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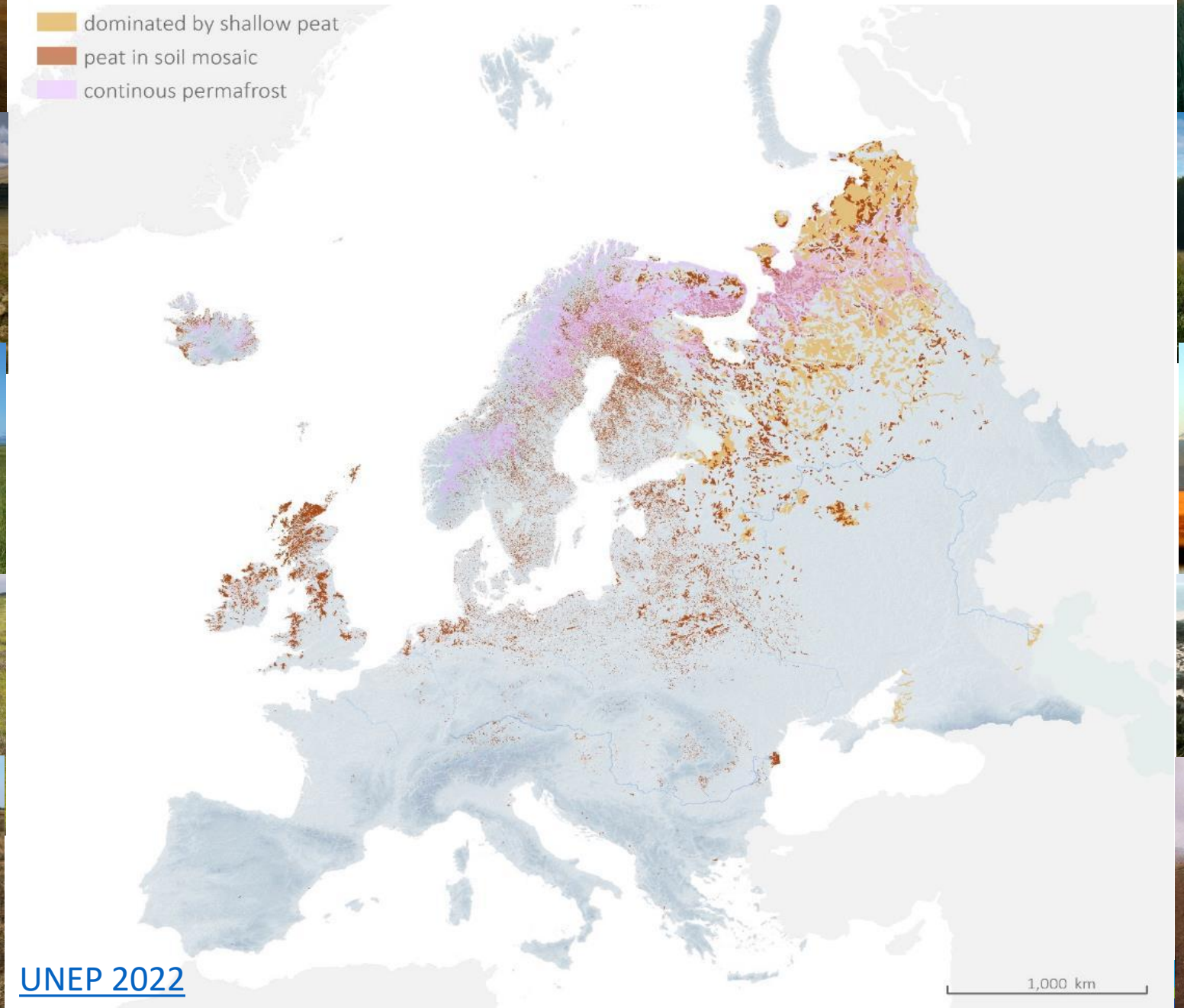
# Why #peatlandsmatter

Dr. Franziska Tanneberger
18.09.2025, Warsaw

# Europe‘s peatlands are beautiful





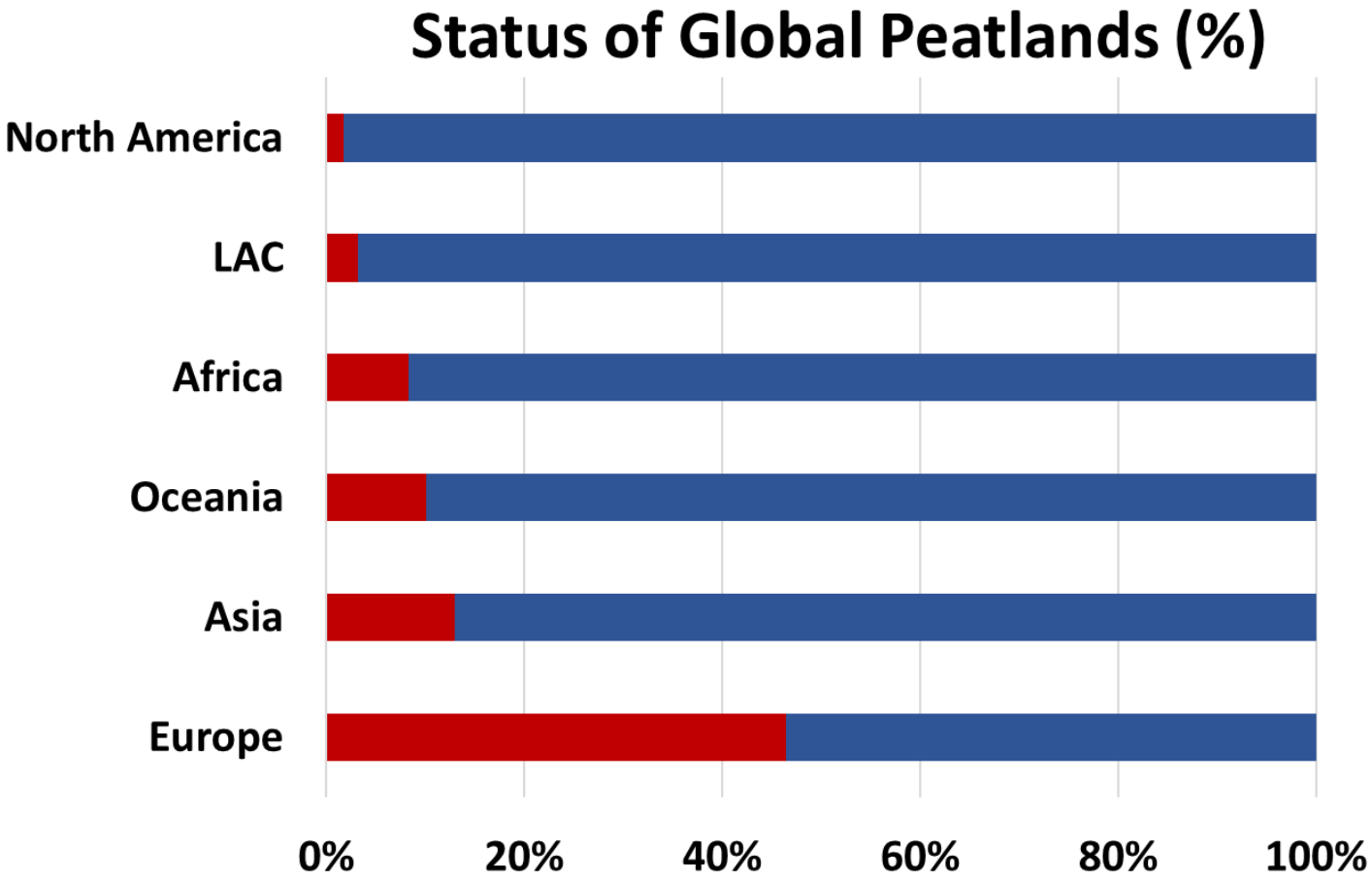






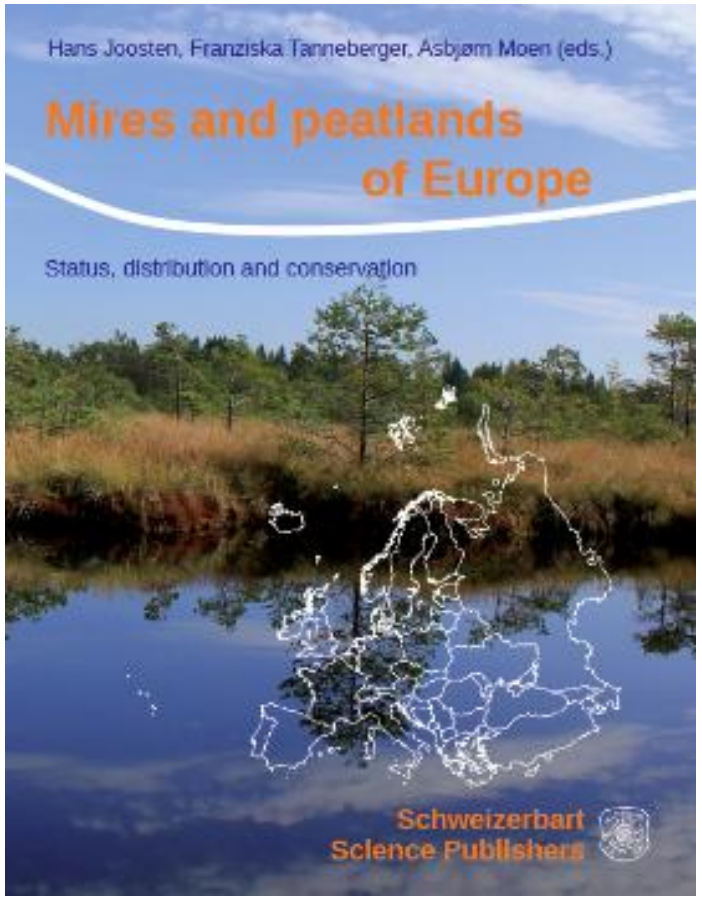

UNEP 2022

# Compared to other continents, Europe has the highest degree of peatland degradation




UNEP 2022

# 12 key findings




- 49 ‘country’ chapters
- 134 autors

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All over Europe peatlands have received much less attention of politics and society than forests.

Republic of Macedonia

In Europe hardly any mires have survived in areas with climatic and edaphic suitability for arable agriculture.

Germany

Peatland destruction is mostly not a sneaking process but the result of concerted and large-scale action.


Germany

Enormous areas of peatlands have been drained in hard work as part of youth campaigns, unemployment relief works, and works of prisoners.

Germany

These rapid developments were initially stimulated by the good results in terms of land productivity.

Switzerland

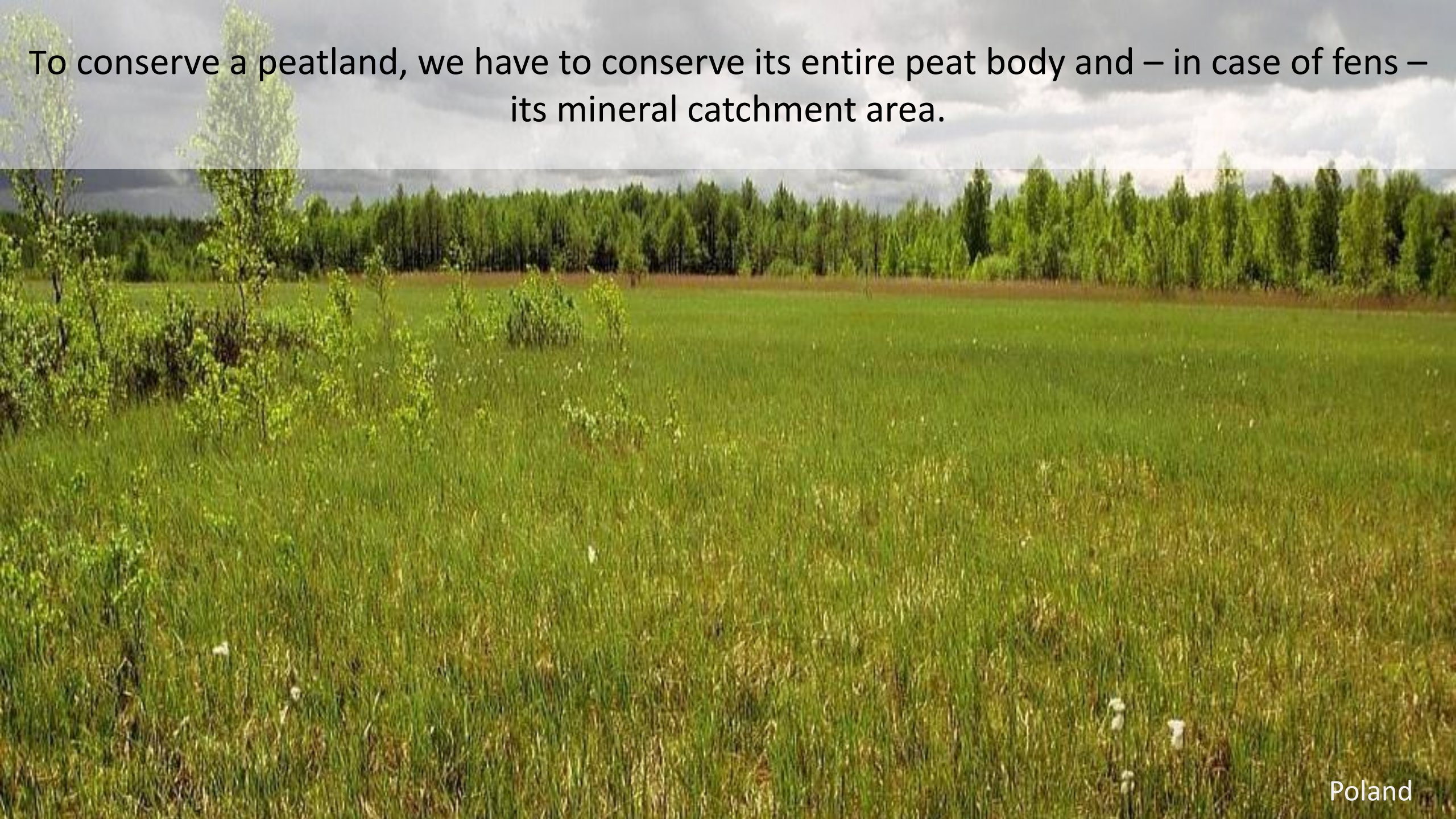
Setbacks like soil degradation and subsidence only became apparent decades later. Much of the damage is irreversible.

United Kingdom

So far, only <1% of the drained peatland area in Europe has been rewetted.


But we also know a lot: Peatland conservation implies primarily the conservation of its hydrology.
Finland

To conserve a peatland, we have to conserve its entire peat body and – in case of fens – its mineral catchment area.



Poland

# Conservation is much more cost-effective than restoration.

Cyprus

# Rewetting stops subsidence and substantially reduces GHG emissions as well as nutrient release

# Last but not least: If you have to use peatlands, use them wet.

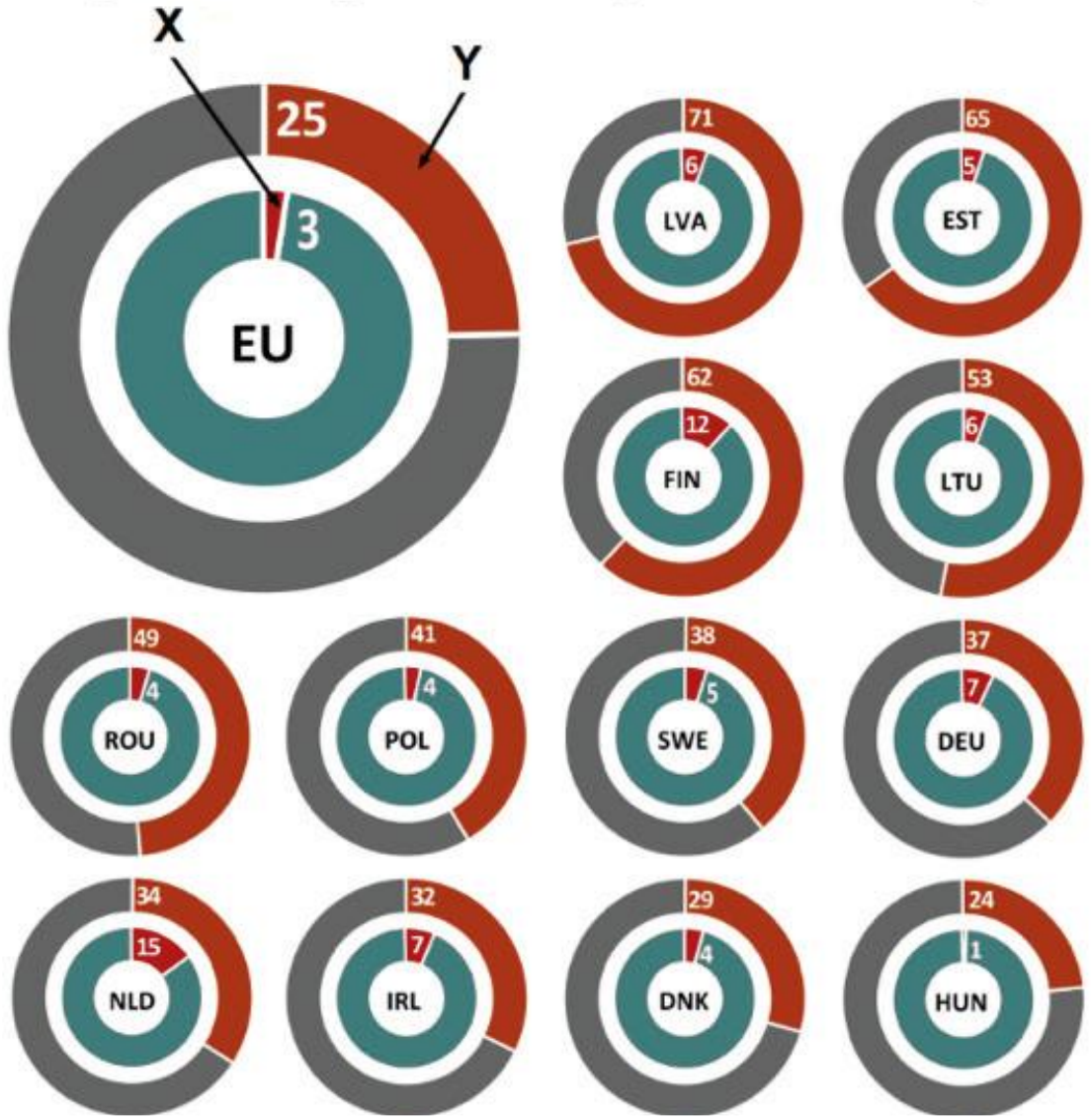

Germany

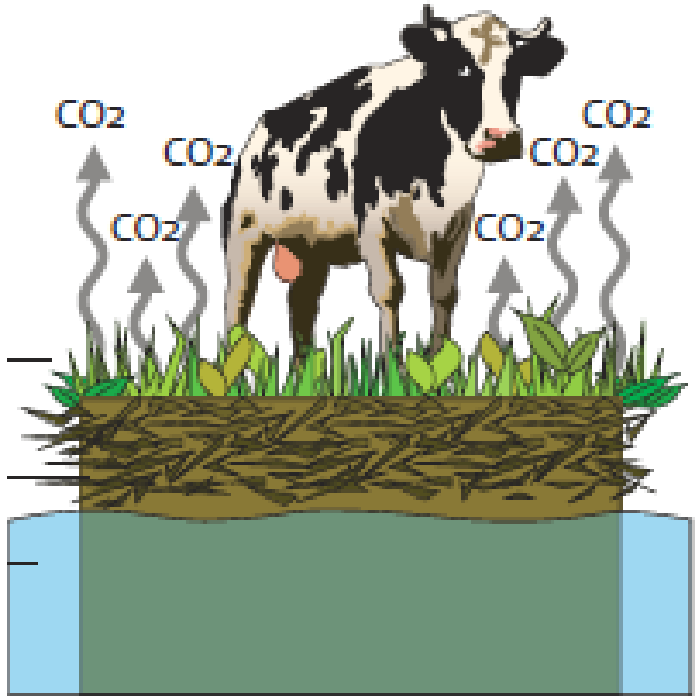
# Peatland rewetting is a chance for agriculture to achieve climate targets

A small part of the agricultural land (x)

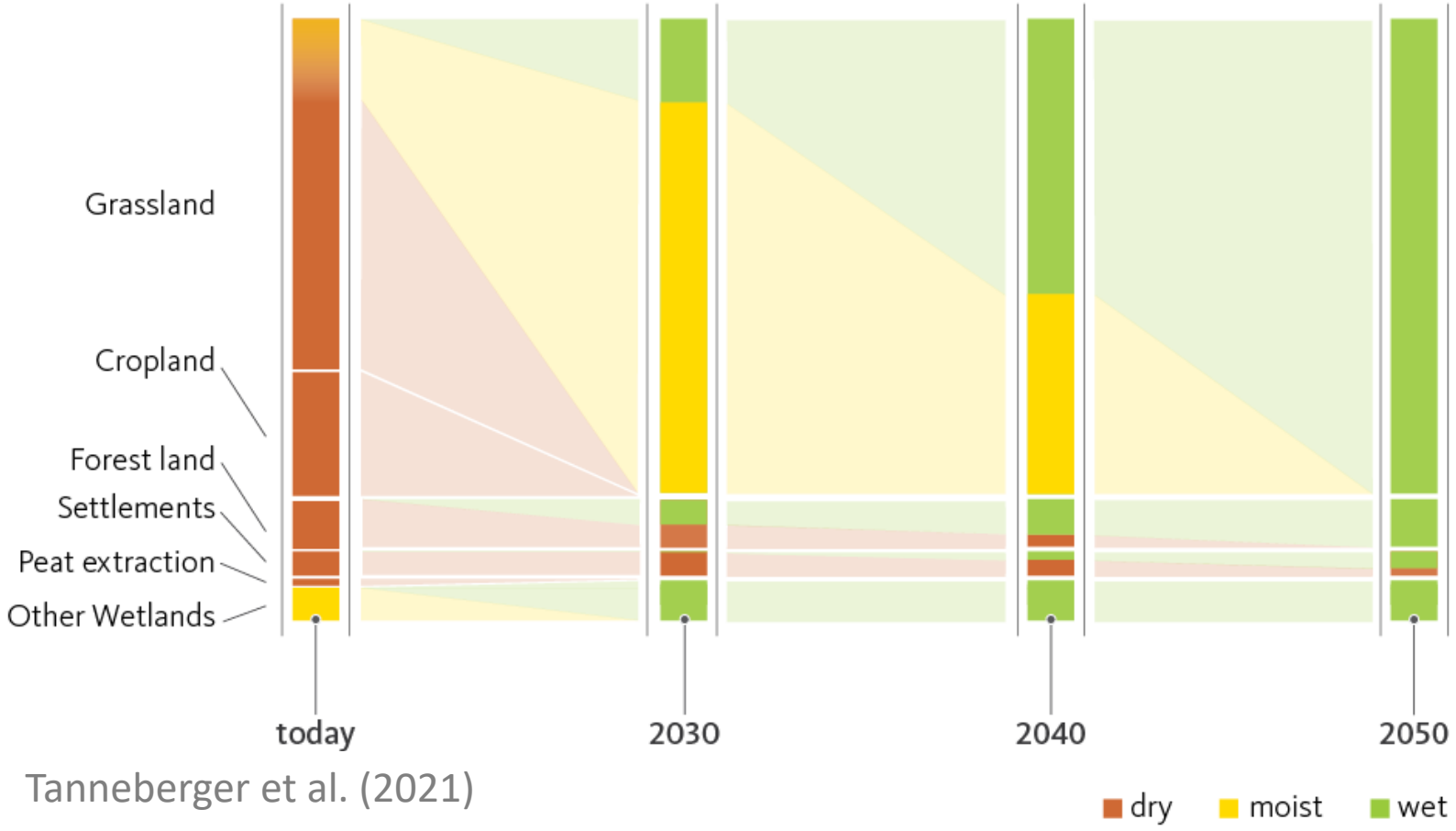
causes

a large part of the GHG emissions related to agriculture (y)



# Swift and large-scale rewetting is necessary to achieve net zero




Tanneberger et al. (2021)

>50.000 ha per year → dimension: coal phase-out!

Sommer et al. 2024

ELSEVIER

Land Use Policy

Volume 147, December 2024, 107363

## Deriving a justified budget for peatland rewetting – Applying the German coal phase-out as a blueprint

Pia Sommer [a], Sebastian Lakner [a 1], Anke Nordt [b 1], Franziska Tanneberger [b 1], Johannes Wegmann [c 1]

# Continued value generation on wet peatlands is key: New crops – new products – new markets

## Biomass

- Material use
- Energetic use
- (Fodder; food)

→**paludiculture***

## Energy

- Solar energy
- Wind energy

… if peatlands are rewetted at the same time!

## Ecosystem services

- Climate protection
- Water protection
- Water retention
- Cooling
- Biodiversity

## Ecotourism

- Hiking
- Bird observation
- Accomodation, catering

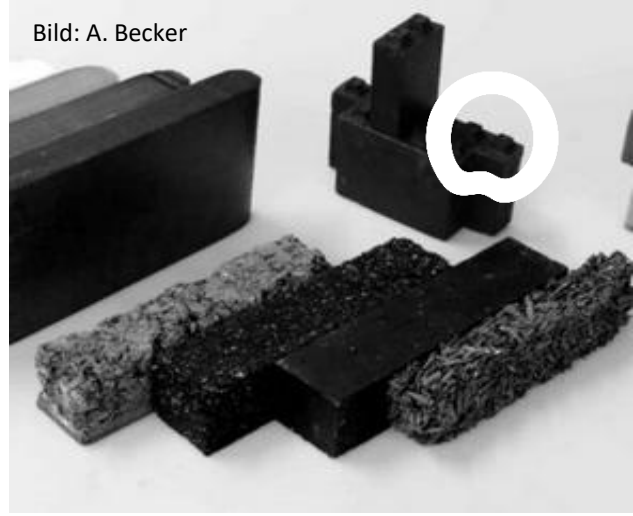
→ Combination possible and necessary for social and economic sustainability

* paludiculture = productive use of wet peatlands


Substrat mats


Sandwich boards


Foam boards




Biochar

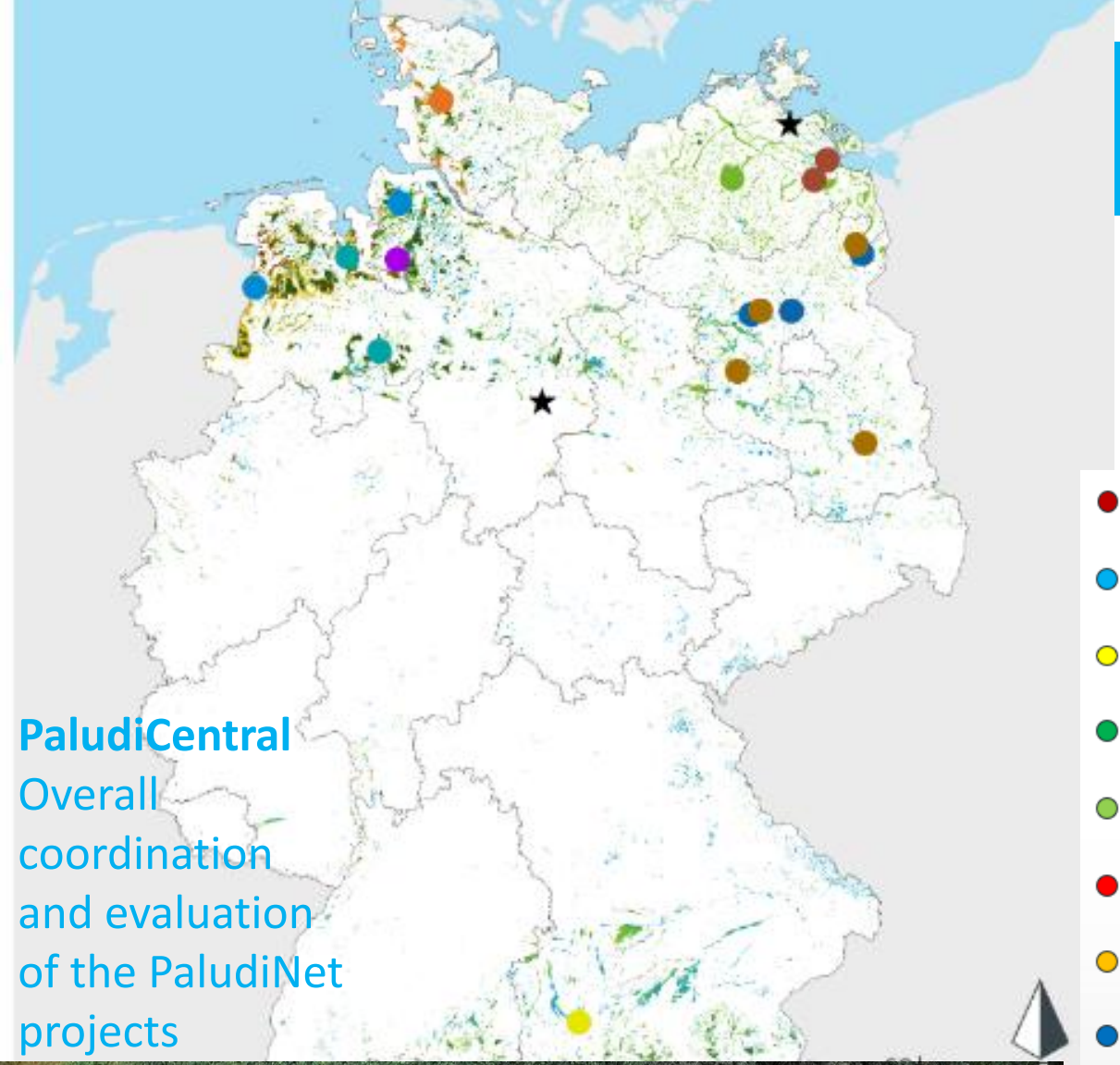
Fiberboards


Thatched roofs


Construction boards

# Implementation of paludiculture in Germany

paludi NETZ ZENTRALE
MOOR · NASS · NUTZEN



**PaludiCentral**
Overall coordination and evaluation of the PaludiNet projects


**In the past**: AES, nature conservation, carbon credits, start-ups: c. 30,000 ha (mainly wet meadows)

**PaludiNet projects**: duration ~2022-2032

- Klimafarm (BMUV) – 405 ha, Nasswiesen
- RoNNi (BMEL) – bis 20 ha, Rohrkolben
- MOOSland (BMEL) – bis 20 ha, Torfmoos
- LiLaTeufel (BMEL) – 200 ha, Nasswiesen & Anbaupaludikultur
- (MOOReturn) (BMEL) – 300 ha, Nasswiesen
- PaludiMV (BMUV) – 795 ha, Nasswiesen, Schilf, Rohrkolben
- WetNetBB (BMEL) – 2430 ha, Nasswiesen
- BluMo (BMUV) – 750 ha, Nasswiesen
- MoorWERT (BMUV) – 60 ha, Nasswiesen

**In the future**: ANK funding „Palu“ (federal government)

# Rewetting + paludiculture: Strong emission reduction and new sequestration

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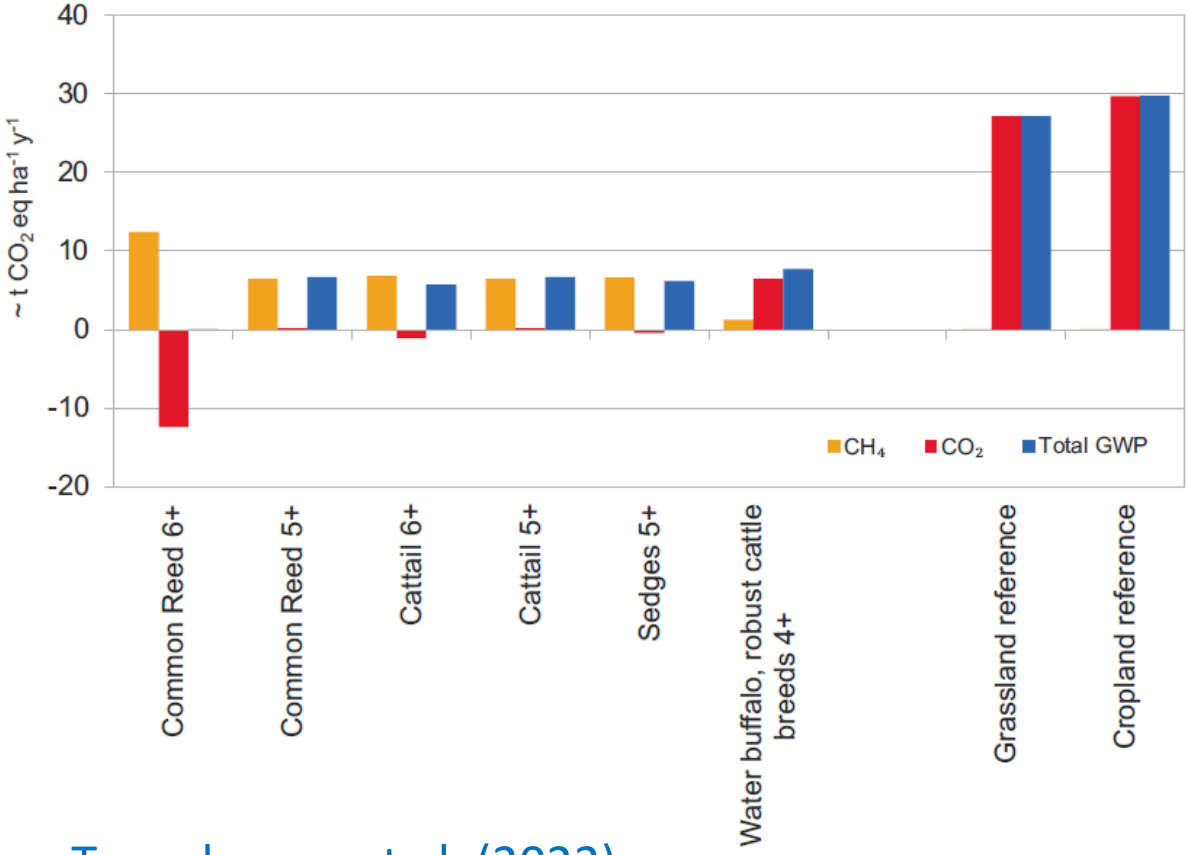
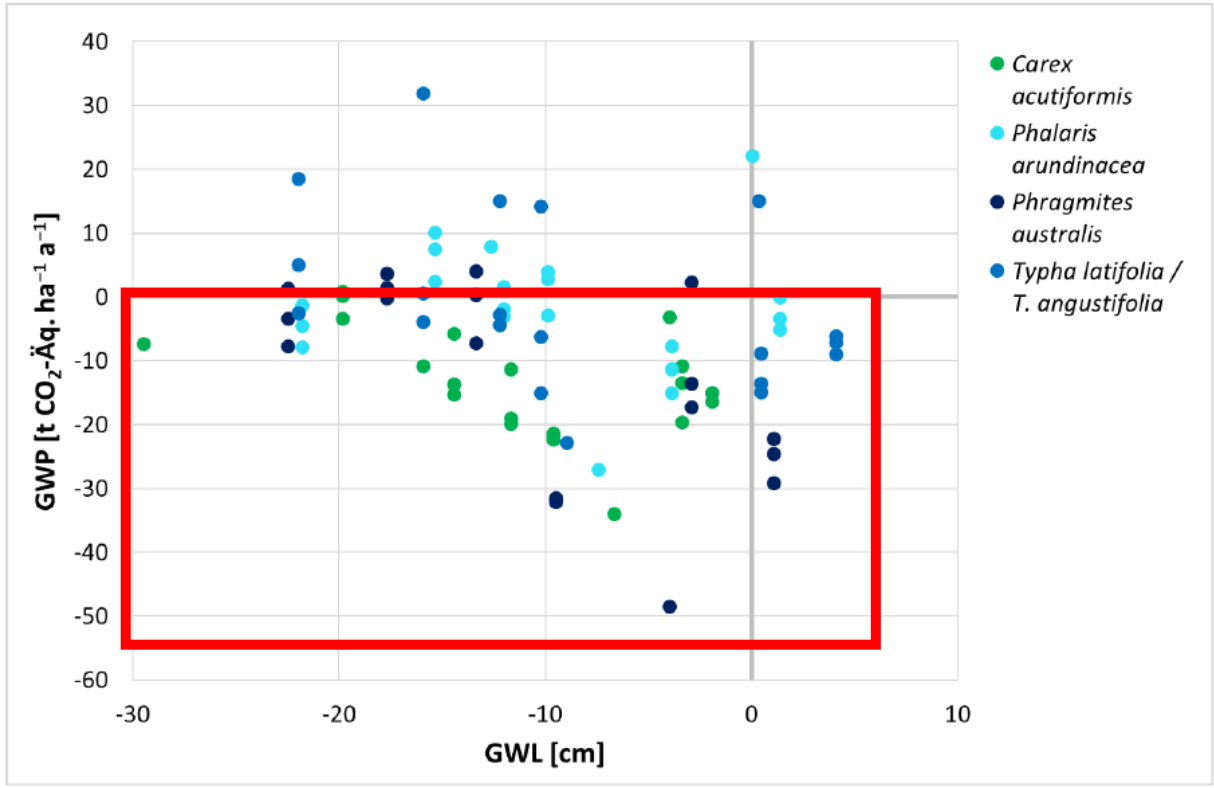
Increasing evidence from GHG measurements on paludiculture sites



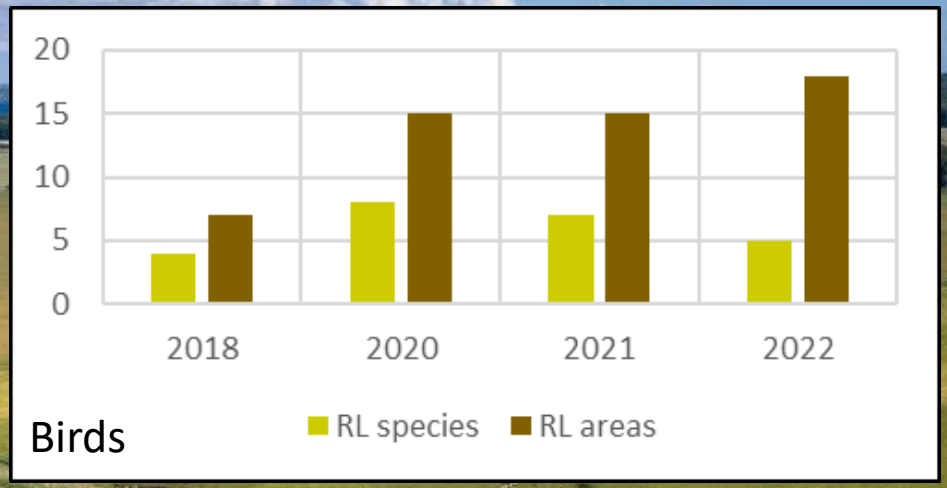

[Tanneberger et al. (2022)]




[Eickenscheidt et al. (2023)]

# Rewetting + paludiculture: Biodiversity benefits

- Reference: drained peatland!
- Focus: mire-typical and mire-specific biodiversity
- Example 10ha cattail site established in 2018/19

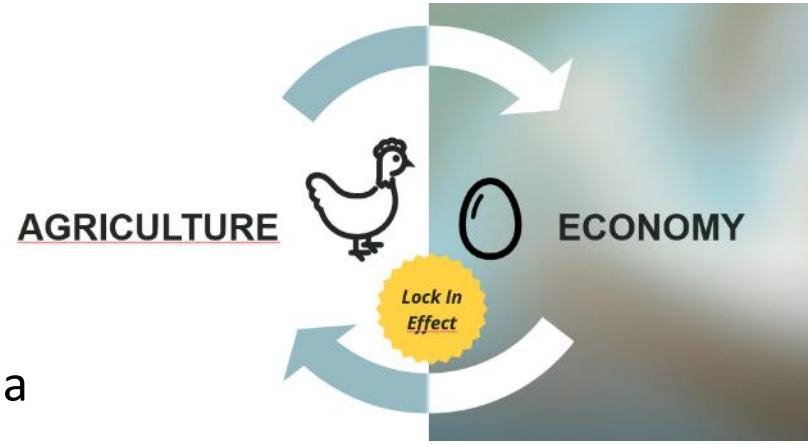



Birds

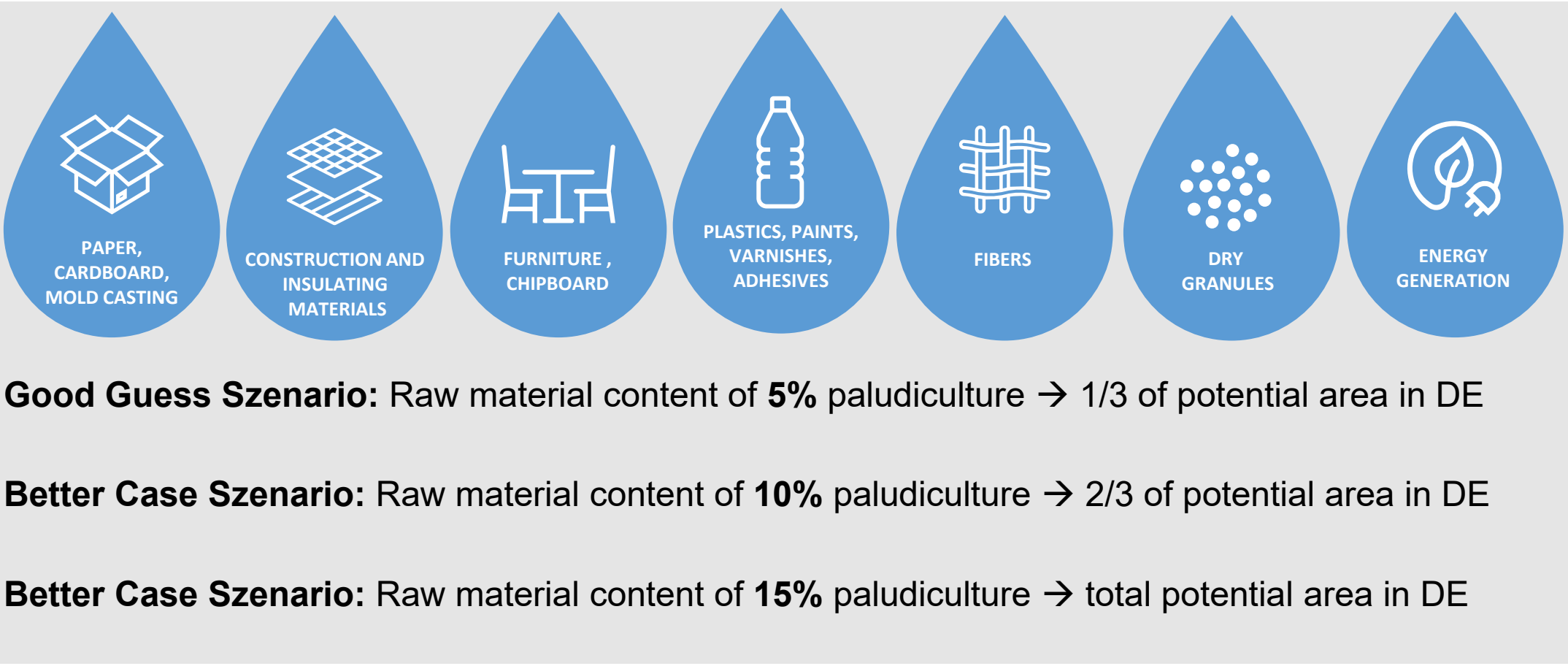
Dragonflies:
40% of the regions‘ species present
(25% reproducing)

Martens et al. 2023; HNEE, PSC & GMC (2024)

# We need to solve the ‚hen and egg' challenge




Total area of agriculturally used peatlands to be rewetted in Germany: 1 mio ha




**Good Guess Szenario:** Raw material content of **5%** paludiculture → 1/3 of potential area in DE

**Better Case Szenario:** Raw material content of **10%** paludiculture → 2/3 of potential area in DE

**Better Case Szenario:** Raw material content of **15%** paludiculture → total potential area in DE

Systain 2023

# Alliance of pioneers

paludi allianz – ein projekt von tomorrow

An alliance of strong and determined business partners who are actively involved in the utilization of paludi biomass through a pilot product.

BAUFRITZ – WIR BAUEN GESUNDHEIT
Kaufland
kik
OBI
OTTO
wepa STIFTUNG
toom – Respekt, wer's selber macht.
Tengelmann Twenty-One
STRABAG – WORK ON PROGRESS
sto
prezero
P&G
out nature by PreZero
OTTO WULFF
leipa


03/2025 OTTO: from 2028 ALL shipping boxes with max. paludi material

Danke für die Aufmerksamkeit!

Dziękuję bardzo za uwagę!