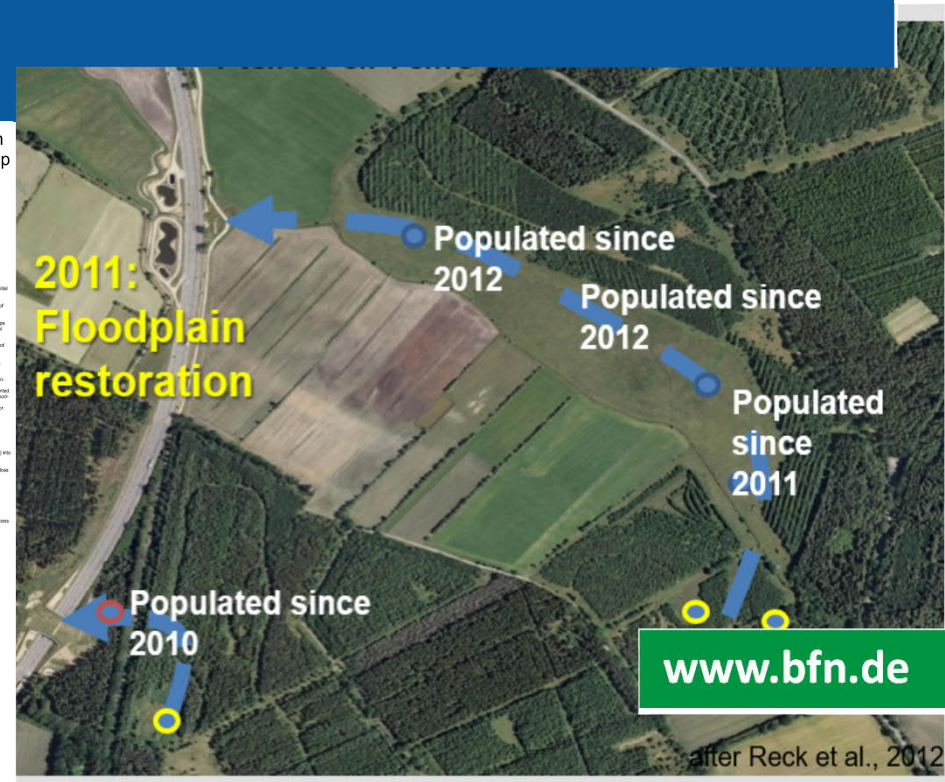
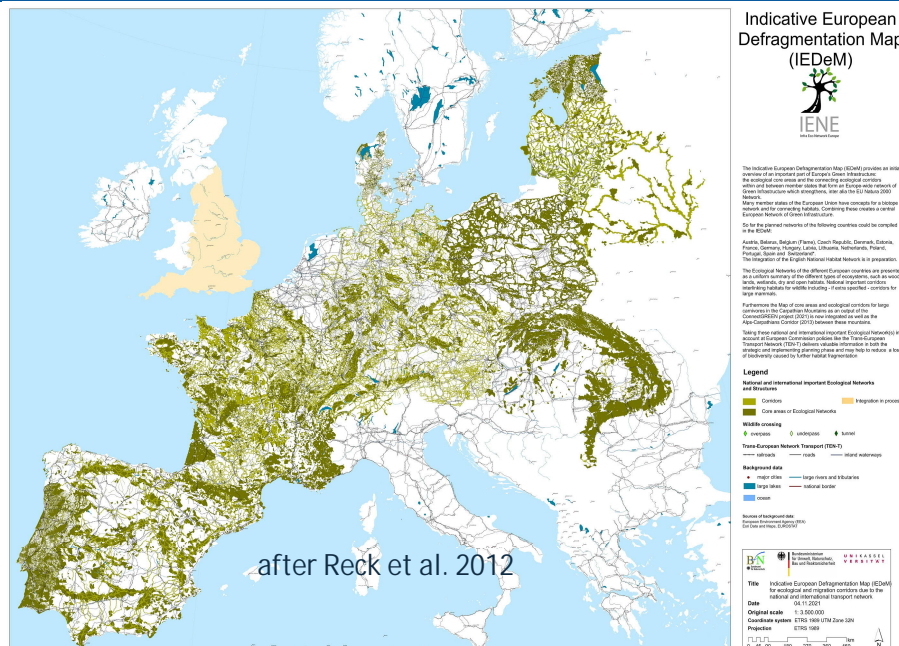


# Planning of ecological connectivity across Europe – challenges and possible implementation

Marita Böttcher, German Federal Agency for Nature Conservation, branch office Leipzig, II 4.2

SaveGREEN Final Conference, Vienna, 06/07.12.2022.



Europe - a frame for nations with a frame of legislations, but  
 - diverse climate, diverse landscapes, diverse species,  
 - diverse ways to fulfil the obligations due to legal frame



Use of the map:

Shows a view about possible and existing areas for (re-)connction in Europe

For human „umbrella species“: politicians, developers of European strategies, decisioners about about financial rессources on european scale

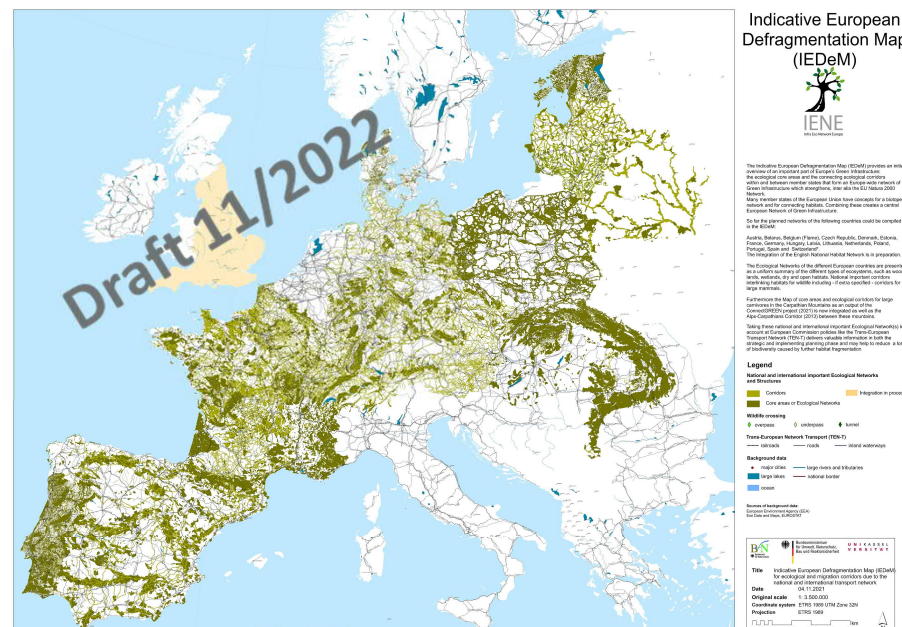
What does it mean for planning of ecological connectivity across Europe?

Use the developed concept of the country!

Note and respect the specific problem of the country and the solutions developed there in form of developed concepts, the national and regional legislation, the guidelines, chosen implementations and measures, each country has its own way!

For cross border projects: talk, talk, talk in person to find a common level of understanding!

Give yourself time, things have to develop, trust between partners has to be allowed to grow.



# Europe - a frame for nations with a frame of legislations, but - diverse climate, diverse landscapes, diverse species, diverse ways to fulfil the obligations due to legal frame



Connectivity across the European landscape has to be maintained and restored, the ways are different, e.g. ecological corridors for Espagna

e. g. Espagna

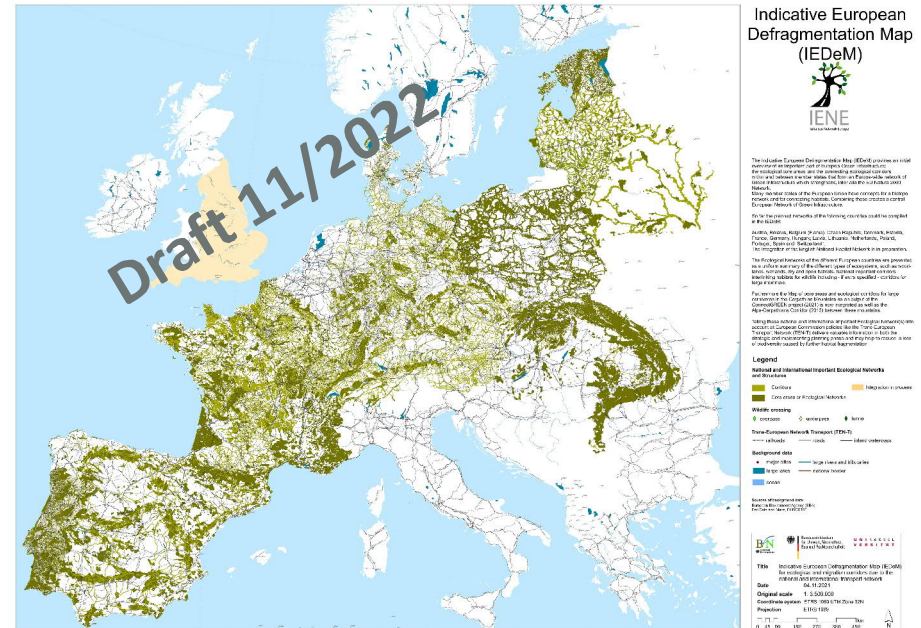
the network focuses on woodland corridors (forests and shrubs) and connects NATURA 2000 sites

(Key environmental issue: Deforestation)

Additional data:

Transhumance corridors

- Habitats Directive
- Bonner and Berner Convention
- Convention on Biological Diversity



Bei ungeeigneten Bildhintergründen kann

# Europe - a frame for nations with a frame of legislations, but

- diverse climate, diverse landscapes, diverse species,
- diverse ways to fulfil the obligations due to legal fram

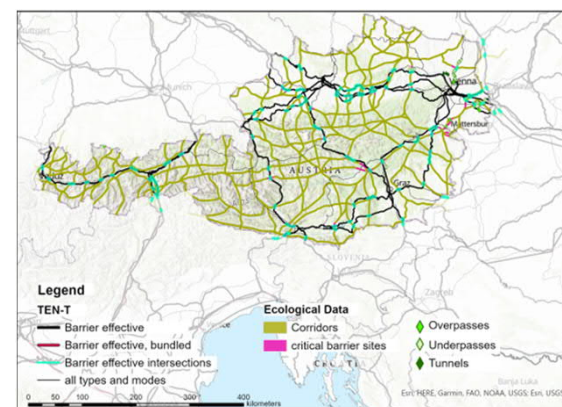
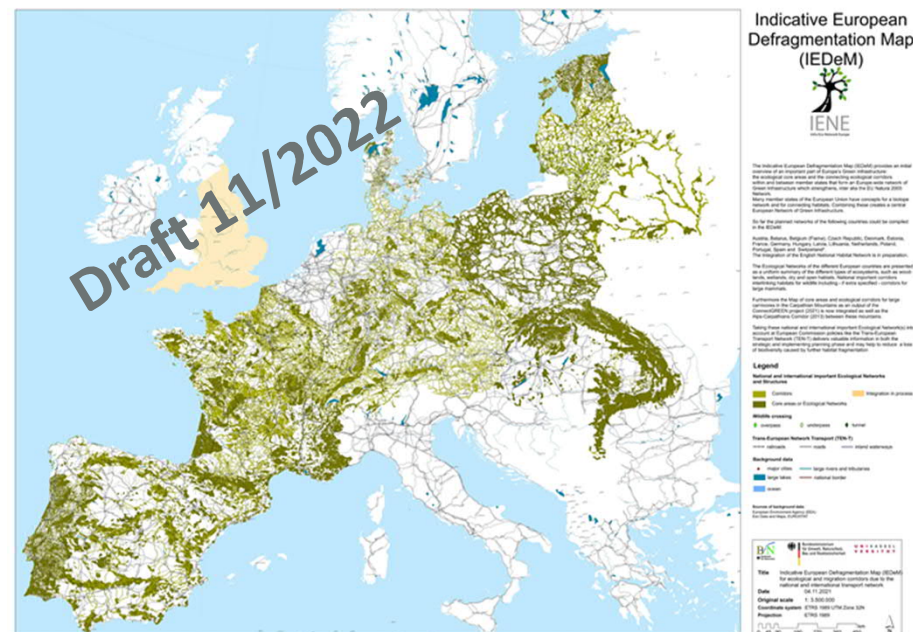


Connectivity across the european landscape has to be maintained and restored, the ways are different, e.g. wildlife corridors for Austria

Fragmentation and isolation of habitats for wildlife in the main valleys of the Alps and outside the mountain areas

Instructions „Habitat network“  
(Dienstanweisung „Lebensraumnetz Wildtiere“ (2006))

- Laws for nature conservation and hunting of the länder (Naturschutz- und Jagdgesetze der Länder)
- Habitats Directive
- Bonner and Berner Convention
- Convention on Biological Diversity



Bei ungeeigneten Bildhintergründen kann c

# Europe - a frame for nations with a frame of legislations, but - diverse climate, diverse landscapes, diverse species, diverse ways to fulfil the obligations due to legal fram



Connectivity across the european landscape has to be maintained and restored, the ways are different, e.g. habitat corridors for Germany

the network focuses different habitat types (dry habitats, wetland habitats, woodland habitats, open woodland habitats and woodland habitats)

Fragmentation of the landscape especially for terrestrial species of all scales (from Stag beetle to Red deer)

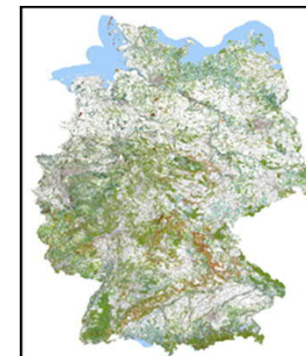
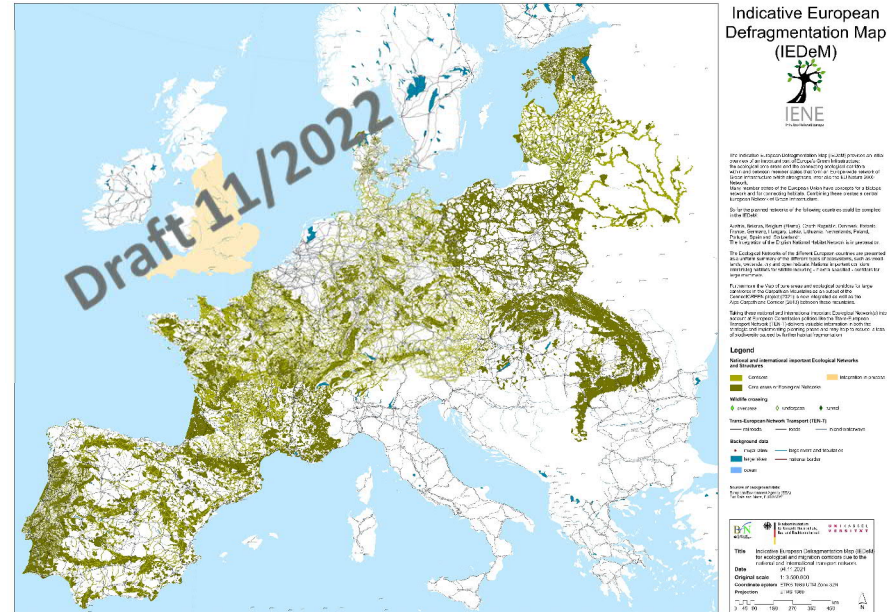
Federal Nature Conservation Act, especially § 13 f., 20 f., § 31 f.

Laws for nature conservation of the Bundesländer

Habitats Directive

Convention on Biological Diversity

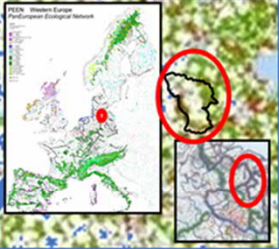

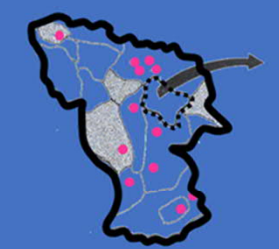
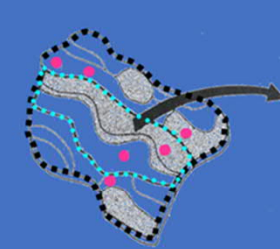

Bundesprogramm Wiedervernetzung (Federal Reconnection Programme)



Bei ungeeigneten Bildhintergründen kann der Urheber auch an der Seite genannt werden.

# Planning principles: which information on which scale is relevant and meaningful



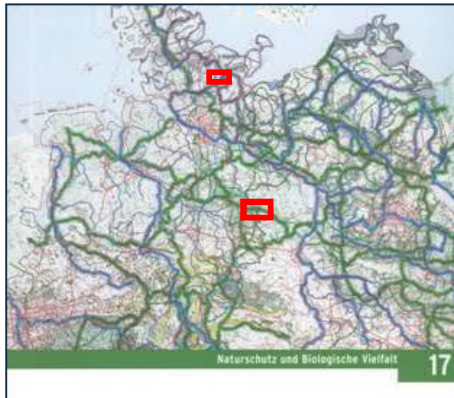
Scales for the assessment of	≤ 1:300.000 SEA (TEN-T, ...)	±1:200.000 SEA + EIA (NHP)	± 1:50.000 SEA + EIA	± 1.10.000 EIA, IA of SAC	≥ 1: 5.000 impact regulation compens. balance
- fragmentation, - defragmentation - habitat corridors along/across TI	 <p>+ localisation of supra-reg. important conflict pts.</p>	 <p>+ regional important conflict points</p>	 <p>+ important fauna passages</p>	 <p>+ necessary defragmentation</p>	 <p>+ avoidance/mitigation/compensate</p>



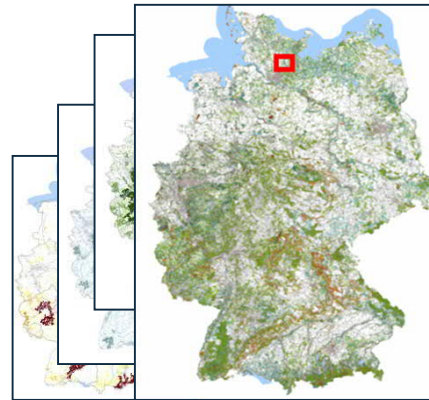
<b>Impact of IEDeM* on TI planning</b> * = currently based on national concepts that represent incoherent ecological approaches	Very high and to be used in context with Sites of Community Importance/ SCIs and other strictly protected areas	High but in need to be supplemented by existing or special developed regional eco-corridors	In need to be supplemented by existing or special developed local eco-corridors	... to be supplemented by TI project-specific, parity reconnection concepts */**	... to be supplemented by TI project-specific, parity reconnection concepts*/**
<b>Further supplements in need</b> (regarding ecological corridors and its function) <b>Additionally req. info</b>	International + national migration corridors of migrating species ... <b>See add. indicator slides</b>	+ regional migration corridors of species  <b>See add. indicator slides</b>	+ road- & railkill hotspots  <b>See add. indicator slides</b>	+ main game trails and amphibian or reptile migration paths <b>See add. indicator slides</b>	<b>See add. indicator slides</b>
<b>R&amp;D needs concerning corridor maps and de-fragmentation priorities</b>	e.g. European-wide methods to identify best corridors, based on habitat topology; criteria for prioritization.	e.g. methods (remote sensing, artificial intelligence) to identify best habitat corridors; methods to detect regional migration corridors, ...	e.g. methods for monitoring rail- and roadkill hotspots	* at the level of project approval an equal reconnection concept can in most cases lead to efficient safeguarding of biological diversity despite the intervention	** standard methods (minimum requirements) for the development of project specific but cross-sectional reconnection concepts must be developed

# Planning scales: from the national view to the local area

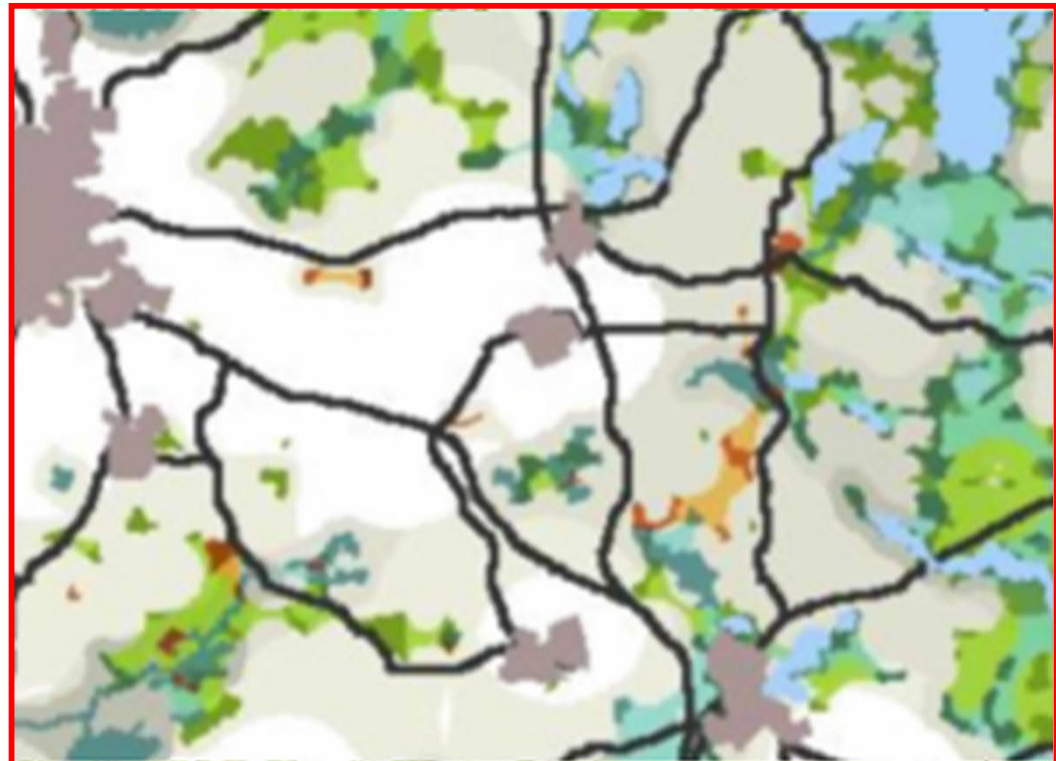
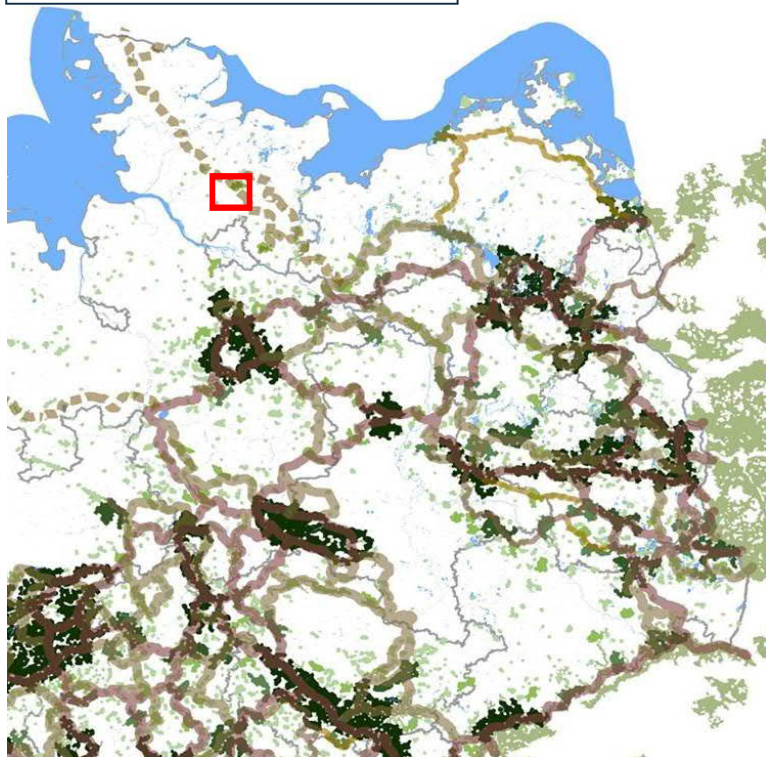
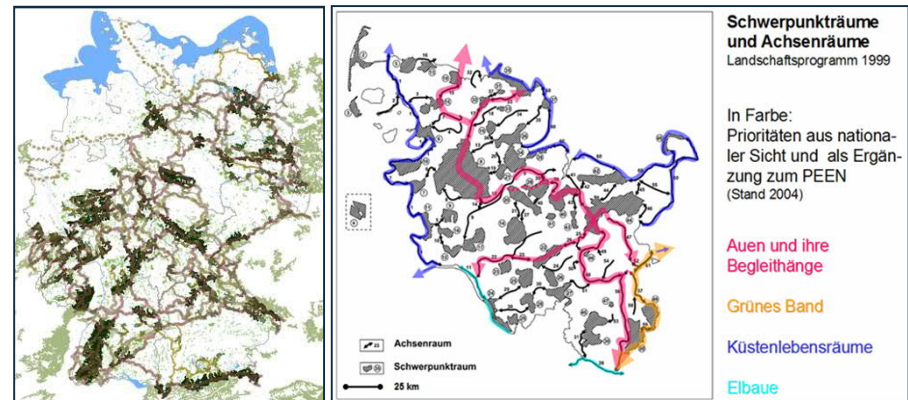
simplified national scale



Habitat networks and networks for silvicolous mammals



Biotopenetwork-SH



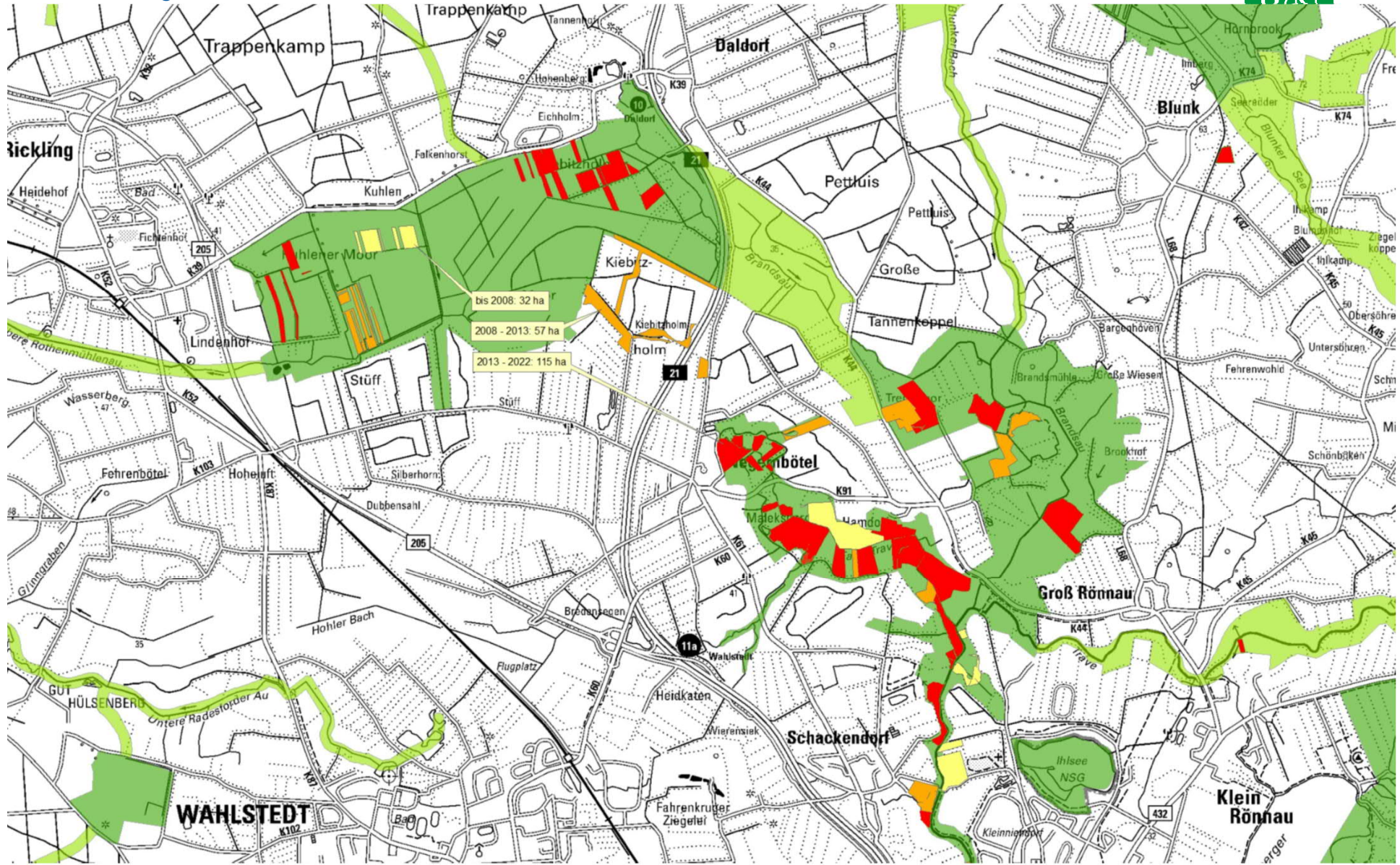
# Possible implementation: an example from the North of Germany – Holsation Corridors (high spatial suitability due to existing and planned defragmentation measures)



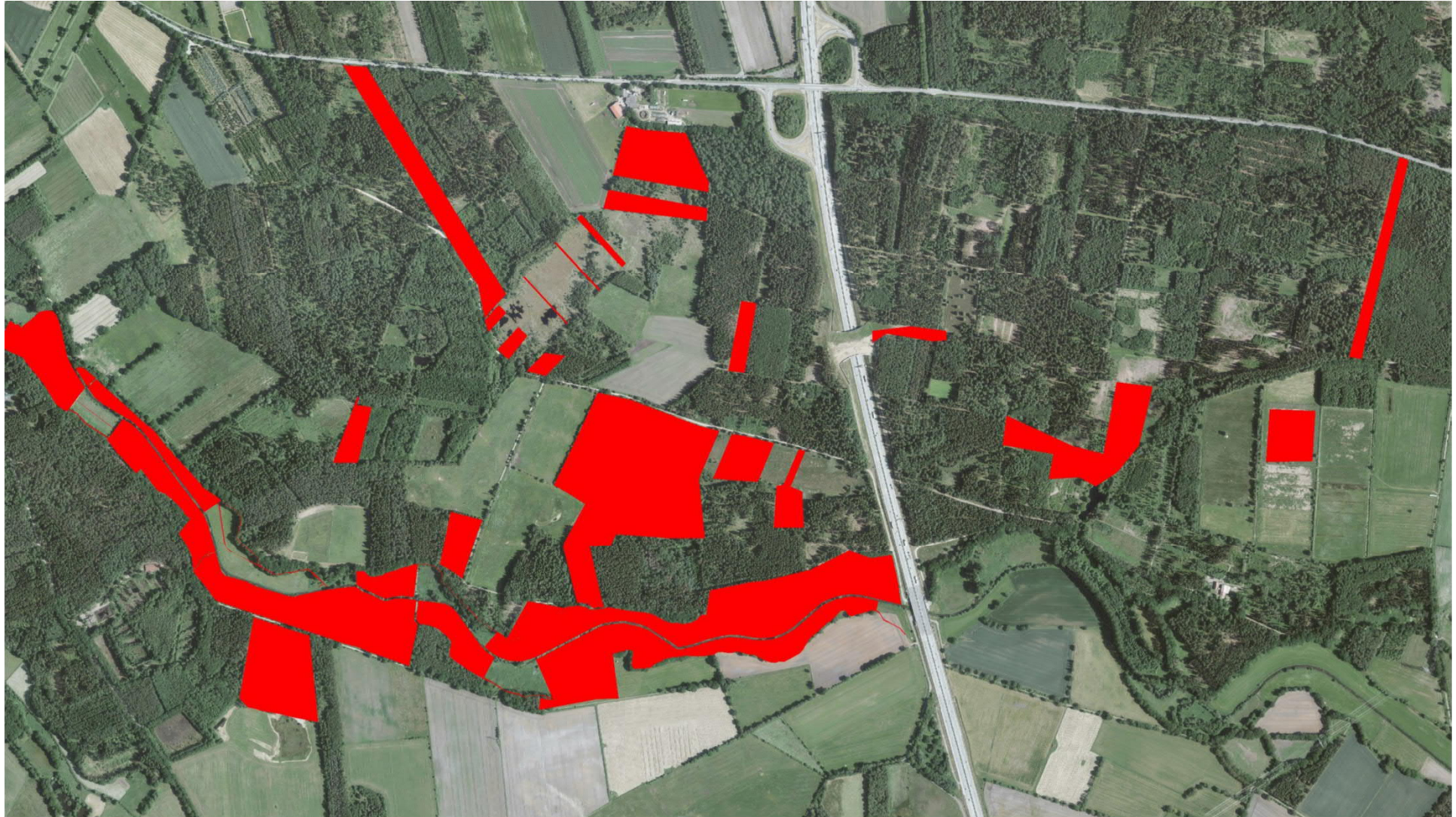
Karte: Schulz, verändert nach Meißner (2009)



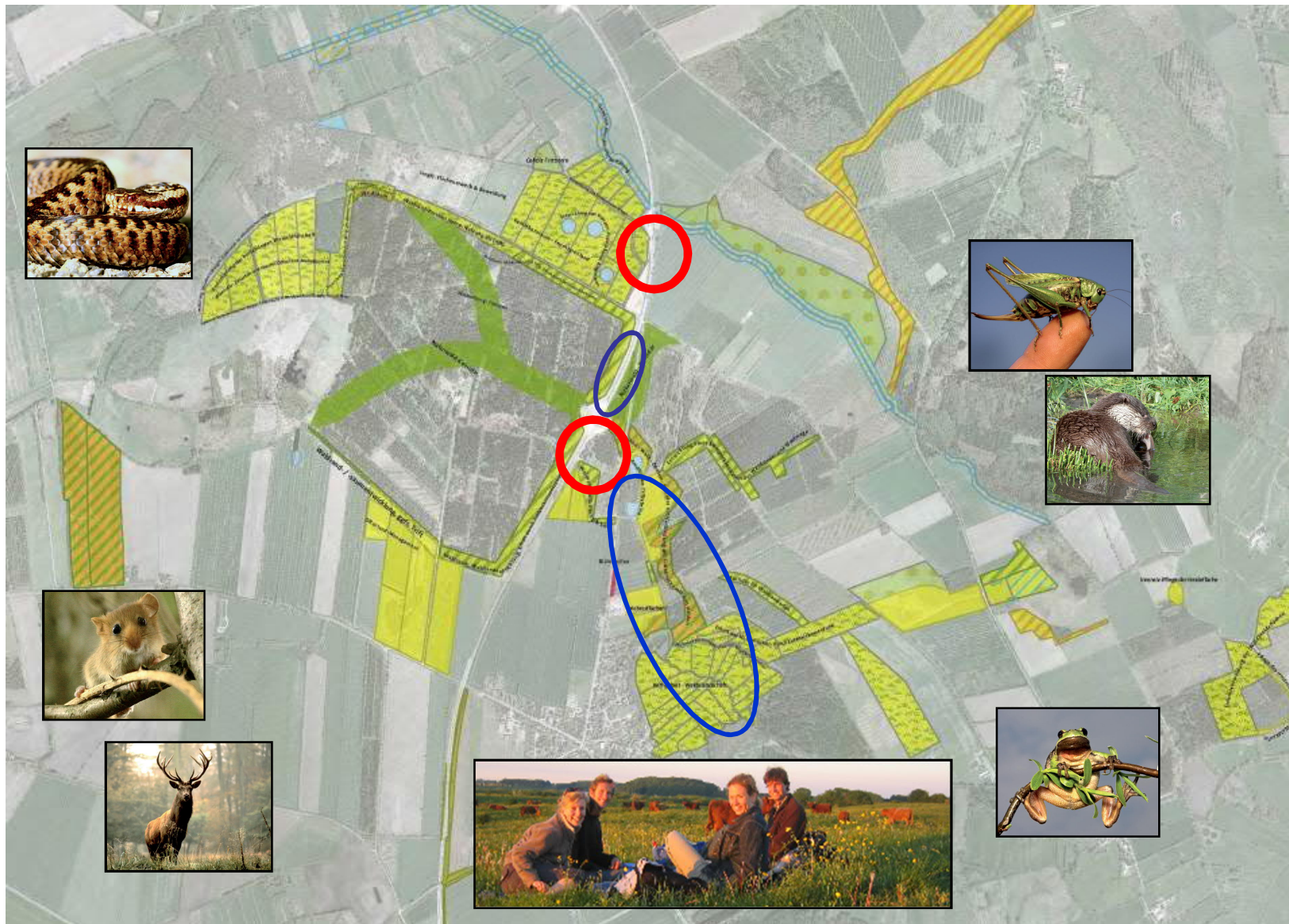
# Possible implementation: an example from the North of Germany – Holsation Corridors



# Possible implementation: an example from the North of Germany – Holsation Corridors (red = sites of nature conservation property and/or actions for reconnection of habitats, ca. 2013 – 2020)



# Possible implementation: an example from the North of Germany – Holsation Corridors



# Possible implementation: an example from the North of Germany – Holsation Corridors



# Possible implementation: an example from the North of Germany – Holsation Corridors



Don't forget the children



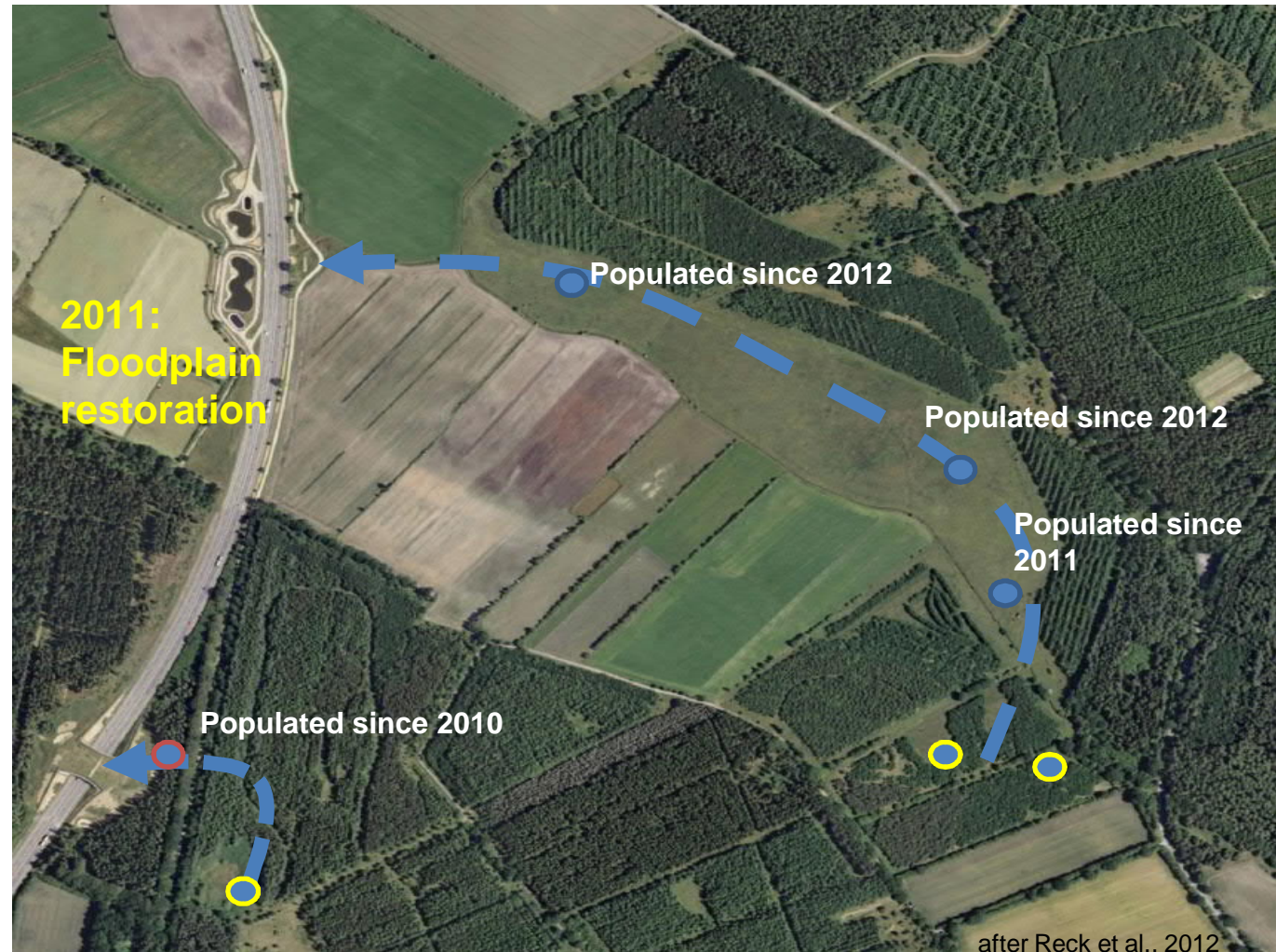
Participation of all locally active representatives in the planning processes and the implementation of the measures. Active participation in the conservation and maintenance of measures

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# Possible implementation: an example from the North of Germany – Holsation Corridors



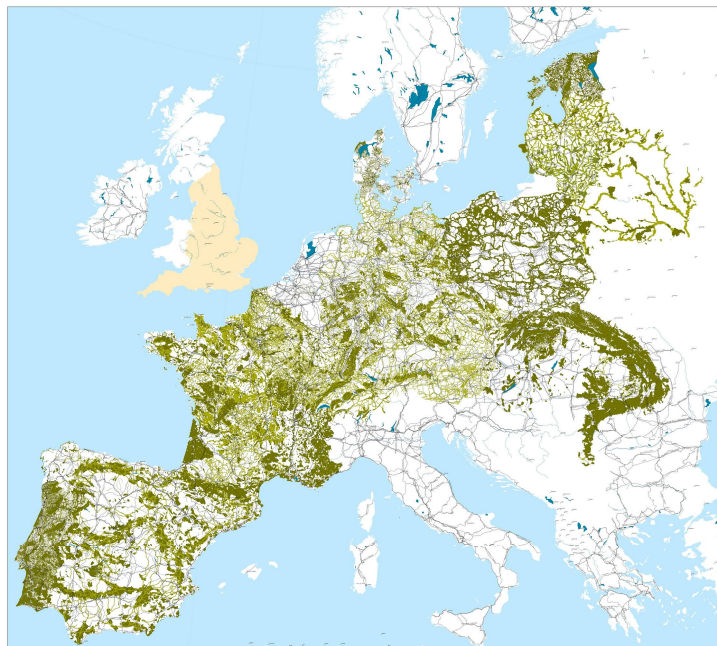
**Implementation:**  
Spatial use monitoring using the moor frog (*Rana arvalis*) as an example



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Marita Böttcher, German Federal Agency for Nature Conservation, branch office Leipzig, II 4.2

SaveGREEN Final Conference, Vienna, 06/07.12.2022.



Indicative European Defragmentation Map (IEDeM)



The Indicative European Defragmentation Map (IEDeM) provides an initial overview of the proposed plan of Europe's Green Infrastructure. It is a conceptual overview map and the underlying ecological corridors and network are not yet fully defined. The map is based on the network of Green Infrastructures which are already in place or planned in the Member States of the European Union. It is not intended to be a final map and for conceptual purposes. Countries that are not members of the European Union are not included in the map.

In the general network of the following countries could be completed in the IEDeM:  
Austria, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, France, Germany, Hungary, Latvia, Lithuania, Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, United Kingdom.

The Ecological Networks of the different European countries are presented as a series of corridors of different types and capacities, such as roads, rivers, and other linear features. These corridors are not yet fully defined and their final configuration will be determined in the course of the implementation of the Green Infrastructure Strategy.

Furthermore the map of core areas and ecological corridors for large protected areas (LCPAs) is presented as a series of corridors of different types and capacities, such as roads, rivers, and other linear features. These corridors are not yet fully defined and their final configuration will be determined in the course of the implementation of the Green Infrastructure Strategy.

Being more detailed and more specific, the map of the Green Infrastructure Strategy (GIS) is intended to be used for the implementation of the Green Infrastructure Strategy.

The map is intended to be used for the implementation of the Green Infrastructure Strategy.

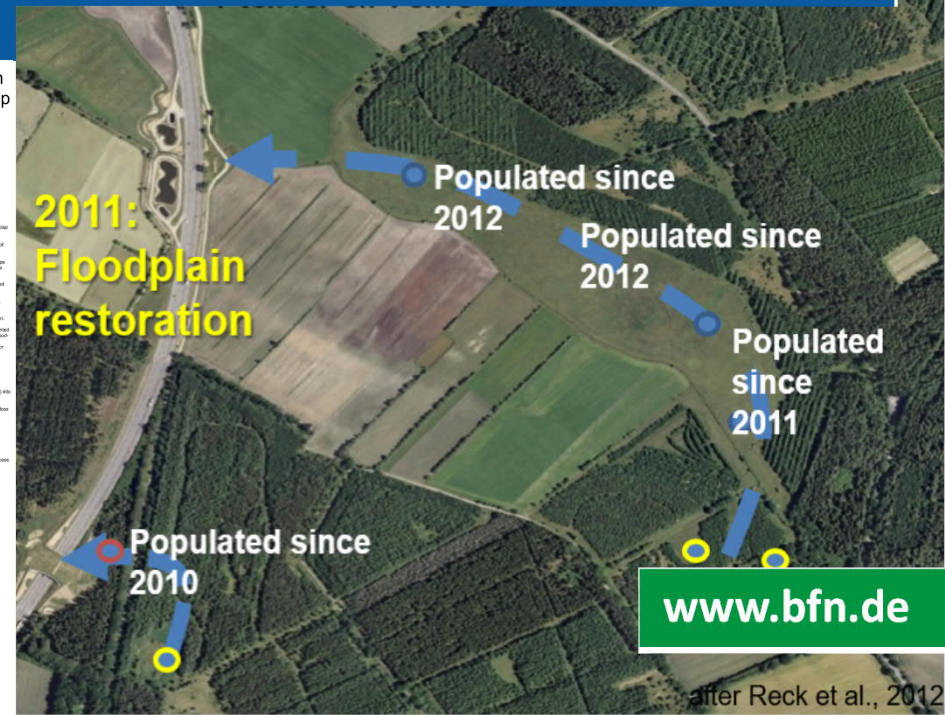
The map is intended to be used for the implementation of the Green Infrastructure Strategy.

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[www.bfn.de](http://www.bfn.de)

after Reck et al., 2012