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NATURA 2000

LIFE21-IPC-EE-LIFE-SIP-AdaptEst

Implementation of national climate change adaptation activities in Estonia

Argo Orumaa

Brasov

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LIFE21-IPC-EE-LIFE-SIP AdaptEst

- Duration: 01/01/2023-31/03/2032
- Coordinating Beneficiary: The Ministry of Climate
- The main objective of the project is to **increase the resilience of different ecosystems in a changing climate**, improve society's readiness to adapt to climate change (through the updating of weather forecasting models and climate projections), and to ensure the socio-economic positive effects through sustainable use of resources via employing several good-practices, demonstration and piloting, and capacity building activities.

LIFE21-IPC-EE-LIFE-SIP AdaptEst

- **There is 7 work packages:**
- Management of the Alam-Pedja nature conservation area as a pilot
- Mapping of water bodies affected by climate change and developing support measures for resilience
- Compilation of National water re-use strategy
- **Ensuring healthy, adaptable, and diverse forests in a changing climate**
- Reducing the effects of anthropogenic factors in a changing climate by removing obsolete dams, restoring the spawning areas and habitats of important water bodies and restocking critically endangered fish species
- Development of monitoring, information, and support system
- Updating climate projections

WP 5 – Ensuring healthy, adaptable, and diverse forests in a changing climate

- **Background**: Majority of Estonian forests and forestry is based on three tree species: Scots pine, Norway spruce, and Silver birch. These three species comprise 75% from all growing stock in forests
- Climate change is in progress and already caused a lot of disturbances in forests and we are facing an unpredictable future
- **The aim** of the action is to ensure healthy, adaptable, and diverse forests in a changing climate with the purpose of high-quality raw materials and increased income from the valorisation of timber
- Work package is divided into two parts:

Field testing local and foreign provenances and seed sources of different tree species for the production of forest reproductive material for resilient, productive and healthy forests in the future

- Six three species are being field tested:
- Silver birch (Betula pendula)
- Scots pine (Pinus Sylvestris)
- Norway spruce (Picea abies)
- European beech (Fagus sylvatica)
- European larch (Larix decidua)
- Douglas fir (Pseudotsuga menziesii)

Field testing local and foreign provenances and seed sources of different tree species for the production of forest reproductive material for resilient, productive and healthy forests in the future

- Material collected from best seed sources in other countries nearby (also Central Europe countries) are being field-tested
- In 2025, Scots pine trees are planted and in following years other species will be planted

Mixed species demonstration sites

- It is important to establish demonstration sites to introduce the possibilities and best practices of mixed forest management to mitigate the climate change effects on forests and demonstrate the resilience of the mixed forest stands to climate change
- Demonstration sites will be established for forest owners and managers to determine which tree species and their various combinations would be economically viable to cultivate in the future
- There are five demonstration sites that are established to former agricultural lands and their sizes are 5 to 13 hectares

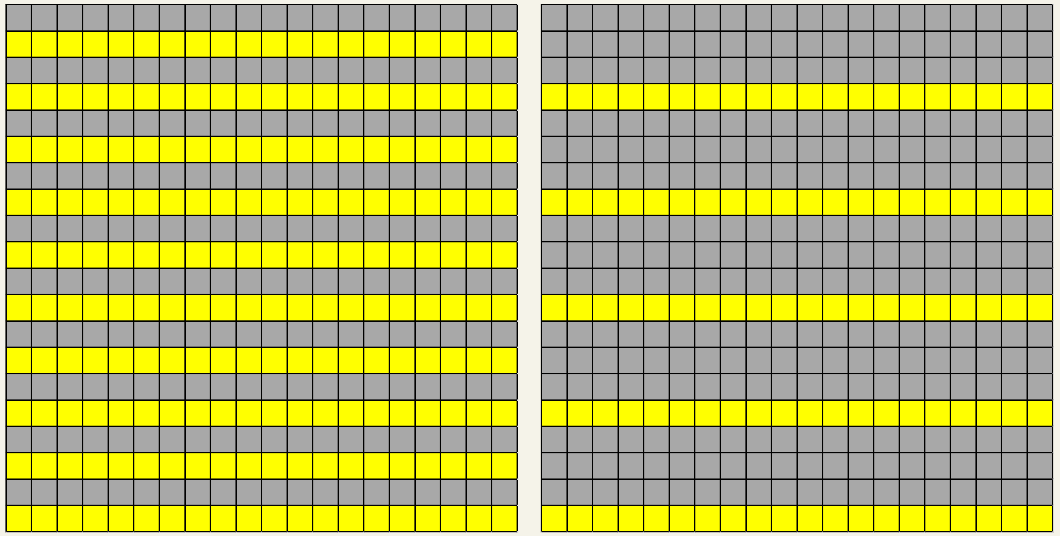
Mixed species options

- 1. Pedunculate oak + Norway spruce (Quercus robur + Picea abies)
- 2. Pedunculate oak + Small-leaved lime (Quercus robur + Tilia cordata)
- 3. European larch + Norway spruce (Larix decidua + Picea abies)
- 4. European larch + Scots pine (Larix decidua + Pinus sylvestris)
- 5. European larch + Silver birch (Larix decidua + Betula pendula)
- 6. Siberian larch + Norway spruce (Larix sibirica + Picea abies)
- 7. Siberian larch + Scots pine (Larix sibirica + Pinus sylvestris)
- 8. Siberian larch + Silver birch (Larix sibirica + Betula pendula)
- 9. Douglas fir + Norway spruce (Pseudotsuga menziesii + Picea abies)
- 10. Douglas fir + Silver birch (Pseudotsuga menziesii + Betula pendula)
- 11. Norway spruce + Norway maple (Picea abies + Acer platanoides)

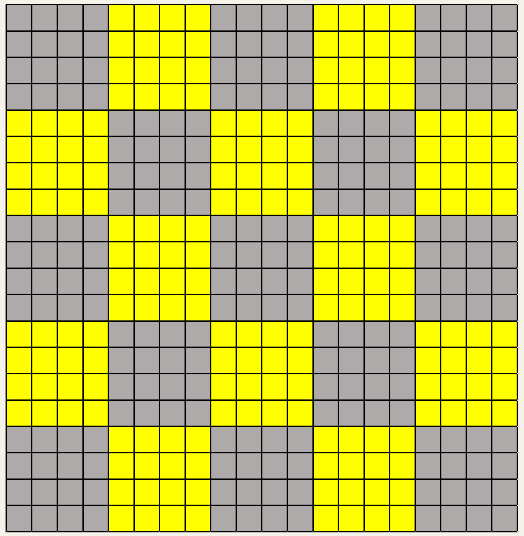
Mixed species options

- In years 2024 to 2026 in each demonstration sites mixed species options are planted annually
- Each year a diferent planting system is used

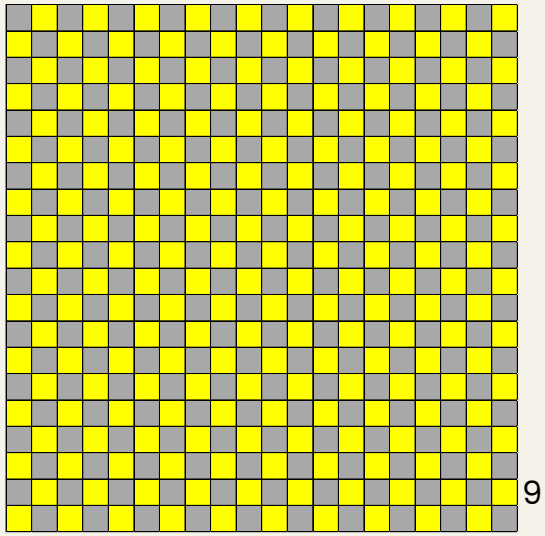
2024



2025

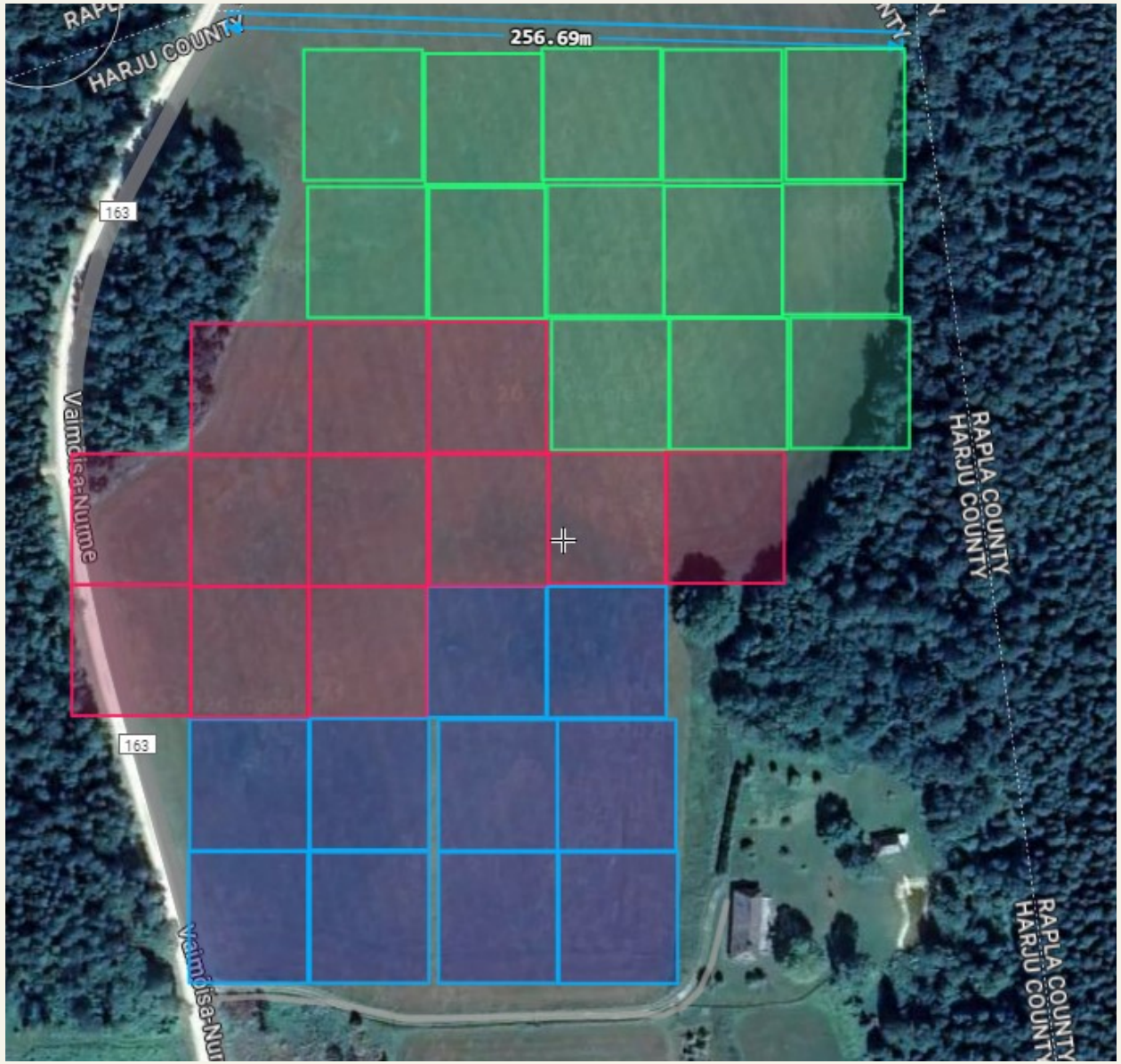


2026



Demonstration site design

- 2026
- 2025
- 2024



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Kliimanutikas Eesti!

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KLIIMAMINISTEERIUM

Eesti Maaülikool
Estonian University of Life Sciences

Segapuistute näidisalad

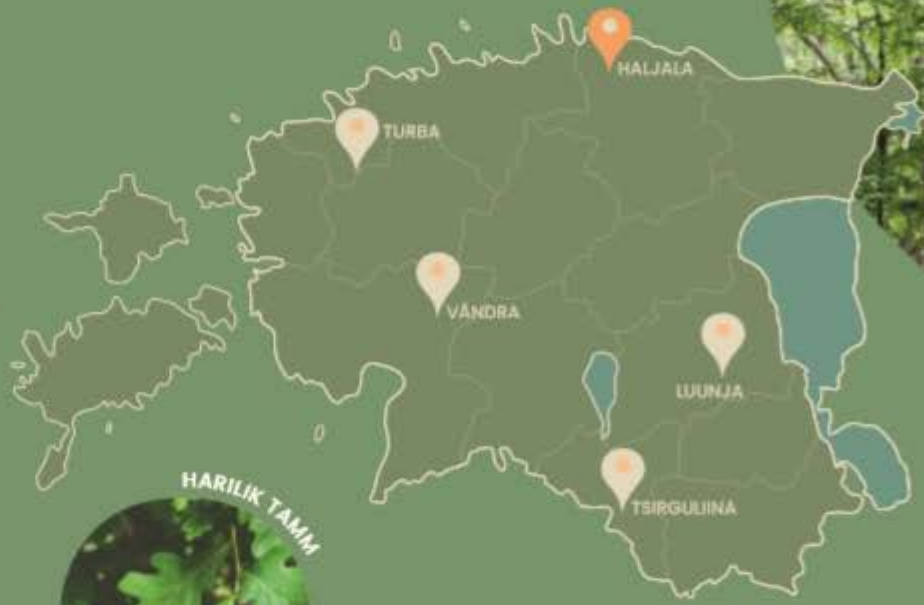
NÄIDISALAD:

Katsetame erinevate puuliikide koos kasvatamise võimalusi, panustades seelabi metsade elujõulisuse, tootlikkuse ja mitmekesisuse suurendamisesse. Soov on teada saada, milliseid puuliike ja nende erinevaid kombinatsioone oleks kliimamuutusi arvestades majanduslikult mõttekas tulevikus koos kasvatada.

Harjumaale, Lääne-Virumaale, Pärnumaale, Tartumaale ja Valgamaale on rajatud segapuistute näidisalad, mis on ülesehituselt sarnased. Segude puhul on kasutatud erinevaid istutuskombinatsioone. Ulukikahjustuste vältimiseks on alad ümbritsetud taraga.

PUULIIGID:

Näidisaladelt võib leida mitmeid puuliike, mis on Eestis metsamajanduslikult tänapäeval tähtsad, kuid ka neid liike, mis võivad muutuvates kliimatingimustes paremini kasvada ja hakkama saada. Erinevates segudes kasvatavateks puuliikideks on arukask, harilik mänd, harilik kuusk, harilik tamm, harilik pärn, harilik vaher, euroopa lehis, siberi lehis ja harilik ebatsuuga.



TUTVU PROJEKTIGA LÄHEMALT

www.lifeadaptest.ee

LIFE-SIP AdaptEST ehk „Kliimamuutustega kohanemise tegevuste elluviimine Eestis" (LIFE21-IPC-EE-LIFE-SIP AdaptEst/101069566) projekti eesmärk on suurendada meie ühiskonna valmisolekut kliimamuutustega

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Problems so far

- As far, the main problem has been that nurseries do not grow non-native or rare species. Obtaining these species is difficult (Douglas fir, pedunculate oak, small-leaved lime, Norway maple, larch species)
- It is important that nurseries expand the range of tree species

Working Group II: European forests and climate change

- Enhancing the resilience of forest ecosystems to climate change, drought, storms, and forest fire risks
- Exploring the role of forests in carbon sequestration, adaptation strategies, and mitigation measures
- Strategies to improve the sustainability of forest biomass use while maintaining biodiversity and ecosystem integrity
- Strengthening early warning systems and adaptive management for extreme weather events and pest outbreaks

Thank you for listening!