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Call for participation to DigiEduHack 2023

Title: The Ukrainian academic community for soil quality in Ukraine

Team name: SoilGuard UA

Description:

This project aims to create tools for restoring soils damaged by military actions, involving the Ukrainian academic community and specialists from various fields of science. Using different resources, recommendations for the remediation of damaged soils will be developed.

Our Challenge will run within the framework of the [DigiEduHack 2024](#).

Start date: 13/11/2024 **End date:** 14/11/2024

Our team:

We are looking for a 12-person team, mainly staff and students from Ukrainian universities. The focus is on the fields of agronomy, ecology, geodesy, and land management.

To register: Please email Nataliia Kapinos, nataliia.kapinos@snau.edu.ua

Goals / Outcomes

Our Challenge aims to:

Підвищити увагу до неагтивних наслідків військових дій в Україні на якість ґрунтів.

Збір інформації про постраждалі земельні ділянки з використанням інтерактивних засобів та доступних джерел

Розробка рекомендацій щодо ремедіації ґрунтів пошкоджених в наслідок бойових дій

- Raise awareness of the negative impacts of military actions in Ukraine on soil quality.
- Collect information on affected land areas using interactive tools and available sources.
- Develop recommendations for the remediation of soils damaged by military activities.

Our experience

We train experts in assessing soil conditions and restoring areas damaged by military actions.

During the training, participants acquire the following skills:

- Conduct soil sampling in areas affected by military actions;
- Analyze soil samples for contaminants using modern equipment (PxRF);
- Record the environmental impacts of military actions using GIS technologies and remote sensing tools;
- Study the effects of military actions through aerial imagery and process images using QGIS software;
- Use ground-based hyperspectral measurements to assess soil conditions;
- Calculate damages to agricultural land caused by military actions.

Please visit: <https://soil-expert.snau.edu.ua/> (our demo [here](#))

Expectations and requirements

Any proposed project must consider the current situation in Ukraine and include a list of measures to address the issue of soil restoration after the end of military operations. Considering the risks of researching areas contaminated with explosive objects is essential.

The project should include recommendations for soil remediation activities. Preference will be given to projects incorporating preliminary area analysis based on remote sensing data. All available resources may be used to collect data on the affected areas.

The Challenge is part of the Erasmus+ [Baltics4UA](#) project (Supporting Ukraine through citizen engagement at Baltic Universities). This Challenge continues work developed in the NASA Space Apps Challenge 2023 in which Web2Learn formed its Space4UA team (description of our Challenge [here](#)).

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