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Monitoring and habitat management in the "MIRE" LIFE project sites in Latvia

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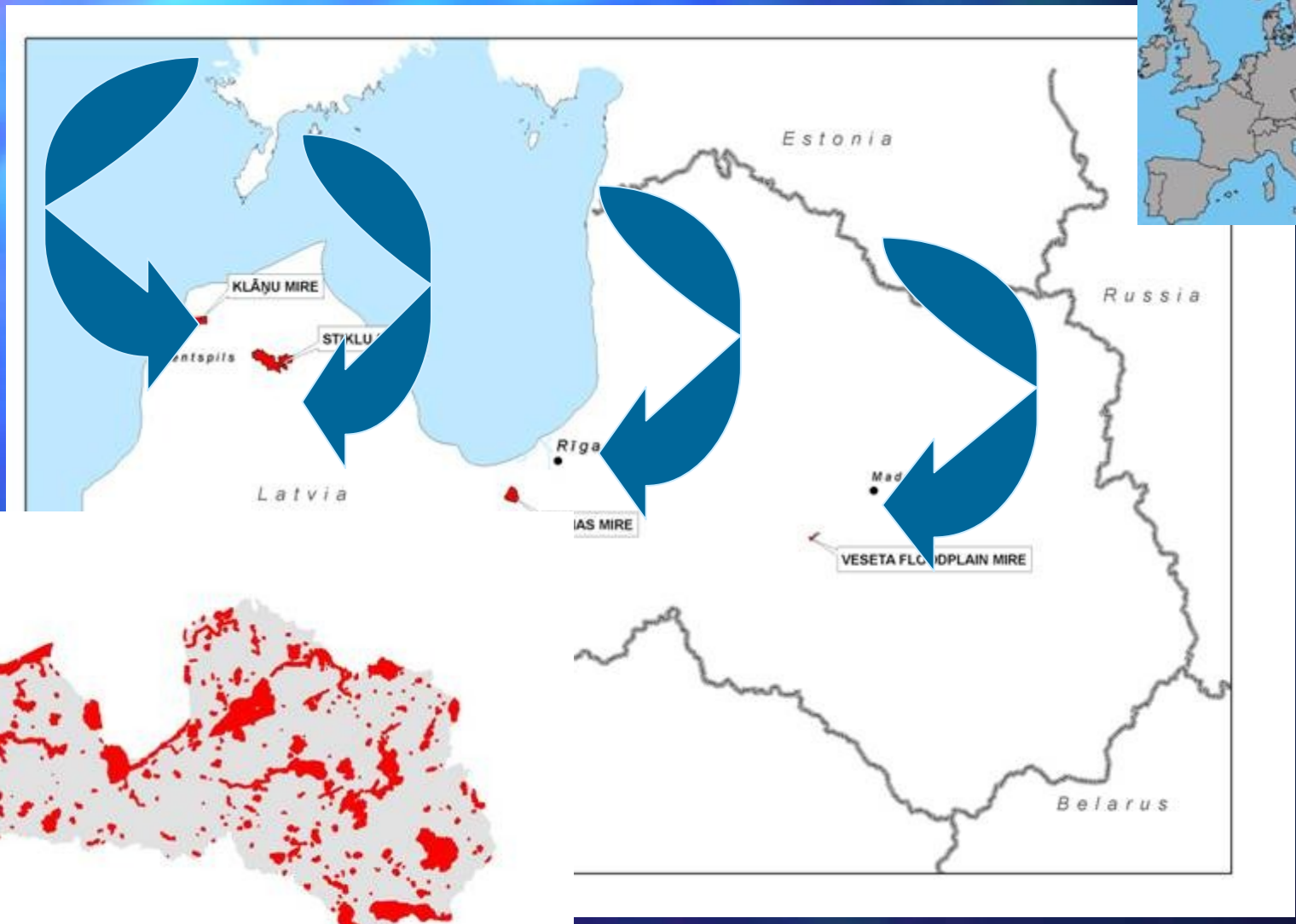
EC LIFE-Nature project LIFE04NAT/LV/000196

- Project title: "Implemenation of Mire Habitat Management Plan for Latvia"
- Duration: September 2004 – December 2008
- Beneficary: Latvian Fund for Nature
- Project Partners: 16

Project sites



Threats to the project sites

- Negative influence from drainage, peat extraction and fire;
- Degradation and loss of habitat diversity;
- Uncontrolled recreation activities;
- Lack of awareness on nature conservation issues.

Project objectives

- Elaborate management plans for 4 project sites with the total area of 10808 ha;
- Ensure the restoration of the active raised bog habitats;
- Maintain valuable spring fen and transition mire habitats;
- Maintain forest habitat – Western taiga;
- Conserve raised bog habitats by educating people about biodiversity values.

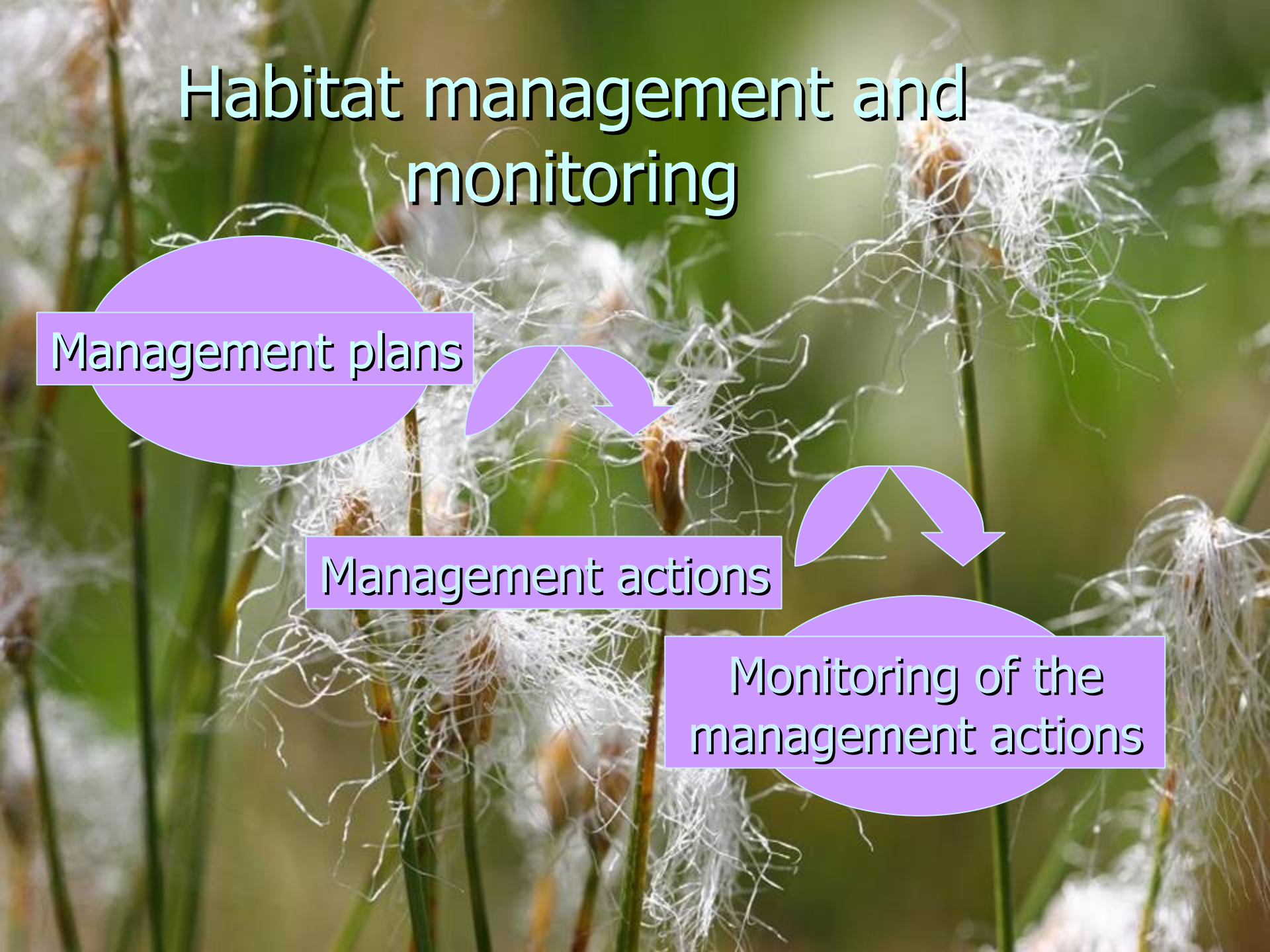
Project actions

- In total there are 24, from which 19 are devoted to habitat management and conservation;
- Currently – 12 actions are being carried out.

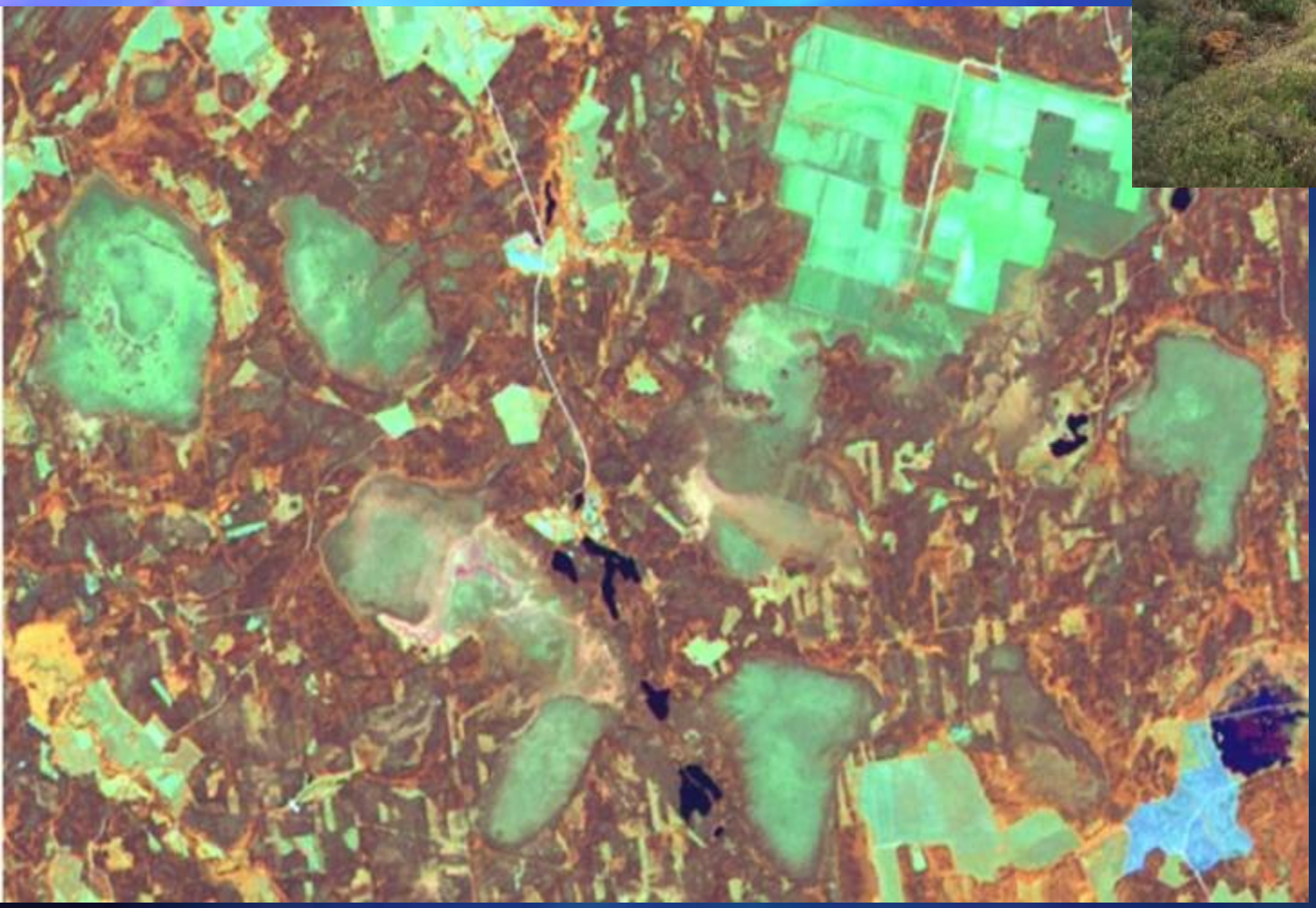
Management plans

- Management plans are the basis for conservation, management and restoration activities in project sites;
- They define whether there is no management needed or whether management actions should be carried out.

Habitat management and monitoring



Stikli Mires



Damage:

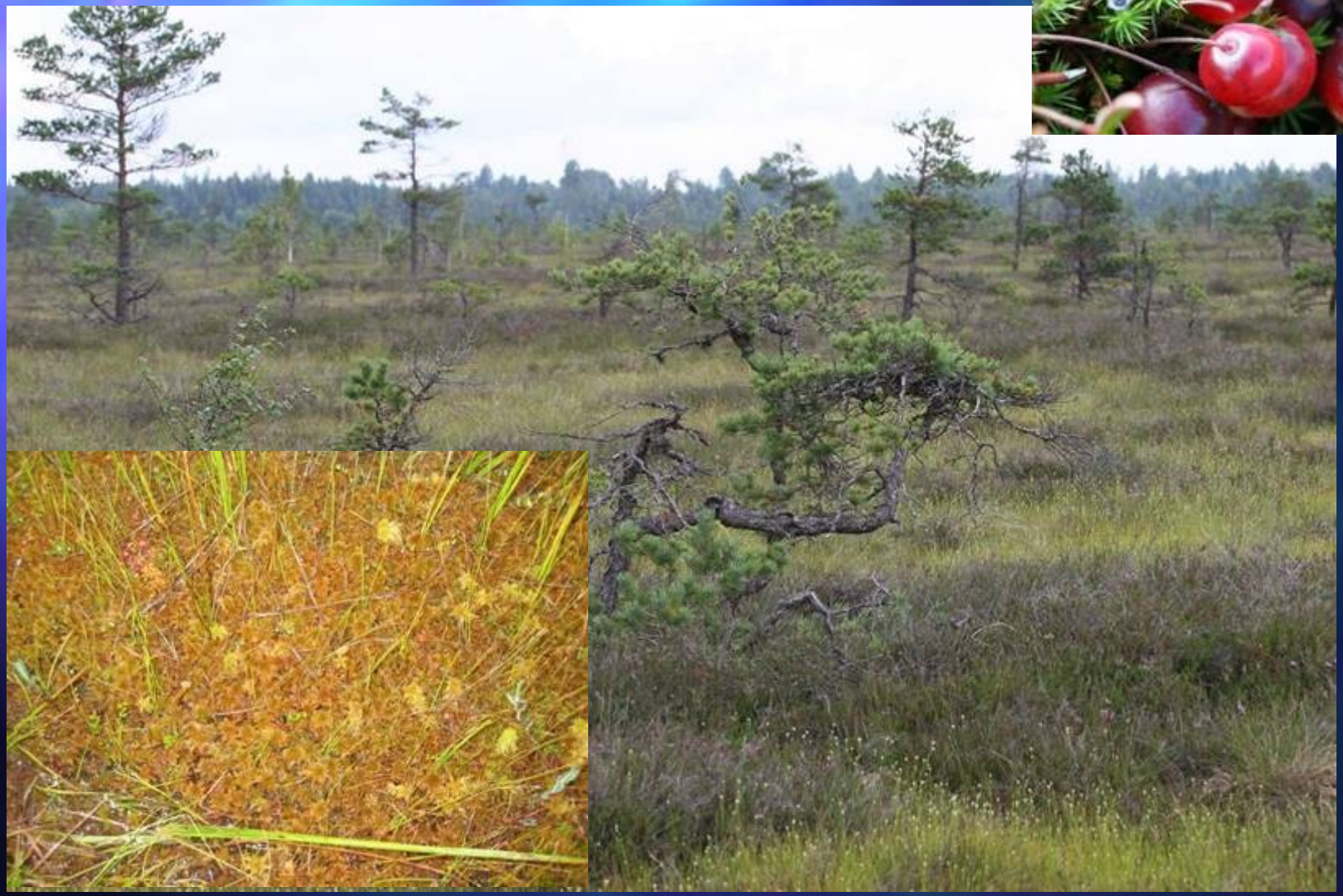
- Drainage

Solution

- Blocking ditches by peat and wooden dams

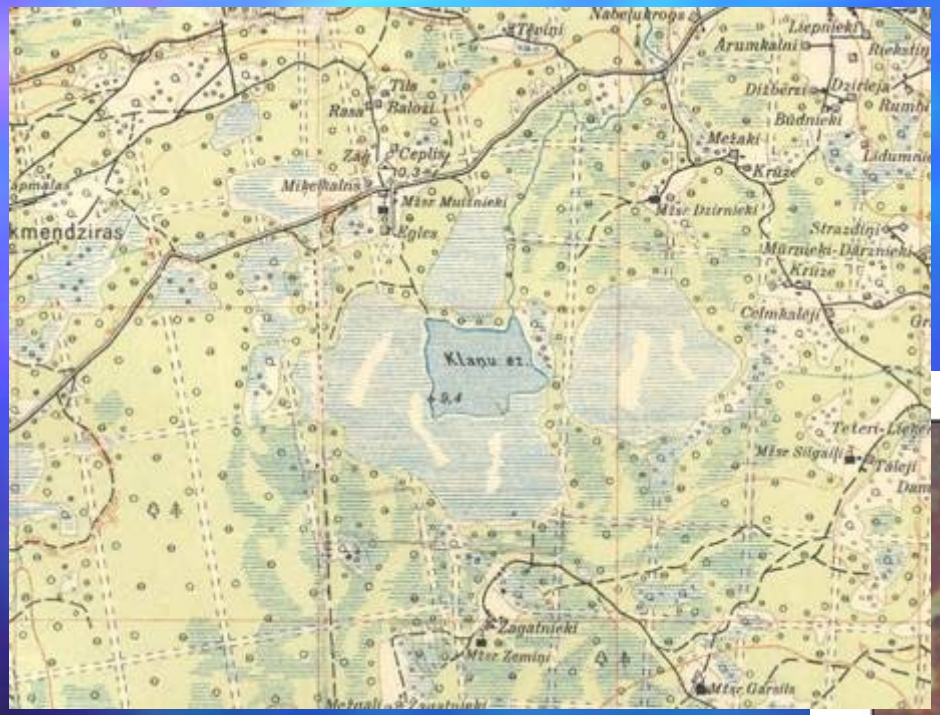
Protected area includes 5 raised bogs (total area 6636 ha)

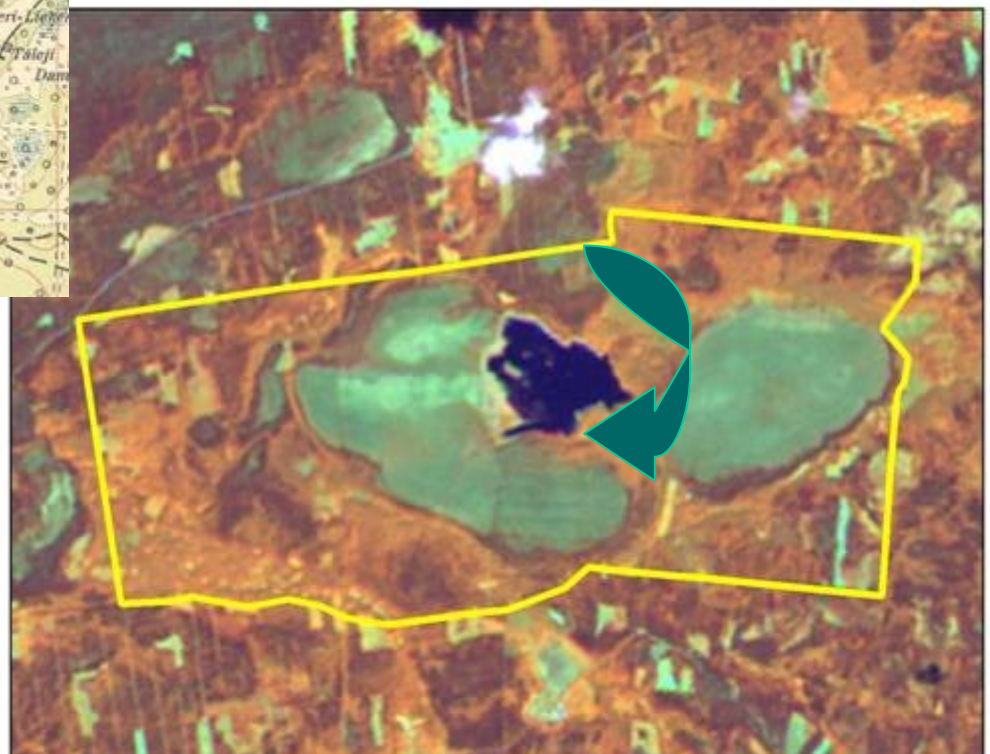
Stikli Mires



Sphagnum lindbergii

Klani Mires





Total area 1615 ha

Klani Lake

Rhynchospora fusca

Eleocharis multicaulis

Lobelia dortmanna

Klani Mire

Veseta Mire

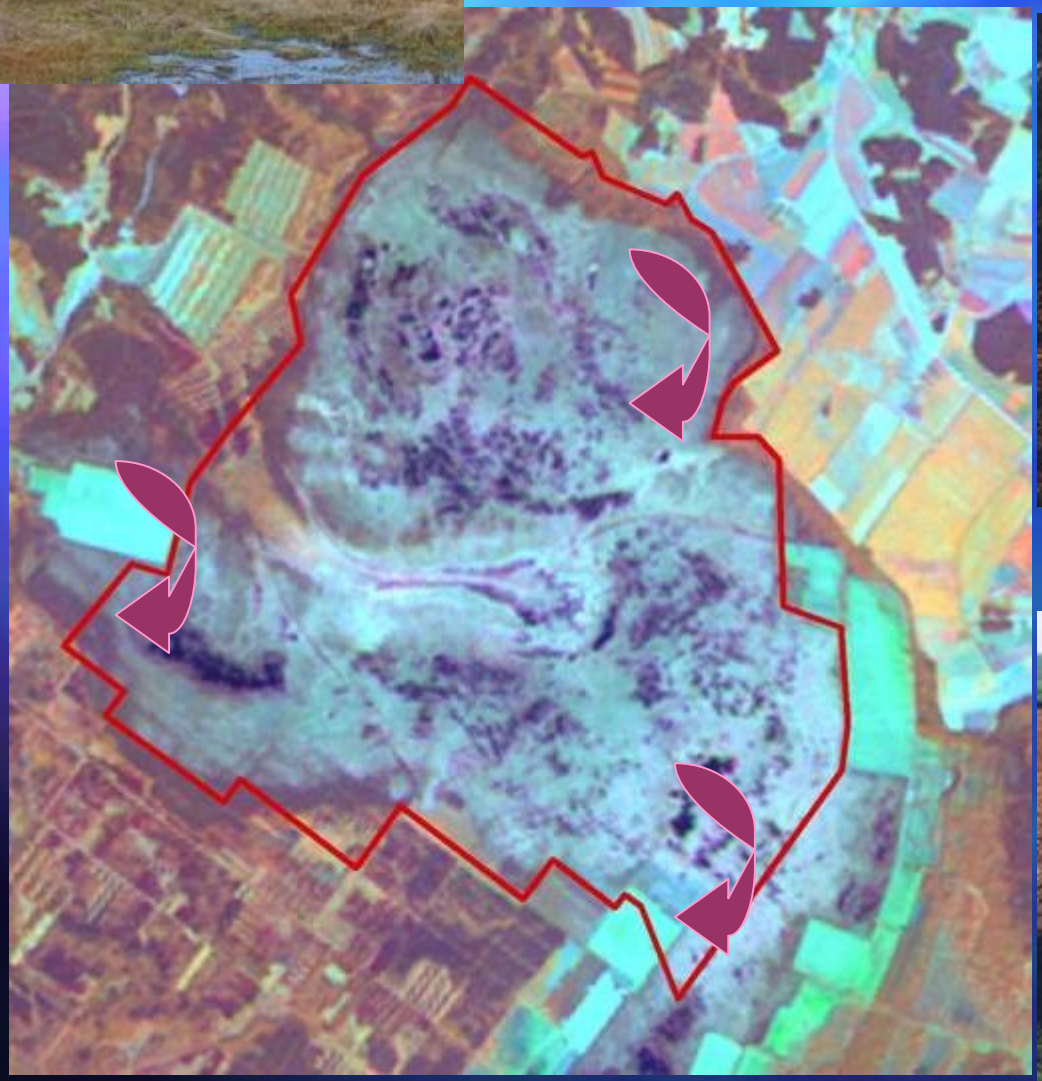
Total area 424 ha

Veseta River floodplain Mire

Hamatocaulis vernicosus

Saxifraga hirculus

Damage to Cena Mire

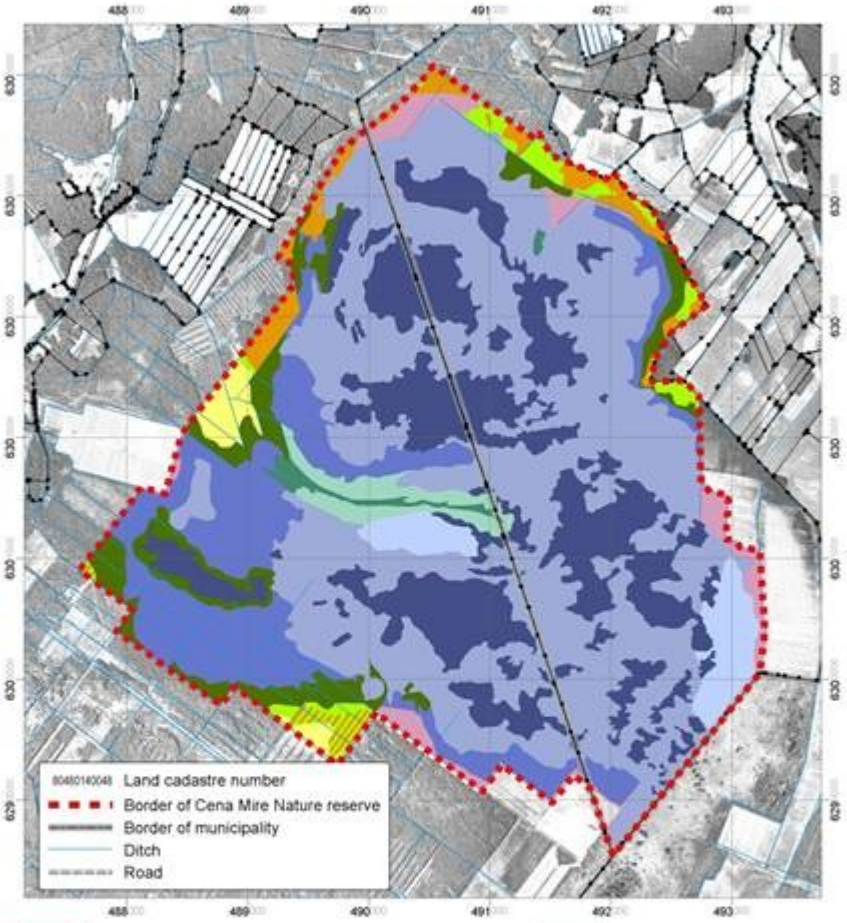


Total area 2133 ha

Drainage

Peat extraction

Habitat map of Cena Mire



- Transition mire
- Ecotone zone between raised bog and transition mire
- Open raised bog
- Raised bog with pine (>3m)
- Raised bog with pine (<3m)
- Raised bog with the complex of bog pools and hummocks
- Degraded raised bog
- Peat field
- Beavers habitat
- Bog woodland
- Drained decidious forest
- Drained coniferous forest

Scale 1:40 000

0 400 800 1 200 m

Coordinate system of Latvia LKS-92
Orthophoto in scale 1:10 000, 2003., c State Land Service of the Republic of Latvia
Land cadastre, 2004., c State Land Service of the Republic of Latvia

Raised bog habitats

Raised bog vegetation in Cena Mire

Sphagnum pulchrum

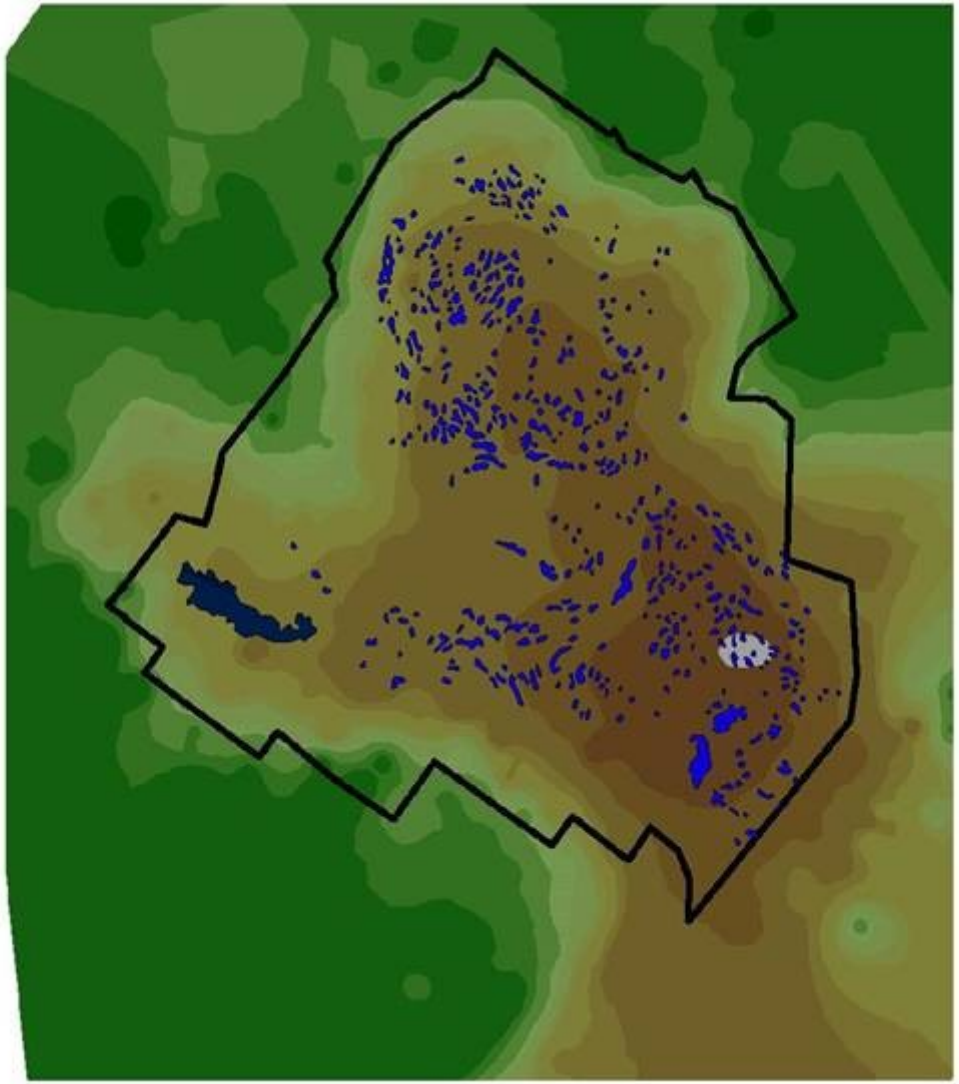
Cenas tirelis

Betula nana in Cena Mire

Trichophorum cespitosum

Chamaedaphne calyculata

Cena Mire



Keys

- the border of protected area
- raised bog pools
- Skaista lake

Elevation range

- 7 - 7.4
- 7.4 - 7.7
- 7.7 - 8.1
- 8.1 - 8.4
- 8.4 - 8.8
- 8.8 - 9.2
- 9.2 - 9.5
- 9.5 - 9.9
- 9.9 - 10.3
- 10.3 - 10.6
- 10.6 - 11
- 11 - 11.3
- 11.3 - 11.7
- 11.7 - 12.1
- 12.1 - 12.4
- 12.4 - 12.8
- 12.8 - 13.2
- 13.2 - 13.5
- 13.5 - 13.9
- 13.9 - 14.3

0.5 0 0.5 1 1.5

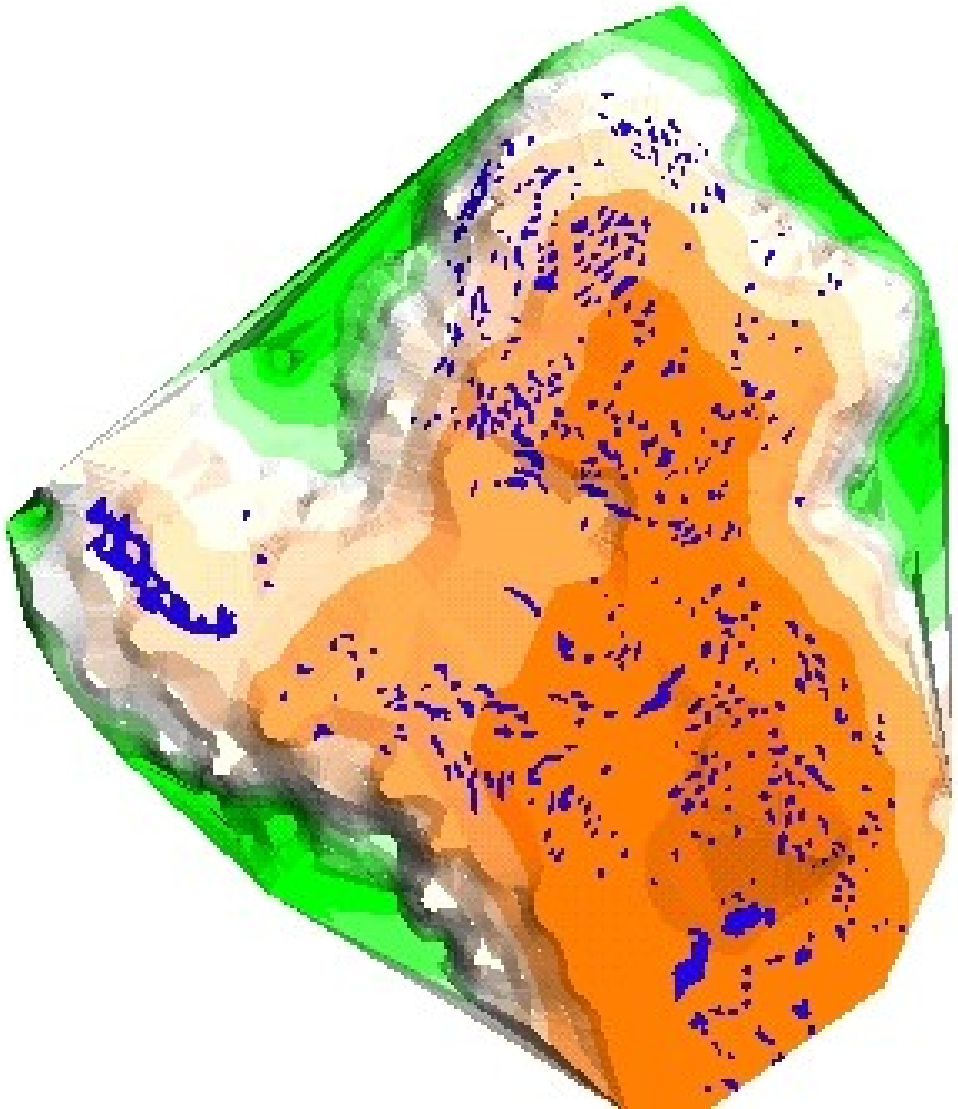
N

W E

S

Nature trail near Skaists Lake

Cena Mire



Elevation range (m)

- 7 - 7.5
- 7.5 - 8
- 8 - 8.5
- 8.5 - 9
- 9 - 9.5
- 9.5 - 10
- 10 - 10.5
- 10.5 - 11
- 11.5 - 12
- 12 - 12.5
- 12.5 - 13
- 13 - 13.5
- 13.5 - 14
- 14 - 14.5

Monitoring and management actions of the project

- Raising of water level by building dams on the drainage ditches to stop the degradation raised bog habitats;
- Habitat and site hydrology monitoring before and after any management actions.

Monitoring of the habitat management actions

What do we expect?

Vasenieku Mire

Hydrological monitoring

Nature trail in Vasenieku Mire

Geological and paleobotanical studies

Conclusions

- At present, the project sites include both natural raised bog habitats as well as those influenced by various human activities, like drainage, peat extraction and fire;
- Therefore, activities re-instating the mire hydrology are carried out;
- Habitat and site hydrology monitoring has to be carried out before any management action takes place.