



Research and innovation



IESPĒJAS PĀRTIKAI, BIOEKONOMIKAI UN VIDEI: ES MISIJAS UN APVĀRSNIS EIROPA 6. KLASTERIS

9.07.2025 11:00

TREŠDIENA	
11:00-11:20	APVĀRSNIS EIROPA 6. KLASTERIS: PĀRTIKA, BIOEKONOMIKA, LAUKSAIMNIECĪBA, DABAS RESURSI UN VIDE <b>Lāsma Brenča un Aiga Salmiņa, NKP</b> Iepazīšanās ar 6. klastera tematiku, aktualitātēm un gaidāmajiem projektu konkursiem.
11:20-11:40	VEIKSMES STĀSTS NO LATVIJAS: PIEREDZE PROJEKTĀ 6. KLASTERI <b>Anīta Dzelme, LLKC</b> Pieredze 6. klastera projektā "ClimateSmartAdvisors", kas atbalsta pāreju uz klimata ziņā pārdomāto lauksaimniecību
11:40-12:00	ES MISIJAS: AUGSNE; OKEĀNI UN ŪDEŅI- IZAICINĀJUMI UN IESPĒJAS <b>Marija Kiršteine, NKP</b> Pārskats par misiju mērķiem, aktuālajiem projektiem un iespējām Latvijas dalībniekiem
12:00-12:20	VEIKSMES STĀSTS: LATVIJAS DALĪBA ES MISIJU PROJEKTĀ <b>Dagnija Lazdiņa, SILAVA</b> Pieredze "Augsnes" misijas projektos "InBest Soil" un "Bioservices"
12:20-12:40	ZINĀŠANU UN INOVĀCIJU KOPIENA EIT FOOD <b>Ize Laukaleja-Broka, EIT Food Hub Latvia vadītāja</b> Par iespējām programmā EIT Food, kas veicina inovācijas pārtikas nozarē

Veiksmes stāsts: Latvijas dalība ES misiju projektā

Pieredze «Augsnes misijas» projektos:

InBestSoil (ID 101091099)

BIOservicES (ID 101112374)

Dr.silv. Dagnija Lazdiņa, LVMI Silava vadošā pētniece



BIO SERVICES

Pirmā vēstule  
2022. 22. 02.



The screenshot shows a web browser window with the URL [euraf.isa.utl.pt/news/agroforestry\\_research\\_latvia](https://euraf.isa.utl.pt/news/agroforestry_research_latvia). The main content is a map of Europe with blue location pins indicating research sites in various countries including the UK, France, Spain, Italy, Germany, Poland, Czech Republic, Slovakia, Hungary, Romania, Bulgaria, Greece, Portugal, and Latvia. To the right of the map is a news article titled "Ongoing agroforestry research in Latvia" dated 16 Jun 2021. Below the title is a photograph of a young tree growing in a field. A short paragraph of text follows, discussing agroforestry in Latvia.

Hello to both of you,

I am NAME, a researcher at the University. I am writing in relation to a proposal for a Horizon Europe project, the Soil Mission "Incentives and business models for soil health":

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-miss-2021-soil-02-05>

Together with some colleagues from the University, we have organized a consortium with several countries to make a proposal to enhance the value of soil and increase the attention we pay to it. In the project, we need to establish a series of case studies across Europe, with different land uses. Some of these case studies (lighthouses) are experiments that have been going on for some time (long term), and we want to determine how they improve soil quality. We have seen that you have an ongoing study on agroforestry established in 2011, which fits perfectly with the project.

[https://euraf.isa.utl.pt/news/agroforestry\\_research\\_latvia](https://euraf.isa.utl.pt/news/agroforestry_research_latvia)

We would like to know if you would like to participate as a partner in the proposal. For this type of case study (the lighthouses), we would only need to do a soil sampling (at the beginning of the project) in the area you are using for your agroforestry practices and in an area where no agroforestry practices have been implemented, to establish a comparison of soil quality.

The deadline is 24 March 2022, and we don't have much time, but we think it is worth a try (we already have several groups working on the proposal).

Thank you very much for your time. If you have any questions, please do not hesitate to contact me.

Best regards,

NAME



Uzrunājām kolēģus no



## Research and innovation



Nākamais pieteikums pirmā pieteikuma konsorcija partneru ierosināts:  
Research and Innovation actions to support the implementation of the Soil health and Food Mission (HORIZON-MISS-2022-SOIL-01)

- pirmā saruna 2022.gada 30. martā,
- iesniedzam pieteikumu 2022.gada 27. septembrī,
- sākam īstenot 2023.gada 1. septembrī.

## Case Studies

To achieve our mission, we will study 25 experimental sites across five biogeographic regions, covering eight different land uses.



Continental Region



Mediterranean Region



Alpine Region



Atlantic Region



Boreal Region



# Divi veiksmes stāsti:



One of research activities for EU Mission: A Soil Deal for Europe  
Horizonts - recultivation of former mining areas



Research and Innovation and other actions to support the implementation of a mission in the area of Soil health and Food (HORIZON-MISS-2021-SOIL-02)

pieteikums iesniegts 2022.gada 24.martā

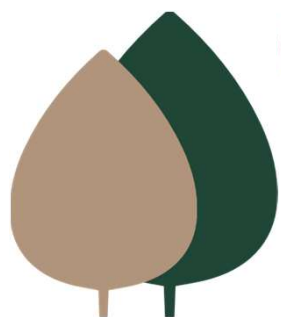
uzsākta īstenošana 2023.gada 1.janvārī

- **Pirmais izaicinājums**: pārtulkot angļisko nosaukumu un aktivitātes latviski

*Monetary valuation of soil ecosystem services and creation of initiatives to invest in soil health: setting a framework for the inclusion of soil health in business and in the policy making process* = letvars augsnes veselības aspekta iekļaušanai politikas veidošanas procesos: augsnes ekosistēmas pakalpojumu ekonomiskais novērtējums un iniciatīvas ieguldījumiem augsnes veselībā

- **Otrais izaicinājums**: kas ir kas?:

- *Lighthouse* = zināšanu bāka (demonstrācijas vieta) => *Case study* = labās prakses piemēri



 InBestSoil

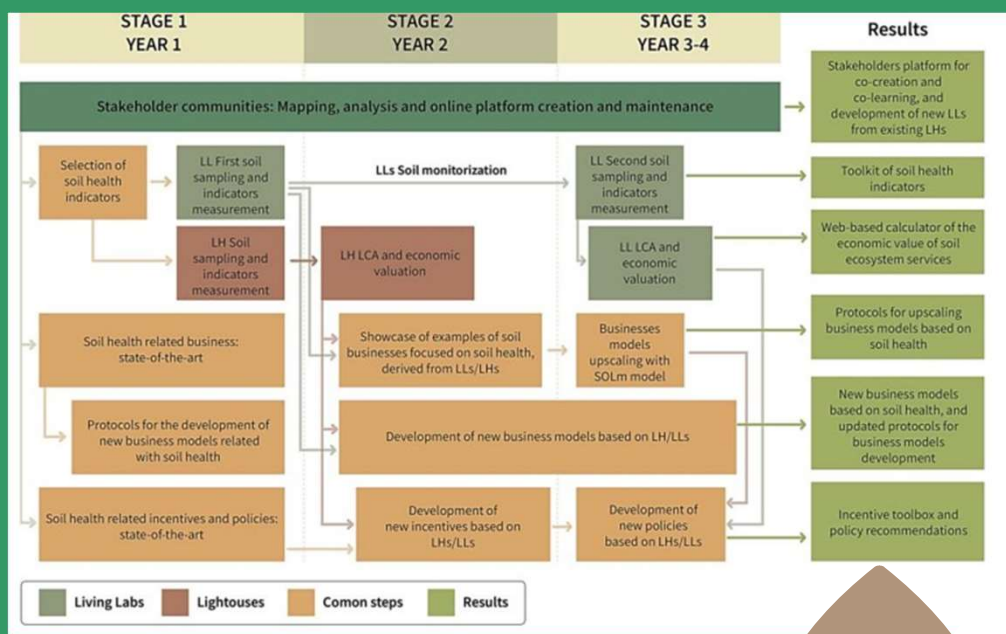
FACTSHEET | 13 November 2024

EU Mission Soil Deal for Europe: Living labs and lighthouses

The Mission 'A Soil Deal for Europe' will support the transition towards healthy soils by 2030 by putting in place an effective network of 100 living labs and lighthouses in rural and urban areas.



# Aktivitātes InBestSoil



## Boreal Regions

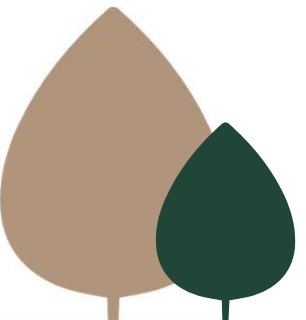
- Lighthouse 5: Boreal Urban Soil: The Vilnius lighthouse in Lithuania utilizes urban spaces for agriculture, addressing land use issues, like erosion, and flooding while improving soil health. It assesses different practices' impact on soil ecosystem services.
- Lighthouse 6: Boreal Forestry Soil: This lighthouse focuses on improving forestry soil through sustainable management practices, monitoring groundwater levels, and studying the impact of the Baltic Sea on coastal forests. It aims to enhance soil quality and overall forest management.



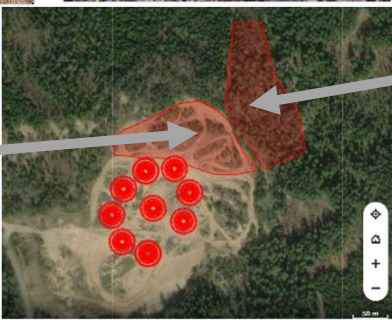
InBestSoil – Ietvars augsnes veselības aspekta iekļaušanai politikas veidošanas procesos: augsnes ekosistēmas pakalpojumu ekonomiskais novērtējums un iniciatīvas ieguldījumiem augsnes veselībā

# Sampling of soil and best practice demonstrations – case studies

- Case studies / Demostration of:
- different soil preparation methods and soil erosion/ watertable;
  - mining sites recultivation;
  - reforestation after windfalls in fertilized and nonfertilized stands.



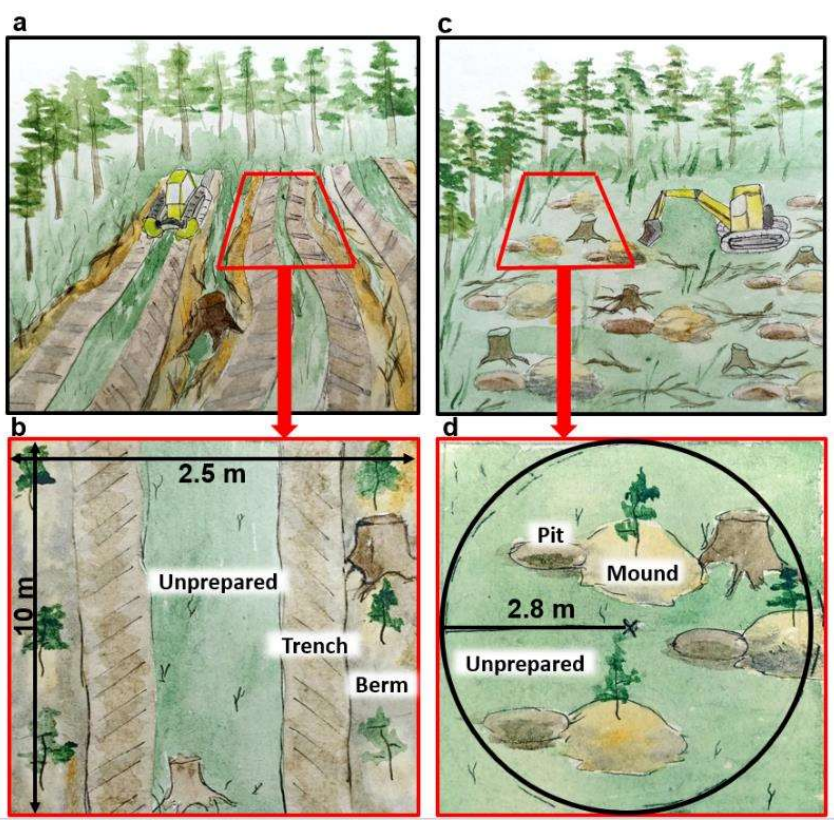
**AFTER GRAVEL  
MINING A-  
DIFFERENT STAGES  
OF SELF RESTORING**



**UNDISTURBED  
SOIL**



# Demonstration of different practices – one of them planting site preparation method and its impact on biodiversity and tree growth

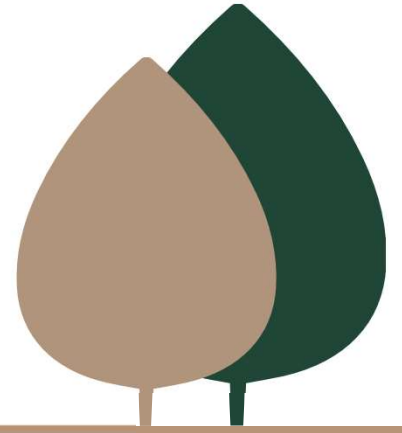
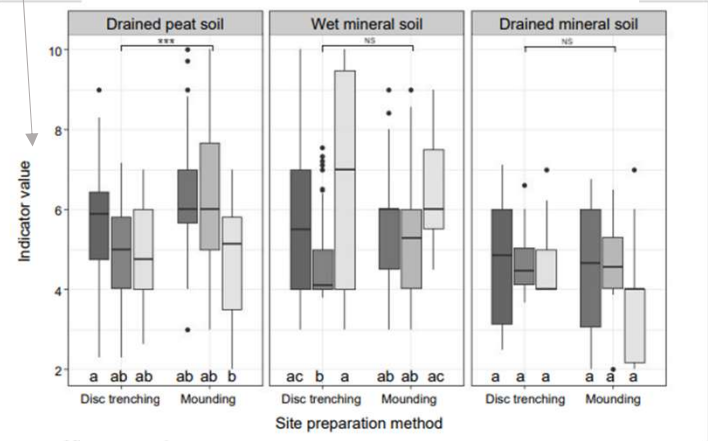
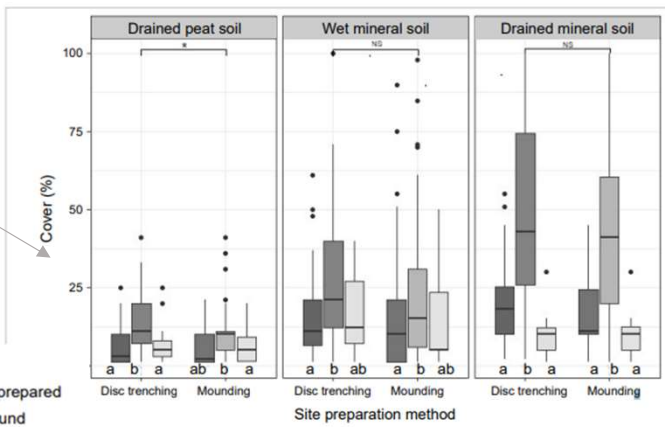


VEGETATION COVER IS HIGHEST IN THE UNCULTIVATED GROUND COVER

«MOISTURE-LOVING» SPECIES ARE MORE COMMON IN MICROFORM DEPRESSIONS

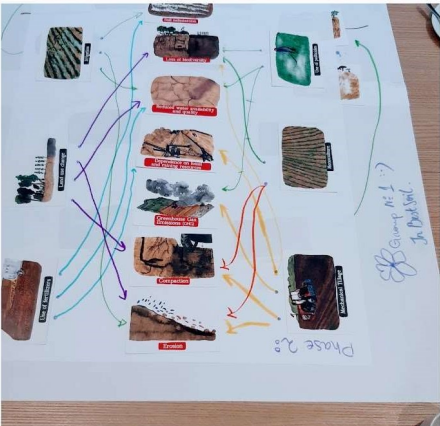
Microtopography

- Trench
- Unprepared
- Berm
- Pit
- Unprepared
- Mound





# Uzņēmām Latvijā pirmo InBestSoil konsorcijsanāksmi 2024.gada vasarā



LVMI Silava piensesums skatāms projekta profilā institūta mājas lapā:

<https://www.silava.lv/petnieciba/petijumi/InBestSoil> un video stāstā

<https://youtu.be/iudpipp4dl8?si=TCyl9QJrTslkMEuO>

Visu konsorcijs dalībnieku paveiktais un aktivitātes: <https://inbestsoil.eu>

The image displays two overlapping digital interfaces. On the left is the InBestSoil website, featuring a dark green header with the logo and a 'SOIL COMMUNITY' button. The main content area has a background image of soil and a small green plant. The headline reads 'Empowering Sustainable Investments for a Resilient Future', followed by a sub-headline: 'InBestSoil is an innovative project funded by the European Union through the Horizon Europe program that revolutionizes the perception of soil health by developing an economic valuation system integrated into business models.' On the right is the Soil Community app interface, showing a dark blue sign-in screen with the text 'One of us? If you already has an account, just sign in. We've missed you!' and a 'Sign In' button. Below this is a white registration form with the text 'Welcome, please enter your email' and an input field labeled 'EMAIL' with the prompt 'Laipni lūdzam pievienoties!'.

Platforma  
ir  
izveidota!



BIOSERVICES

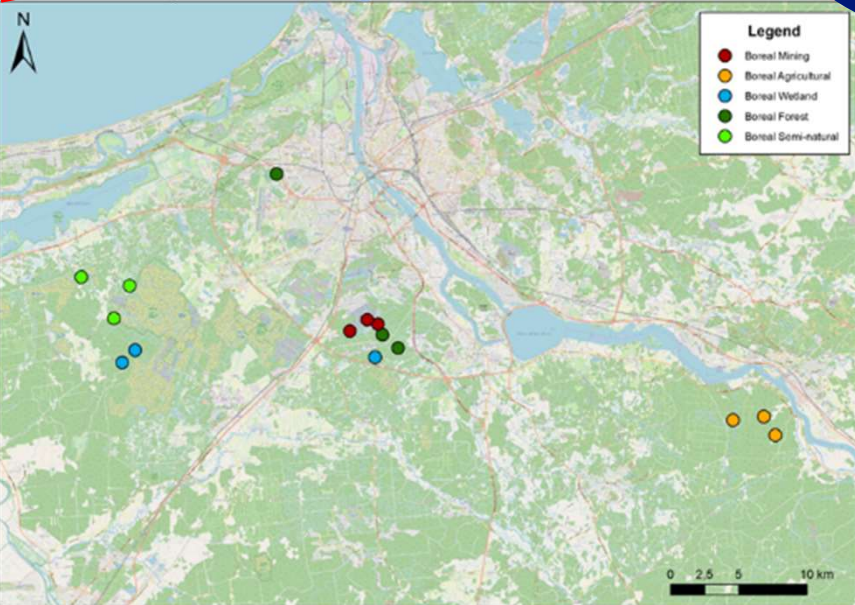
- Latviskojam projekta nosaukumu: *Linking soil biodiversity and ecosystem functions and services in different land uses: from the identification of drivers, pressures and climate change resilience to their economic valuation* = Augsnes biodaudzveidības, ekosistēmu funkciju un pakalpojumu saistība dažādos zemes izmantošanas veidos: no virzītājspēku, slodžu un klimata pārmaiņu noturības identifikācijas līdz ekonomiskajam vērtējumam



- Installation of climate change experiment (increased soil temperature °C and decreased precipitation)



# Experimental sites at the Boreal biogeographic region of Europe



## Main soil health pressures in histosol:

- WETLAND: Nutrient imbalance, Acidification
- SEMI-NATURAL LAND USE: organic matter loss, compaction
- FORESTS: Nutrient imbalance, Acidification, Eutrophication
- MINING LAND USE: Biodiversity loss, erosion
- AGRICULTURAL LAND USE: Nutrient imbalance



# Pirmās aktivitātes BIOservicES



**In the field** Climate change sampling scheme

3/5

- 1. Earthworms and macrofauna**

  - Excavate a square pit with an area of 25x25 cm and a depth of 20 cm
  - Separate 0-10 cm (earthworms and macrofauna) and 10-20 cm (earthworms only) and place the 2 soil samples on 2 different plastic sheets
  - Collect earthworms and macrofauna out of the excavated soil, roots, litter etc. by hand-sorting and picking up with plastic tweezers/forceps
  - Earthworms are rinsed in tap water, put on tissue paper for carefully drying, then fixed in a 1:1 solution of 4% formalin and 96% ethanol until stop moving and collected in labelled test tubes with 4% formalin
  - Other macrofauna are collected in labelled test tubes with 70% ethanol
  - Add 2.5 L AITC solution into the pit to expel deep burrowing earthworms up to the surface. Pick them up with plastic tweezers/forceps, put them in tap water and treat them as described above
- 2. Mesofauna**

  - Collect a soil core of 4 cm diameter and 0-20 cm depth with a soil core sampler
  - Separate the two depth levels 0-10 and 10-20 cm using a spatula
  - Place the soil cores directly into the beakers that suit to the Kempton/MacFayden extractor or in plastic bags or containers properly labelled
  - Transport the samples to the laboratory in cool boxes with cool packs
  - In the lab, keep at 4°C and extract the animals as quickly as possible. (Do not store for longer than 4 weeks)
- 3. Soil structure, bulk density and SOC:** Collect at 0-30 cm with plastic liner auger.

  - During soil fauna sampling, try to avoid impact on this sampling area
  - Plastic liners properly labelled both for sample number and depth (0 and 30 cm in both extremes)
  - If the plastic liner is not filled with soil, please seal it with parafilm/aluminum foil and paper to prevent it from moving during storage and transport
  - Storage: Keep plastic liners at room temperature
- 4. Physicochemical properties, microbiota and nematodes**

  - Record the coordinates of the central point
  - Collect ± 3 kg composite sample from 5 LUCAS points (2 m forming a cross from de central point) at 0-20 cm with an auger. Homogenize all subsamples.
  - Note for **microbiota**: Homogenize using a 5-mm sieve.
  - Physicochemical properties: Separate ± 2 kg in paper bags and keep at ambient T (avoid plastic bags for plastic analysis)
  - Aggregates: Separate 300 g in rigid container and keep at ambient T
  - Microbiota: Separate, with gloves, soil in 6 (8 in the Mediterranean) sterile 2 ml Eppendorf tubes. Previously in the lab, add 2.5 ml of DNA/RNA Shield in each 2 ml Eppendorf tube with a pipette. In the field, add ~1.5 g of soil in each tube. Shake the tube to get a slurry and so, efficient suspension, and keep at ambient T.
  - Mineral N and microarthropods by metabarcoding: Separate ± 40 g in 50 ml Falcon tubes or Ziploc bags properly labelled and keep in cooler with ice
  - Nematodes: Separate ± 600 g in plastic bags with gloves and keep in cooler with ice or cool packs. Plastic bags should be properly labelled (close well with twist tie (preferred) or piece of rope. Use a Styrofoam plate or something else to avoid the soil samples touching the ice or cool packs
  - Viable bacteria: Separate, with gloves, ± 10 g in a Falcon tubes and keep in cooler with ice

**On the field** WP2 sampling scheme

- 1. Soil structure, bulk density and SOC:** Collect at 0-30 cm with plastic liner auger. First to collect to avoid compaction

Storage: Plastic liner and keep at room temperature
- 2. Physicochemical properties, microbiota and nematodes**

  - Collect ± 3 kg composite sample from 5 LUCAS points (2 m forming a cross from de central point) at 0-20 cm with an auger. Homogenize all subsamples
  - Record the coordinates of the central point
  - Try to avoid impact on other parts of the sampling area

Storage and transport

  - Physicochemical properties: Separate ± 2 kg in paper bags and keep at ambient T (avoid plastic bags for plastic analysis)
  - Aggregates: Separate 300 g in rigid container and keep at ambient
  - Mineral N: Separate 30 g in 50 ml Falcon tubes and keep in cooler with ice
  - Microbiota: Separate in 3 sterile 2 ml Eppendorf tubes with gloves and keep in cooler with ice
  - Nematodes: Separate ± 600 g in plastic bags with gloves and keep in cooler with ice
- 3. Mesofauna**

  - Collect ± 1 soil at 0-20 cm with an auger.
  - Place the sample upside-down directly into the beakers that suit to the Kempton/MacFayden extractor or in plastic bags with sealed with a cotton ball.
  - In the lab, keep at 4°C for 4 weeks max.
- 4. Macrofauna**

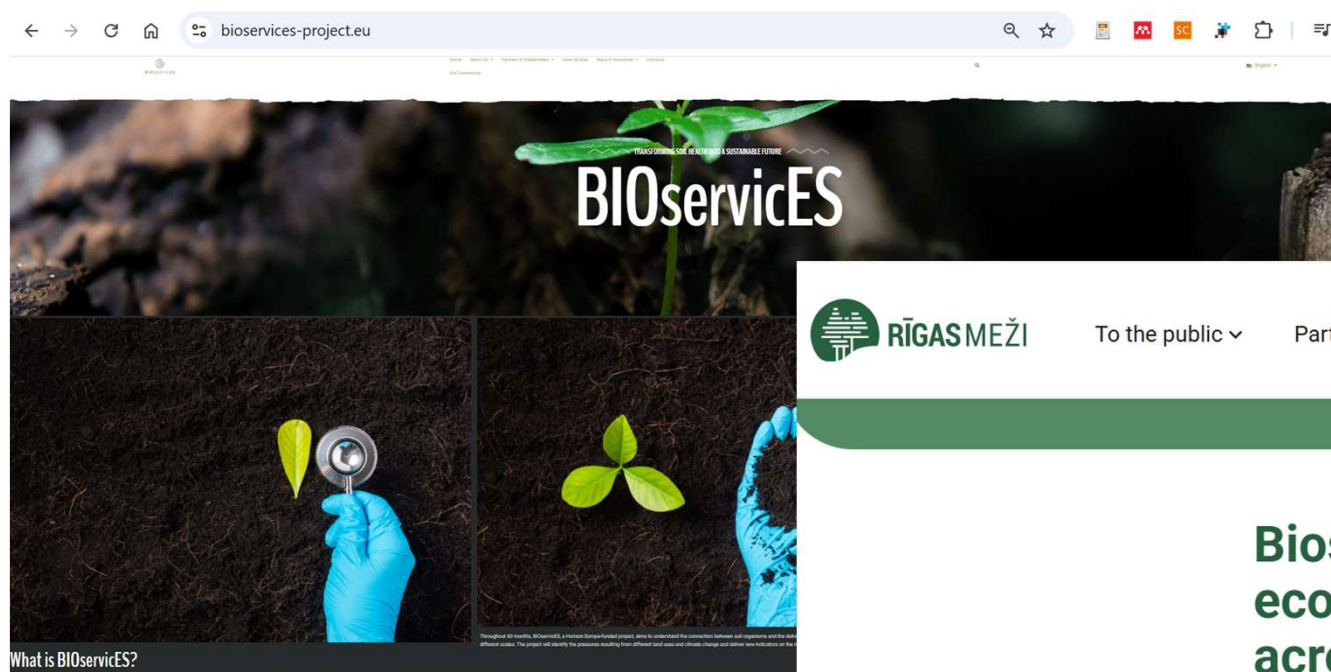
  - Collect earthworms and macrofauna by hand-sorting and picking up excavating a pit of 50x50x20 cm. Earthworms and other macrofauna are then placed in labelled plastic containers and filled with moist soil.
  - Add AITC to move deep individuals up to surface. Take them and place them in plastic containers filled with moist soil

Pirmais gads tiek veltīts paraugu ievākšanai klimata eksperimentu ierīkošanai un lēmumpieņemēju apzināšanai.

LVMI Silava piensesums skatāms projekta profilā institūta mājas lapā:

<https://www.silava.lv/petnieciba/petijumi/BIOservicES>

Visu konsorcijs dalībnieku paveiktais un aktivitātes: <https://bioservices-project.eu>



**Bioservice: Linking soil biodiversity, ecosystem functions and services across different land uses: from identification of drivers, pressures and climate resilience to economic assessment 101112374**

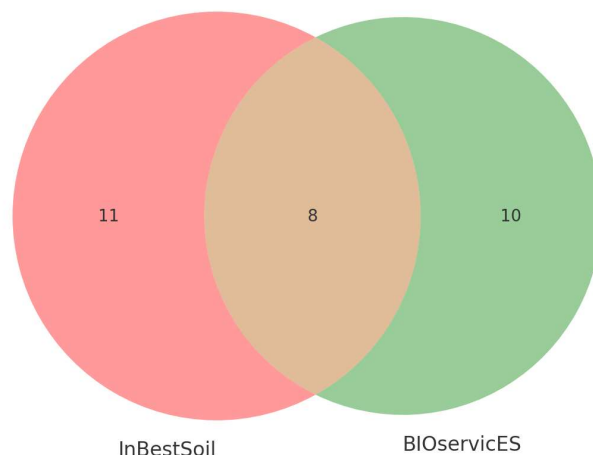
# Divi projekti dažādi uzdevumi un daļēji pārklājošās komandas

## leguvumi

- Satiekamies biežāk 2 reizes gadā un kaut gan fokuss ir uz vienu no pētījumiem, tomēr neformālā gaisotnē tiek pārrunāts arī otrā paveiktais un paveicamais – labāk iepazīstamies
- Esam «draudzīgie» projekti, tomēr ne «sister» jo dažādi uzsaukumi.

InBestSoil lielāku uzsvaru liek uz ekonomisko novērtējumu un uzņēmējdarbības modeļiem, BIOservicES koncentrējas uz augsnes organismu bioloģisko daudzveidību, ekosistēmu funkcijām un rādītājiem.

Konsorciiju partneru pārklāšanās




## Apgrūtinājumi

- Lēmumpieņēmēju grupas pārklājas – cenšamies katrā no projektiem iesaistīt citus cilvēkus, lai dažādotu profilus un «nenogurdinātu» sadarbības partnerus vairākkārtīgi vaicājot līdzīgus jautājumus.

Jauni uzsaukumi:

Pieteikums abu īstenošanā esošo konsorciiju partneru veidots.  
Gandrīz veiksme – bijām virs kvalitātes sliekšņa = pieteikuma rakstīšanas process ir Latvijas mēroga projekta nodevums.


 **Proposal Management & Grant Preparation**  
101218992 - SOILFIRE


08 Oct 2024


Submitted Informed

Process documents

- ▶ Evaluation Result Letter (1)
- ▼ Evaluation Summary (1)

 101218992\_SOILFIRE\_ESR

 101218992\_SOILFIRE\_ESR

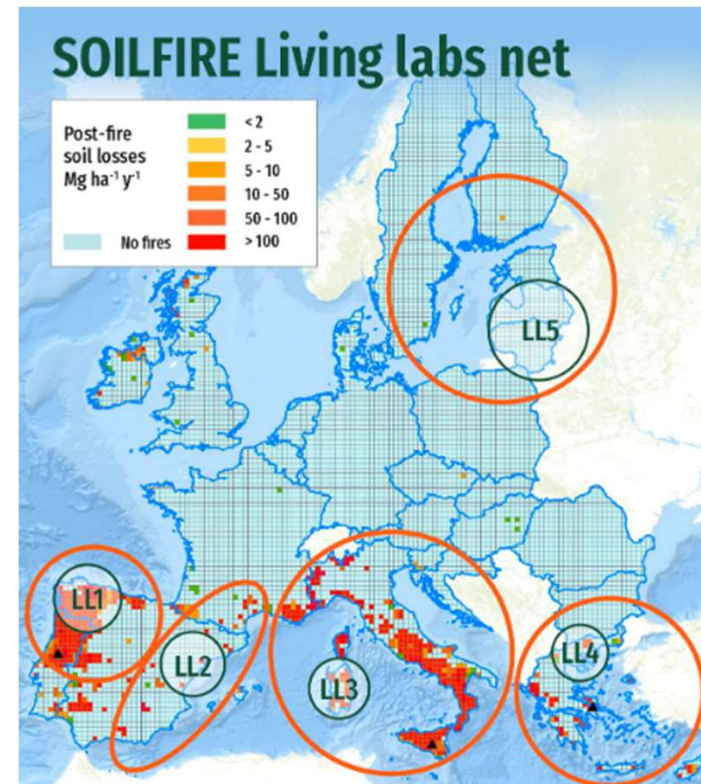
 101218992\_SOILFIRE\_ESR

Acknowledgement status: N/A

### Evaluation Summary Report

#### Evaluation Result

Total score: 11.00 (Threshold: 10 )







# Pateicībā par iespēju būt divos brīnišķīgos konsorcijs!

Research and innovation



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