



Biological restoration of extracted peatbogs in the Třeboň Basin

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https://www.at-cz.eu/cz/ibox/po-2/atcz45_connat-at_cz

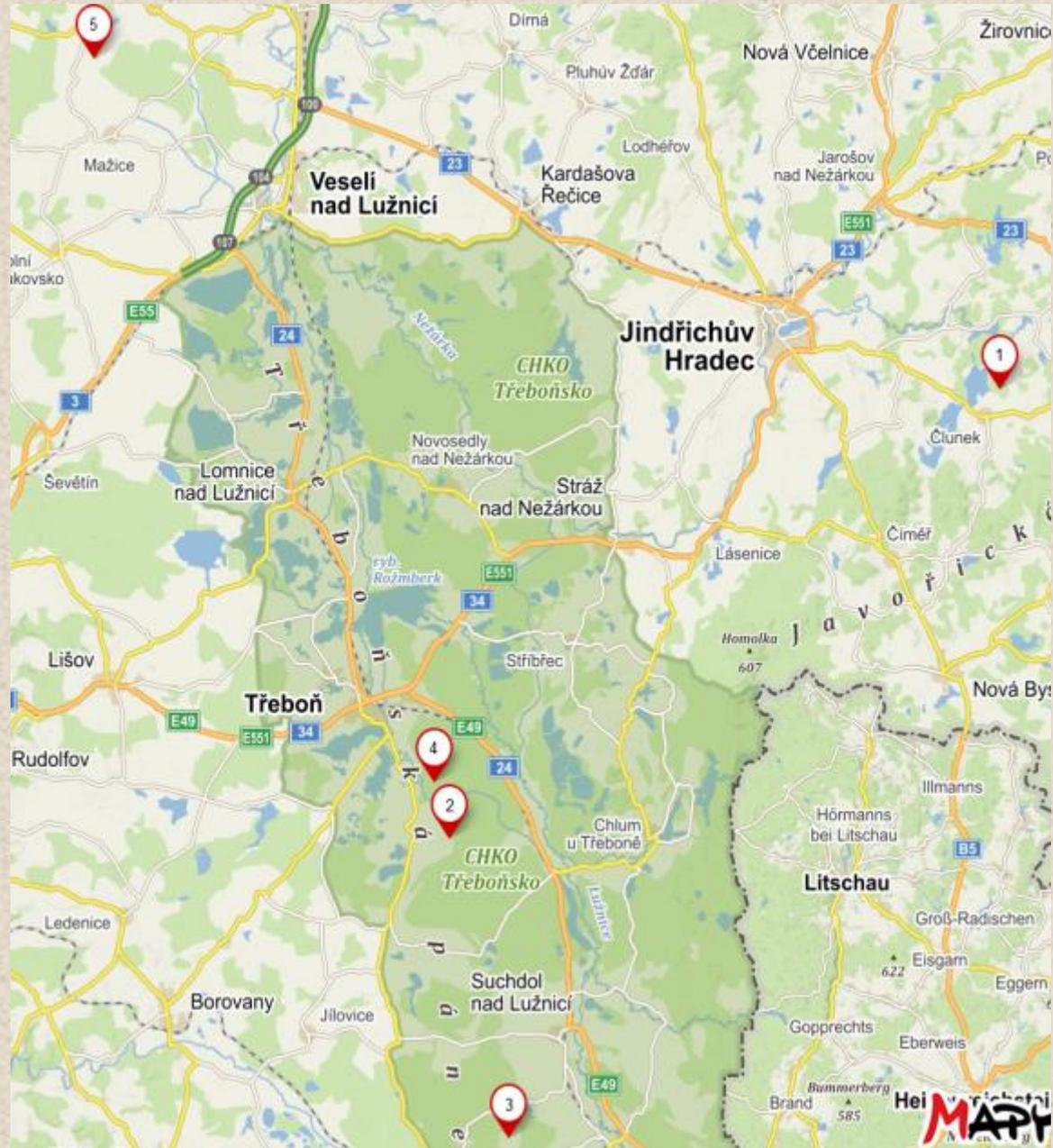


Still extracted
peatbogs in the
Třeboň Basin:

1. Člunek
2. Branná
3. Hranice

Extraction for the
spa
(underwater):

4. Lázně Třeboň
5. Lázně Bechyně



Future development?

- Rašelina Soběslav (extraction company): the extraction licence until 2020.
- All extracted peatbogs are almost completely extracted. Minimum layer of 60 cm of peat was not kept!
- According to the law the extraction company should make technical recultivation, afterwards the owners should make a biological recultivation (= planting, etc.) according to the recultivation plans. These are not always available, however usually planting of pines, birch or alder was planned.

The returning of sites (technical restoration) to the owners is going on...



Extracted site Branná

Main owners:

Lesy ČR, Třeboň

Future?

- Planting with pines
- Spontaneous succession
- Retention basin
- „Rewetting“ restoration – increase of water table by dams, creating of small pools – problem: the site was forested before the extraction therefore it should be forested in the end otherwise the owners should pay high compensations



Extracted site Člunek

Main owners:

Rašelina a.s., Lesy ČR,
Střížovice village

Future?

- Pine plantation
- Blueberries plantations
- „Rewetting“ restoration towards a minerotrophic peatbog – good sources of water and diaspores



Extracted site Hranice

Main owner:
Lesy ČR

Future?
Plantation with pines
and alder (ongoing)

In a small part
„rewetting restoration“:
the drainage system will
be blocked by dams and
small pools will be
created



Konvalinková P., Prach K. (2014): Environmental factors determining spontaneous recovery of industrially mined peat bogs: A multi-site analysis, *Ecological Engineering* 69: 38-45.

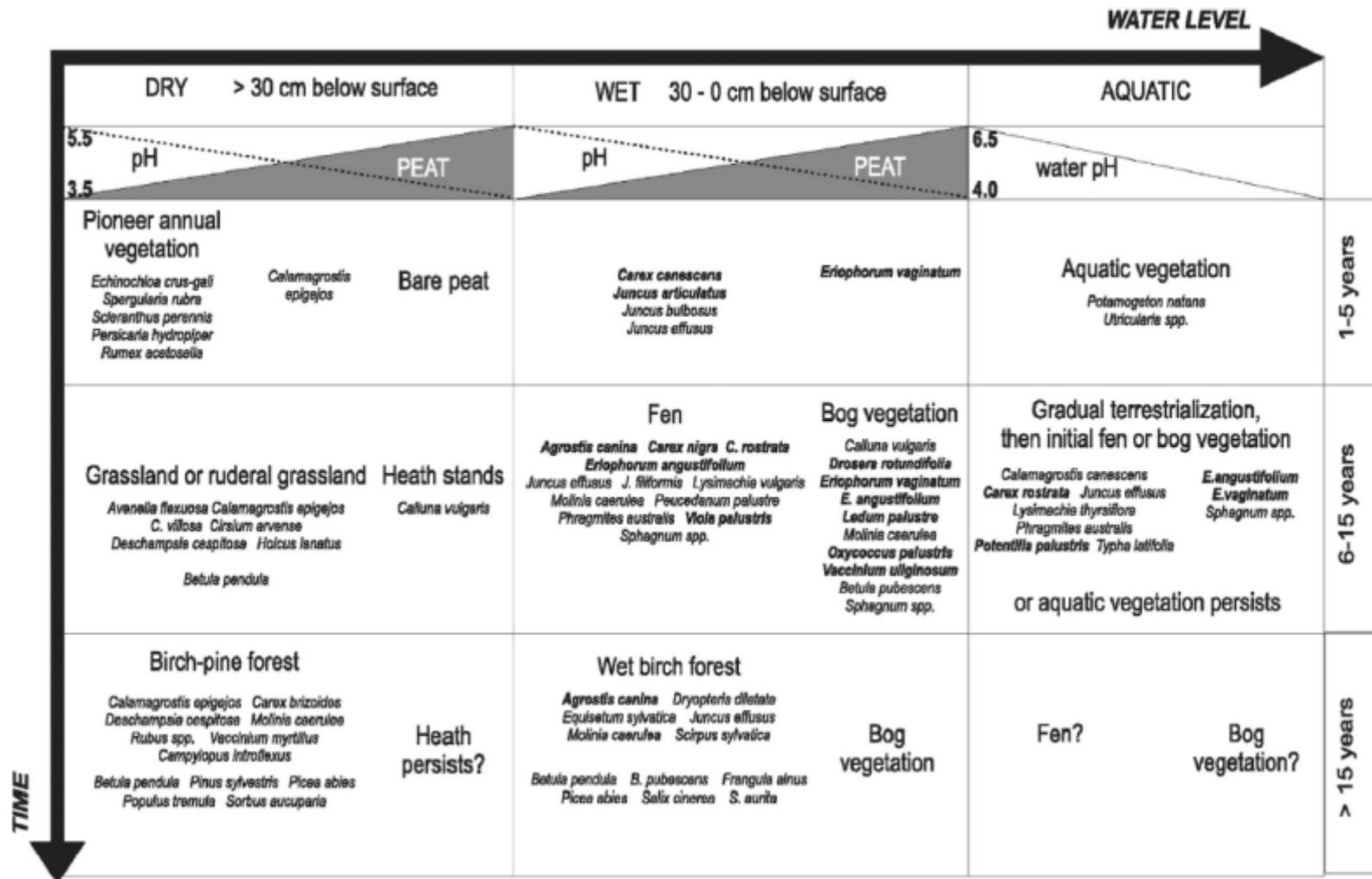


Fig. 3. Generalized scheme of spontaneous vegetation succession on milled peatlands in relation to the main environmental factors. Target species are marked in bold.

Negative side of the „rewetting“ restoration

- The residual layer of peat is very thin in most sites – the natural succession after rewetting will lead probably very quickly to the development of willow or reed stands which are not very „popular“ for the owners.
- Diaspore of target peatbog species (i.e. peaty vegetation) is missing or scarce in the close vicinity (Branná, Hranice)
- Non-native species are already present (*Elodea canadensis* – Branná)
- The blocking of drainage channels will be not enough for rewetting of the extracted sites due to high summer temperatures and low precipitation in the next years.
- Most sites were forested before extraction, according to the law they should be also forests after that. Otherwise high compensations should be paid for the conversion to the non-forested ground.

Sunny side

- Several meetings with Třeboň and PLA Třeboňsko representative were initiated – they support the idea of rewetting at least in a part of the extracted sites
- Lesy ČR has a big problem with bark-beetle calamity in the Czech Republic. They want to increase water retention in forests, so there is a possibility to increase water level in a part of extracted sites and to devote it to water retention and spontaneous succession.
- There is a possibility to gain a project to conduct the „rewetting“ restoration from the Ministry of Environment



Spontaneous succession after rewetting
18 years ago (Borkovická blata):

+ former black peat already covered by
sedges and grasses, peat moss already
present, dense population of *Drosera*

- reed stands are starting to invade
along the drainage ditches