

# Light & Fire LIFE

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METSÄHALLITUS

Puohde-LIFE



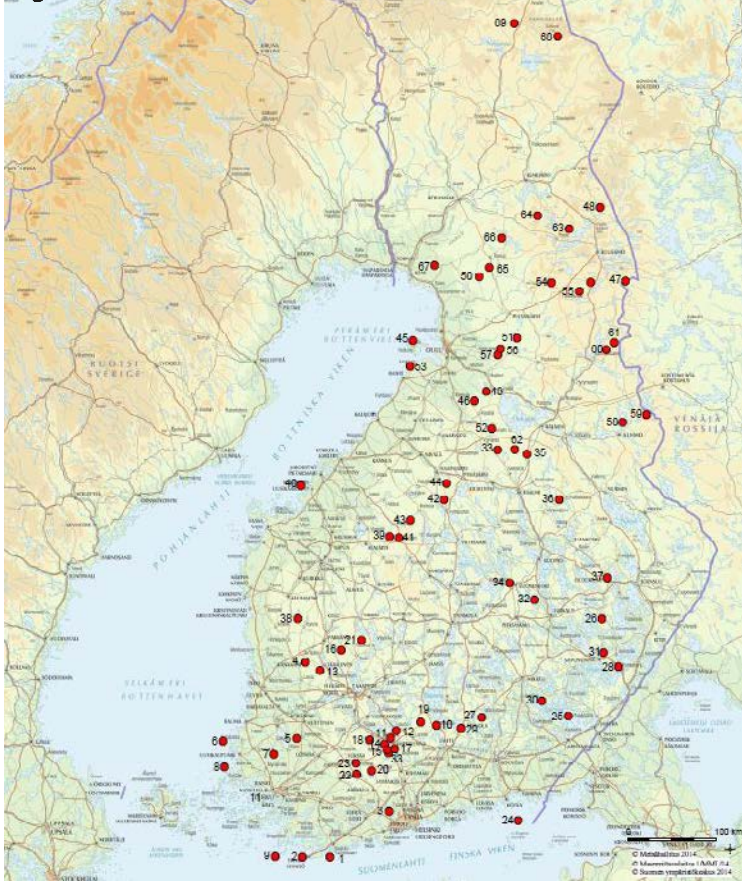
Light & Fire LIFE



NATURA 2000







# Light & Fire Project

- LIFE+ Nature
- Nation-wide - 69 Natura2000 areas
- CoB: Metsähallitus, Park & Wildlife Finland
- ABs: Metsähallitus Forestry, ELY Centre for North Savo, Häme University for Applied Sciences, Finnish Forest Centre, UPM-Kymmene Corp., WWF Finland
- 6 years (1.8.2014 - 31.7.2020)
- 4,06 million €
- EC contribution 50 %
  - Co-financing from the MoE (50 000€)



# Objectives of the project



Photo: Tuomas Haapalehto

## Improve the quality of fire-born and sunlit habitats

- Controlled burnings, removal of trees, bushes and litter layer
- Species translocations, removal of alien species
- Targeting 19 HD Annex I habitats, e.g.
  - Western Taiga (9010\*)
  - Esker forests (9060)
  - Coastal meadows (1630\*)
  - Fixed coastal dunes (2130\*)
  - Dry heaths (4030)



# Objectives of the project



Photo: Niko Potinkara

## Increasing awareness on the values of nature

- Restoration camps for volunteers, 10 camps in 6 sites
- Smaller events against invasive species
- Restoration trail
- A/V-materials
- Time-lapse video, re-photography
- Media work



# Restoration by controlled burning

- Re-initiating natural succession
- Resources for fire-dependent & saproxylic species
- 38 sites, app. 470 ha
- Careful planning & execution



# Why do we burn forests?



- Boreal forests used to burn quite regularly before the effective fire prevention
- Many endangered species are dependent of burned wood
- Metsähallitus conduct restoration burnings in protected areas ca. 100 hectares every year
- Fire continuum area planning is the base of the burnings



Photos: Metsähallitus/Haapalehto





<https://yle.fi/uutiset/3-10227978>

<https://www.youtube.com/watch?v=hJ8qta7hj1s>

<https://youtu.be/Gj6r8ntwiBM>

# Restoration of sunlit habitats

- Esker forests
- Creating barren conditions: removal of raw humus layer and revealing mineral soil
- Controlled burnings
- Increasing solar radiation and heat: removal of trees, bushes and other biomass
- Translocation of *Thymus serpyllum*
- 34 sites, 345 ha



Photo: Teemu Rintala



Photo: Matti Seppälä

# Restoration of sunlit habitats

## Restoration of dunes and heaths

- Removal of trees, bushes and common reed, controlled burning
- Translocation of *Thymus serpyllum*

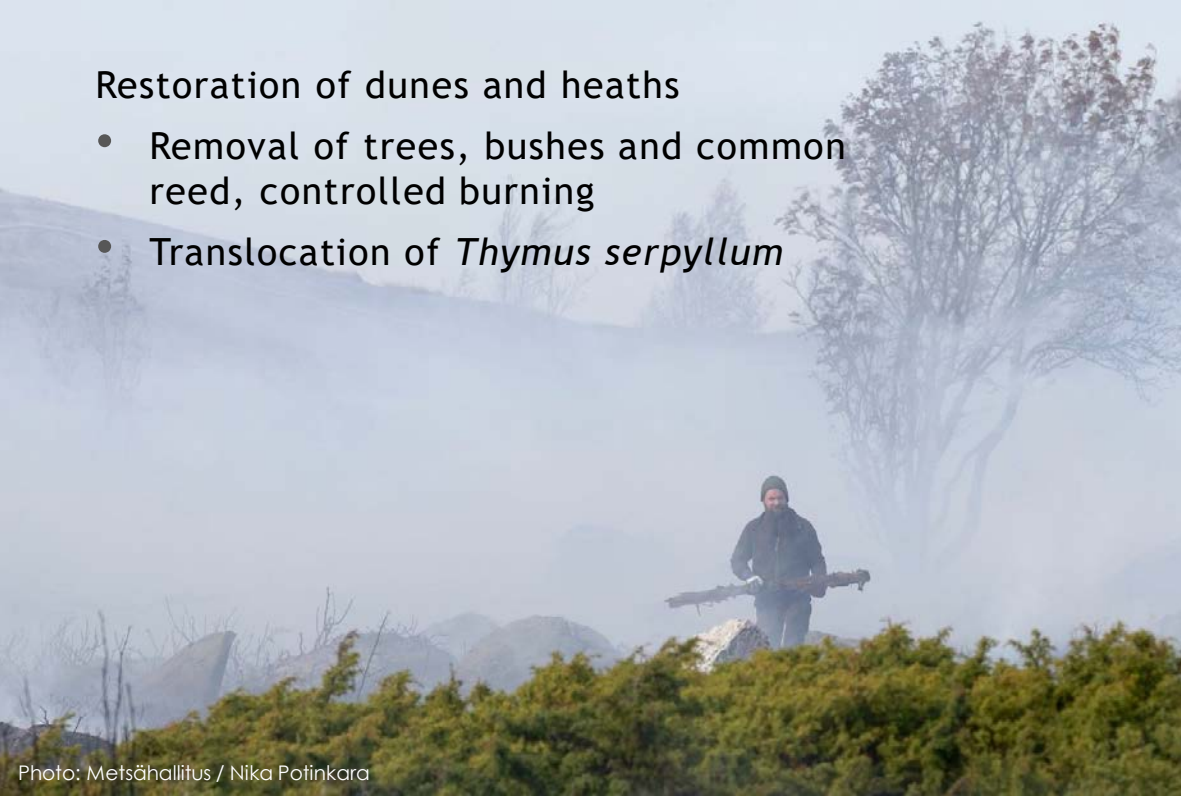


Photo: Metsähallitus / Nika Potinkara



Photo: Metsähallitus / Maija Mussaari



Photo: Metsähallitus / Maija Mussaari



# Restoration of Baltic sandy beaches

- Removal of trees, bushes, common reed and algal masses
- Eradication of *Rosa rugosa*
- 5 sites



# Habitat restoration and translocation of *Pulsatilla patens*

- Nationally Red-listed (EN), HD Annex II and IV species
- *Pulsatilla patens*, a nationally endangered plant species restricted to esker forests in Häme region.
- 7 sites, 8,1 ha
- Removal of humus layer and revealing mineral soil → Creating barren conditions



# Habitat restoration and translocation of *Pulsatilla patens*

- Seed material collected for propagation in a nursery
- Seedlings grown in nursery garden and 499 seedlings planted in the sites in 2016
- 84 % of the seedlings alive in the first check in 2017 and 2018 the results seem still promising



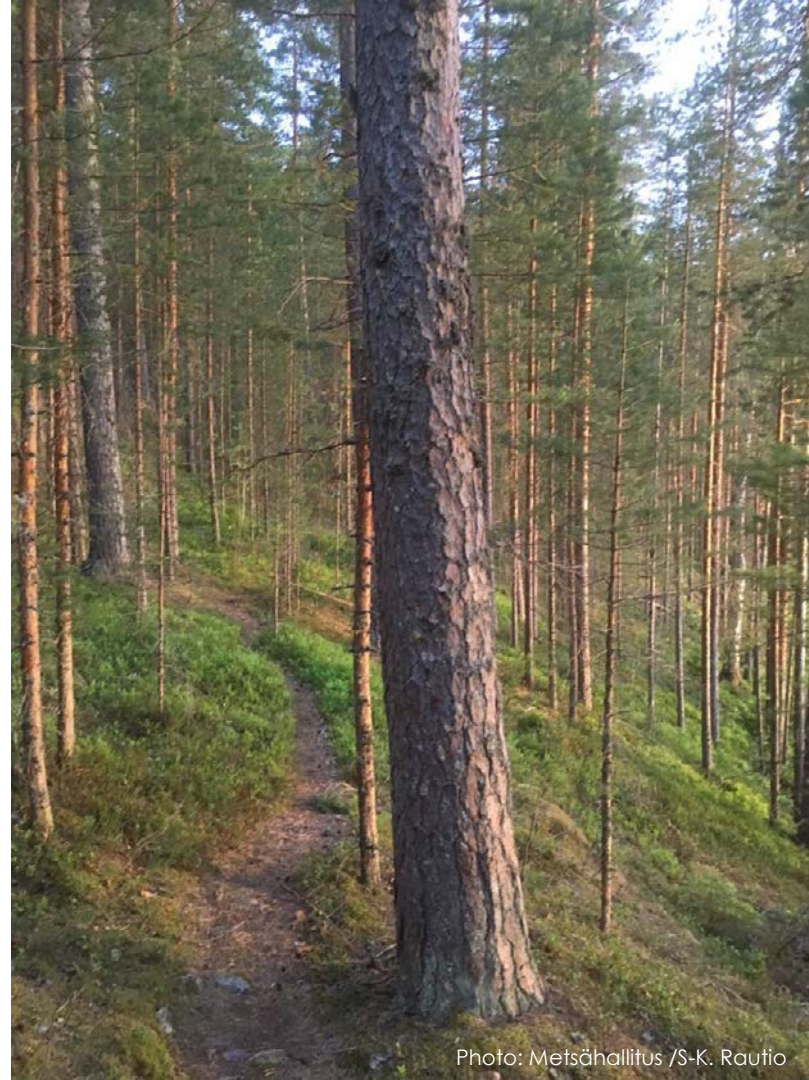
Photo: Metsähallitus / T.Haapalehto



Photo: Metsähallitus / T.Haapalehto

# Esker forests

- In Finland, Sweden & Canada
- In Finnish Natura 200 sites ca 38 000 ha
- Sun-exposed esker forest habitats are small endangered patches, dependent on disturbance
- In private protected areas eskers are protected because of their geomorphology and scenery





# Punkaharju

- 679 ha, state nature reserve, esker formations at its best
- One of the oldest nature reserves (czar Alexander I in 1803) in the world, nationally valuable landscapes of Finland
- Coniferous forests on glaciofluvial eskers (9060) 26 %
- Oligotrophic waters containing very few minerals of sandy plains (3110) 70 %
- Esker forests and sunlit habitats suffer from shading
- Young broad-leaved trees will be cleared away in 25 hectares



Photo:Hannu Vallas



Thank you!

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#paahdelife

<http://www.metsa.fi/web/en/lightandfirelife>



Paahde-LIFE



Light & Fire LIFE



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finnish forest centre

  
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