Life Clima Bombina

VORDINGBORG KOMMUNE

Presentation LIFE Platform Meeting
Amphibian and reptile conservation in Europe
LIFE Clima-Bombina
Santander, Spain, 22-24 May 2024

RAVN-NATURE

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LIFE18 NAT/DK/000732
LIFE Clima-Bombina
”New habitats for Bombina bombina and other amphibians and birds to counteract problems from climate change in coastal areas.” 2019-2024.

Knudshoved Odde. National important populations of *Bombina bombina, Bufo calamita, Pelobates fuscus, Bufo viridis.*

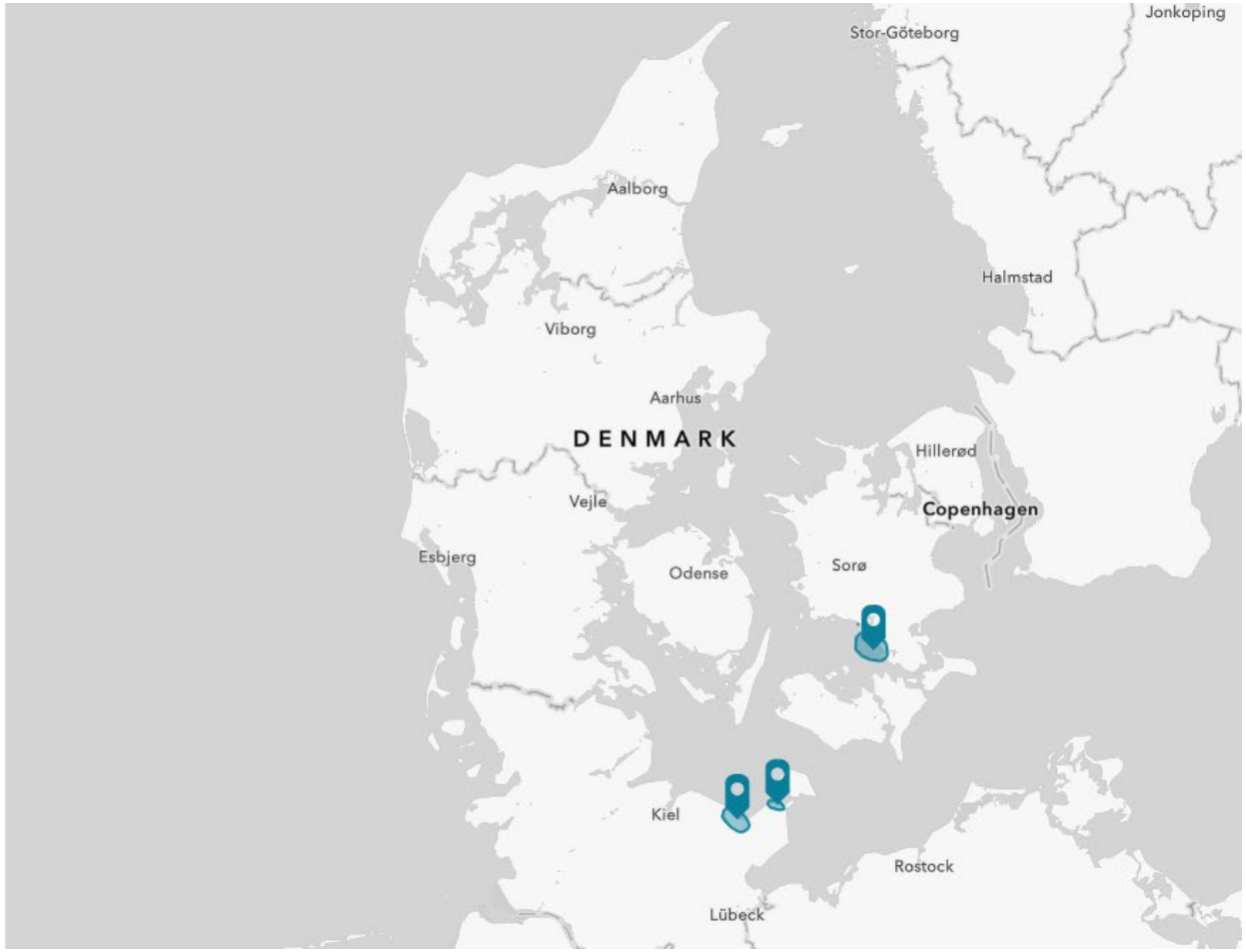
Habitat for 17 out of 19 species of amphibians and reptiles in Denmark

Project areas

The project in Life Clima-Bombina takes place in 3 project areas.

- Project area 1) Knudshoved Odde in Vordingborg Municipality - 280 acres

- Project area 2) Sehlendorfor in Germany - 257 acres
  - Project area 3) North Wagrien in Germany - 55 acres.



Project owner:

- Vordingborg Municipality
- Project manager: Carsten Horup

Project partner:

- Danish Environmental Protection Agency
- Stiftung Naturschutz Schleswig-Holstein
- Ravn-Nature v. Peer Ravn
- Rosenfeldt – private estate (3.000 hectares)

Location:

- Knudshoved Odde and Schleswig-Holstein

Project period: 2019 – 2024

Financers:

- LIFE Program (60%)
- DEA (35%)
- Partners (5%)

Budget: 5.1 mio euro.

EU LIFE Clima-Bombina
Knudshoved Odde - Project area 100 hectares of existing nature to the west – 180 hectares of new nature to the east – A total project area on 280 hectares.

Project objectives and effects in Life Clima-Bombina

The overall objectives of the project is to achieve favorable conservation status for Firebellied toad and contribute to achieve favorable conservation status for 7 other amphibians, 1 reptile, 4 bird species and 9 habitatnature-types.

- Restoring and re-creating 25 breeding ponds for Firebellied toad *(Bombina bombina)* and secure the population through a supplementary breeding programme and establishment of hibernating areas.
- Improve and create areas with 9 habitatnature-types by managing existing habitats and converting arable land into habitat nature. The 9 primary habitat types are: calcareous grassland (6210), nardus grassland (6230), dry grassland on calcareous sand (6120), grey dunes (2130), salt meadows (1330), molinia meadows (6410) and three different freshwater habitattypes (3130, 3140, 3150).

- Improve excisting habitats and create new habitats for 7 amphibian species and one reptile listed at the Habitats Directive Appendix IV: Green Toad *(Bufo viridis)*, Natterjack *(Bufo calamita)*, Common spadefoot *(Pelobates fuscus)*, Treefrog *(Hyla arborea)*, Moor frog *(Rana arvalis)*, Agile frog *(Rana dalmatina)*, Crested Newt *(Triturus cristatus)* and the Sand Lizard *(Lacerta agilis)*.

- Improve excisting habitats and create new habitats and nesting areas for the bird species Avocet *(Recurvirostra avosetta)*, Red-backed shrike *(Lanius Collorio)*, Pintail *(Anas Acuta)* and Arctic tern *(Sterna paradisaea)*.

- Control of predators of wadingbirds and invasive species.

- Establish close-to-nature year-round grazing with Galloway cattle and Exmoor ponies

Threats

Climate change will eventually lead to sea level rise and Firebellied toads main-habitats at Knudshoved Odde is at risk of being divided into three isolated islands. The rocky dune that separates the western and eastern parts of the project area will be permanently flooded. This will further fragment the amphibian populations. Even today, more frequent high tide events are seen especially in winter. This causes overflooding of the breedingponds with saltwater. This makes them not usable for the Firebellied toad and all other rare amphibians. With the Life Clima Bombina project, a new population of amphibians is established on higher ground east of the existing population area so that the amphibians can maintain its important populations at Knudshoved Odde.

Future isolation of amphibian populations due to rise of sea-level!

Threats:
Drougth
Extreme weather

Project results!

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Project area 2019

ine -SDFE/GST


Project area 2023
Natural hydrology restored!
40 new ponds established (52 hectares)
11 exisiting ponds cleaned up (2,2 hectares)

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The amphibians returns!

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Supplementary Breeding program:

- *Bombina bombina*
- *Pelobates fuscus*
- *Bufo calamita*
- *Bufo viridis*

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Supplementary breeding program – Sand Lizard – *Lacerta agilis*

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The birds return!
2023: 400 breedingpairs – 51 species
60 breeding pair of the target species Avocets

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Restoration on landscape-level!

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From arable fields to species-rich dry grasslands in 3 years!

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Result 2020-2021-2022:
9,000 kg of seeding material produced and sown on over 100 hectares.
60-70 different plant seeds.

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Hand collected seeds from ca. 25 characteristic dry grassland speceis









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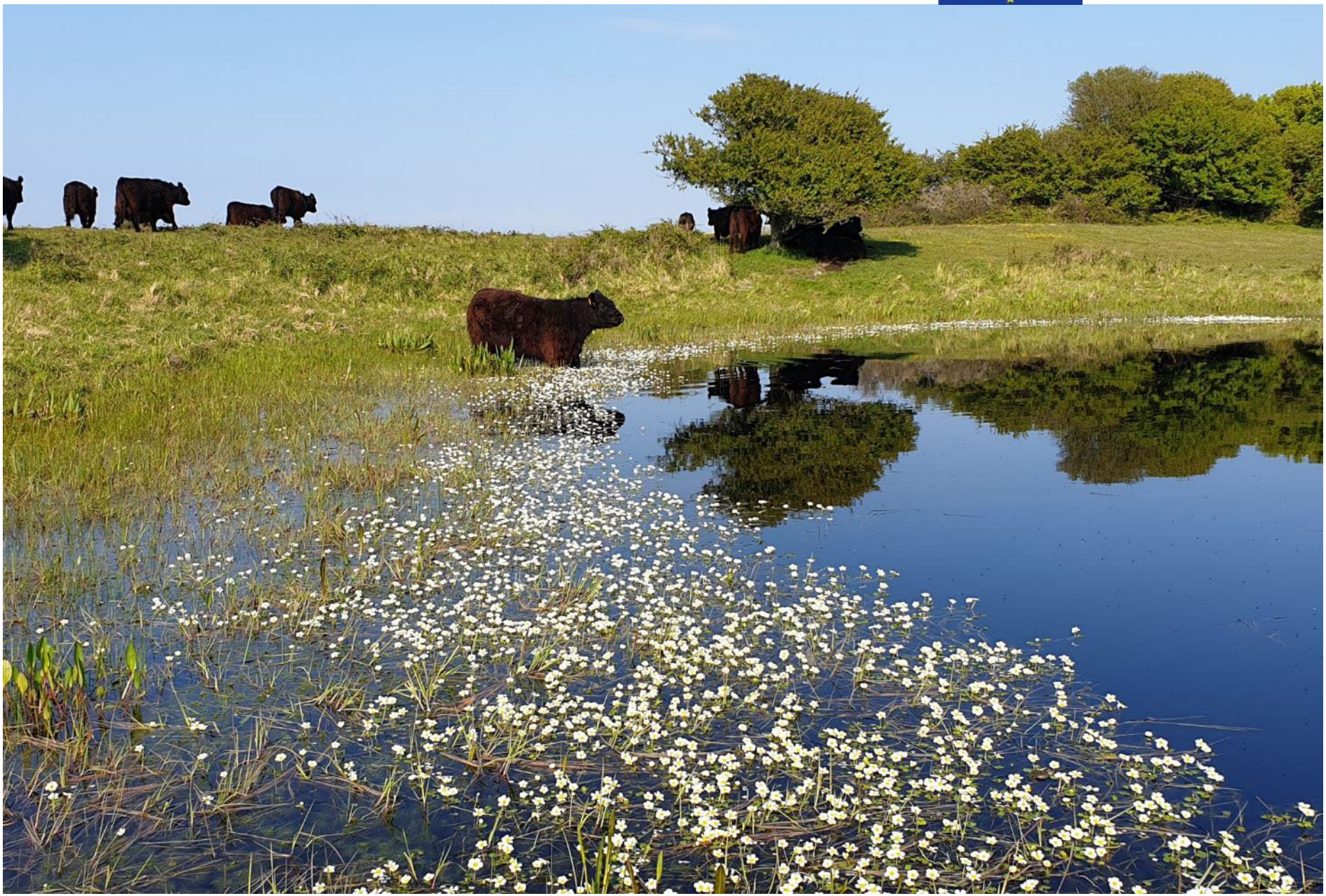
Others actions: Natural rock'ology, turftransplantation, planting of thorny bushes

All year conservation grazing with Galloway cattle and Exmoor ponies plays a crucial role to increase biodiversity!



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Key-messages – lessons learnt!

- Restore natures infrastructure on as large landscape-scale as possible – wet as well as dry infrastructure
- Act before amphibians and reptile populations get's too small – if necessary breeding programs can help
- Act before it is too late – Extreme weather-situations can be crucial to small populations!
- Restore important landscape-features: natural hydrology with variation in ponds, dry grasslands, stones, bushes
- Beware of stickle-backs due to flooding-situations
- Remember long-term sustainability by securing conservation grazing with all-year-grazers
- Good relationship with landowners and attractive financial opportunities to convert farmland to nature
- Natura 2000 network works – but must be expanded to secure financing and priority

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Thank you for watching ☺

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