

A Safety Net for the European Wildcat: restoring migration corridors across fragmented landscapes



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Projekt im Rahmen des:
leben.natur.vielfalt
das Bundesprogramm

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B-N
Bundesministerium für Umwelt, Naturschutz und Bau
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Bund für
Umwelt und
Naturschutz
Deutschland
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FRIENDS OF THE EARTH GERMANY



- ✓ Highly fragmented habitats (traffic, settlements, agriculture)
- ✓ Germany: road network of 250.000 km

Habitat fragmentation - consequences

- ✓ Ca. 250.000 animals (game) killed on roads each year
- ✓ Traffic accidents: main cause of death for e. g. wildcat, otter, wolf, lynx



Habitat fragmentation - consequences

- ✓ genetic isolation, inbreeding, genetic depletion
- ✓ (re)expansion of threatened species is heavily constrained
- ✓ less habitat available for species with spacious habitat requirements
- ✓ small, isolated populations are more vulnerable for extinction by stochastic factors (diseases, weather events..)



Habitat fragmentation

- ✓ Habitat fragmentation and isolation belong to the main threats to biological diversity worldwide and esp. in central Europe



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Biotope networking – the BUND

- ✓ German section of the international Friends of the Earth Network
- ✓ Independent NGO, 480 000 members/ supporters, 2000 groups
- ✓ Three large BUND projects: The **„Green Belt Germany“**, **„reconnecting riparian habitats alongside the Elbe river“** and the **„Safety Net for the European Wildcat“**



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Green Belt



- ✓ BUND's success story
- ✓ From iron curtain to (Europa's) Lifeline
 - Ongoing projects
 - Several Partners
 - International Green Belt



The Safety Net for the Wildcat

- ✓ Aim: reconnection of isolated forests
- ✓ Planting of green corridors, habitat improvements
- ✓ Lobby work for wildlife crossings and the inclusion of biotope networks into the documents of official spatial planning
- ✓ start: 2004 in Thuringia, 2010-12: 5 federal states (2 Mio€, partly funded by EU LIFE+), 2012-15/17: 10 federal states (5.2 Mio€, partly funded by Federal Agency for the Environment)

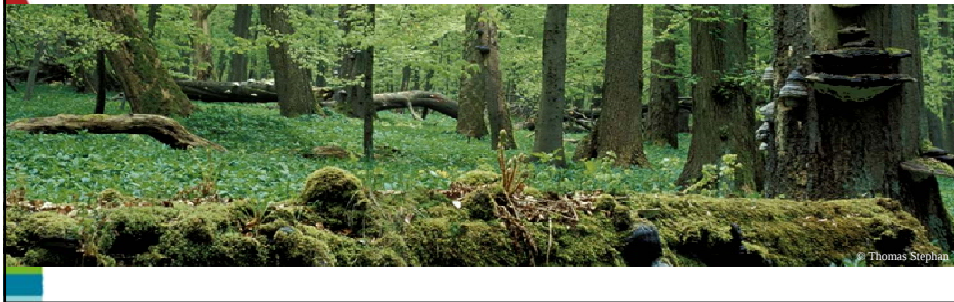


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The Safety Net – why wildcats?

- ✓ Sensitive to habitat fragmentation: avoids open land
- ✓ Dependent on well structured deciduous/mixed dec. forests
- ✓ Attractive **flagship species** for forest reconnection (whilst many others benefit)



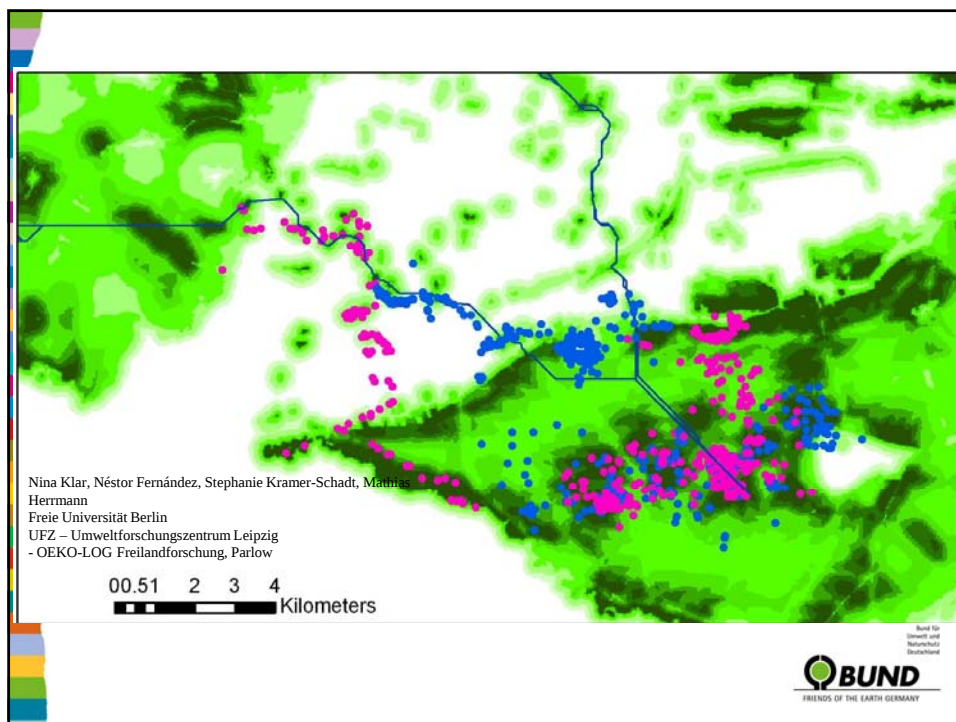
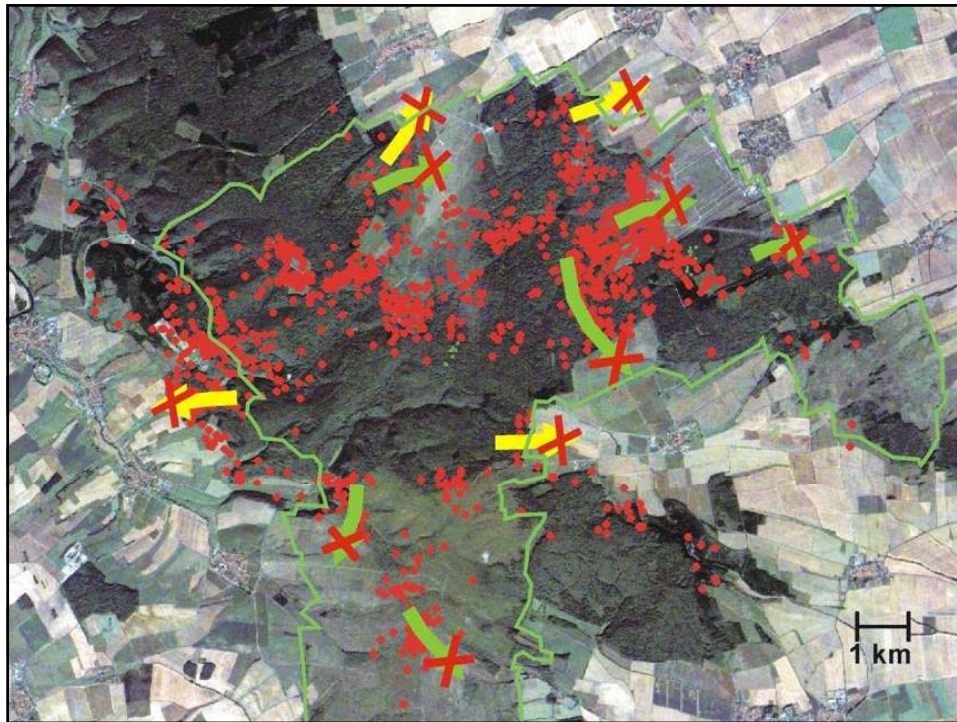
The Wildcat routing map

- ✓ Based on a habitat model using wildcat telemetry data
- ✓ Connecting routes were calculated using cost-distance analysis (settlements, agricultural areas: high costs; forest: low costs of migration)

Nina Klar, Néstor Fernández, Stephanie Kramer-Schadt, Mathias Herrmann, Manfred Trnizen, Ingrid Büttner, Carsten Niemitz (2008). Habitat selection models für European wildcat conservation. *Biological Conservation* 141: 308-319

Burkhard Vogel, Thomas Mölich, Nina Klar (2009). Der Wildkatzenwegeplan, ein strategisches Instrument des Naturschutzes. *Naturschutz und Landschaftsplanung* 41 (11): 333-340





Wildcats in Germany



- ✓ 5000-7000 individuals, isolated subpopulations
- ✓ German red list: 3 (threatened), species of special responsibility
- ✓ FFH: App. IV



The Wildcat routing map



- ✓ Conceptual background of the project
- ✓ Shows connecting routes between:
 - forest habitats already inhabited by wildcats and..

The Wildcat routing map



- habitats suitable to wildcats, but still unoccupied (> 500 km²)

The Wildcat routing map

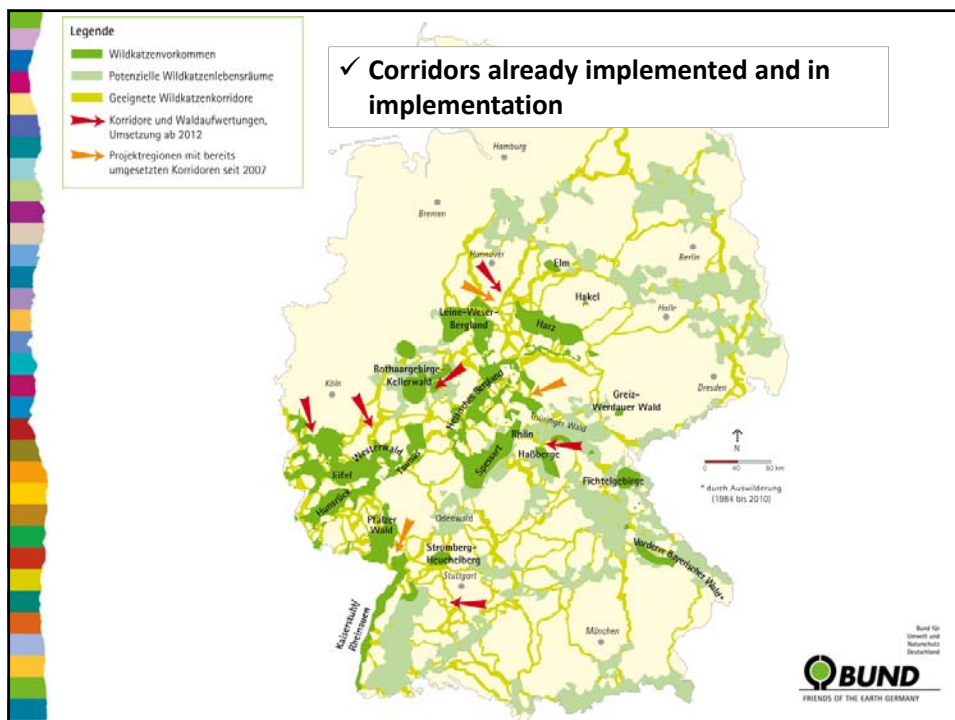


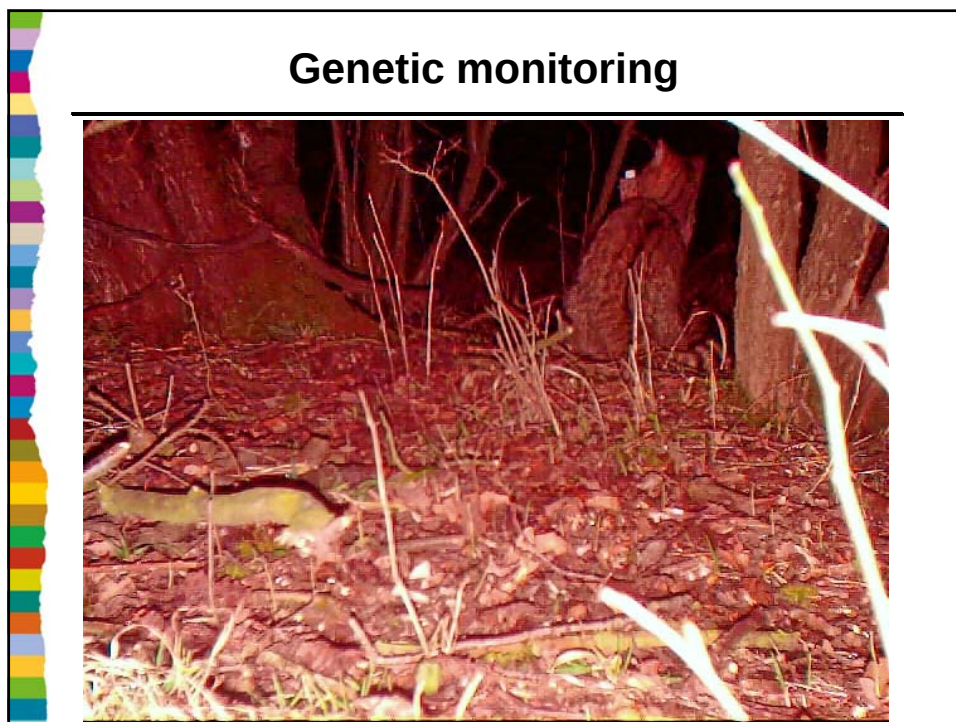
- ✓ Aim: continuous forest network of 20.000km length
- ✓ Connects all important woodlands



Implementation of corridors

- ✓ Optimal case: 50m wide, consisting of three zones
- ✓ But: often only smaller corridors are feasible





Genetic monitoring

- ✓ Analyses at the Senckenberg Research Institute, Gelnhausen
 1. Step: Analysis of mitochondrial DNA (wildcat ↔ domestic cat)
 2. Step: Analysis of microsatellites (nuclear DNA, indiv. characterisation)
- ✓ Within the next six years a data bank of Wildcat DNA will be established
- ✓ Aim: Research on migration patterns, populations structure, landscape genetics, hybridisation



Genetic monitoring



- ✓ 18 standardised sites with 50 lure sticks each
- ✓ 40 smaller sites
- ✓ winter 2011/12:
 - 1372 hair samples
 - at least 380 wildcats
- ✓ winter 2012/13:
 - 1181 samples

Genetic monitoring

- ✓ 1500 lure sticks are regularly controlled by BUND team members, foresters, hunters and more than 500 volunteers



Genetic monitoring





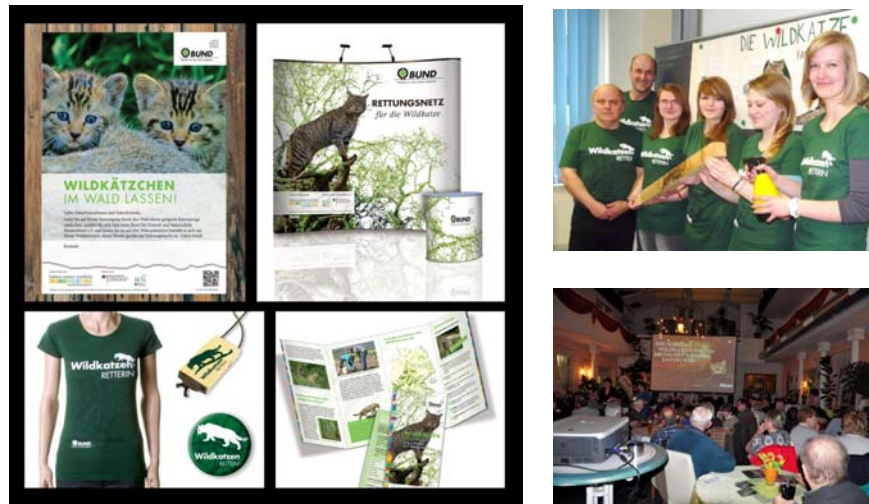
Communication



- ✓ Concerning biotope networking communication is as important as scientific and technical parts
- ✓ Focus: The general and local public, media, stakeholder
- ✓ Brochures, flyers, poster campaigns, school material, cross-country runs, adventure trails...



Communication



Communication

✓ Wildcat village of Hütscheroda (since 2012):

- Modern exhibition
- Wildcat trail with look-out
- Wildcat enclosure





Green Belt

Grünes Band Fennoskandien

Grünes Band Zentraleuropa

Grünes Band Balkan

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European Green Belt

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