Pavadinimas / *Tittle*

„Naujų technologijų, skirtų nuotoliniam žemės paviršiaus stebėjimui ir Europos dirvožemio dangos organinės anglies kiekio prognozavimui, skatinimas“ / „*Stimulating novel technologies from earth remote observation to predict European soil carbon”*

Santrauka / *Summary*

Projekto metu tikrinamos palydovinių žemės paviršiaus vaizdų naudojimo galimybės organinės anglies kiekio dirvožemyje prognozavimui Europos regionuose, esančiuose skirtingose pedoklimatinėse ir agroekologinėse sąlygose. Pirmajame etape analizuojamos sąsajos tarp palydovinių vaizdų („Sentinel-1,2“ ir/arba kiti) teritorijose, kuriose yra žinoma antžeminė informacija apie organinės anglies kiekį dirvožemyje. Antrajame etape analizuojami SOC kiekio dirvožemyje prognozavimą trikdantys veiksniai: dirvožemio drėgmė, granuliometrinė sudėtis, druskingumas, paviršiaus šiurkštumas. Teritorijose, kuriose iš palydovinių vaizdų galima gauti patikimų SOC kiekio dirvožemyje duomenų, prognozėms taikomi kiti papildomi, pvz., geofiziniai, metodai.

Projekto metu LAMMC indėlis: Lietuvos teritorijos dirvožemio dangos SOC kiekio žemėlapio sudarymas, dirvožemio drėgmės Lietuvos teritorijoje modelio sudarymas arba atliekami natūriniai matavimai, granuliometrinės sudėties informacijos teikimas.

During the project, the possibilities to use the satellite surface imagery to predict the soil organic carbon in European regions under different pedoclimatic and agro-ecological conditions will be tested. The first stage will analyse the links between satellite imagery (“Sentinel-1,2“ and/or others) in the areas with available ground-based information on soil organic carbon. The second stage will analyse the factors disturbing SOC prediction: soil moisture, granulometric composition, salinity, surface roughness. In the areas where reliable SOC predictions from satellite data will not be available, other methods, such as geophysical methods, will be applied.

LAMMC contribution to the project: mapping of SOC in the soil cover of the Lithuanian territory, development of a soil moisture model in the Lithuanian territory, or in situ measurements will be carried out and information of the granulometric composition will be provided.

Projekto numeris / *Project number*

Horizon 2020 EJP SOIL Nr. 862695

Trukmė / *Duration*

2021 02 01–2024 02 01

Mokslo kryptis / *Research area*

Žemės ūkio mokslai/ *Agricultural Sciences* A 000

Finansavimas / *Financing mechanisms*

Horizon 2020

Administruojanti institucija / *Administrator*

Lietuvos agrarinių ir miškų mokslų centras / *Lithuanian Research Institute for Agriculture and Forestry* (LAMMC)

Biudžetas / *Budget*

Projekto bendras biudžetas 1712075,00 eurai, Lietuvai skirta projekto biudžeto dalis 36148,00 eurai / *Total budget 1,712, 075.00 EUR, Lithuanian part – 36,148.00 EUR*

Pagrindinis vykdytojas / *Project promoter:*

AgroParisTech (INRAE LTP) France (http://www2.agroparistech.fr); Swedish University of Agricultural Sciences (SLU), Sweden (https://www.slu.se/en/)

Projekto vadovai / *Principal investigators*: Dr Emmanuelle Vaudour, Dr Johanna Wetterlind

Projekto partneriai / *Project partner(s)*:

Wageningen Research, The Netherlands (https://www.wur.nl/en.htm),
responsible person from organization Fenny Van Egmond;

Flanders Research Institute for Agriculture, Fisheries and Food (EV-ILVO), Belgium (https://ilvo.vlaanderen.be/en),
responsible person from organization Fabio Castaldi;

Czech University of Life Sciences Prague (CZU), Czech Republic (https://www.czu.cz/en),
responsible person from organization Lubos Boruvka;

Aarhus University, Danish Centre for Food and Agriculture (DCA/AU), Denmark (https://dca.au.dk/en/), responsible person from organization: Anders Bjørn Møller;

Council for Agricultural Research and Economics (CREA), Italy (https://www.crea.gov.it/en/about-crea), responsible person from organization Pasquale Nino;

National Research Council of Italy (CNR) (https://www.cnr.it),
responsible person from organization: Maria Costanza Calzolari;

Ente Regionale per i Servizi all'Agricoltura e alle Foreste (ERSAF), Italy
responsible person from organization Stefano Brenna;

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Ministry of Agriculture and Forestry General Directorate of Agricultural Research and Policies (TAGEN), Republic of Turkey
(https://www.tarimorman.gov.tr/TAGEM/Sayfalar/EN/Anasayfa.aspx),
responsible person from organization Muhammed Halil Koparan.

Kiti LAMMC mokslininkai, dalyvaujantys projekte /
***Other research staff participating in project from LAMMC*:**

doc. dr. Jonas Volungevičius.