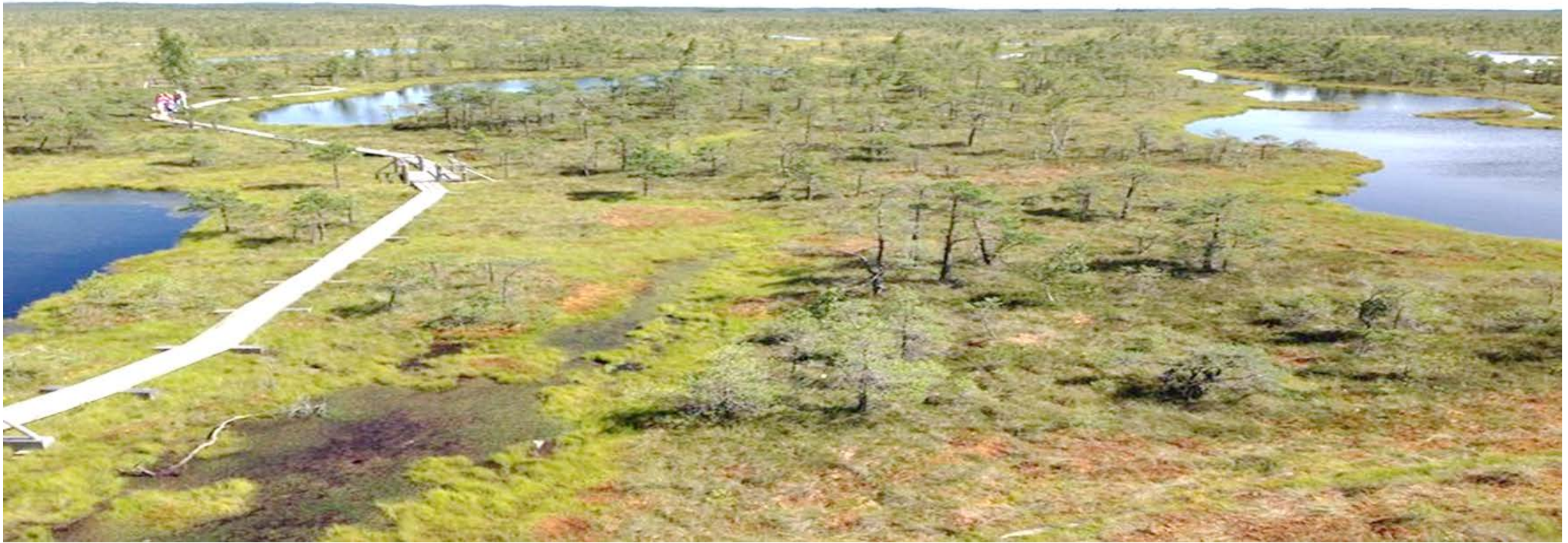


LIFE and peatlands – past, present and future

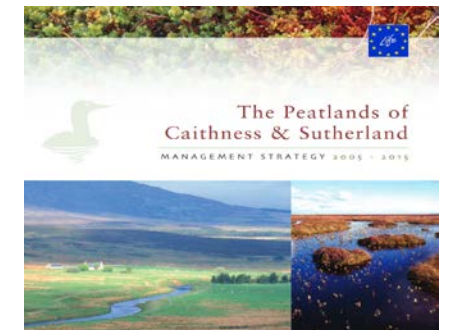
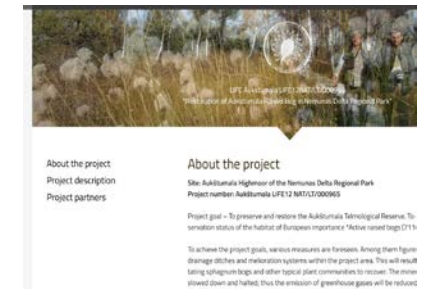


Jan Sliva, ELMEN EEIG

1992 - 2022

>370* LIFE projects to conserve and restore peatlands

- * 1/3 focus primarily on peatlands (mainly Natura 2000 habitats)
- * 2/3 peatland restoration along with inter-linked habitats as part of a larger landscape approach



Challenges - chances – opportunities

Current selection: 2013-2018, Bogs, mires & fens, overall assessment.

Habitats	Regions													
	ALP	ATL	BLS	BOR	CON	MAC	MED	PAN	MATL	STE	MBAL	MMAC	MMED	MBLS
7110 - Active raised bogs	U2	U2		U2	U1	U2	U2	U2						
7120 - Degraded raised bogs capable of natural regeneration	U2	U2		U2	U2	FV								
7130 - Blanket bog (*active only)	U2	U2				FV								
7140 - Transition mires and quaking bogs	U1	U2		U1	U1	U1	U2	U2						
7150 - Depressions on peat substrates of the Rhynchosporion	U2	U2		U1	U1		U1							
7160 - Fennoscandian mineral-rich springs and springfens	FV			U2	U2									
7210 - Calc. fens with Cladium mariscus & Caricion davallianae	U2	U1		FV	U1		U2	FV						
7220 - Petrifying springs with tufa formation (Cratoneurion)	U1	U2	U1	U1	U1		U1	U1						
7230 - Alkaline fens	U1	U2		U1	U2		U2	U2						
7240 - Alpine pioneer formations Caricion bicoloris-atrofuscae	U1	U2			XX		XX							
7310 - Aapa mires	FV			U1										
7320 - Palsa mires	U2			U2										

<https://nature-art17.eionet.europa.eu/article17/>

Challenges - chances – opportunities

Current selection: 2013-2018, Bogs, mires & fens, future prospects.

Habitats	Regions													
	ALP	ATL	BLS	BOR	CON	MAC	MED	PAN	MATL	STE	MBAL	MMAC	MMED	MBLS
7110 - Active raised bogs	U2	U2		U2	U1	U1	U2	U2						
7120 - Degraded raised bogs capable of natural regeneration	U2	U2		U1	U2	FV								
7130 - Blanket bog (*active only)	U2	U2				FV								
7140 - Transition mires and quaking bogs	U1	U2		U1	U1	FV	U1	U2						
7150 - Depressions on peat substrates of the Rhynchosporion	U2	XX		FV	U1		XX							
7160 - Fennoscandian mineral-rich springs and springfens	FV			U2	U2									
7210 - Calc. fens with Cladium mariscus & Caricion davallianae	U2	U1		FV	U1		U1	FV						
7220 - Petrifying springs with tufa formation (Cratoneurion)	U1	U2	U1	XX	U1		XX	U1						
7230 - Alkaline fens	U1	U2		U1	U2		U2	U2						
7240 - Alpine pioneer formations Caricion bicoloris-atrofuscae	U1	U2			XX		XX							
7310 - Aapa mires	FV			U1										
7320 - Palsa mires	U2			U2										

<https://nature-art17.eionet.europa.eu/article17/>

How LIFE helps in the BGP? - Enormous experience and knowledge collected

- Implementation
 - Lessons learned and best practices
 - Challenges & opportunities
- Policy impact



Lessons learned

- **Differentiated approaches**
- **Hydrology first** (catchment scale)
- **Sufficient project area**
- **Long breath required** (implementation & financing)
- **Proper impact monitoring**



Lessons learned - differentiated approaches

- Hydrological type
 - Degradation level
- Appropriate objectives + methods!*



Photographs © J. Sliva

Lessons learned – sufficient project area

- Site hydrology
- Catchment area
- Groundwater level



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© LIFE09 NAT/DE/000009 Hang- und Hoochmoore

Lessons learned – long breath required

- Permits + convincing stakeholders
- land acquisition
- technical actions
- restoration processes



Lessons learned – long breath required

Example Belgium

2003 – 2019: Series of 6 successful LIFE projects in the Ardennes midlands:

Cx SCAILLE (LIFE05 NAT/B/000087), PLTHautes-Fagnes (LIFE06 NAT/B/000091), Lomme (LIFE08 NAT/B/000033), and Ardenne liégeoise (LIFE10 NAT/BE/000706).

- **>2,500 ha of peatlands:** improved peatland hydrology and completed restoration measures
- **Improvement of >80% peatlands in Wallonia and 40% of all BE peatlands**
- **CS still U2 but trend improving**

Carte d'identité du projet



Le LIFE Hautes-Fagnes a été sélectionné comme "Best of Best LIFE Nature project" européenne.



Le projet LIFE Hautes-Fagnes vient d'être sélectionné comme 1 des 4 "Best of Best LIFE Nature p..." qui viennent de se terminer et d'être évalué en 2013. Il a été sélectionné par la Commission européenne sur la base de différents critères : améliorations biologiques, économiques et sociales, degré d'innovation et de transférabilité, pertinence de la stratégie et du rapport coût-efficacité.

But général

Le projet LIFE Hautes-Fagnes visait la **restauration de plusieurs habitats naturels de grand intérêt biologique** dans les milieux tourbeux sur les hauts plateaux.

Il s'agit de tourbières boisées (91D0*), tourbières hautes actives (7110*), tourbières hautes dégradées (7110*), tourbières de transition (7140), communautés de tourbe dénudée (7150), chênaies pédonculées à bouleau paratourbeux (5130), aulnaies alluviales (91E0), hêtraies de *Luzulo-Fagetum* (9110), landes sèches (4030), formations à *Geranium sylvaticum* (6520), les formations à *Nardus stricta* (6230*), et les mégaphorbiaies (6430).

Ces différents habitats, par leur rareté, leur fragilité et la grande biodiversité qu'ils abritent, sont tous considérés comme des "Habitats", qui reconnaissent leur grande valeur patrimoniale à l'échelle de l'Europe et la nécessité d'assurer leur restauration.

Lessons learned – long breath required

Example United Kingdom

1992 – 2021: Series of **24 LIFE projects on the restoration of blanket bogs and raised bogs**, e.g., LIFE Blanket bog (LIFE00 NAT/UK/007075), MoorLIFE (LIFE08 NAT/UK/000202) or MoorLIFE2020 (LIFE14 NAT/UK/000070)

- **In total restoration and improvement of some 170,000 ha of degraded mires**
- = area representing some 6.3% of the total peatland area and 17-22% of all peat-accumulating mires in the UK.



Lessons learned – best practice



- Sufficient rewetting by closing drainage systems and damming
- Deforestation and/or woodland removal
- Combating invasive alien species
- Re-establishment of mire species



Photographs © J. Sliva

Lessons learned – best practice (LIFE CCM, LIFE IPC)

Suitable measures have been tested and applied

- Rewetting, paludiculture and wet / Carbon farming
- Conversion of afforestation and arable land on organic soils
- Reduction of peat mining
- Restoration and sustainable use of areas after peat exploitation



Photographs © indicated LIFE projects

Lessons learned – best practice (LIFE CCM, LIFE IPC)

LIFE REstore (LIFE14 CCM/LV/001103)

- Sustainable and responsible management and re-use of degraded peatlands in Latvia



LIFE Peat Restore (LIFE15 CCM/DE/000138)

- Reduction of CO2 emissions by restoring degraded peatlands in Northern European Lowland



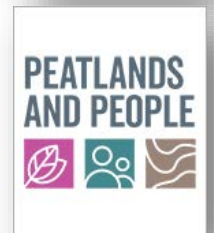
LIFE OrgBalt (LIFE18 CCM/LV/001158)

- Demonstration of climate change mitigation potential of nutrients rich organic soils in Baltic States and Finland

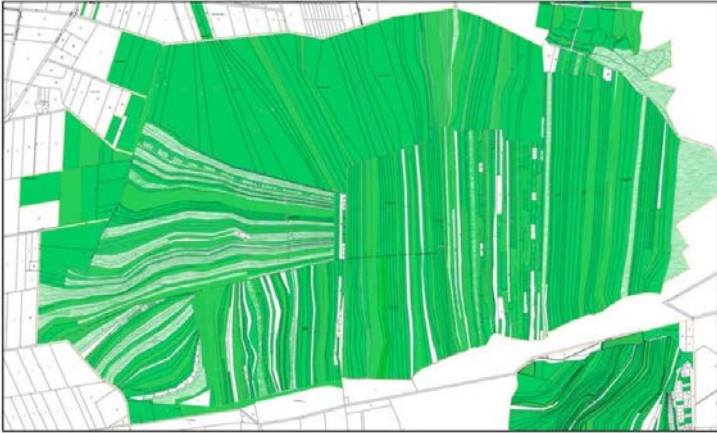
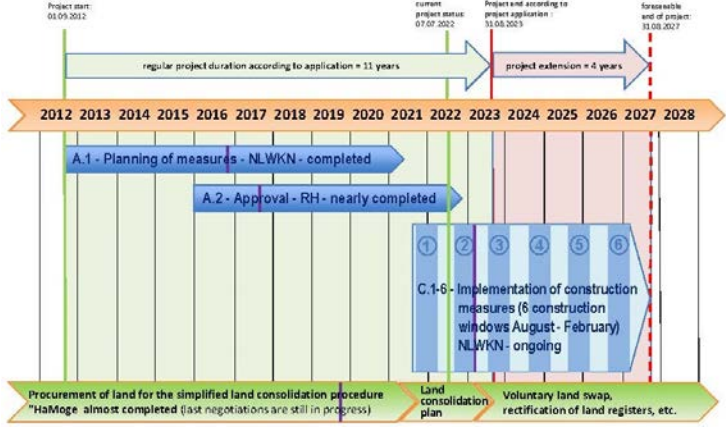
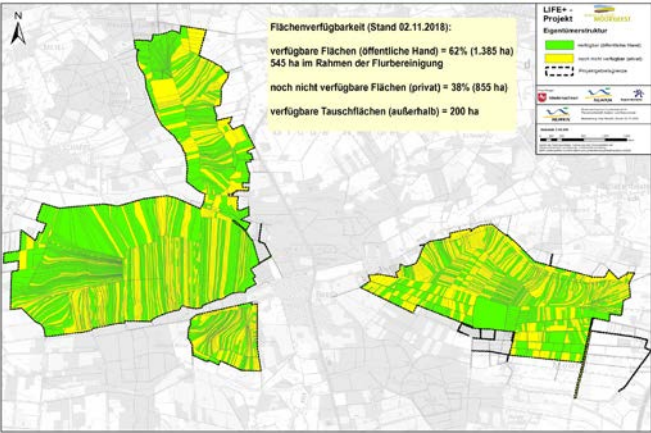


LIFE IP Peatlands and People (LIFE19 IPC/IE/000007)

- Peatlands and People - Irelands Climate Action Catalyst



Challenges - chances – opportunities: Land acquisition



© LIFE11 NAT/DE/000344 Hannoversche Moorgeest



Chances + opportunities

Development, innovation and demonstration

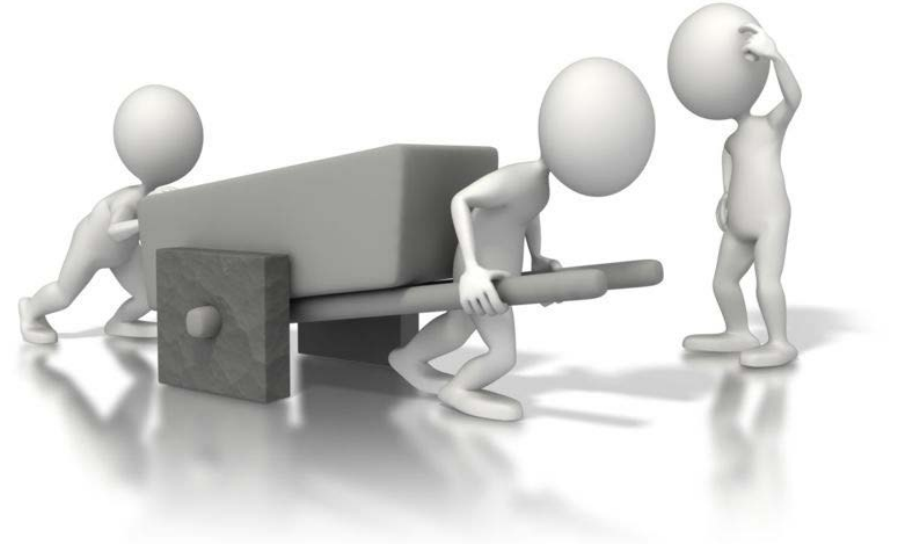


Photographs © indicated LIFE projects



Challenges – weaknesses – failures: *Project performance*

- Deficient review of information sources →
 - **The same mistakes and failures, *again and again ...***
 - **Reinventing wheels, *again and again ...***
- Gathering data with limited validity or explanatory value
- Insufficient publication or sharing of results
- Missing minimum monitoring standards (→ KPI)



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Challenges – weaknesses – failures: *project performance*

- The same mistakes and failures, *again and again ...*



Photographs © J. Sliva

Challenges – weaknesses – failures: *feasible goals*

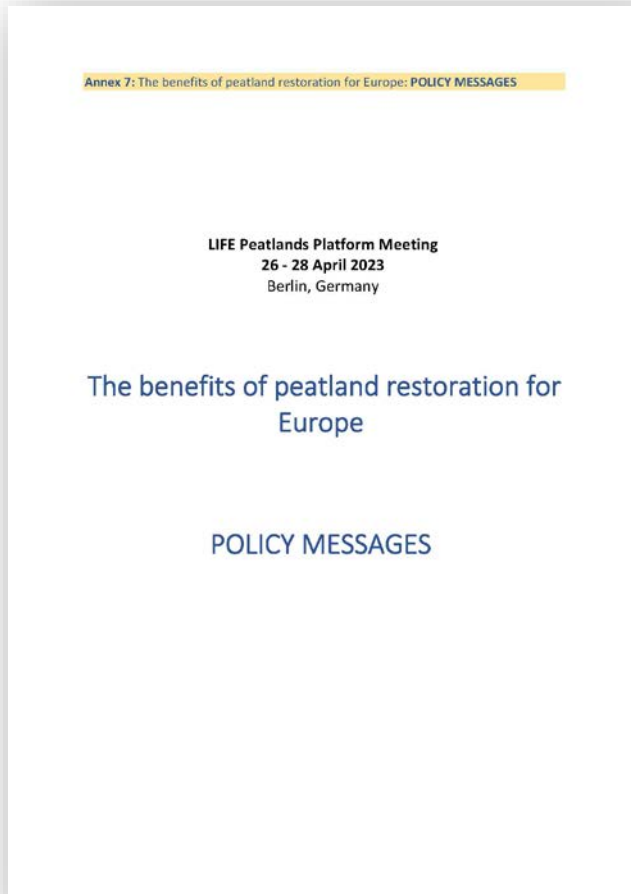
➤ The same mistakes and failures, *again and again ...*



Photographs © J. Sliva

Challenges - chances – opportunities

- In the last decades, EU projects have developed and successfully tested numerous suitable techniques to restore damaged peatlands and degraded organic soils.
- However, efficient and long-lasting implementation and financing schemes and procedures need to be established very soon for large-scale peatland restoration so that they can be practically accessible and financeable (easy to understand, use and finance) by multiple stakeholders concerned.
- Further development and standardisation of Carbon certificates from restored peatlands play a key role too. There are a few, such as IUCN Peatland Code or MoorFutures that start to be well recognised and trusted by landowners and investors alike as a credible certification system.
- In case of the necessary expansion of paludiculture, wide range of paludiculture crops should be listed as eligible for direct payments under national CAP Strategic Plans and Pillar II instruments should be taken into account within National CAP Strategic Plans to make paludiculture implementation possible.



Challenges - barriers - financing

All projects (1998-2021), all relevance	363
All projects (1998-2021), high relevance only	106
Total costs (2000-2021), high relevance only	399.930.649 €

Cost of 1 km highway in Germany: € 20-30 million

High relevance peatland LIFE projects in Germany 2000-2021: € 36.2 million = 1-2 km highway (EU: € 400 mio. = some 20 km highway).

The German transport ministry (BMDV) significantly failed the climate targets but plans but plans 144 construction projects that span 1,300 kilometres and would cost up to € 30 billion.

24 Jan 2023, 13:10 Carolina Kyllmann

NGO sues German government for failing climate targets in transport and buildings sectors

#Transport #Heating #Government



Hintergrund: Was kostet ein Kilometer Autobahn?



TRANSPORT + LOGISTIK

verkehrs  RUNDschau



Wie teuer ist ein Kilometer Autobahn? Diese Frage lässt sich pauschal nicht beantworten
© Foto: Fotolia/Marina Lohrbach

Beim Autobahnbau gibt es keine Pauschalpreise. Die Kosten pro Kilometer können unter Umständen sogar bis zu 100 Millionen Euro erreichen.

<https://www.verkehrsrundschau.de/nachrichten/transport-logistik/hintergrund-was-kostet-ein-kilometer-autobahn-2999089>



Thank you



4th Natura 2000 Biogeographical Seminar for the Atlantic Region, 04-06 September 2013, Hannover, DE

