of one Czech staff at BOKU Vienna during 10. – 12.12.2023 (dr. Miroslav Bauer) to participate at common experimental campaign at laboratory rainfall

simulator – to measure kinetic rainfall energy. Delivery of disdrometer from CTU Prague to BOKU Vienna – the reason for car use.

Within the project, all two main planned activities - student courses, were realized in planned duration and terms, with planned (slightly exceeded number of participants. Concerning of the staff visits, some very limited partial changes have been adopted, mainly in terms of form and duration of visits – as mentioned above. The organizers succeeded and saved part of the money, mainly due to they have got a significant credit for accommodation prices in Prague + part of Austrian students preferred to find their private accommodation, or stayed with their friends here in Prague. Similarly, several Czech students stayed at their relatives and friends during course in Vienna. Also reduction of price of transportation of train tickets switching to bus.

Due to savings and not realized staff visits, we saved in total 12.798,- CZK, which were returned back to AKTION office.

Detailed specification of main activities:

I. Course at CTU in Prague under the title „Assessment of soil erosion and surface runoff from agriculturally used watersheds, using GIS techniques“ held on 19. - 23.11.2023 with following program:

19.11.2023 – arrival of the participants, welcome, introduction

20.11.2023 – introduction lectures, basics of computer modeling, GIS presentation. Common dinner.

21.11.2023 – soil loss calculation using GIS techniques. Experimental determination of splash erosion and kinetic energy of raindrops and spatial homogeneity laboratory measurement using rainfall simulator.

22.11.2023 – sediment transport from the watershed assessment, using GIS technology

23.11.2023 - results assessment, final discussion, conclusions, departure of the participants

There were in total 40 students participating at the course and 6 teachers – 8 students and 6 teachers (prof.Dr.Ing. Tomáš Dostál, doc. Ing. Josef Krása Ph.D., Ing.Miroslav Bauer, Ph.D., Ing. Martin Neumann, Ing.Petr Kavka, Ph.D. and Ing.Michal Vrána) from the Czech Republic and 32 students and 2 teachers from Austria (Dr. Stefan Strohmeier, MSc. Jeremias Maier). Name list is enclosed.

II. Course at BOKU Wien under the title “Applied methods of soil erosion research “ during 7. – 11.11.2023 with following program:

3.12.2023 – arrival of the participants, welcome, introduction

4.12.2023 – general methodological presentations and lectures, first part of laboratory works (rill erodibility experiments, aggregate stability)

5.12.2023 – modeling of erosion processes in soil laboratory (rill erodibility experiment, aggregate stability experiment, presentation of disdrometer). Common dinner.

6.12.2023 – field trip to experimental catchment and research institute of soil and water conservation BAW – Petzenkirchen and Wachau region, presentation of soil conservation technology

7.12.2023 – calculation of measured results, statistical evaluation of measured data, students presentation, final discussion, conclusion, finishing of the course, departure of the participants

There were in total 24 students and 4 teachers participating at the course – from the Czech Republic 14 students and 2 teachers (prof.Dr.Ing. Tomáš Dostál and. Doc Ing. Josef Krása, Ph.D.) and from Austria 10 students and 3 teachers (Dr. Stefan Strohmeier, MSc. Jeremias Maier, MSc Carina Gassebner). Name list is enclosed.

At the end of common courses the participants received certificates, which approved, that students passed intensive course, held under AKTION project 96p5. Sample report of one student group worked out during their activities within the course in Vienna is also enclosed at the project report.

Allocated budget has been used effectively.

Some changes were done between individual categories:

- We got special rate for bus tickets for group of students travelling to Vienna, therefore we saved some funds
- For trip of staff to BOKU, we had to use car to transport disdrometer for common laboratory measurement – therefore we exceeded planned budget. For second trip we joined another people and therefore travel expenses were not charged.
- We got significantly better prices for students accommodation in Prague, therefore we saved some funds. Furthermore, 3 students provided their own accommodation in Prague.
- Due to listed savings we could cover more person days and therefore longer staff visits in Prague and also to pay higher allowances to students, than was planned. However, daily allowances rate were set to 600,- CZK/day – which is fully in accordance with AKTION standards. Furthermore, there were 32 Austrian students, compared to 30 students planned.
- Furthermore we saved some funds, which were returned to AKTION office.

Detailed specification is presented at the table:

Activity	Expenses – planned (CZK)	Expenses – reality (CZK)
Travel expenses Prague – Vienna (student course)	24.200,-	18.198,-
Travel expenses Prague – Vienna (staff visit)	3.200,-	6.604,-
Allowances for student course in Prague	57.500,-	107.700,-
Accommodation for the course in Prague	145.000,-	82.000,-
Allowances BOKU staff in Prague	3.600,-	6.000,-
Accommodation BOKU staff in Prague	4.000,-	4.200,-
Returned to project provider – AKTION agency	0	12.798,-
Total	237.500,-	237.500,-

All the invoices are stored at the economic department of CTU Prague. Regardless of relatively significant changes in project organization and general enlargement of the project's goals, the expenses have not been exceeded at all.