



# LIFE EREMITA Final Conference

Risultati conseguiti e prospettive future

10.06.2022

DAMSLab  
Bologna



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CONSERVATION ACTIONS OF *GRAPHODERUS BILINEATUS* AT  
EUROPEAN LEVEL



Con il contributo dello strumento finanziario LIFE dell'Unione Europea LIFE 14 NAT/IT/000209 EREMITA





# *Graphoderus bilineatus* habitats



*G. bilineatus* habitat in Skujiņu Lake (Latvia)  
(Photo: U. Valainis)



*G. bilineatus* habitat in Nature reserve  
“Dubnas paliene” (Latvia)(Photo: U. Valainis)



*G. bilineatus* habitat in Bavaria (Germany)  
(Photo: Lars Hendrich)



*G. bilineatus* habitat in Drišķins Lake (Latvia)  
(Photo: U. Valainis)



*G. bilineatus* habitat in an abandoned gravel  
pit in the Siget gravel system  
(Slovenia)(Photo: Ivan Ergaver)



*G. bilineatus* inhabited peat pit in  
Vaserne, Olsens Sø (Denmark)  
(Photo: Mogens Holmen)

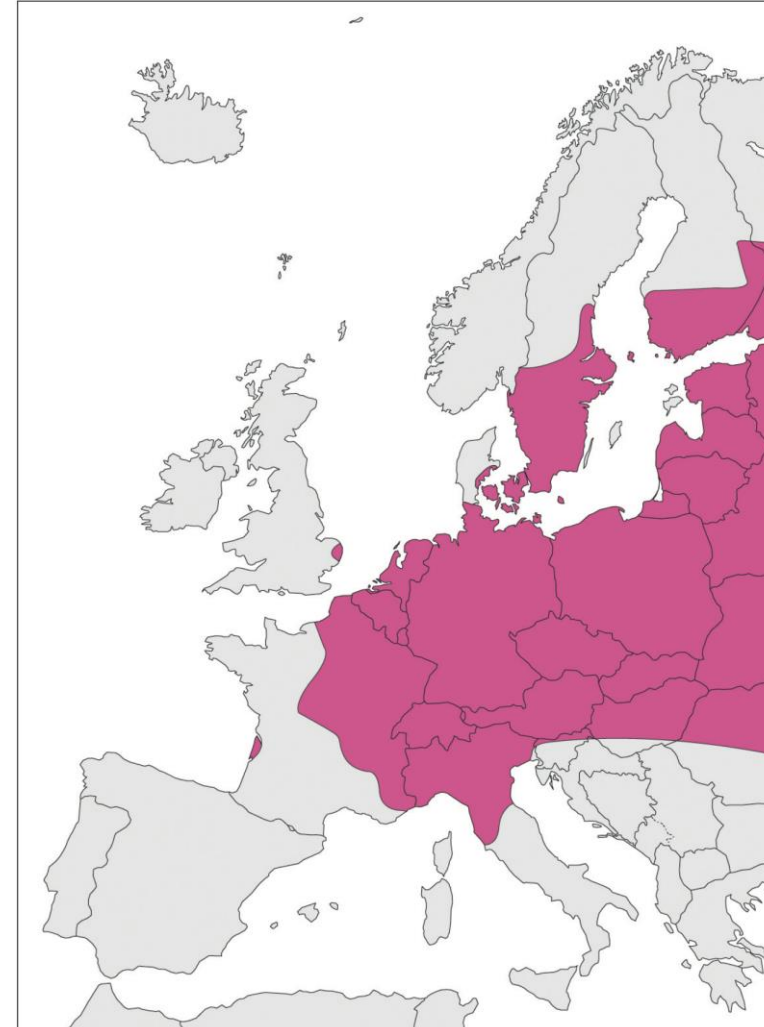
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# Species distribution

**Occurrence:** Austria; Belarus, Bosnia and Herzegovina; Croatia, Czech Republic; Denmark; Estonia, Finland; France; Germany; Hungary; Italy; Latvia; Lithuania, Luxembourg; Montenegro; Netherlands; Norway; Poland; Russia (Central, Southern and Northern part of Europe, as well as Western Siberia), Serbia; Slovakia; Slovenia, Sweden, Switzerland; Turkmenistan; Ukraine.

**Considered extinct:** Belgium, United Kingdom.



European distribution map of *Graphoderus bilineatus*

Source: Cuppen et al., 2006

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# Species status according to international legal instruments and agreements

Legal text	Annex
<p>📄 Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora - consolidated version 01/01/2007 (EU Habitats Directive)</p>	<p>Annex II: animal and plant species of community interest whose conservation requires the designation of special areas of conservation.</p>
	<p>Annex IV: animal and plant species of community interest in need of strict protection.</p>
<p>📄 Convention on the conservation of European wildlife and natural habitats (Bern Convention)</p>	<p>Annex II: strictly protected fauna species</p>
	<p>Revised Annex I of Resolution 6 (1998) of the Bern Convention listing the species requiring specific habitat conservation measures (year of revision 2011)</p>



*G. bilineatus* (Photo: V. Vahruševs)

Source: <https://eunis.eea.europa.eu/species/160>

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# Species assessments at EU biogeographic level

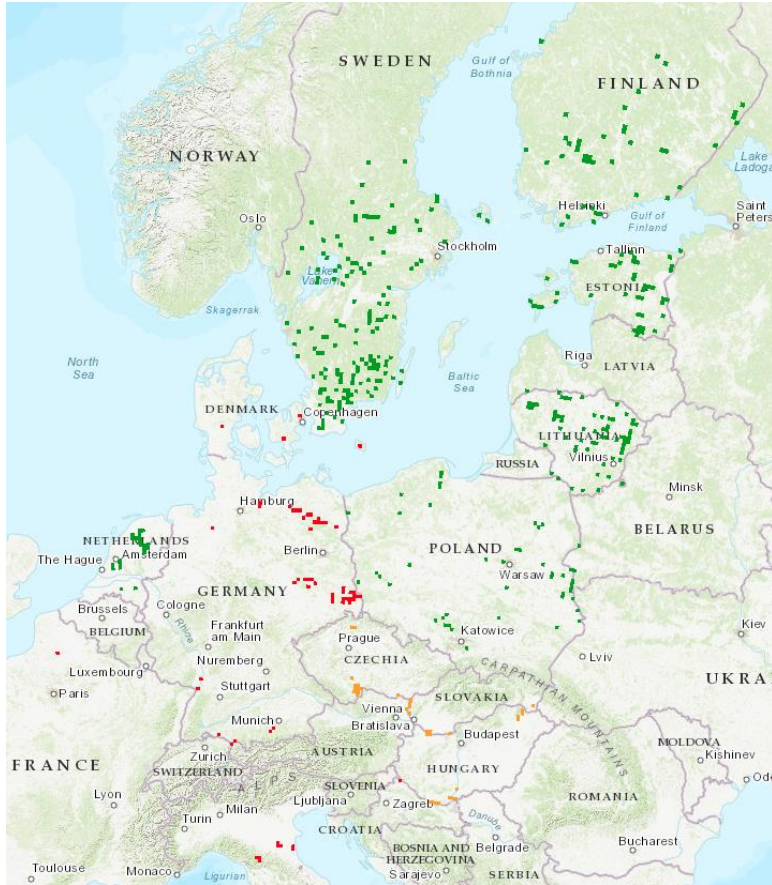
Region	Conservation status 2007-2012	Conservation status trend (2012)	Conservation status 2013-2018	Conservation status trend (2018)
Alpine	U2	X	MTX	X
Atlantic	U2	X	MTX	+
Black Sea	U1	X	MTX	X
Boreal	U1	X	MTX	=
Continental	U2	X	MTX	=
Pannonian	U2	-	MTX	X

### Categories of conservation status:

Favourable	FV
Unknown	XX
Unfavourable-Inadequate	U1
Unfavourable-Bad	U2

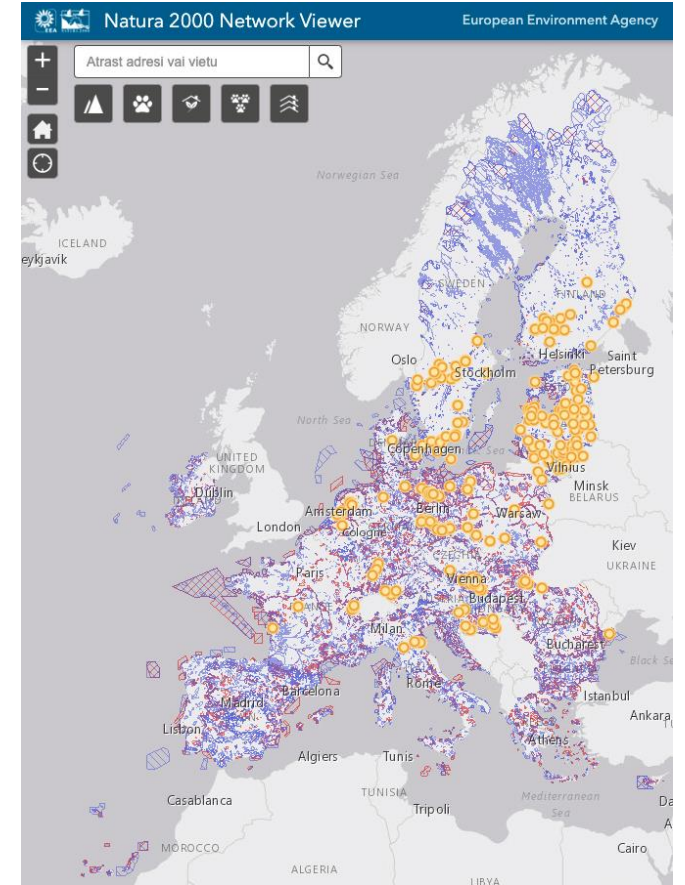
### Categories of trend

Improving	+
Stable	=
Deteriorating	-
Unknown	X



Species distribution and Conservation Status data in 10X10 km grid (2013-2018)

Source: <https://maps.eea.europa.eu>



*G. bilineatus* occurrence in Natura 2000 sites  
Source: <https://natura2000.eea.europa.eu/#>

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# Species assessments at Member States level

<u>Country</u>	<u>Region</u>	<u>Conservation status 2007-2012</u>	<u>Conservation status 2013-2018</u>
Austria	Alpine	U2x	U2x
Austria	Continental	U2=	U2=
Croatia	Continental	N/A	XX
Czech Republic	Pannonian	N/A	U1+
Czech Republic	Continental	U2=	U1+
Denmark	Continental	U2x	U2=
Estonia	Boreal	FV	FV=
Finland	Boreal	FV	FV=
France	Continental	XX	XXx
France	Atlantic	XX	U2x
Germany	Continental	U2x	U2=
Germany	Atlantic	U2+	U2=
Hungary	Pannonian	FV	U1x

<u>Country</u>	<u>Region</u>	<u>Conservation status 2007-2012</u>	<u>Conservation status 2013-2018</u>
Italy	Continental	U1x	U2-
Latvia	Boreal	U1x	U1+
Lithuania	Boreal	XX	FV=
Netherlands	Atlantic	U2x	FV+
Poland	Continental	FV	FV=
Romania	Black Sea	U1	XX
Romania	Continental	U1	XX
Slovakia	Pannonian	U2-	U1X
Slovakia	Alpine	U2-	U2x
Slovenia	Continental	U2-	U2-
Sweden	Continental	FV	FV=
Sweden	Boreal	FV	FV=

10.06.2022

Source: <https://nature-art17.eionet.europa.eu/article17/species/summary/?period=5&group=Arthropods&subject=Graphoderus+bilineatus&region=>

### Categories of conservation status:

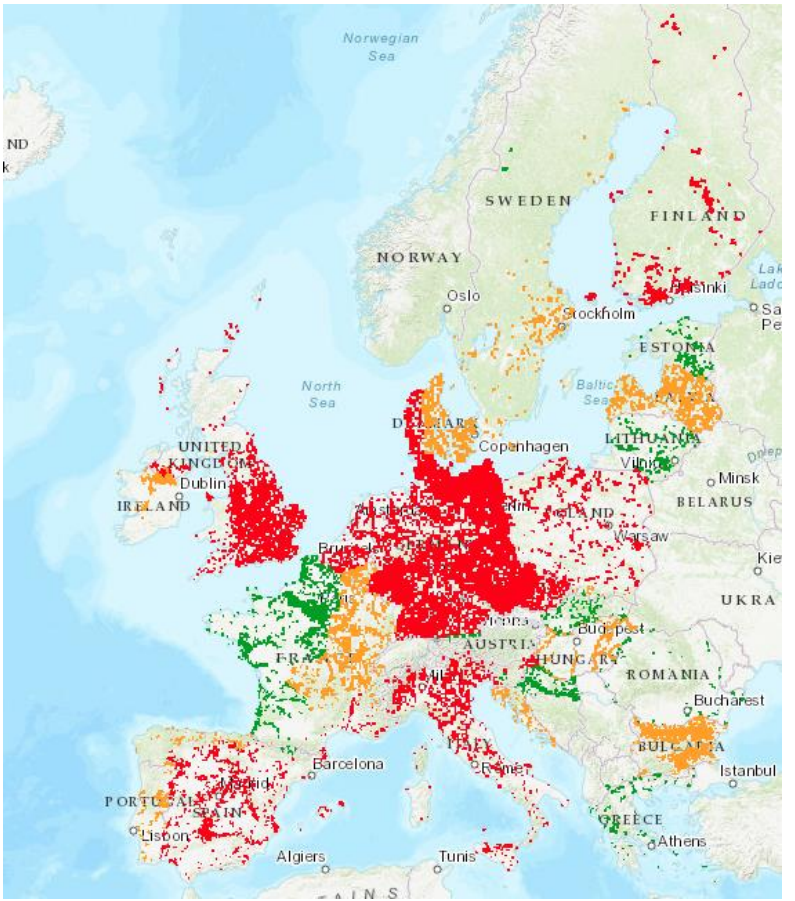
Favourable	FV
Unknown	XX
Unfavourable-Inadequate	U1
Unfavourable-Bad	U2

### Categories of trend

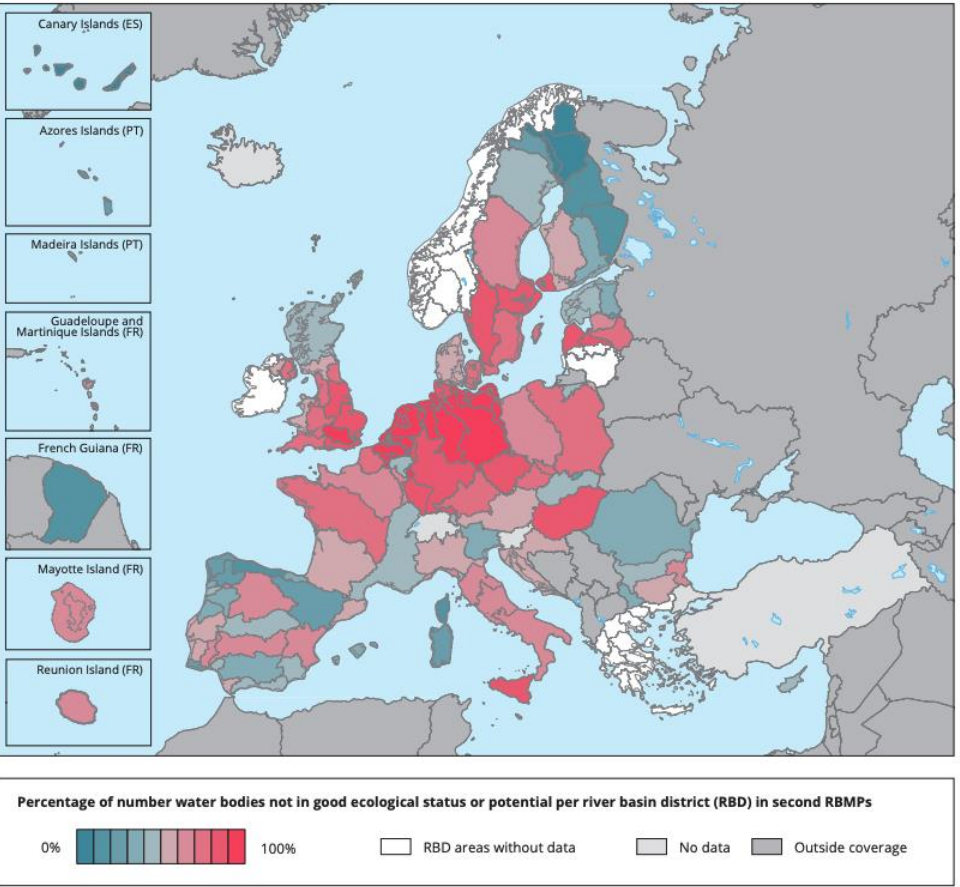
Improving	+
Stable	=
Deteriorating	-
Unknown	x



# Conservation status and ecological quality of freshwater habitats in Europe



Distribution and Conservation Status data in 10X10 km grid for habitat 3150 *Natural eutrophic lakes* (2013-2018)  
 Source: <https://maps.eea.europa.eu>



Percentage of water bodies in Europe's river basin districts (RBD) that are not in good ecological status/potential  
 Source: European waters Assessment of status and pressures, 2018

10.06.2022



# Main pressures and threats reported by Member States

## Ten most frequently reported 'highly important' pressures

Code	Activity	Frequency
J02	Changes in water bodies conditions	41
H01	Pollution to surface waters	23
F02	Fishing and harvesting aquatic resources	14
K02	Vegetation succession/Biocenotic evolution	14
A02	Modification of cultivation practices	5
F01	Marine and freshwater aquaculture	5

## Ten most frequently reported 'highly important' threats

Code	Activity	Frequency
J02	Changes in water bodies conditions	40
H01	Pollution to surface waters	20
K02	Vegetation succession/Biocenotic evolution	13
F02	Fishing and harvesting aquatic resources	10
A02	Modification of cultivation practices	3
A07	Use of 'pesticides' in agriculture	3
I01	Invasive alien species	3
I02	Problematic native species	3
J03	Other changes to ecosystems	3

### Explanation of terms used in Article 17 Reference Portal:

**Pressures** are activities which are currently having an impact on the species.

**Threats** are activities expected to have an impact in the near future.

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# Main conservation measures reported by Member States

## Ten most frequently reported 'highly important' conservation measures

Code	Measure	Frequency
6.3	Legal protection of habitats and species	26
4.1	Restoring/improving water quality	19
6.1	Establish protected areas/sites	19
4.3	Managing water abstraction	13
7.2	Regulation/ Management of fishery in limnic systems	6
2.1	Maintaining grasslands and other open habitats	3
4.0	Other wetland-related measures	3
6.4	Manage landscape features	3
7.0	Other species management measures	3
7.1	Regulation/ Management of hunting and taking	3

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

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# Examples of *Graphoderus bilineatus* habitat management in Europe



EUROPEAN COMMISSION



LIFE Public Database

European Commission > CINEA > LIFE Programme > LIFE Public Database

Advanced Search on LIFE Projects Results

Title	Reference	
▶ Re-creating habitat complexity for semi-aquatic fauna	LIFE14 NAT/SE/000201	<a href="#">% DETAILS</a>
▶ Raised bogs in Denmark	LIFE14 NAT/DK/000012	<a href="#">% DETAILS</a>
▶ Restoration and conservation of petrifying springs (*7220), calcareous fens (*7210) and alkaline fens (7230) in Denmark	LIFE14 NAT/DK/000606	<a href="#">% DETAILS</a>
▶ Restoration programme for Natura2000 fen areas in the Netherlands	LIFE12 NAT/NL/000372	<a href="#">% DETAILS</a>
▶ Booming business: wetland restoration in the marshes of Natura 2000 Alde Feanen	LIFE12 NAT/NL/000134	<a href="#">% DETAILS</a>

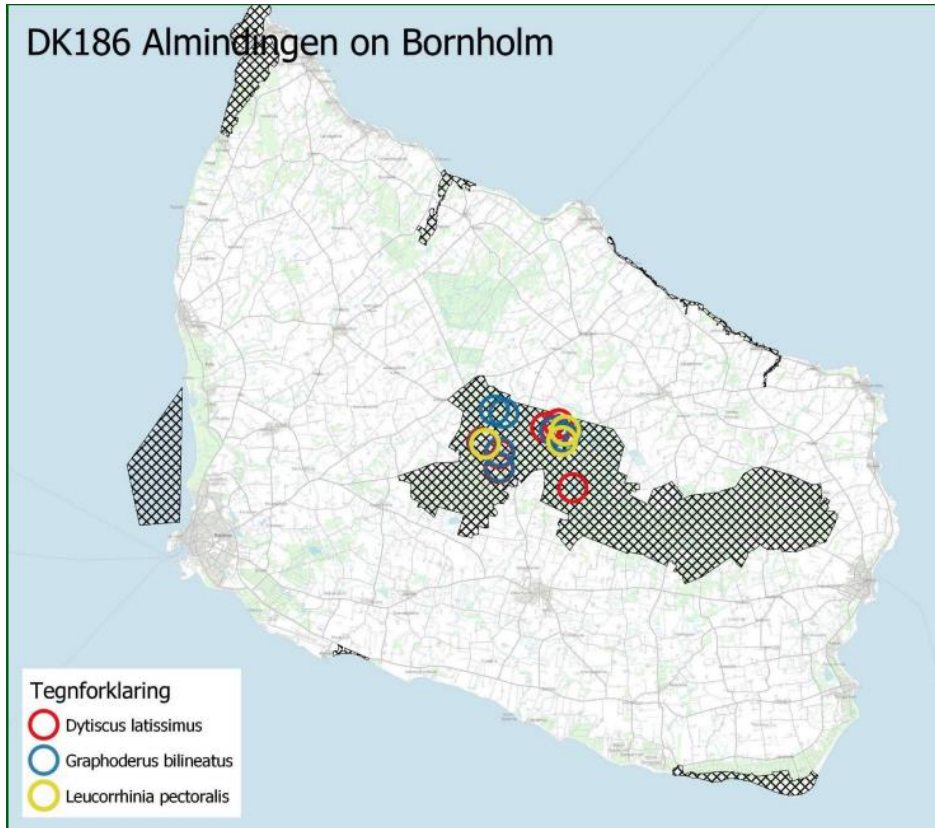
1 - 5 of 5 items

10.06.2022



# Re-creating habitat complexity for semi-aquatic fauna

Reference: LIFE14 NAT/SE/000201 | Acronym: SemiAquaticLife



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SemiAquaticLife project sites on Bornholm (Denmark) before restoration works



# Re-creating habitat complexity for semi-aquatic fauna

Reference: LIFE14 NAT/SE/000201 | Acronym: SemiAquaticLife

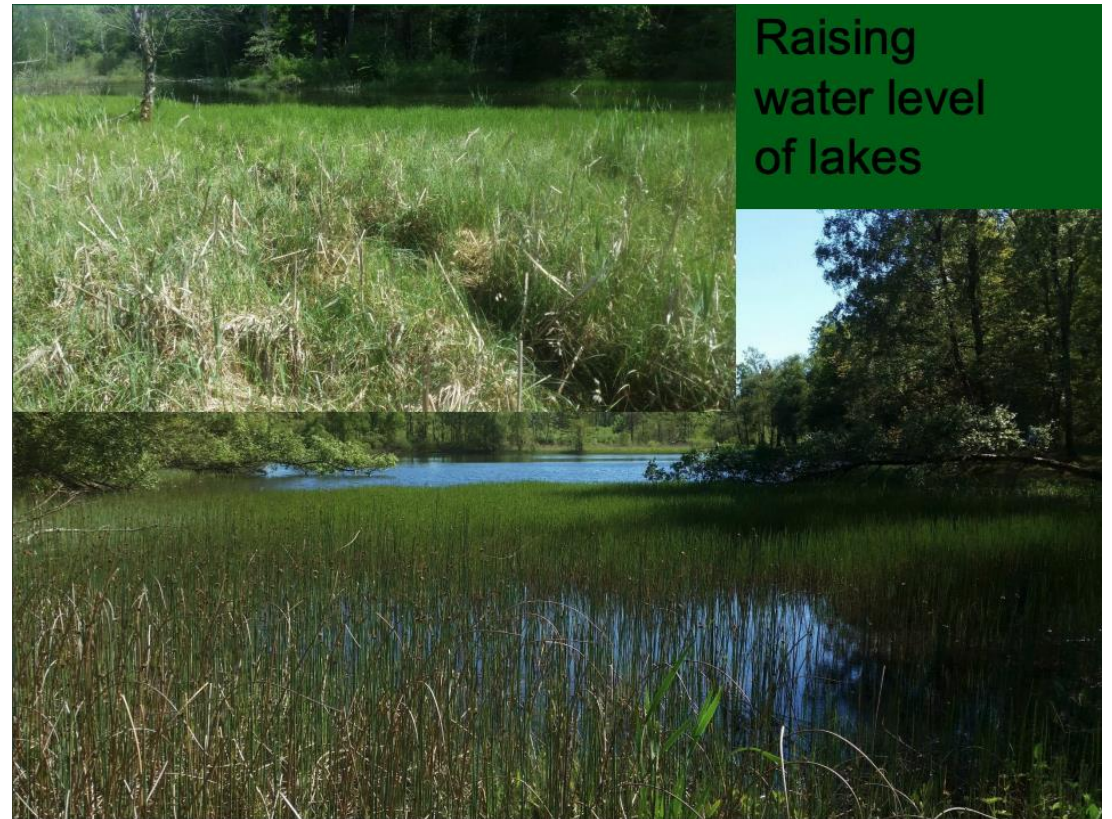


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# Re-creating habitat complexity for semi-aquatic fauna

Reference: LIFE14 NAT/SE/000201 | Acronym: SemiAquaticLife



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# Re-creating habitat complexity for semi-aquatic fauna

Reference: LIFE14 NAT/SE/000201 | Acronym: SemiAquaticLife



Removing dominant vegetation like *Typha*, *Phragmites* etc



Digging new lakes

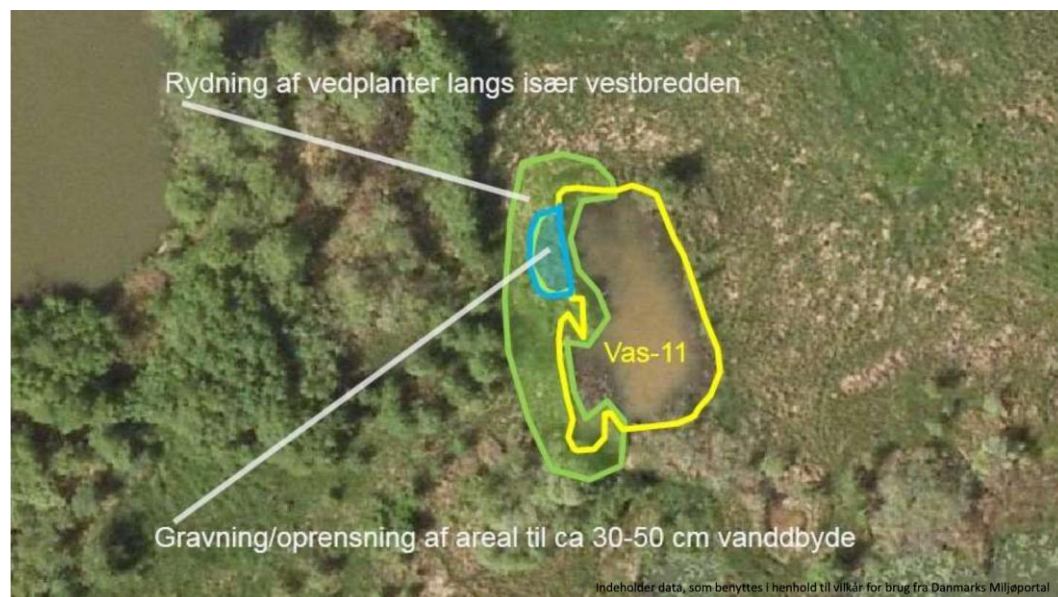


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## Restoration and conservation of petrifying springs (\*7220), calcareous fens (\*7210) and alkaline fens (7230) in Denmark

Reference: LIFE14 NAT/DK/000606 | Acronym: RigKilde-LIFE



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# Riparian Ecosystem Restoration of the Lower Drava River in Slovenia

Reference: LIFE11 NAT/SI/000882 | Acronym: LIVEDRAVA



Source: <http://livedrava.ptice.si/domov/galerija/fotogalerija/>

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## ADMINISTRATIVE DATA

- ★ Reference: LIFE11 NAT/SI/000882
- ☆ Acronym: LIVEDRAVA
- 🕒 Start Date: 01/09/2012
- 🕒 End Date: 31/12/2017
- 💶 Total Budget: 4,409,483 €
- 🇪🇺 EU Contribution: 2,188,741 €
- 📍 Project Location:

## TARGET HABITAT TYPES

- 91E0 - "Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (Alno-Padion, Alnion incanae, Salicion albae)"

## SPECIES

- *Tringa glareola*
- *Sterna hirundo*
- *Philomachus pugnax*
- *Haliaeetus albicilla*
- *Aythya nyroca*
- *Alcedo atthis*
- *Charadrius dubius*
- *Actitis hypoleucos*
- *Rhodeus sericeus amarus*
- *Umbra krameri*
- *Cobitis taenia*
- *Aspius aspius*





# Riparian Ecosystem Restoration of the Lower Drava River in Slovenia

Reference: LIFE11 NAT/SI/000882 | Acronym: LIVEDRAVA



Ditch before the restoration



Creation of meanders and appropriate banks



Ditch after the restoration

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Source: <https://livedrava.ptice.si/habitat-for-graphoderus-bilineatus-was-restored/?lang=en> (Photo: Tilen Basle)



# Coordinated actions to preserve residual and isolated populations of forest and freshwater insects in Emilia-Romagna

Reference: LIFE14 NAT/IT/000209 | Acronym: LIFE EREMITA



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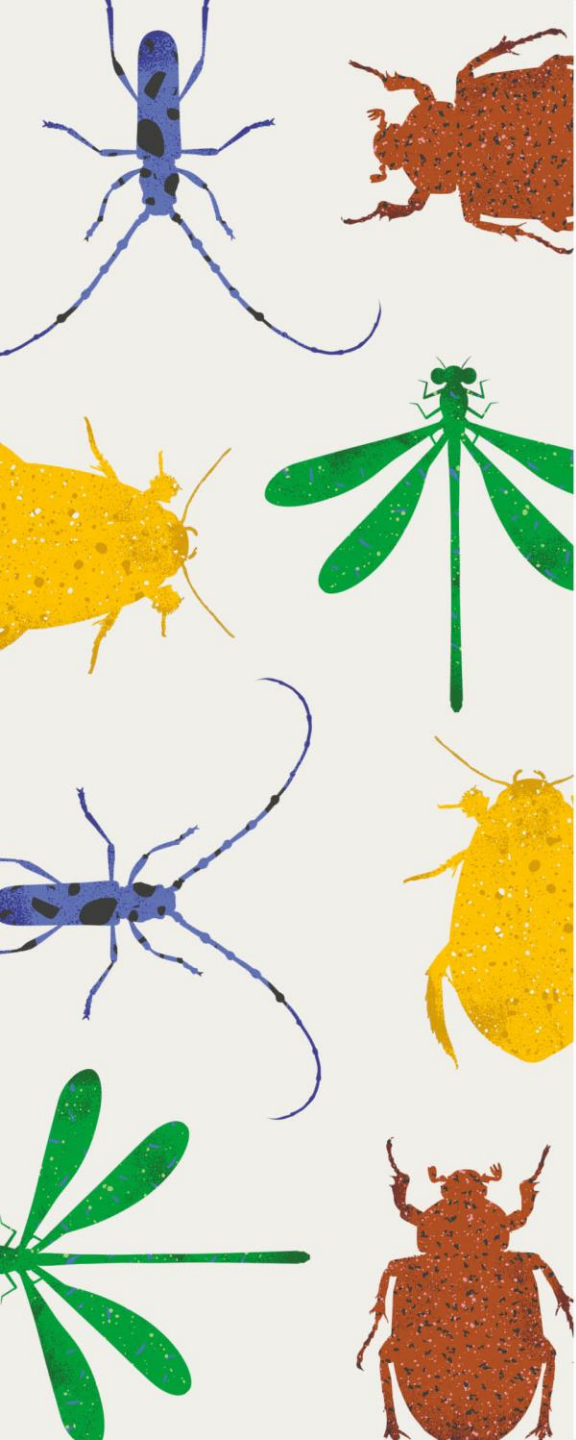
Source: LIFE EREMITA project materials



**I would like to thank the following colleagues who provided valuable information for the preparation of this presentation:**

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# Thank you for listening!

INFO E CONTATTI

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