

ECOLOGICAL CONNECTIVITY AND TRANSPORT INFRASTRUCTURES
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How to reconnect biodiversity across motorways?

Practical experiences of establishing ecological hinterland connections of fauna passages
in a highly fragmented northern german landscape



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Holstein Habitat Corridors
Reconnection of habitats for dormouse, deer & Co.

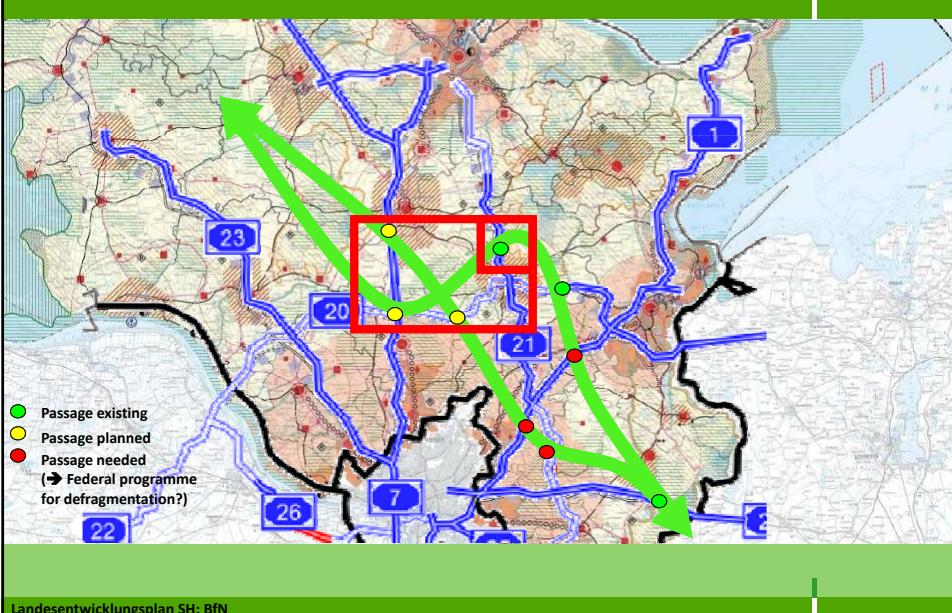


- Where do we work?
- What is our plan?
- How do we tell different species where the fauna passage is?
- Do we have any success? (targets and preliminary results)
- What will be done in the future?

Where do we work?
In the federal state of Schleswig-Holstein, the land bridge to Scandinavia



Where do we work?
In the district of Segeberg, which is dissected by 3 motorways



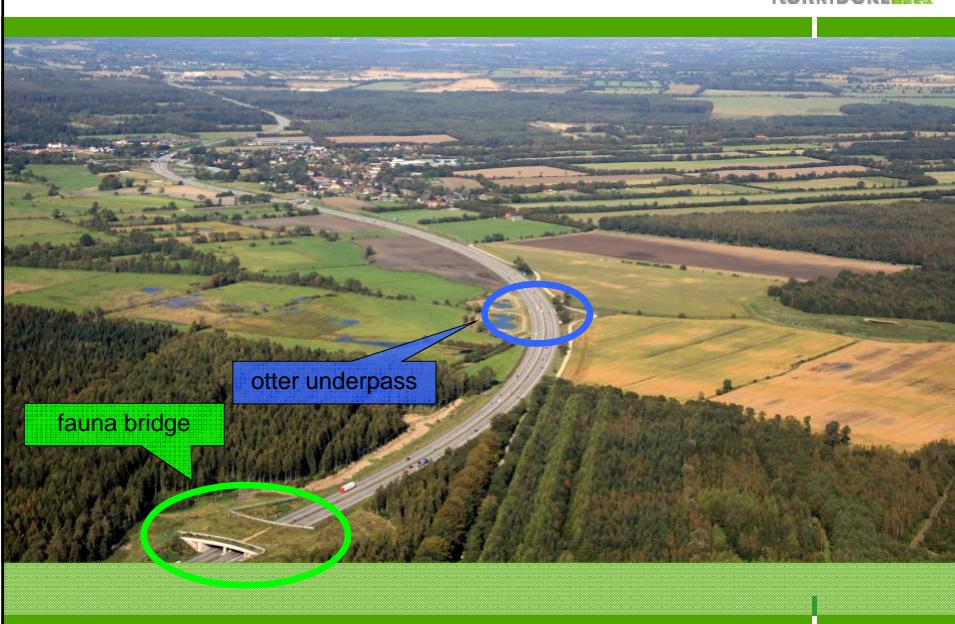
Where do we work?

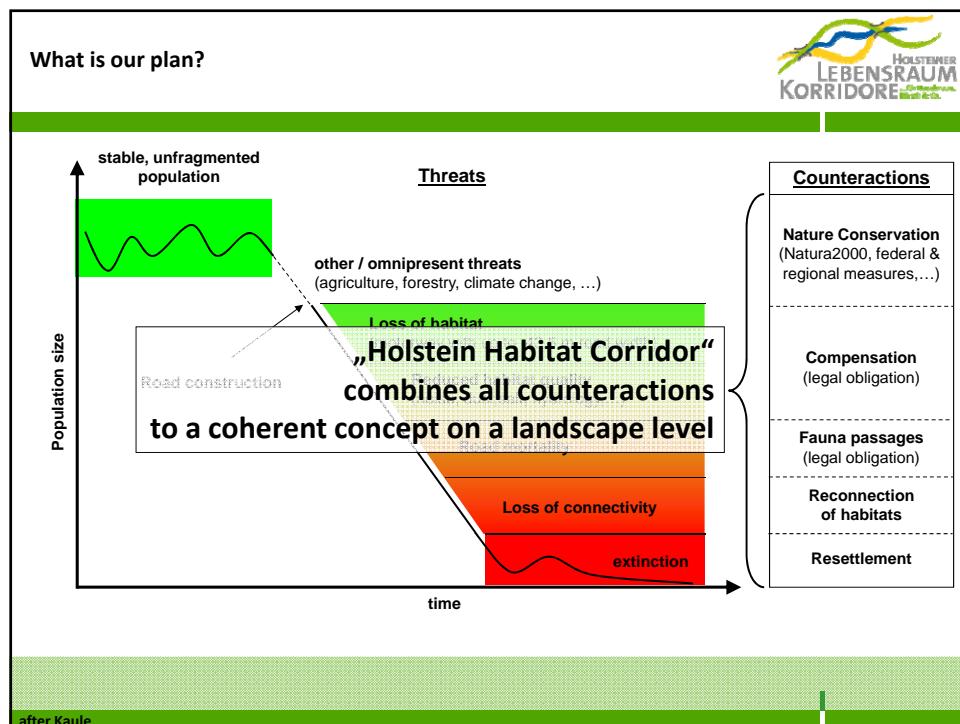
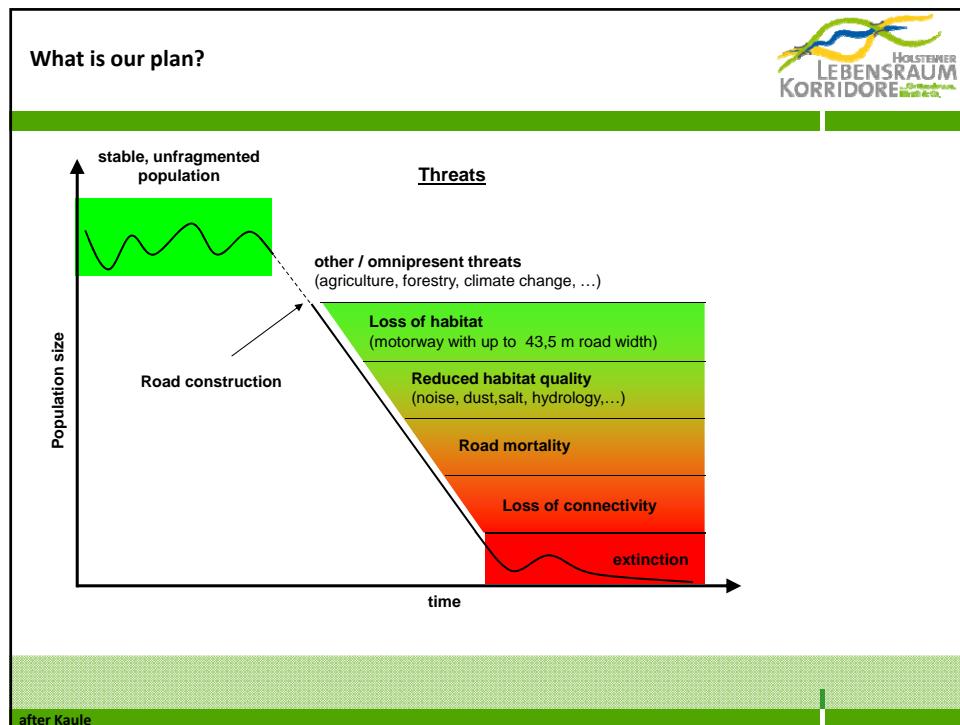
Intensive agricultural landscape, few forests and fewer nature reserves...



Where do we work?

...but with possibilities to overcome barriers and with good partners!





How do we tell species of **native forests** where the fauna passage is?

Carabus problematicus

state forest (forever)

municipality (30 a)

A21

target: increase & spread of populations of „native“-forest-species across bridge
action: 20 ha of surrounding forest were selected (criteria: age, species, location), partly reconstructed (all foreign trees removed), discarded from forestal usage

How do we tell species of **dry grassland** where the fauna passage is?

state foundation

gravel mining

private owner

private owner

state foundation

municipality

state forest

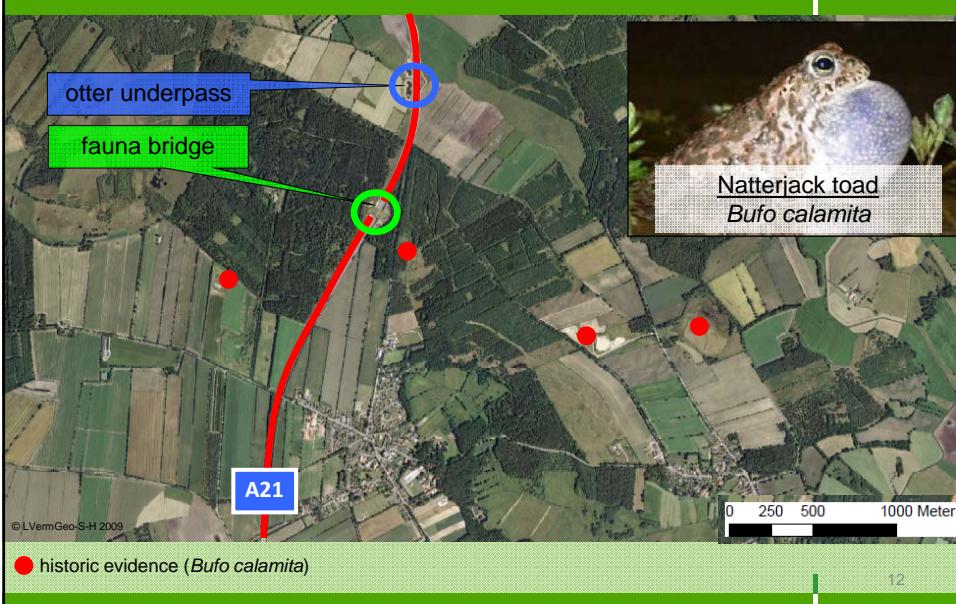
Wartbiter
Decticus verrucivorus

target: increase & spread of populations of species of dry grassland & heath
actions: linear forest clearings, topsoil removement (sod plugging), flora transfer,...

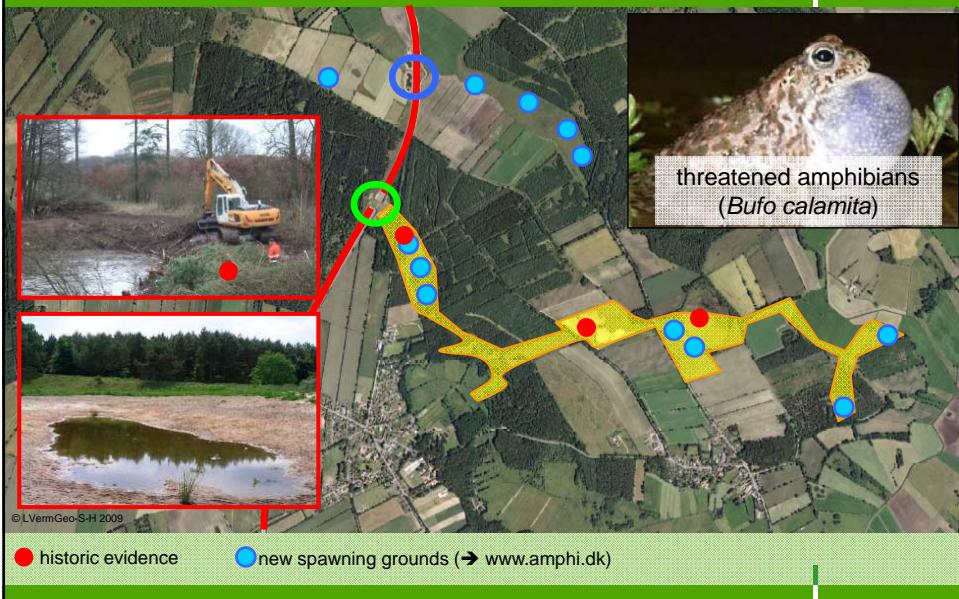
How do we tell species of dry grassland where the fauna passage is?



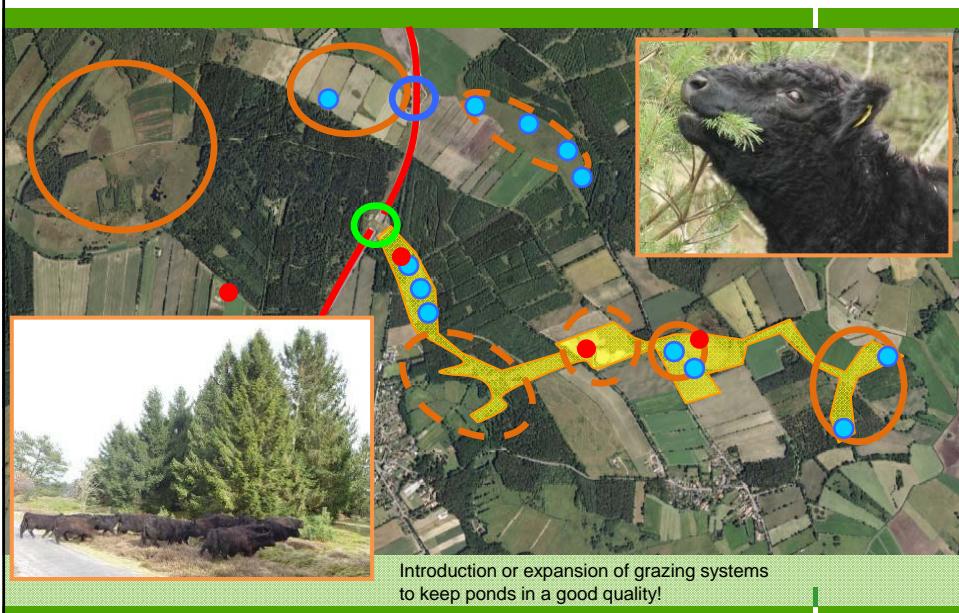
How do we tell species of ponds where the fauna passage is?

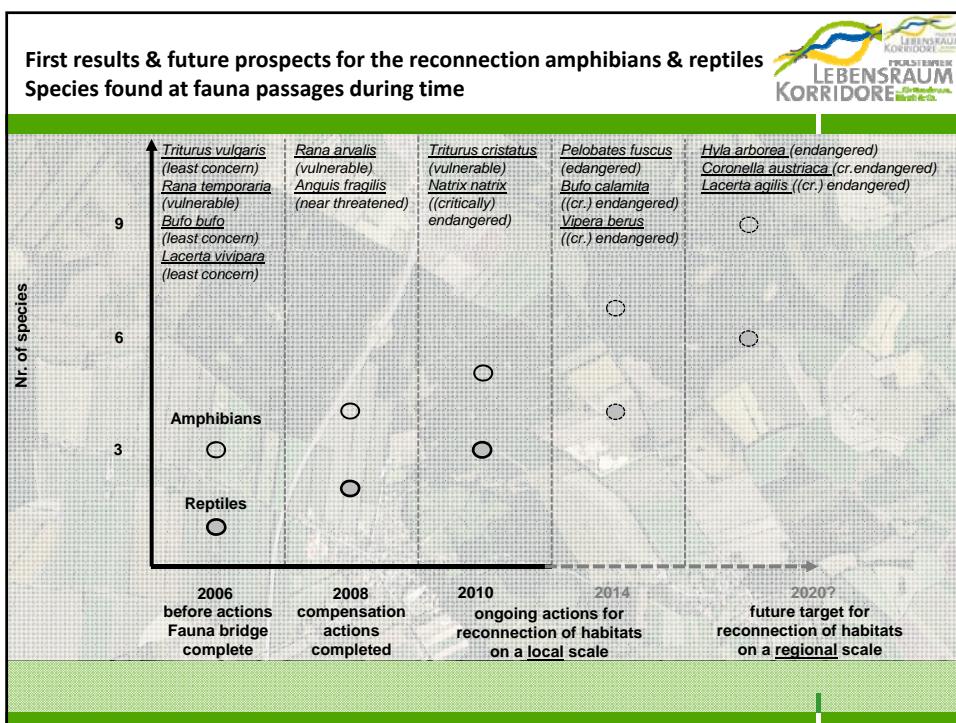
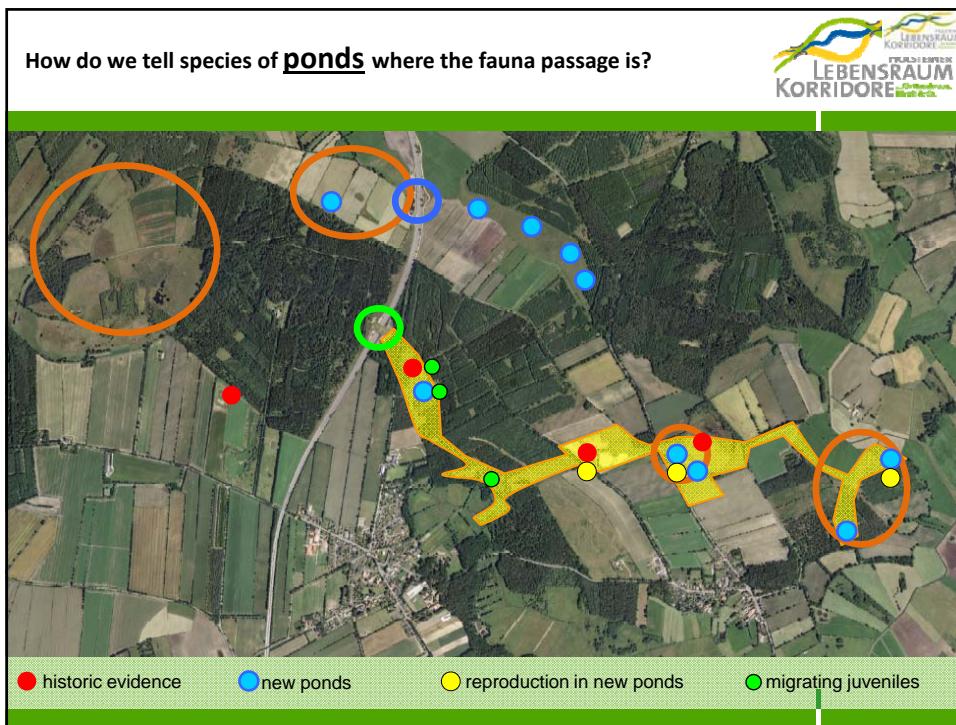


How do we tell species of **ponds** where the fauna passage is?



How do we tell species of **ponds** where the fauna passage is?





How do we tell **arboreal & large mammals** where the passage is?

LEBENSRAUM KORRIDORE

Common dormouse
Muscardinus avellanarius

Red deer
Cervus elaphus

target: exchange of individuals between forests on a large scale

How do we tell **arboreal & large mammals** where the passage is?

LEBENSRAUM KORRIDORE

Common dormouse
Muscardinus avellanarius

Red deer
Cervus elaphus

action: increase of density of stepping stones (woods) and linear corridors (hedges),
~ 3 km of desolate hedges are restored up to now

time: 2010 – 2013
costs: ~ 1 Mio € (incl. personell)
(fauna passage: 2.5 Mio €!)
actions for species of...

- forests: 26 ha
- open land: 40 ha
- aquatic habitats: 28 ponds

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How will we tell species, where the next fauna passages are?

fauna passage Brokenlande

fauna passage Kiebitzholm

Development of a coherent network of

- ecological hinterland connections** (for each fauna passage) with
- existing nature reserves** and
- large scale habitat corridors** for different habitat types
(forests, dry grassland and water bodies)

fauna passage Bad Bramstedt

fauna passage Todesfelde

HOLSTEINER LEBENSRÄUM KORRIDORE

0 0.5 1 2 3 Kilometer

