

ECOHYDROLOGICAL RESTORATION OF PEATLANDS IN CARPATHIANS

PROJECT: ACC04P02

2022-2024

Iceland
Liechtenstein
Norway grants



 **MINISTERSTVO
ŽIVOTNÉHO PROSTREDIA
SLOVENSKEJ REPUBLIKY**



BENEFICIARY AND PARTNERS



State Nature Conservancy of the Slovak Republic

DAPHNE Institute of Applied Ecology

Slovenský raj (Slovak Paradise) National Park

Spišská Belá Municipality

Norwegian Institute for Nature Research

PROJECT OBJECTIVES

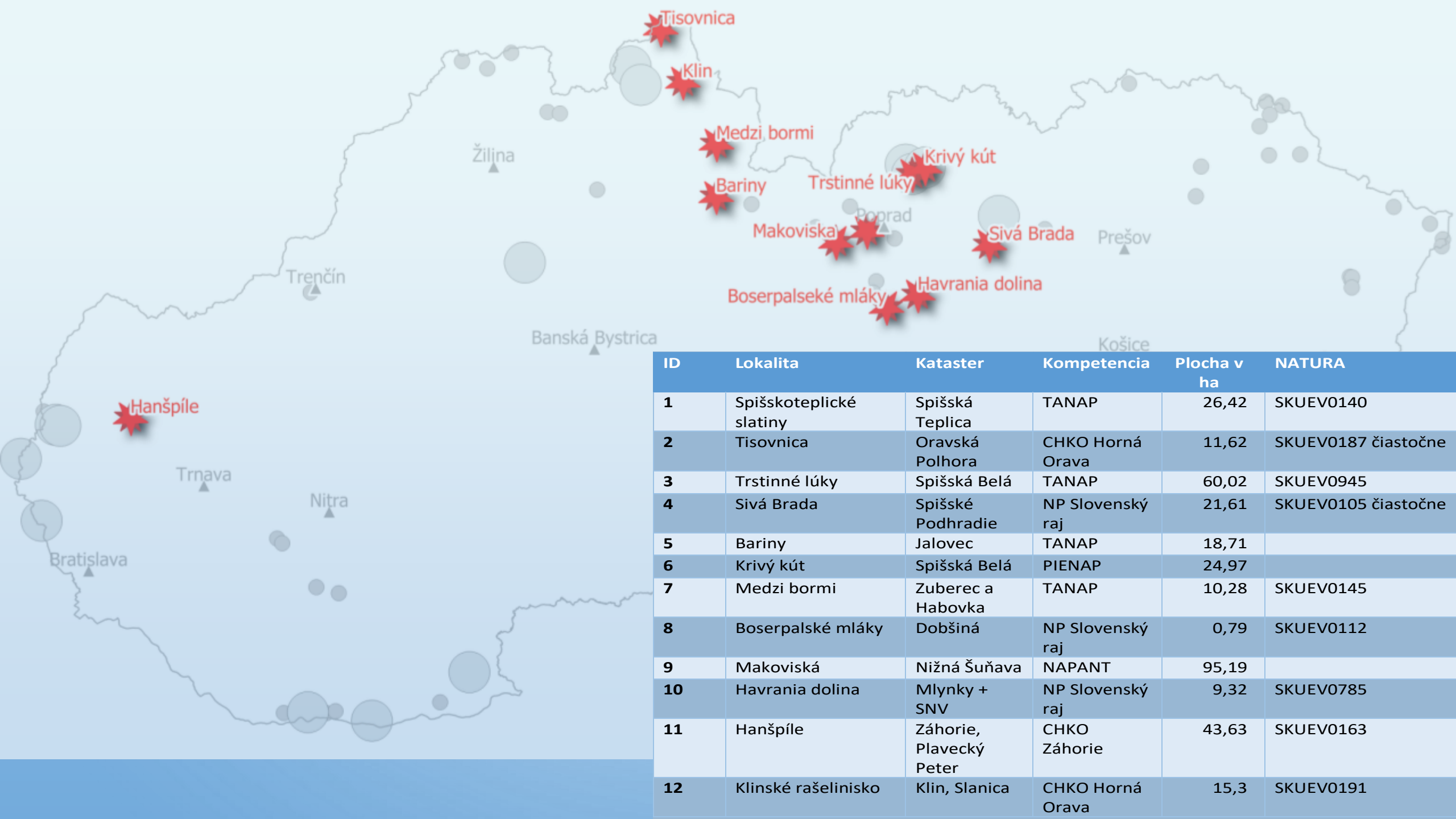
The project aims to reduce CO₂ emissions by restoring degraded peatlands and regenerating their function as carbon sinks.

The project will deal with restoration of 12 peatland sites in Slovakia to stop their degradation by realisation of well targeted hydrological restoration measures and applying climate-responsible peatland management on area of 352.18 ha.

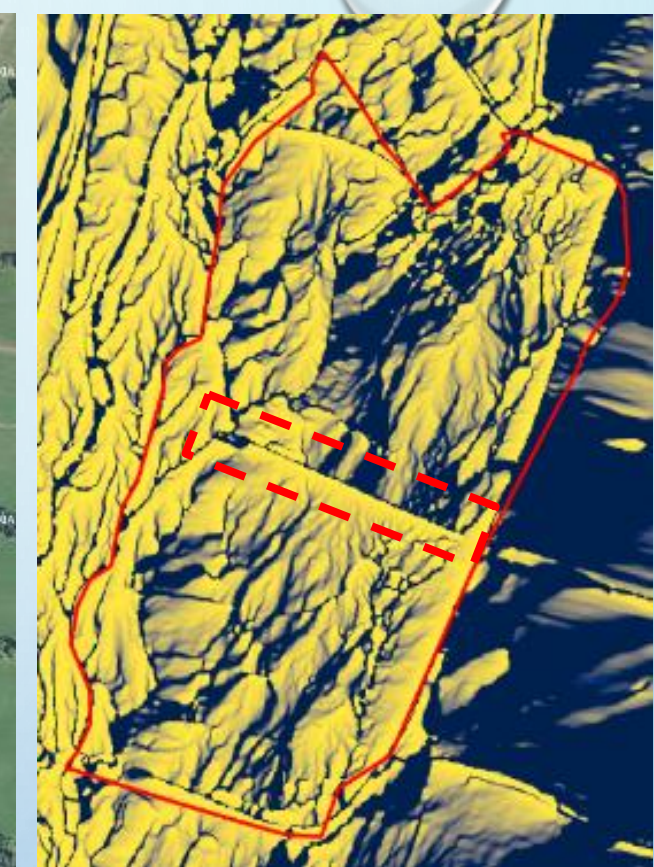
Pilot sites will be used for demonstration of best-practice peatland management to relevant stakeholders on local and national scale. Best-practice guidelines for sustainable management of forested peatlands on local and national level will be prepared on the basis of its testing on project sites.

Awareness about peatland related climate change mitigation and adaptation measures will be increased. Working with and involving relevant local stakeholders and local communities will ensure the long-term sustainability of the project.





ID	Lokalita	Kataster	Kompetencia	Plocha v ha	NATURA
1	Spišskoteplické slatiny	Spišská Teplica	TANAP	26,42	SKUEV0140
2	Tisovnica	Oravská Polhora	CHKO Horná Orava	11,62	SKUEV0187 čiastočne
3	Trstinné lúky	Spišská Belá	TANAP	60,02	SKUEV0945
4	Sivá Brada	Spišské Podhradie	NP Slovenský raj	21,61	SKUEV0105 čiastočne
5	Bariny	Jalovec	TANAP	18,71	
6	Krivý kút	Spišská Belá	PIENAP	24,97	
7	Medzi bormi	Zuberec a Habovka	TANAP	10,28	SKUEV0145
8	Boserpalské mláky	Dobšiná	NP Slovenský raj	0,79	SKUEV0112
9	Makoviská	Nižná Šuňava	NAPANT	95,19	
10	Havrania dolina	Mlynky + SNV	NP Slovenský raj	9,32	SKUEV0785
11	Hanšpíle	Záhorie, Plavecký Peter	CHKO Záhorie	43,63	SKUEV0163
12	Klinské rašelinisko	Klin, Slanica	CHKO Horná Orava	15,3	SKUEV0191

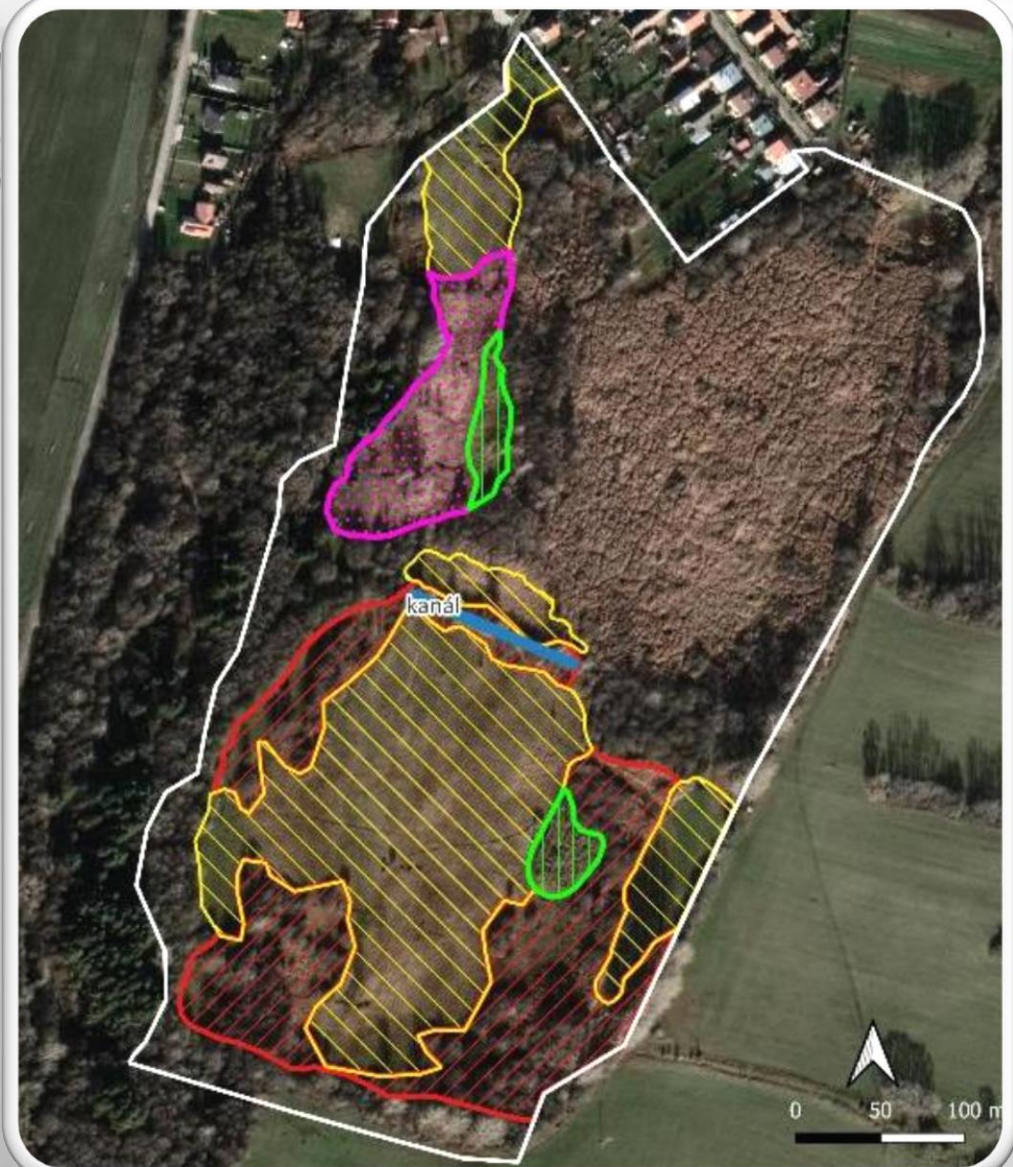


Activity - Elaboration of restoration plans






Preparation of the Management plans – 12 sites

Analysing the site

- historical photos, maps, documentation and research
- hydrologic situation
- soil research
- vegetation
- discussions with stakeholders
- consultations with partners



Proposal of main management measures

-  felling of young trees
-  mowing meadows
-  hand mowing or sensitive mechanization
-  reed mowing
-  channel backfilling

Specification of measures including parameters

site	type	measures	parameters	indication in a map
Bariny	hydrology	Channel backfilling	Length - 100m, height - 3m	kanál
Bariny	management	Felling of young trees	Area: 3 ha	
Bariny	management	Mowing - mesophile meadows, biomass transportation outside site	Area: 4,5 ha	
Bariny	management	Mowing of fens habitats, manually or sensitive soft mechanization, transport biomass outside site – 2x	Area: 1 ha	
Bariny	management	Mowing reed, transportation biomass, 2x	Area: 0.31 ha	

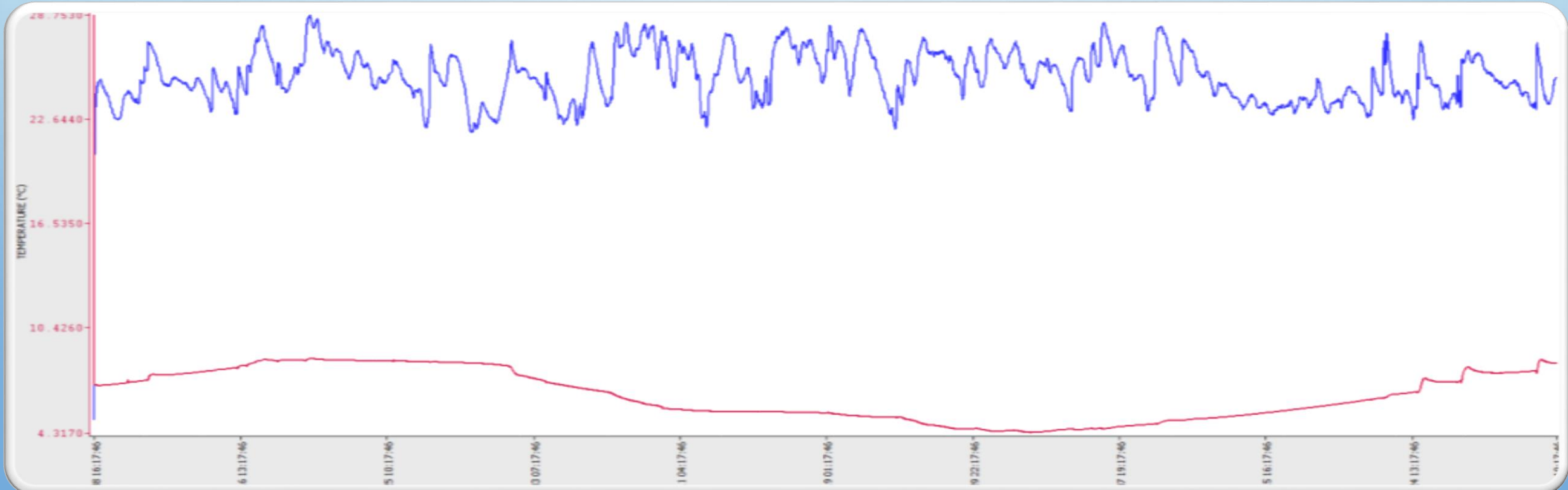


Establishment of hydrological and habitat monitoring in restored sites

Peat research

DNA extraction from water

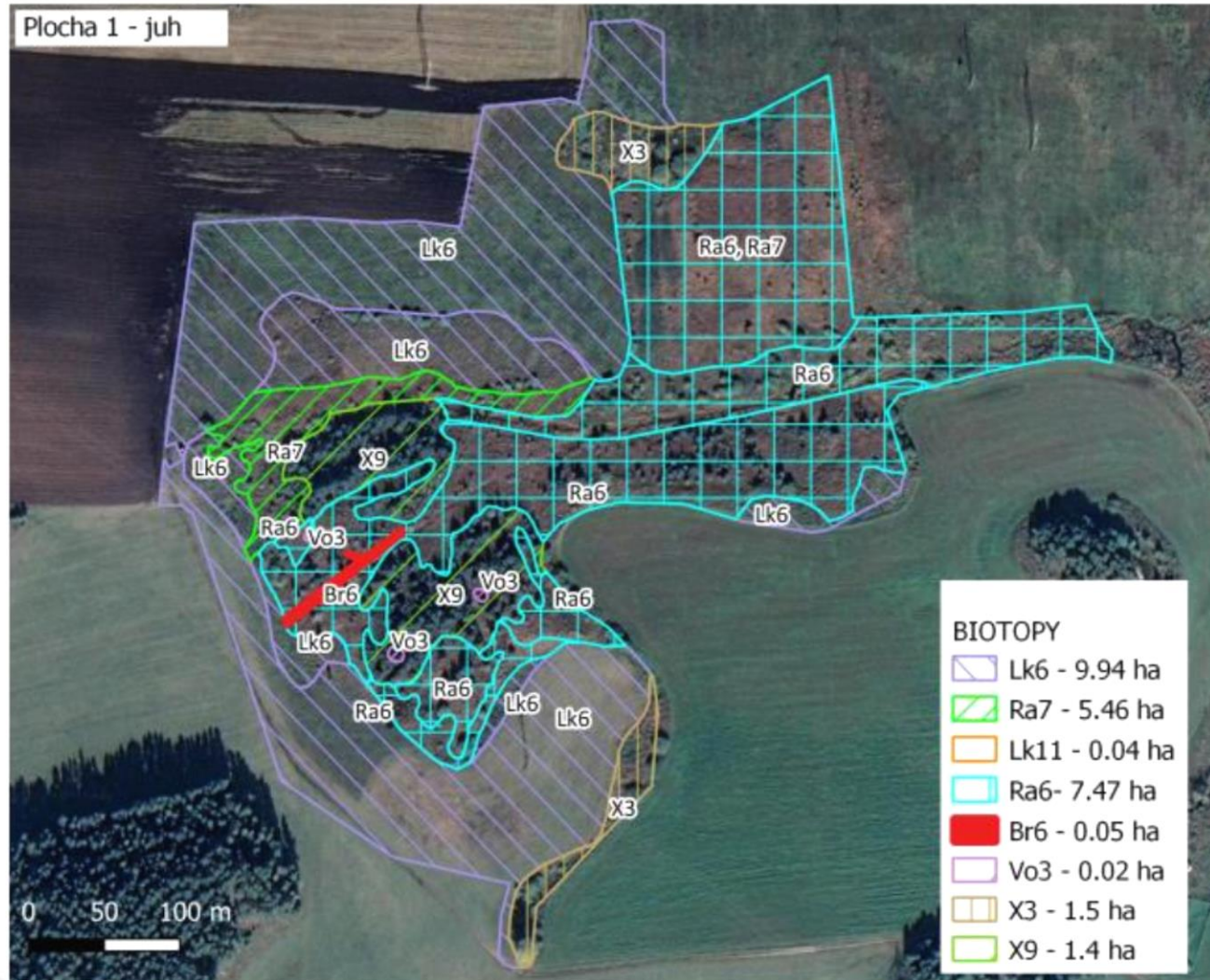
Hydrological monitoring



Habitat and vegetation mapping/monitoring

Spišskoteplické slatiny - vegetácia

Plocha 1 - juh



Vegetačné mapovanie – lokalita Bariny

Predmetom ochrany chráneného územia sú biotopy:

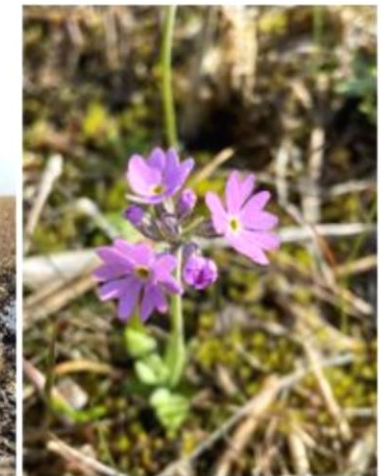
Biotopy európskeho (EV) a národného významu		
Kód biotopu	Kód NATURA2000 (biotop EV)	Názov biotopu
Sl2	• 1340	Karpatské travertínové slanská
Ra6	7230	Slatiny s vysokým obsahom báz
Vo3	3160	Prirodzené <u>dystrofne</u> stojaté vody
Lk1	6510	Nížinné a podhorské kosné lúky
Lk5	6430	<u>Vysokobylinné</u> spoločenstvá
Lk6		Podmäčkané lúky horských a podhorských oblastí
Ra7		<u>Sukcesne</u> zmenené slatiny

Vegetačné mapovanie lokality Bariny bolo realizované v dňoch 29.4., 22.6. a 6.10. 2022. Mapované boli polygóny s homogénnou vegetáciou so zameraním na rašeliniskové a mokradňové biotopy nasledovne:

Sl2 Karpatské travertínové slanská (1340*) je prioritným a veľmi vzácnym biotopom európskeho významu. Zaznamenali sme ho v polygóne sever06. Podzemná voda je blízko k povrchu. Sú tu iniciálne porasty s nízkou pokryvnosťou vyšších rastlín. Rastie tu *Trientalis maritima*, *Trichoporum bumilum*, *Gentianium littorale subsp. compressum*, *Primula farinosa*, *Pinguicula vulgaris*, *Eleocharis acicularis*. Polygón zarastá trstinou.



Karpatské travertínové slanská



Primula farinosa

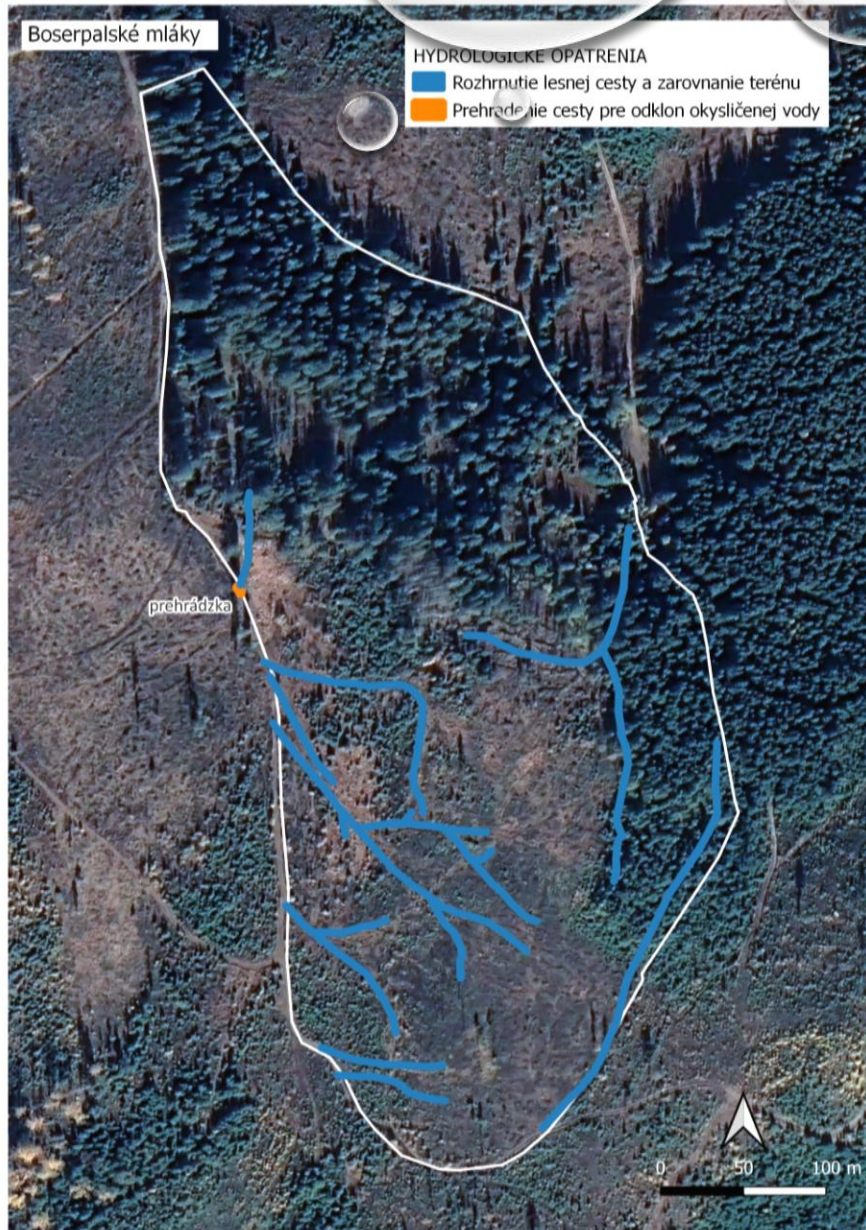


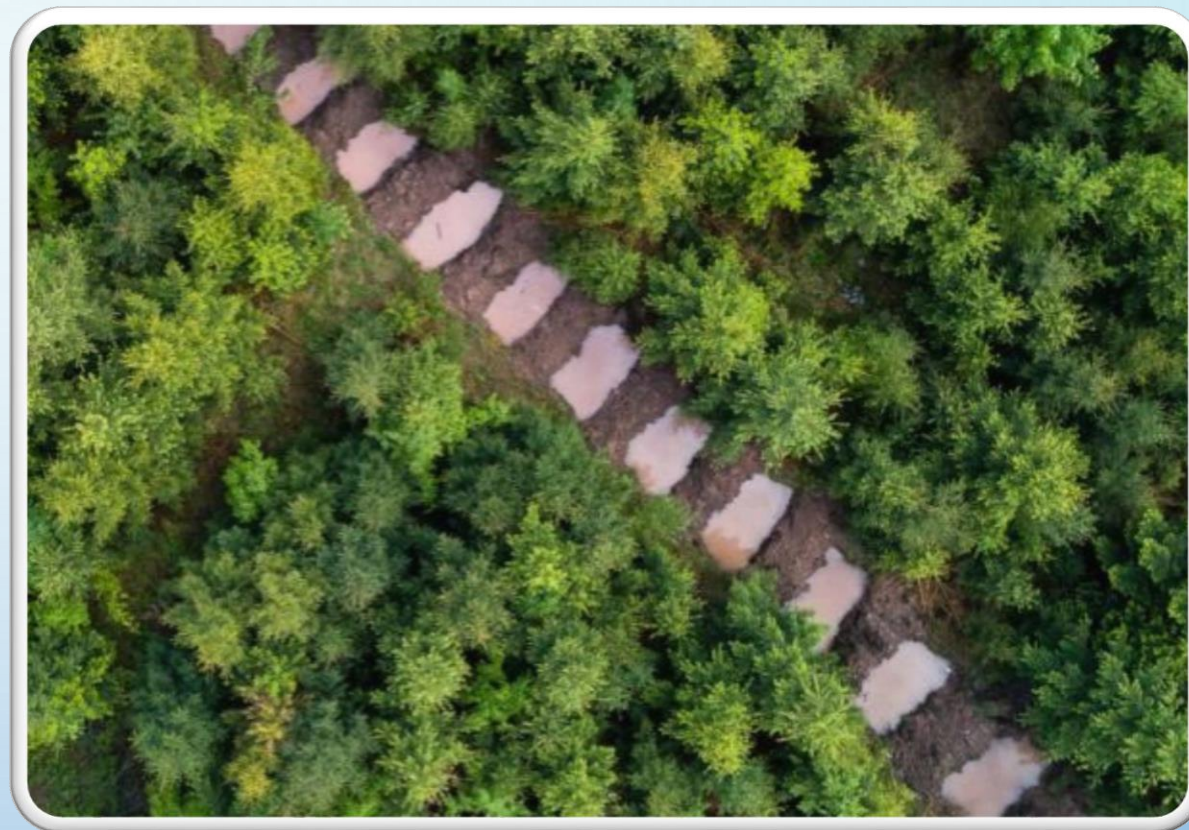
COMMUNICATION WITH LOCAL STAKEHOLDERS ON RESTORATION MEASURES



IMPLEMENTATION OF RESTORATION MEASURES

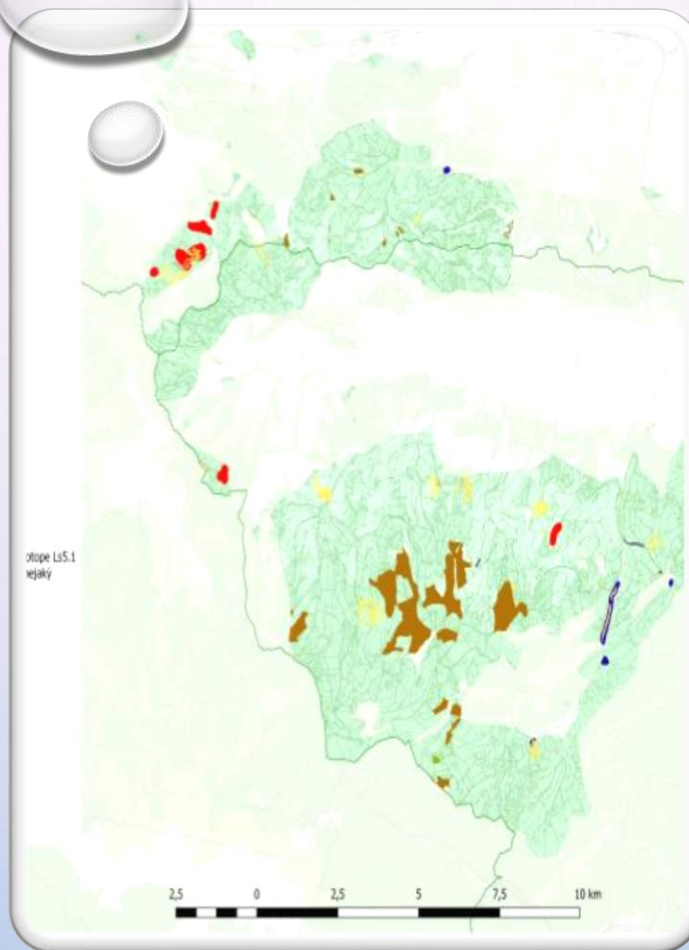
ELABORATION OF METHODOLOGICAL GUIDELINES FOR SUSTAINABLE MANAGEMENT OF PEATLAND AND WETLAND FORESTS



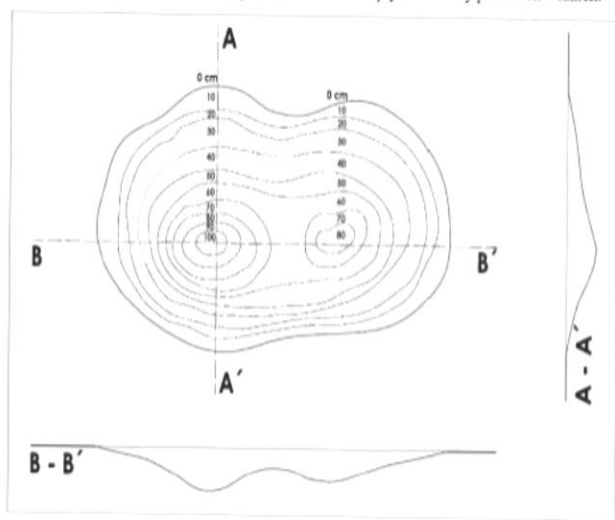


ELABORATION OF METHODOLOGICAL GUIDELINES FOR SUSTAINABLE MANAGEMENT OF PEATLAND AND WETLAND FORESTS

PIT – DAM – PIT METHOD

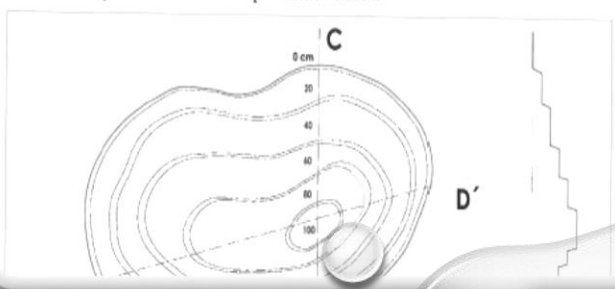


s okolním prostorem a s litorálním pásmem tůň včetně plynulé změny podmínek v tůňích.



Příloha č. 2 Ilustrace – tůň se schodovitým dnem

Tůň vyžadují úpravu hloubky vody a modelaci dna. Schodovité dno zaručuje diferenciaci vůči okolnímu prostoru a diferenciaci podmínek v tůňích.



ELABORATION OF METHODOLOGICAL GUIDELINES FOR SUSTAINABLE MANAGEMENT OF PEATLAND AND WETLAND FORESTS



ELABORATION OF STUDY ON CARBON SEQUESTRATION POTENTIAL OF RESTORED SITES

PUBLIC AWARENESS ACTIVITIES

PRESS CONFERENCE IN PEATLAND, MEDIA OUTPUTS, ARTICLES, VIDEO, ETC.


LEPORELO



Involvement of local schools

- 19 schools from 15 settlements
- 38 teachers, over 800 pupils connected to peatlands
- „Climate and peatlands“ - Toolkit with activities for schools
- Tools and methodology for environmental research provided to each school – trainings for teachers organised every 6 months
- Webinars for teachers organised every month (various topics)



 **Objavitelia rašelinísk**

Názov tímu:	Aktívne počasie:
Zapísovateľ:	Pozorovateľ 1:
Pozorovateľ 2:	Pozorovateľ 3:
Dátum funkcie:	Dátum funkcie:

Rašeliniská sú úžasným miestom na objavovanie, sú plné prekvapení a niekedy aj drámy. Pri návšteve rašeliniska sa nechajte inšpirovať niektorými z nasledujúcich aktivít.

Zvuky rašeliniska

Koľko rôznych zvukov počujete na rašelinisku? ...

Komu/tomu zvuky patria – viete ich identifikovať? Skúste aspoň 3 z nich:

Zvuk 1: _____

Zvuk 2: _____

Zvuk 3: _____

Vôňa rašeliniska

Preskúmate vôň rašeliniska bez toho, aby ste čokoľvek na rašelinisku zmiešali.

• Aké vône ste objavili? _____

• Ktorá vôňa vás najviac zaujala? _____

• Ako by ste ju opísali? _____

Dotyk rašeliniska

Skúste sa dotknúť rôznych povrchov na rašelinisku.

• Nájdite niečo, čo je:

drsné: _____


mäkké: _____

tvrdé/studené/alebo iné: _____

Dúha na rašelinisku

Pozornému oku neújde pestré farby ukryté v detailoch rašeliniska.

• Koľko farieb dúhy sa vám podarilo na rašelinisku nájsť?



Cervená Oranžová Žltá Zelená Modrá Indigová Fialová



Events for local pupils/students

- „Explore your peatland“ - excursions
- „Save your peatland“ – practical activities (management, removal of garbage, etc.)
- Student conference – online presentation of research completed by students





THANK YOU