LIFE13 NAT/LV/000578
CONSERVATION AND MANAGEMENT OF PRIORITY WETLAND HABITATS IN LATVIA

Conservation and management of wetland habitats in Latvia

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CONTENT OF PRESENTATION

- Mires in Latvia
- Mire restoration experience

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MIRES IN LATVIA

- Mires cover 4,9% from the total land area, they are characterised by permanent water logging, active peat formation and the continuous upward growth of the surface and specific plant cover adapted to these conditions
- Peatlands, where peat accumulation has stopped, are no longer mires
- Peat deposits include mires but also peat extractions fields, wet forests and comprise about 10% of land area in Latvia

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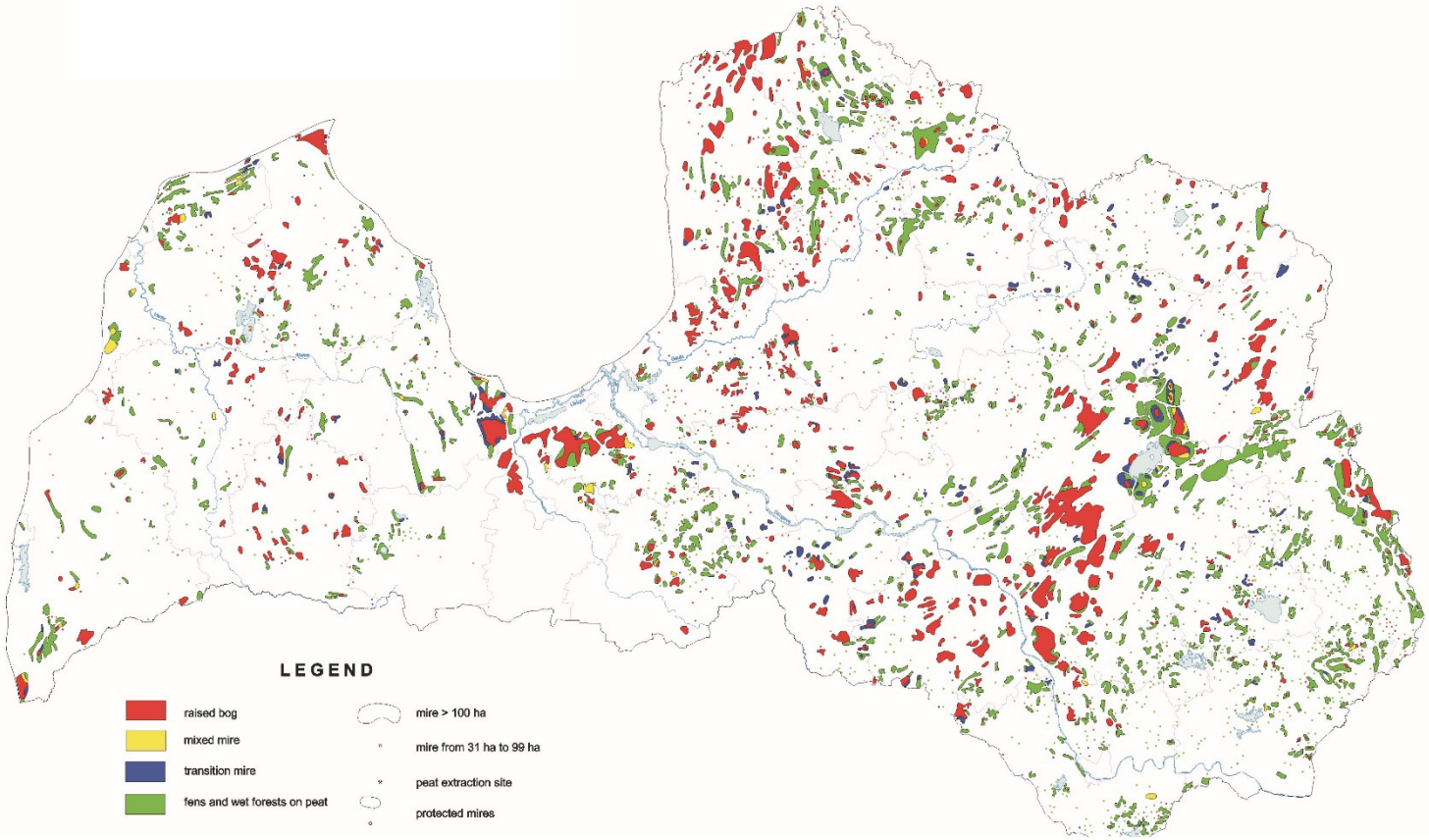
PEATLANDS IN LATVIA



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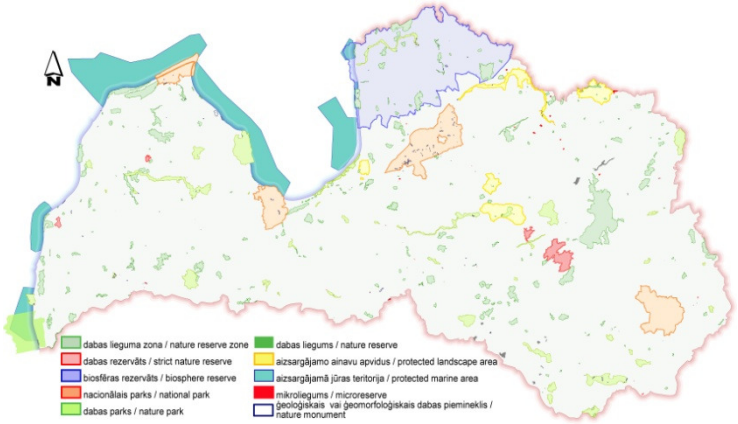
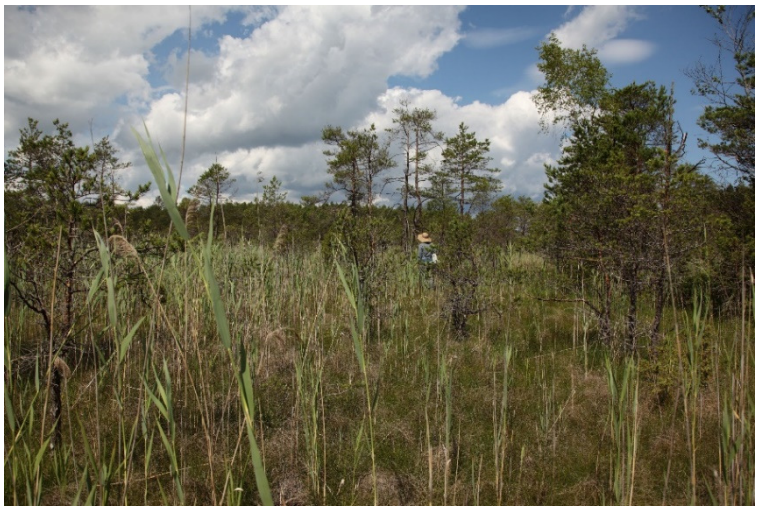
MIRES IN LATVIA



327 Natura 2000 sites

TRANSITION MIRES



FENS

RAISED BOGS

EC LIFE+ project

- Duration: June 2014 – November 2017
- Project sites: Slitere National Park, Gauja National Park, Raunas Staburags Nature Reserve and Ziemelu Mires Nature Reserve
- Coordinating beneficiary: University of Latvia
- Associated beneficiaries and co-financers: 6

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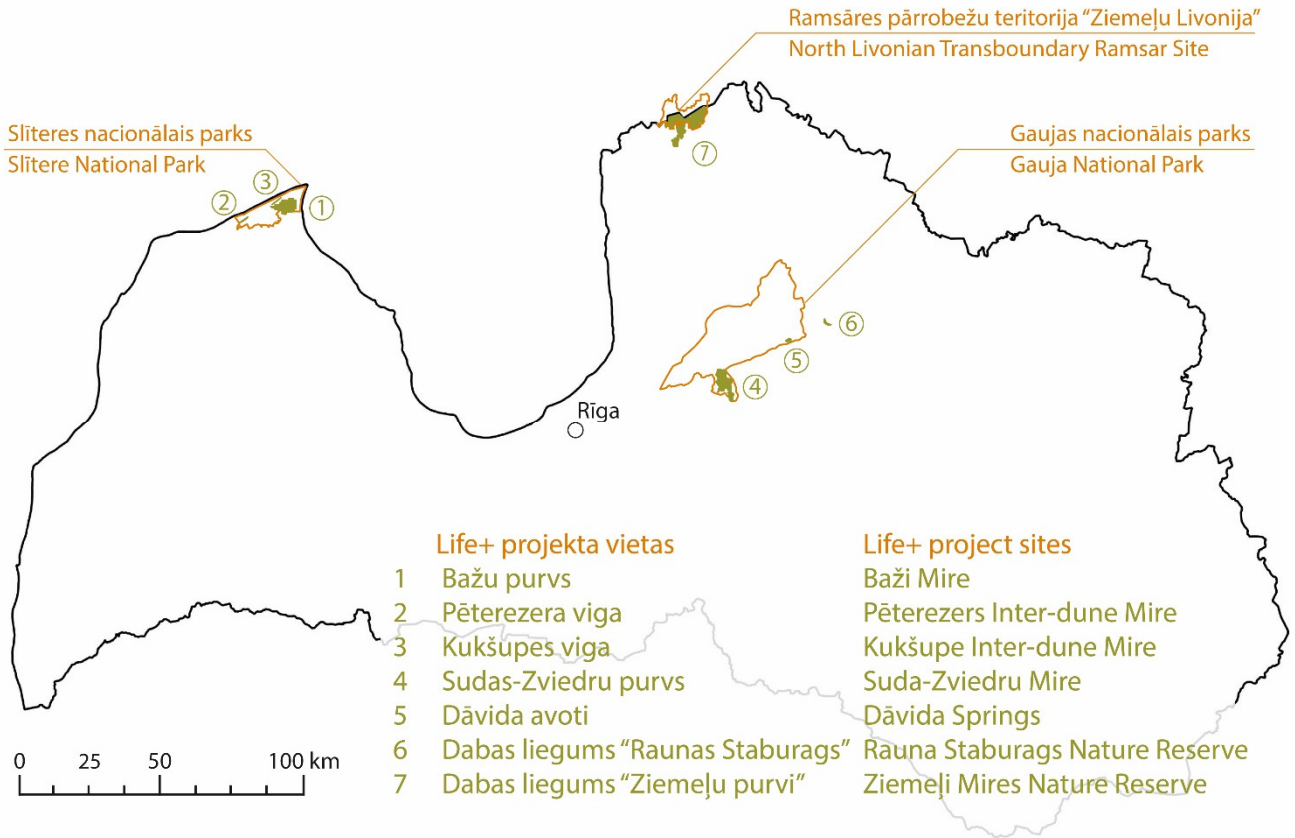
PROJECT SITES



STATUS OF EU MIRE HABITATS IN LATVIA

CODE	HABITAT	HABITAT AREA IN ITS DISTRIBUTION	SPECIFIC STRCTURES	FUTURE OF THE HABITAT	SUMMARY HABITAT EVALUATION
7110*	ACTIVE RAISED BOGS	U2	U1	U1	U2-
7120	DEGRADED BOGS	U2	U1	U1	U2x
7140	TRANSITION MIRES AND QUACKING BOGS	U1	U1	U1	U1x

U1 PROTECTION STATUS UNFAVOURABLE – not adequate

U2 PROTECTION STATUS UNFAVOURABLE – bad

+ improves, - becomes worse, x unknown

Latvia Report to the EC, Article 17, 2013

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MIRE STUDIES, MANAGEMENT AND MONITORING

MANAGEMENT PLANS

TECHNICAL DESIGNS

HABITAT AND HYDROLOGICAL MONITORING

MIRE RESTORATION ACTION

HABITAT AND HYDROLOGICAL MONITORING

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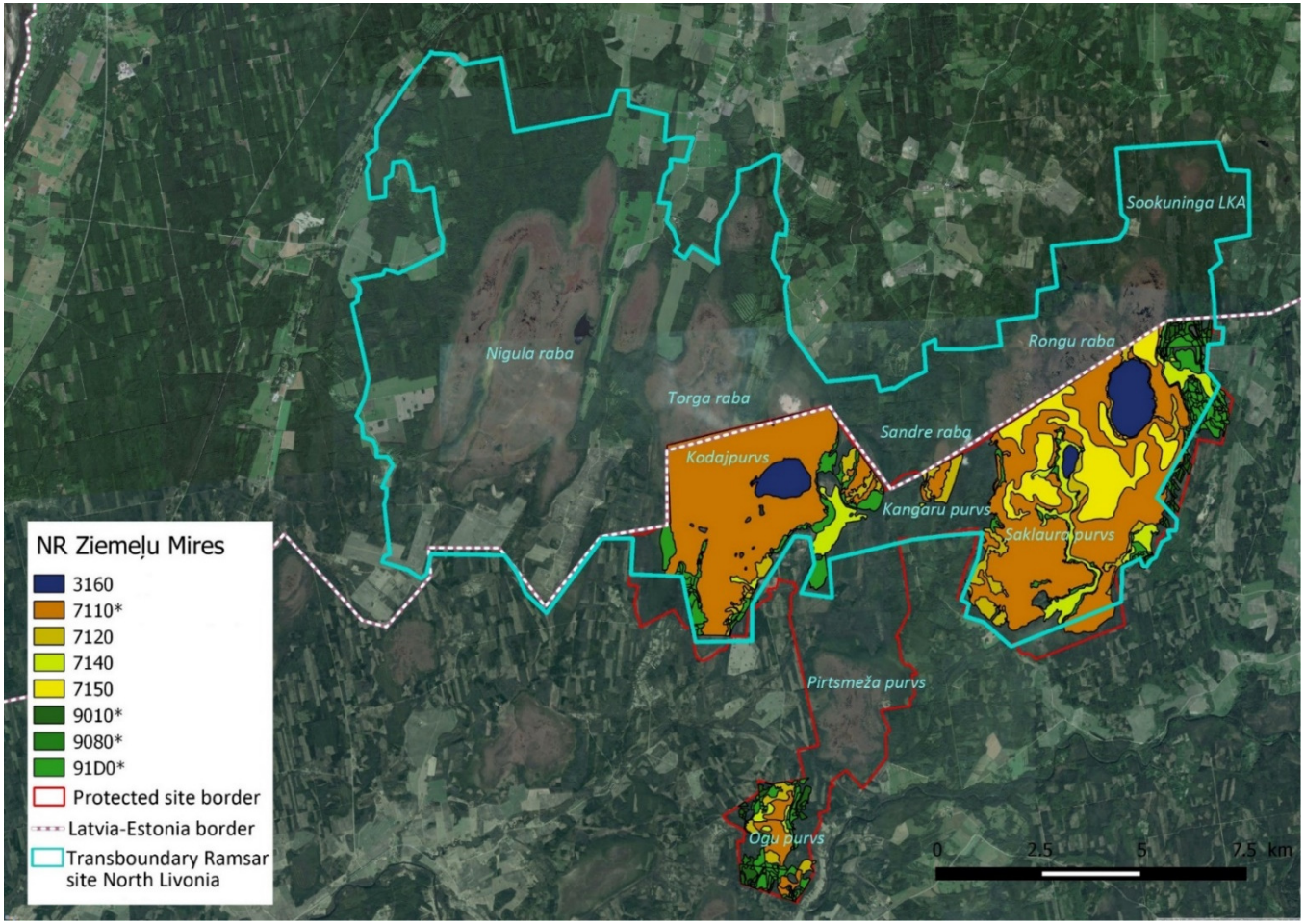
Northern Bogs Ramsar site

Total area: 7718 ha



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ZIEMEĻU MIRES

Drosera intermedia

**7110* Intact raised bog –
priority protection status in EU**

Betula nana

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ZIEMEĻU MIRES

Tetrao tetrix

Aquila chrysaetos

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GEOLOGICAL AND HYDROLOGICAL SYUDIES IN ZIEMEĻU MIRES

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BOG LAKES IN ZIEMEĻU MIRES

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ZIEMEĻU MIRES

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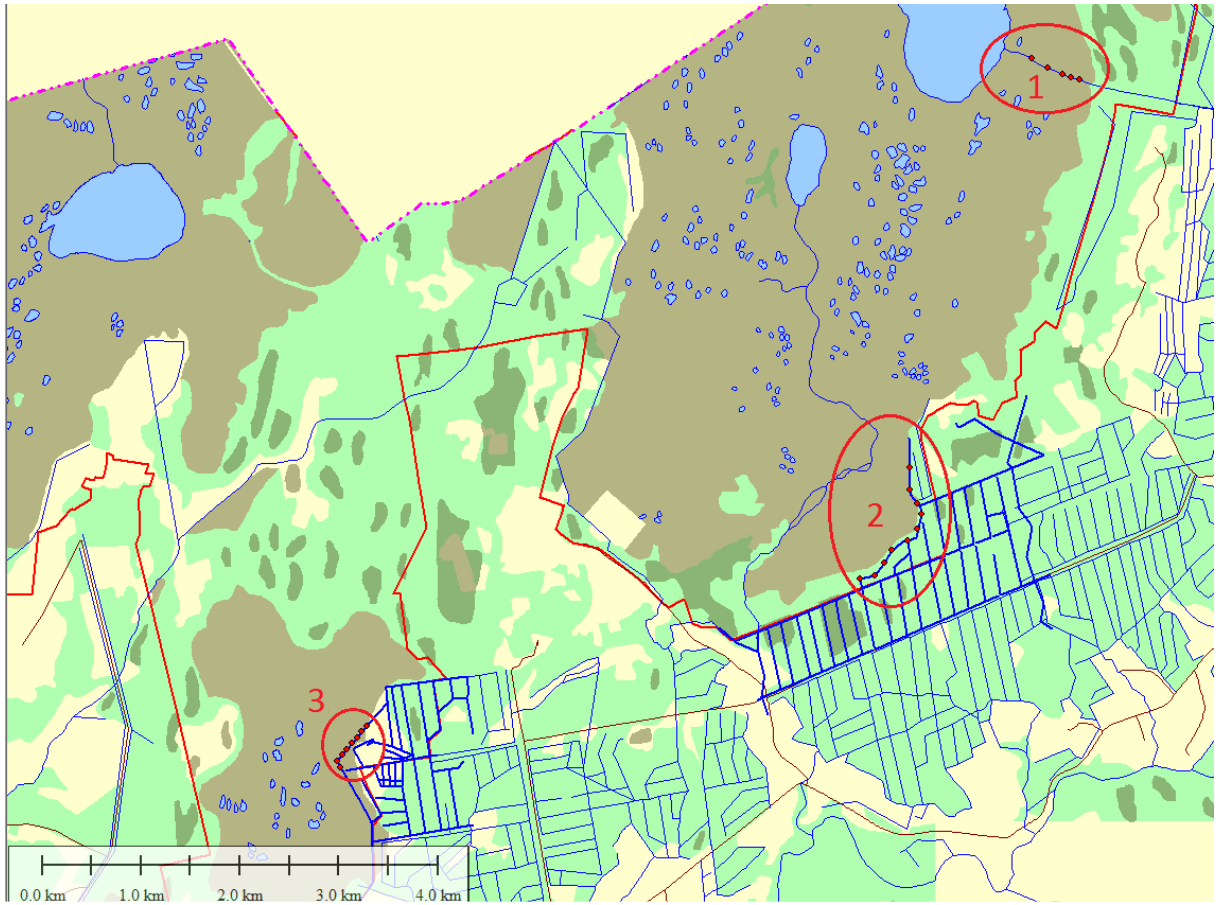
ZIEMEĻU MIRES

- **Elaboration of Management Plan**

- **Drainage ditches – 30,6 km**



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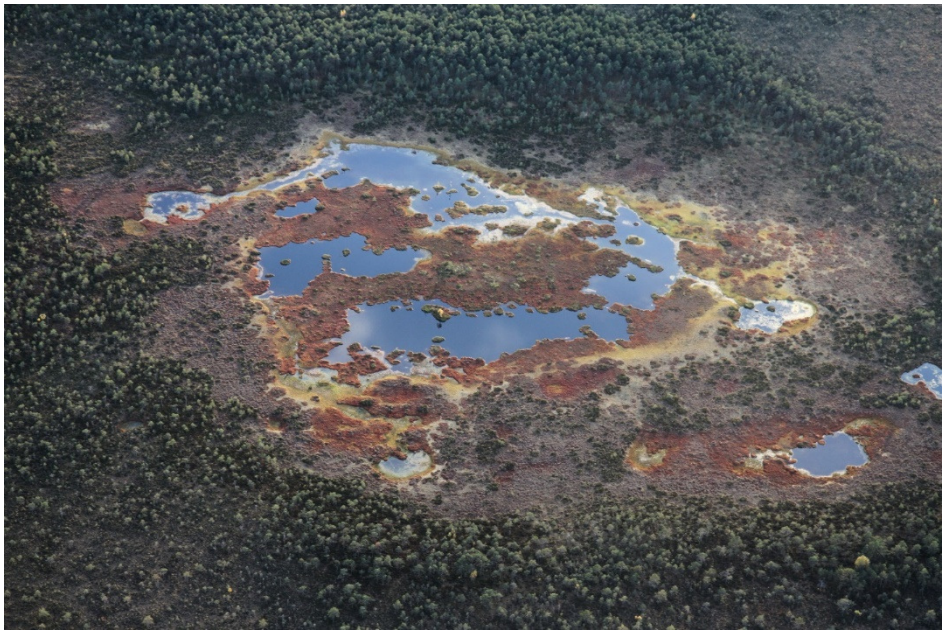
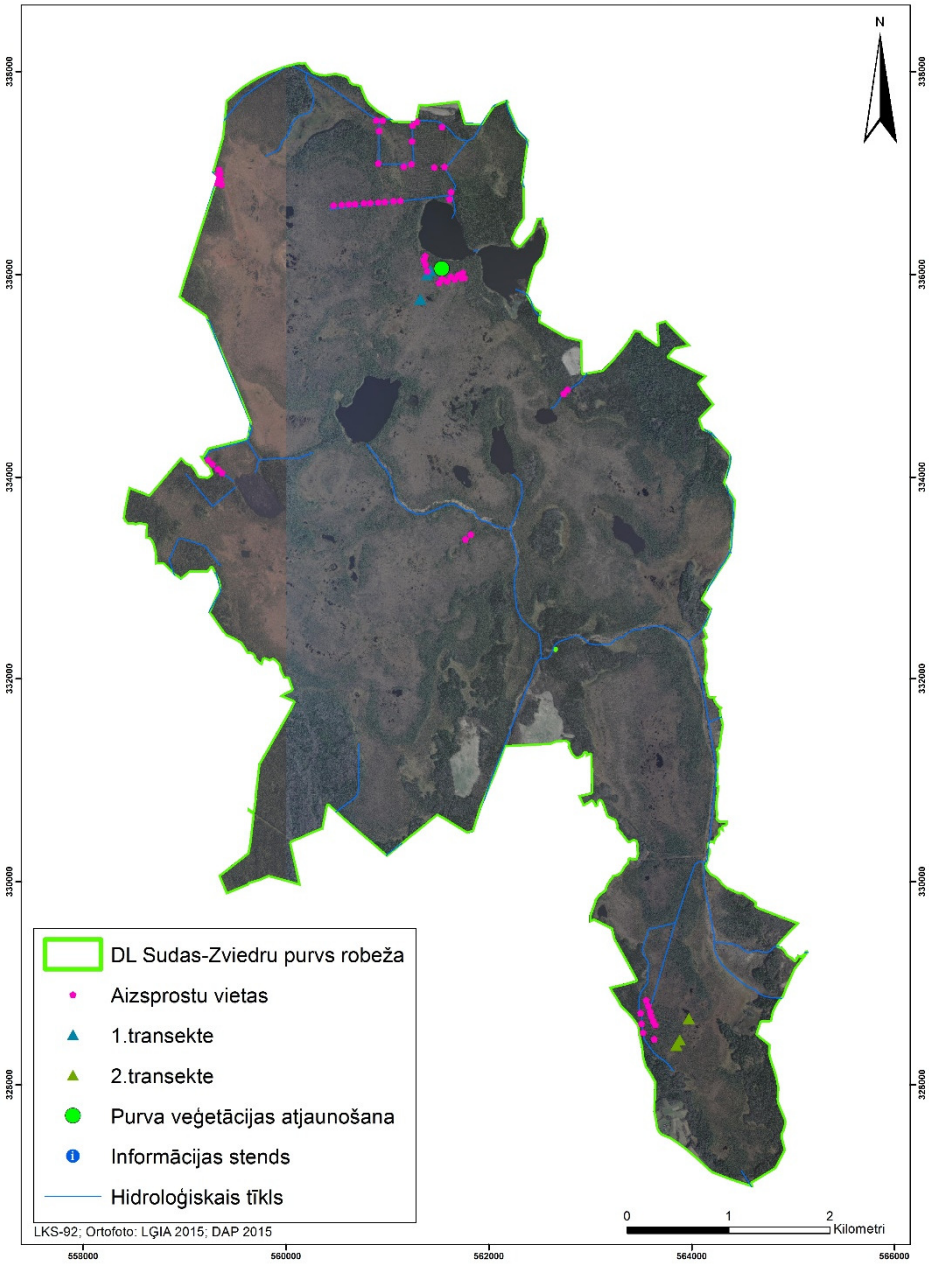
SUDAS-ZVIEDRU MIRE IN GAUJA NATIONAL PARK





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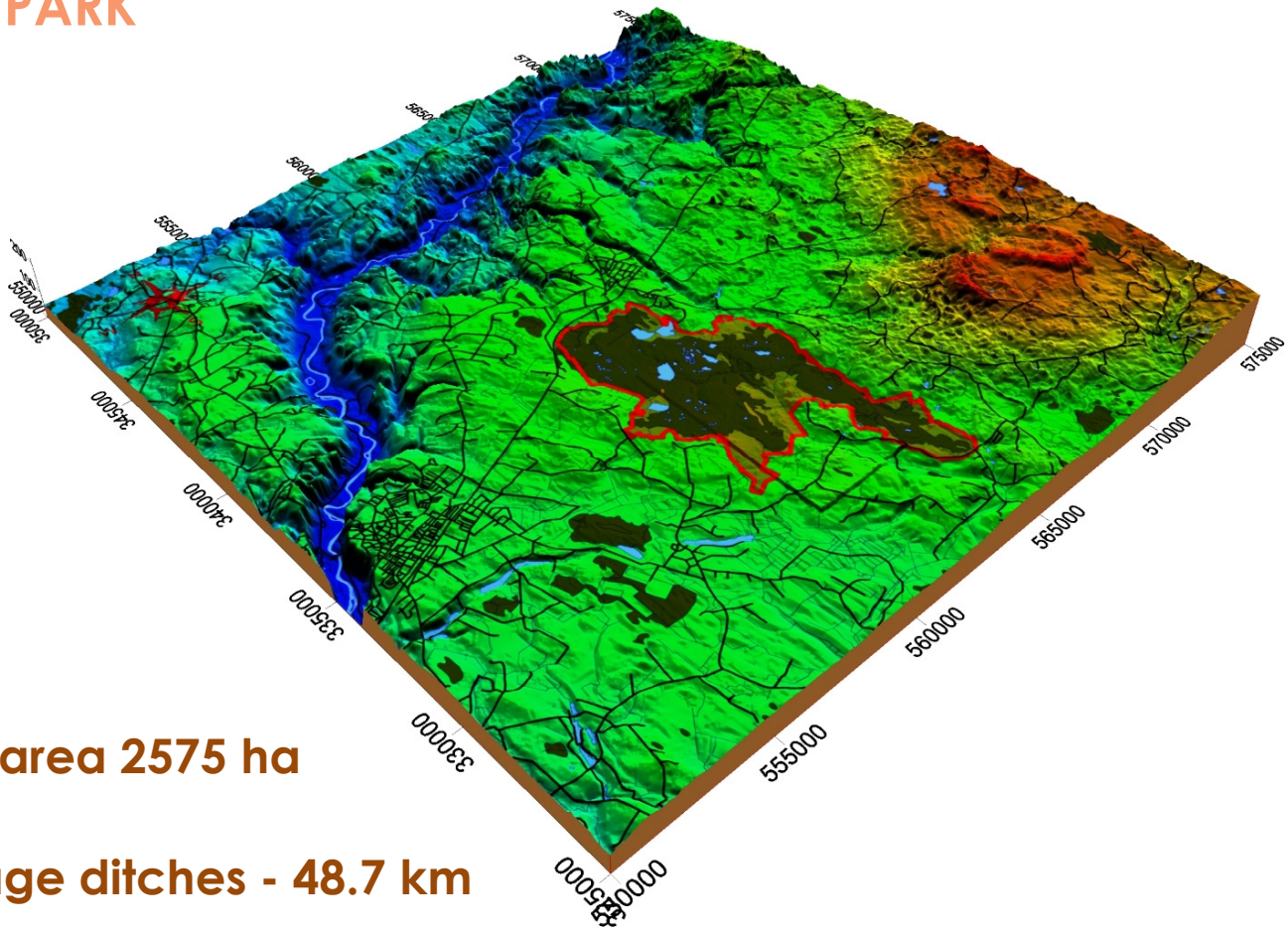
SUDAS-ZVIEDRU MIRE IN GAUJA NATIONAL PARK



Total area 2575 ha

Drainage ditches - 48.7 km

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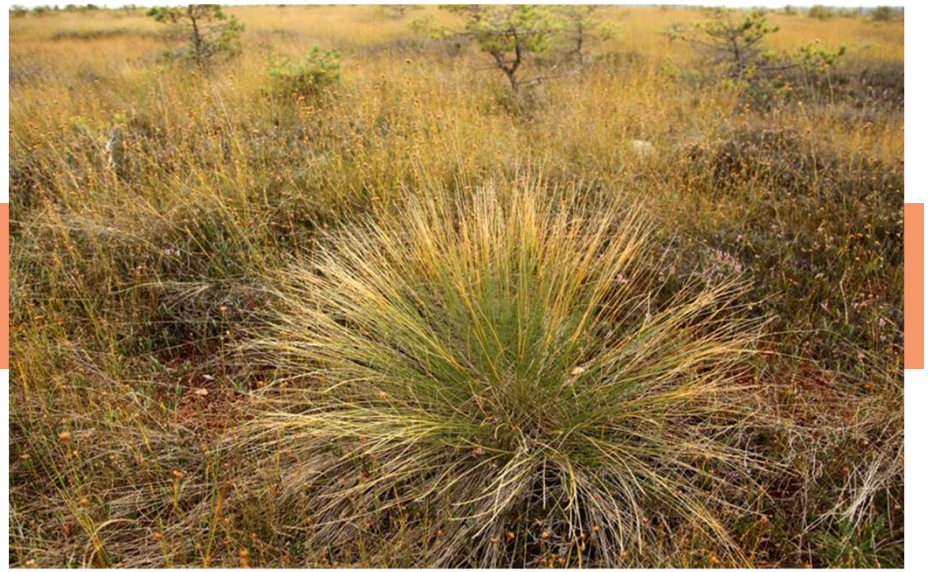
SUDAS-ZVIEDRU MIRE



Trcihophorum caespitosum

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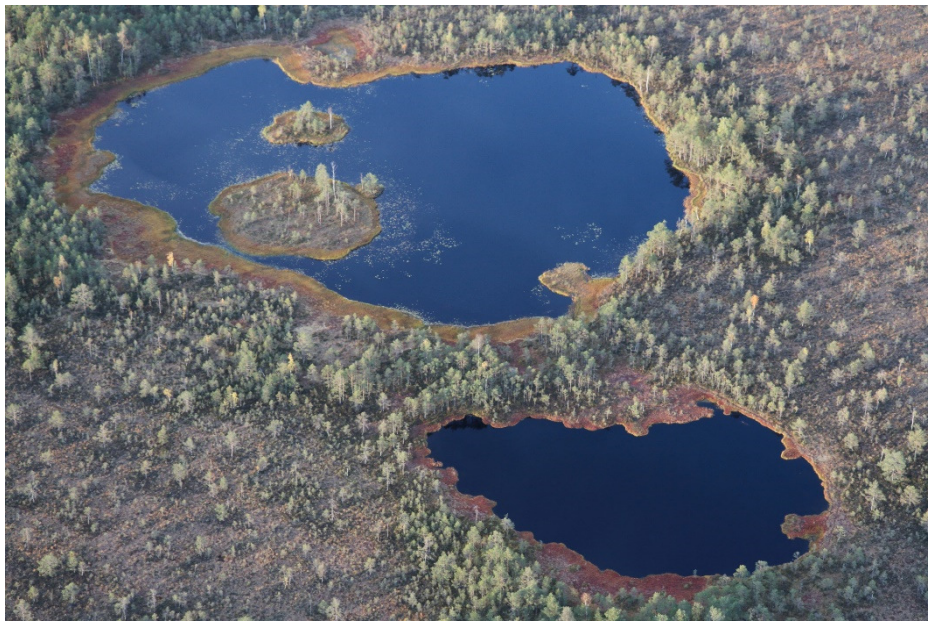
SUDAS-ZVIEDRU MIRE

- Disappearance of raised bog pools
- Increase of forested area



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DĀVIDA SPRINGS IN GAUJA NATIONAL PARK

RAUNAS STABURAGS NATURE RESERVE

Fennoscandian mineral-rich springs and spring fens (7160)

Petrifying springs with tufa formation (*Cratoneurion*) (7220*)

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DĀVIDA SPRINGS

Carex paniculata

Lunaria rediviva

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BAŽU MIRE AND INTER-DUNE MIRE COMPLEX IN SLĪTERE NATIONAL PARK

- **Total area of Bažu Mire 2646 ha**
- **Drainage ditches – 7,9 km**

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BAŽU MIRE IN SLĪTERE NATIONAL PARK

Fire in 1992, about 3000 ha burned

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INTER-DUNE MIRES IN SLĪTERE NATIONAL PARK

Hamatocaulis vernicosus

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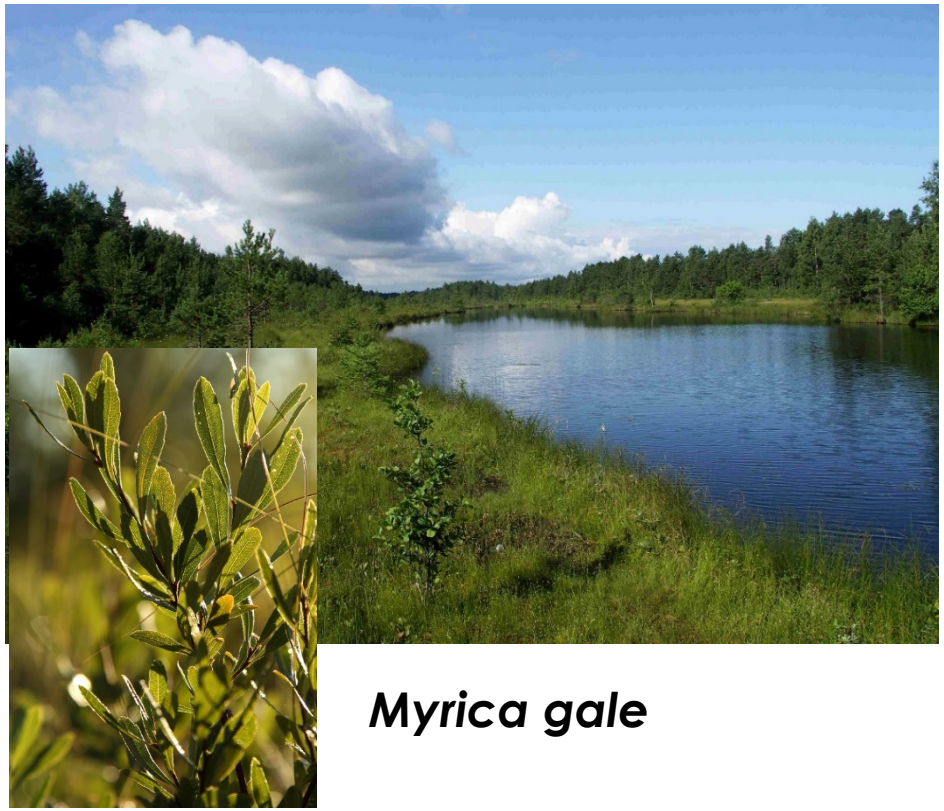
INTER-DUNE MIRE COMPLEX IN SLĪTERE NATIONAL PARK

Drosera intermedia



Myrica gale

Paludella squarrosa

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HABITAT AND GROUNDWATER MONITORING

- **Raised bogs (7110*, 7120)**

  in natural state ⟷ degraded from drainage – 4 sites, 120 plots

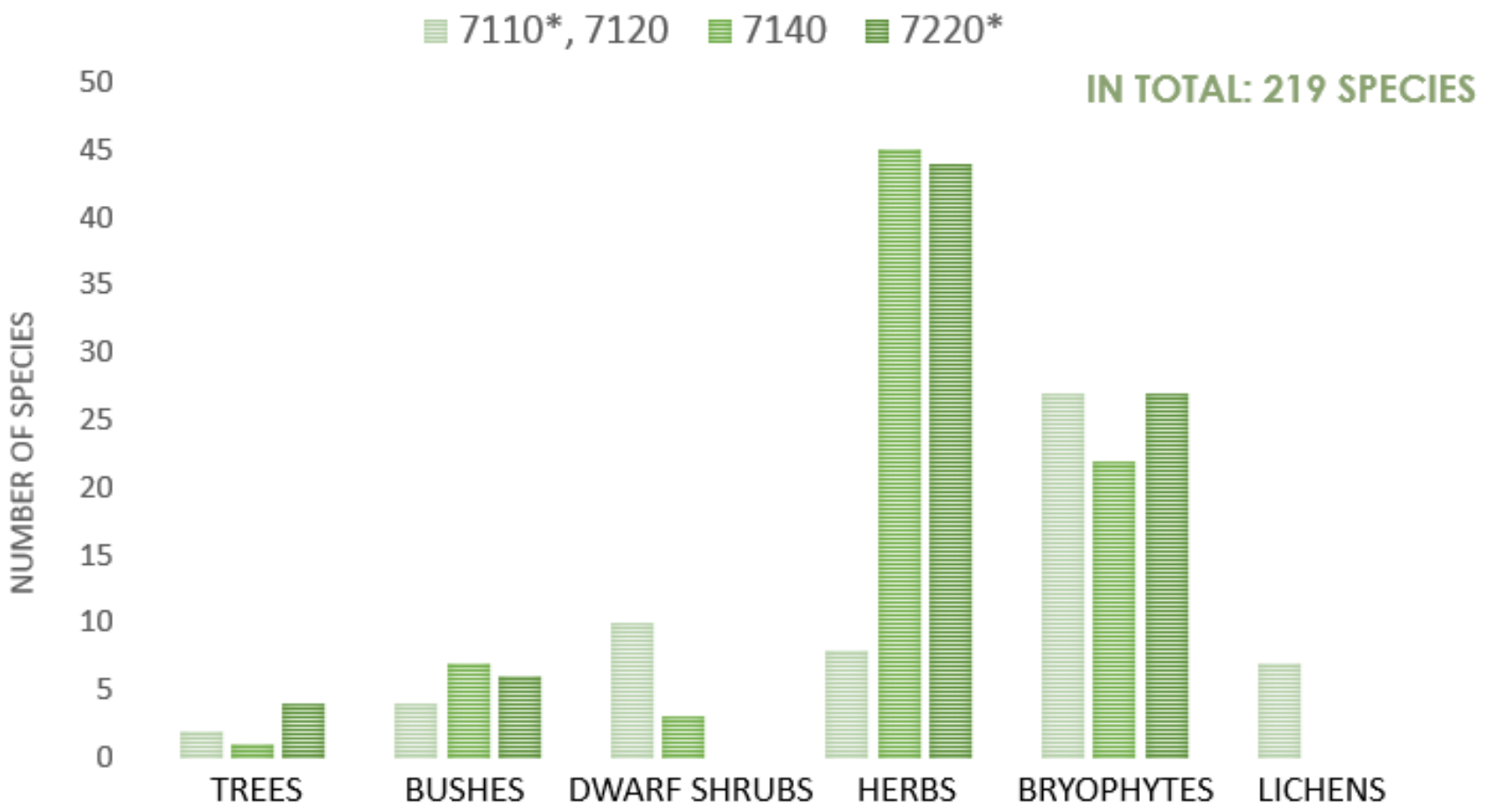
- **Transition mires and quaking bogs (7140)**

  in natural state ⟷ overgrowing with trees and shrubs
  – 2 sites, 20 plots

- **Petrifying springs with tufa formation (7220)**

  in natural state ⟷ overgrowing with *Heracleum sosnowskyi*
  – 2 sites, 20 plots

  in natural state ⟷ overgrowing with trees and shrubs
  – 1 site, 10 plots


7110*, 7120
7140
7220*
IN TOTAL: 219 SPECIES
NUMBER OF SPECIES
50
45
40
35
30
25
20
15
10
5
0
TREES
BUSHES
DWARF SHRUBS
HERBS
BRYOPHYTES
LICHENS

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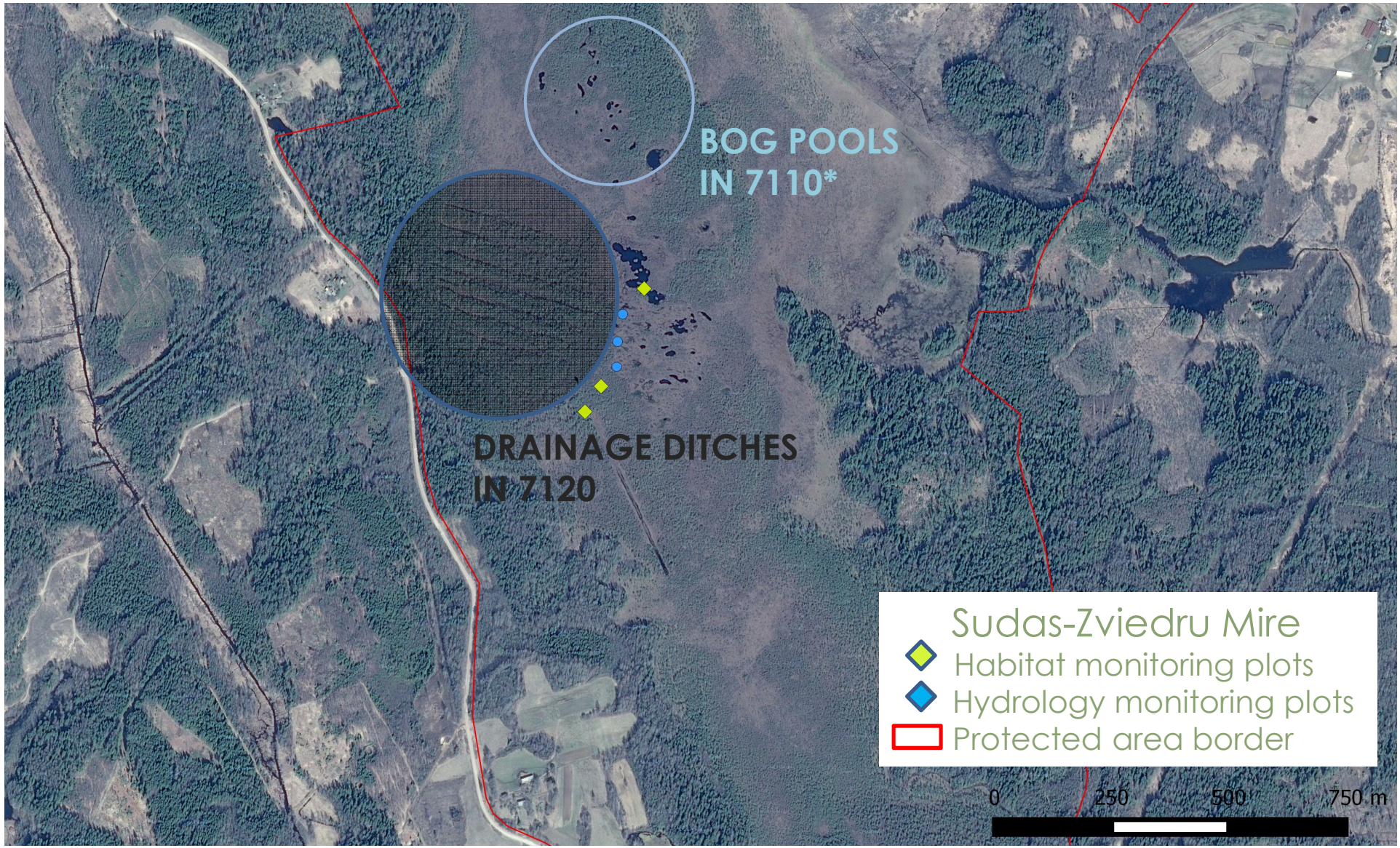

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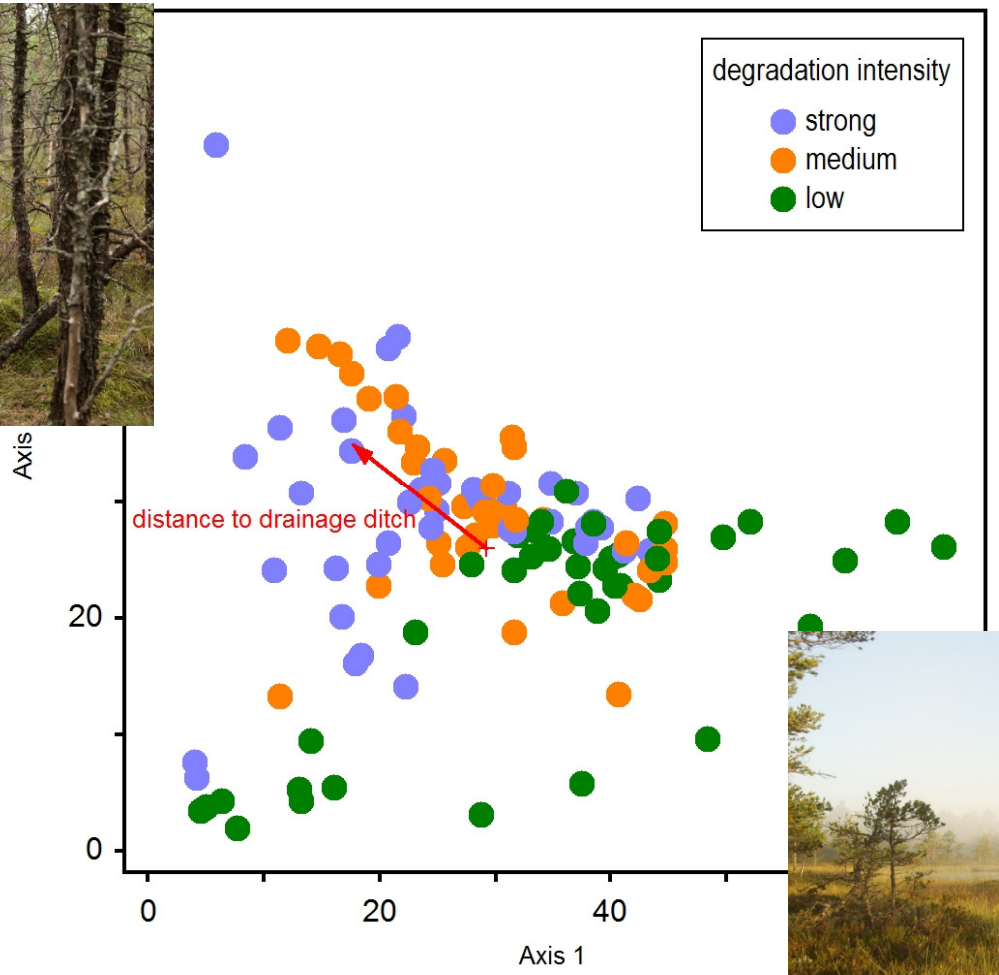
RAISED BOG DECORANA ORDINATION



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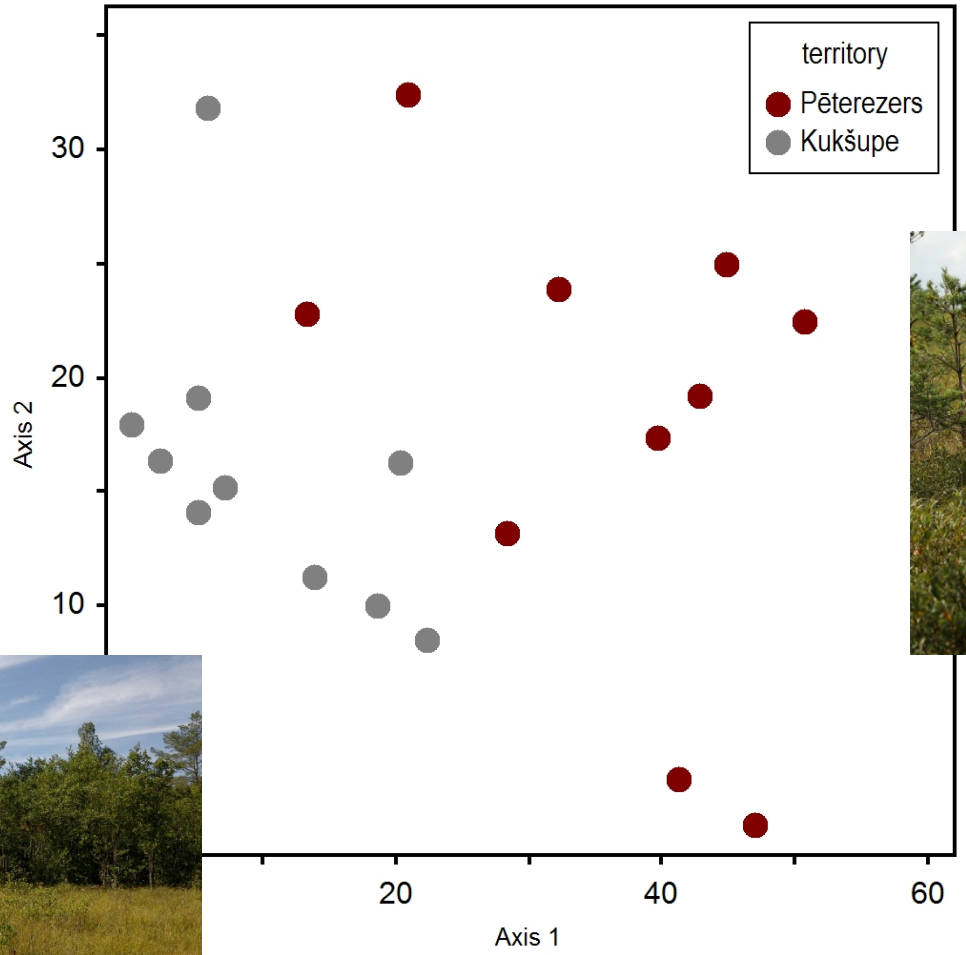
TRANSITION MIRE AND QUAKING BOG DECORANA ORDINATION



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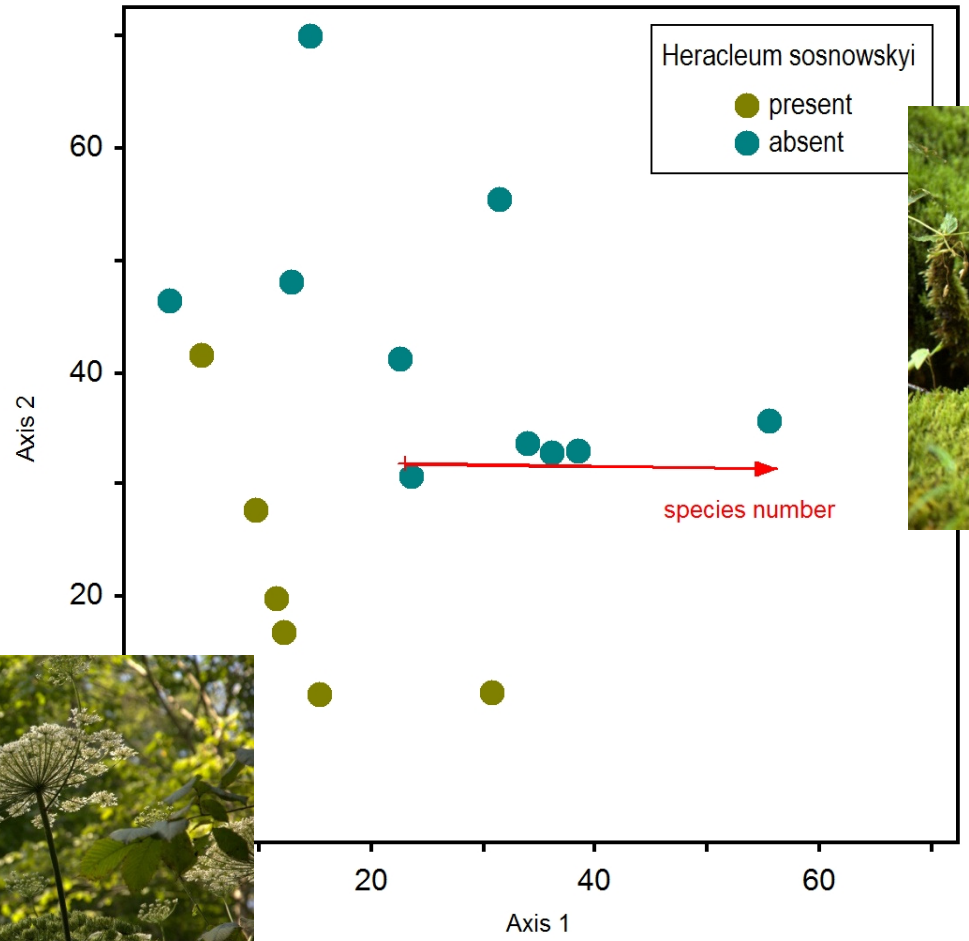
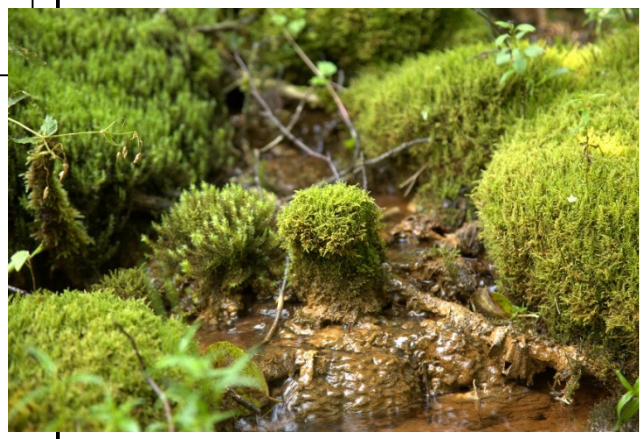
PETRIFYING SRING DECORANA ORDINATION





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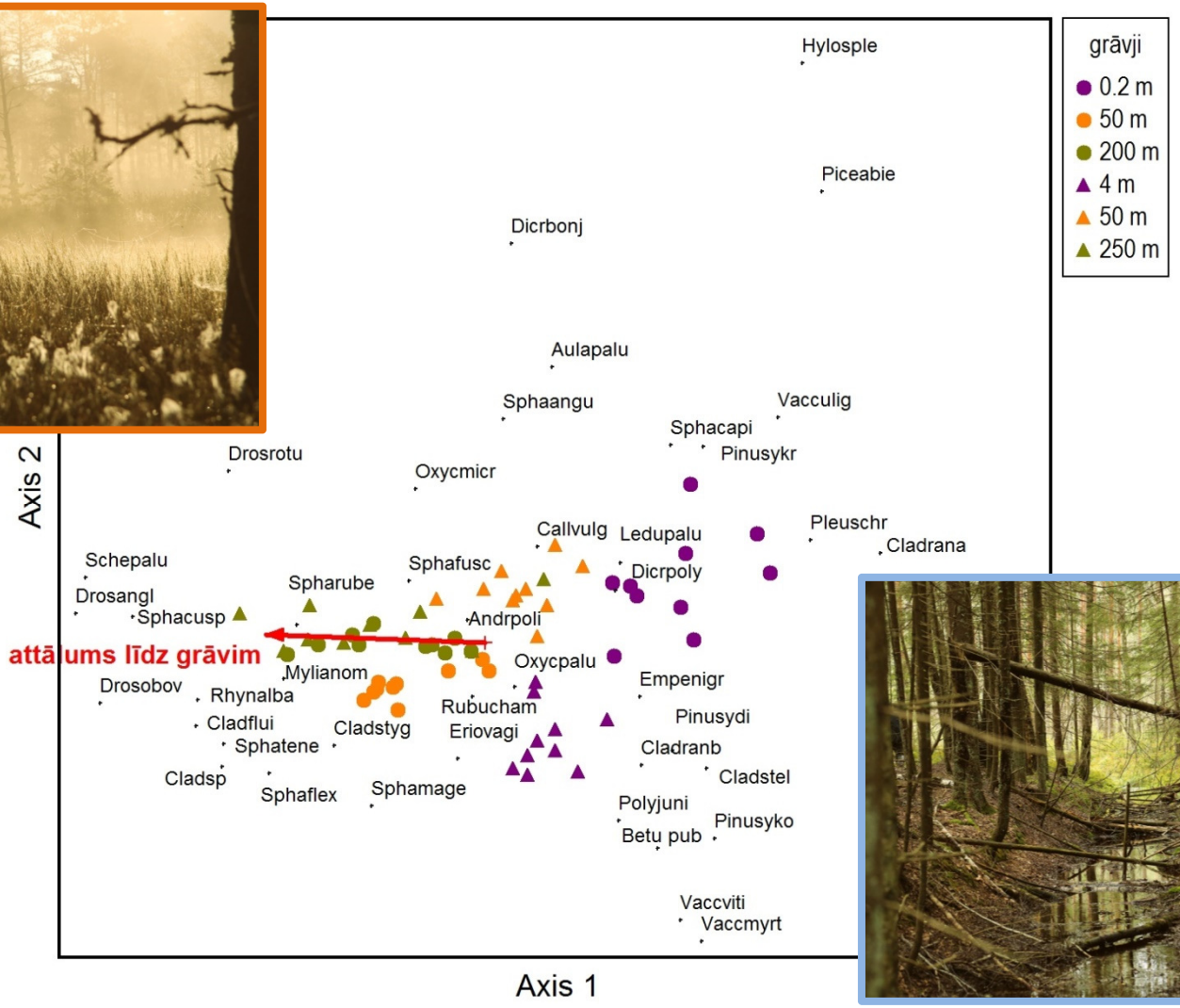
SUDAS-ZVIEDRU MIRE



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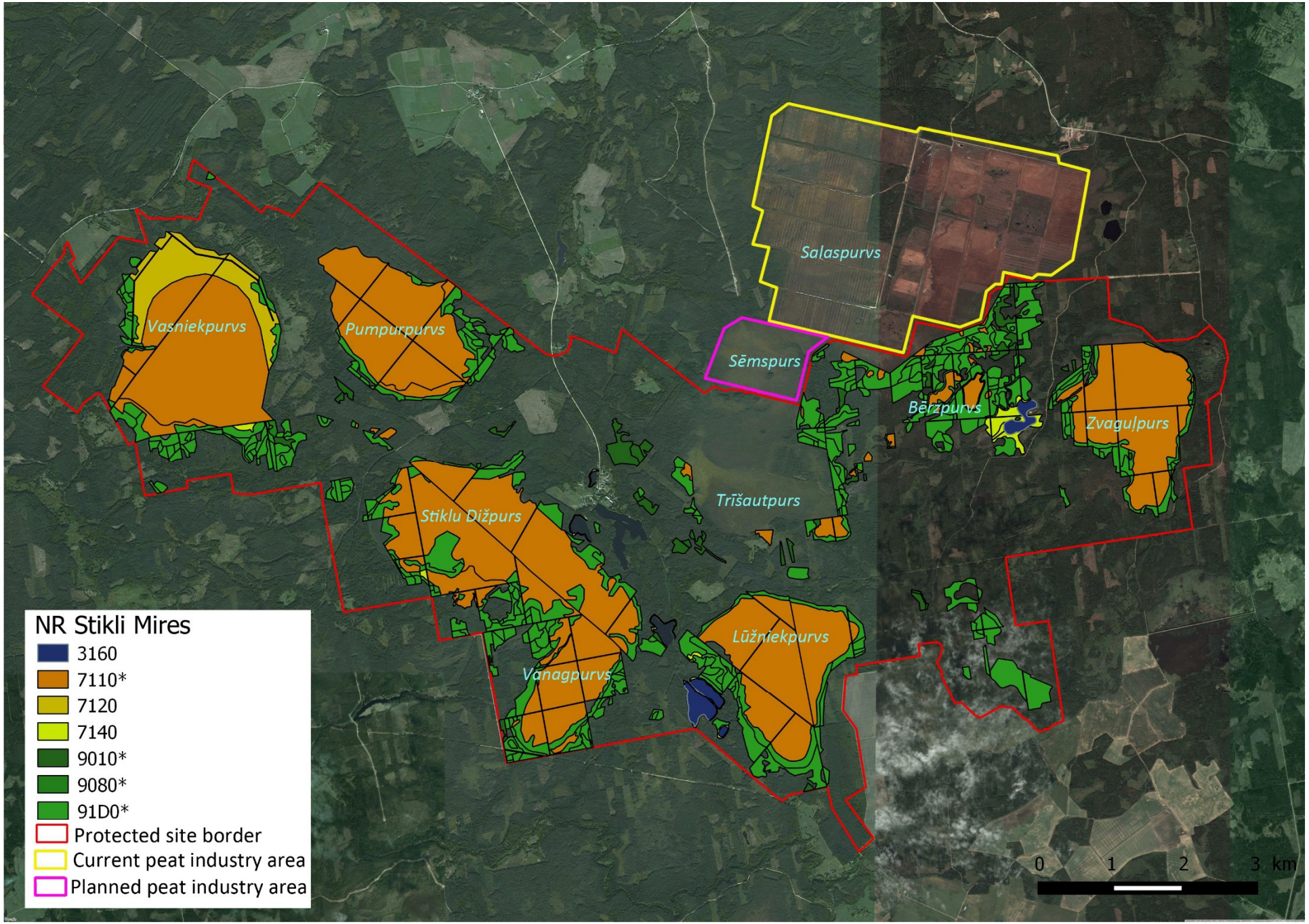
STIKLI MIRES NATURE RESERVE

BUILDING OF DAMS IN 2007

DECEMBER 2015


Salaspurvs
Vasniekpurvs
Pumpurpurvs
Sēmspurs
Bērzpurvs
Zvaguļpurs
Trīšautpurs
Stiklu Dižpurs
Lūžniekpurvs
Vānagpurvs
NR Stikli Mires
3160
7110*
7120
7140
9010*
9080*
91D0*
Protected site border
Current peat industry area
Planned peat industry area
0
1
2
3 km

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HUMAN IMPACT

- **About half of Latvian mires have been influenced by various human activities, like drainage, peat extraction and fire**

Lielsala peatland

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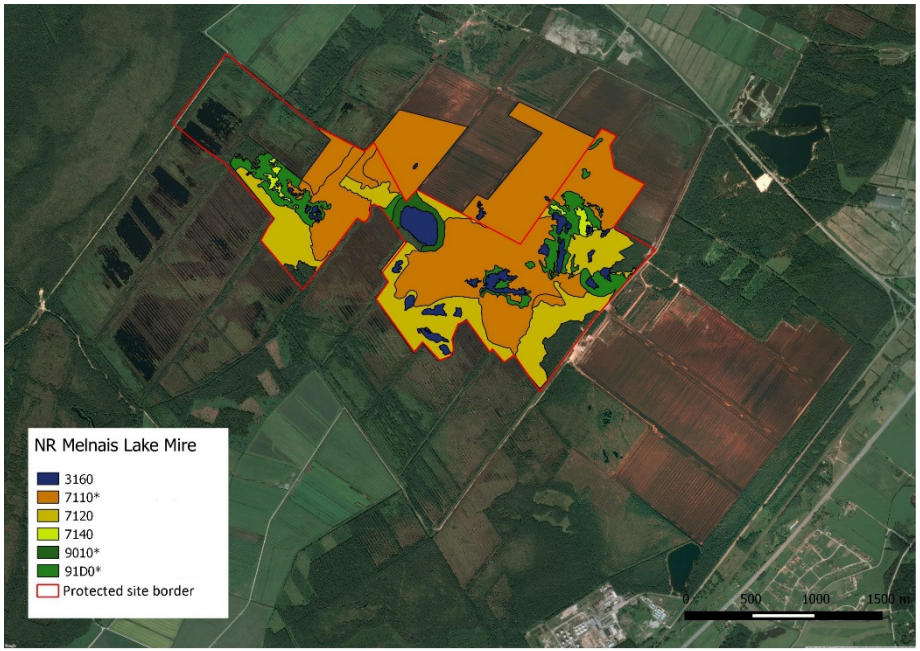
CENA MIRE AND MELNAIS LAKE MIRE NATURE RESERVES



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BULDING OF DAMS ON DRAINAGE DITCHES IN 2012

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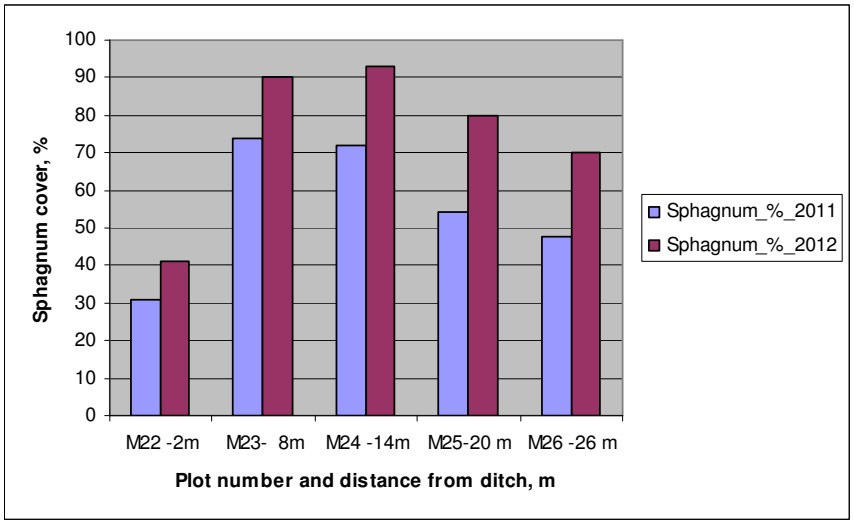
Melnais Lake Mire

2011

2012



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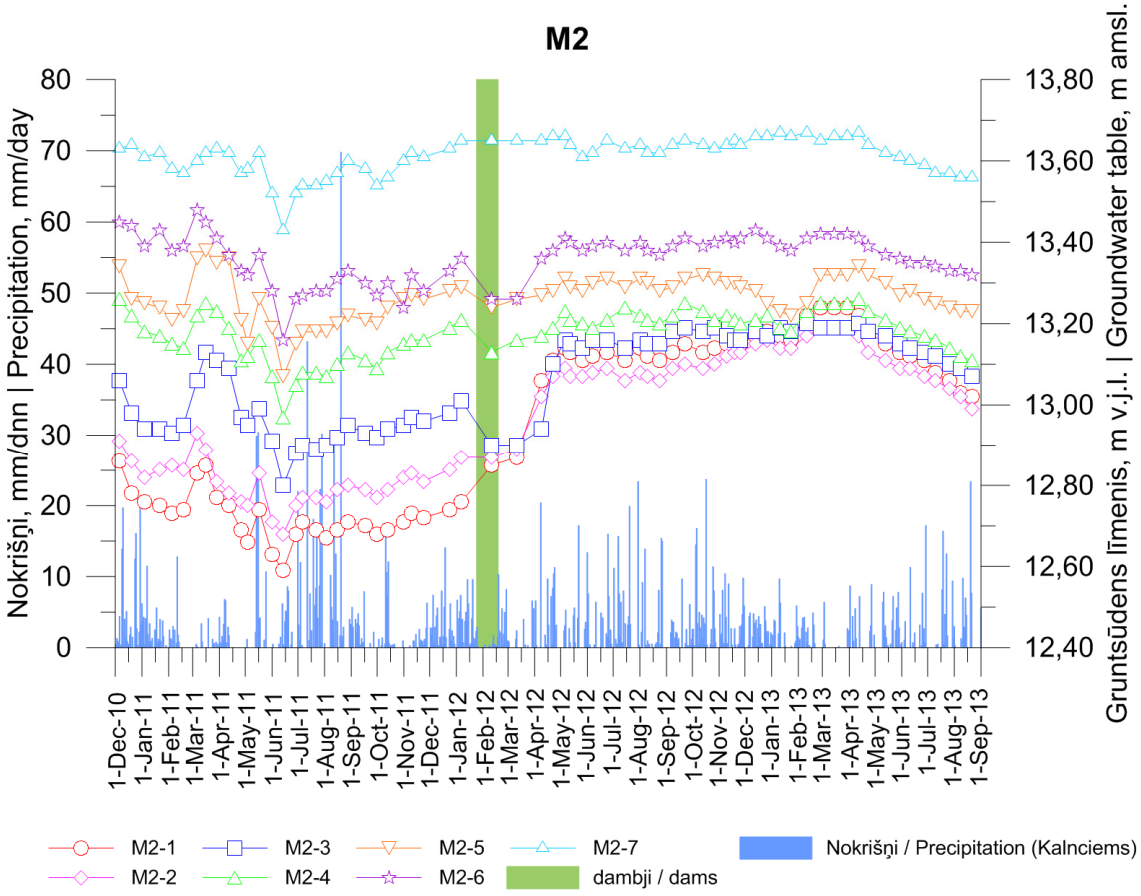
HYDROLOGICAL MONITORING IN MELNAIS LAKE MIRE



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RESULTS: MELNAIS LAKE MIRE

Change of the proportions in *Sphagnum* coverage

Sphagnum magellanicum

Sphagnum cuspidatum

Sphagnum fallax

The coverage of species of more wet areas has increased

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NEUSTÄDTER MIRE IN GERMANY

Erica tetralix

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CONCLUSIONS

- Raised bog restoration in Latvia is carried out mainly within EC LIFE projects;
- Hydrological and habitat monitoring shows that after raising of water level by building of peat dams on the drainage ditches, immediate changes take place in site hydrology and afterwards also in raised bog vegetation;
- Re-establishment of *Sphagnum* species is an indicator of mire regeneration in the degraded mire areas;
- After rising of groundwater table, regeneration of mire species takes place in the same vegetation season.

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PHOTO AND MULTIMEDIA EXHIBITIONS

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