

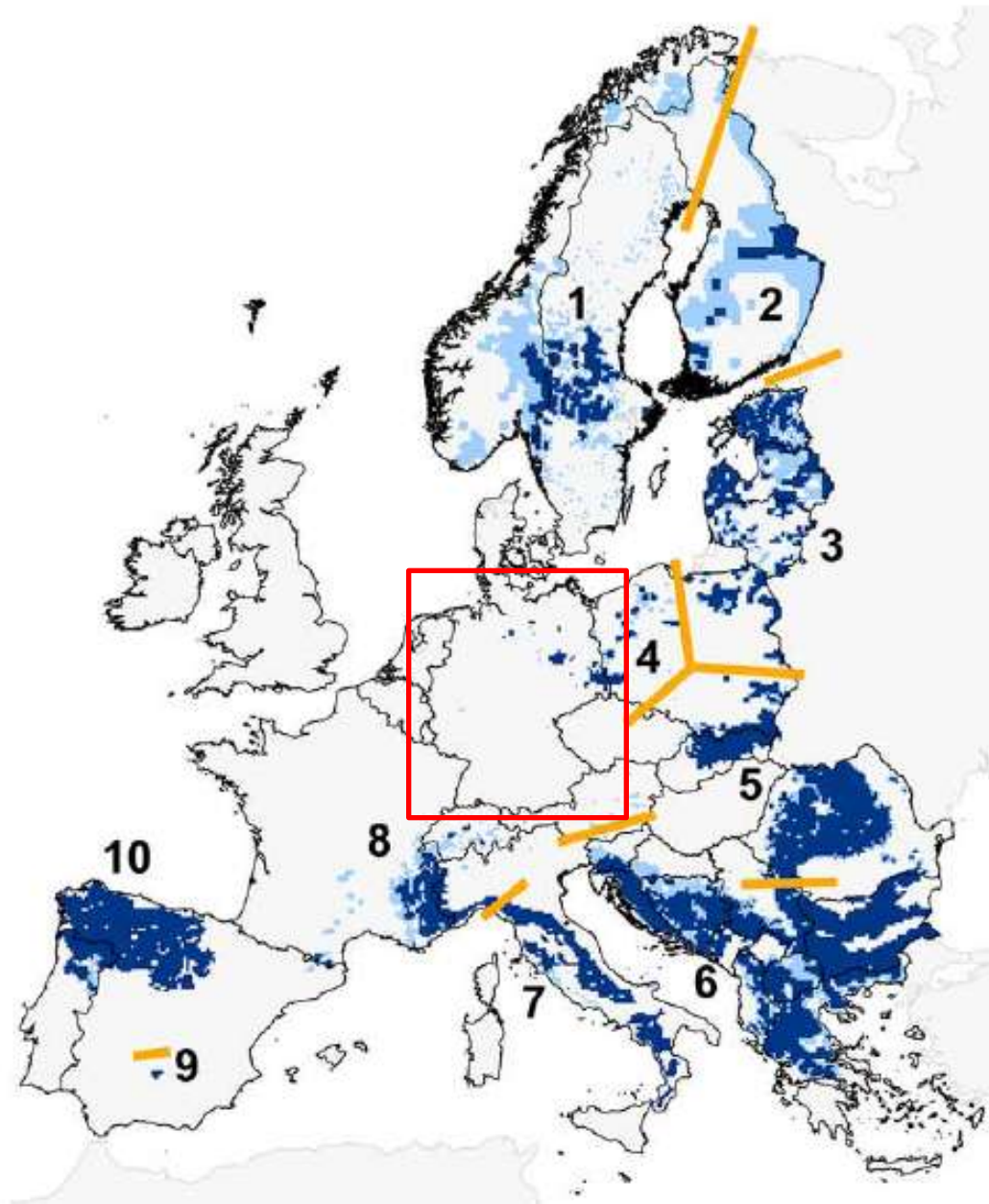
# Wolves in Germany as a case study - insights from a recolonization

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Guillaume Chapron et al. (2014):  
Recovery of large carnivores in Europe's modern  
human-dominated landscapes.  
*Science* **346**, 1517



# Wolves in Germany - status

## Germany

- 150 years without wolves

220 people / km<sup>2</sup>



1.8km road / km<sup>2</sup>



## Distribution of confirmed wolf territories in Germany 2000

1 pack





## Distribution of confirmed wolf territories in Germany 2005

3 packs



## Distribution of confirmed wolf territories in Germany 2000

8 packs

5 pairs

7 single resident wolves



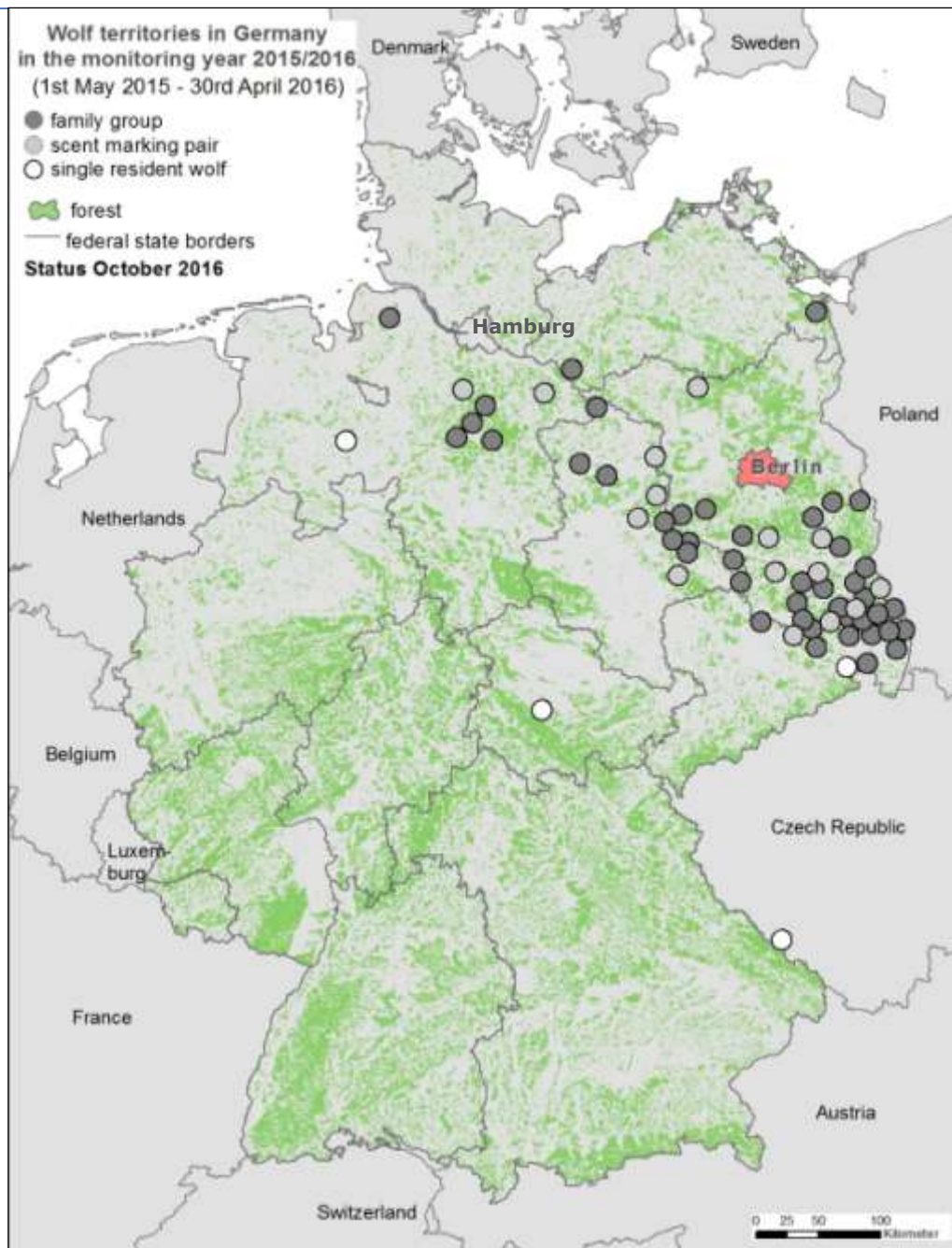


## Distribution of confirmed wolf territories in Germany 2015/2016

46 packs

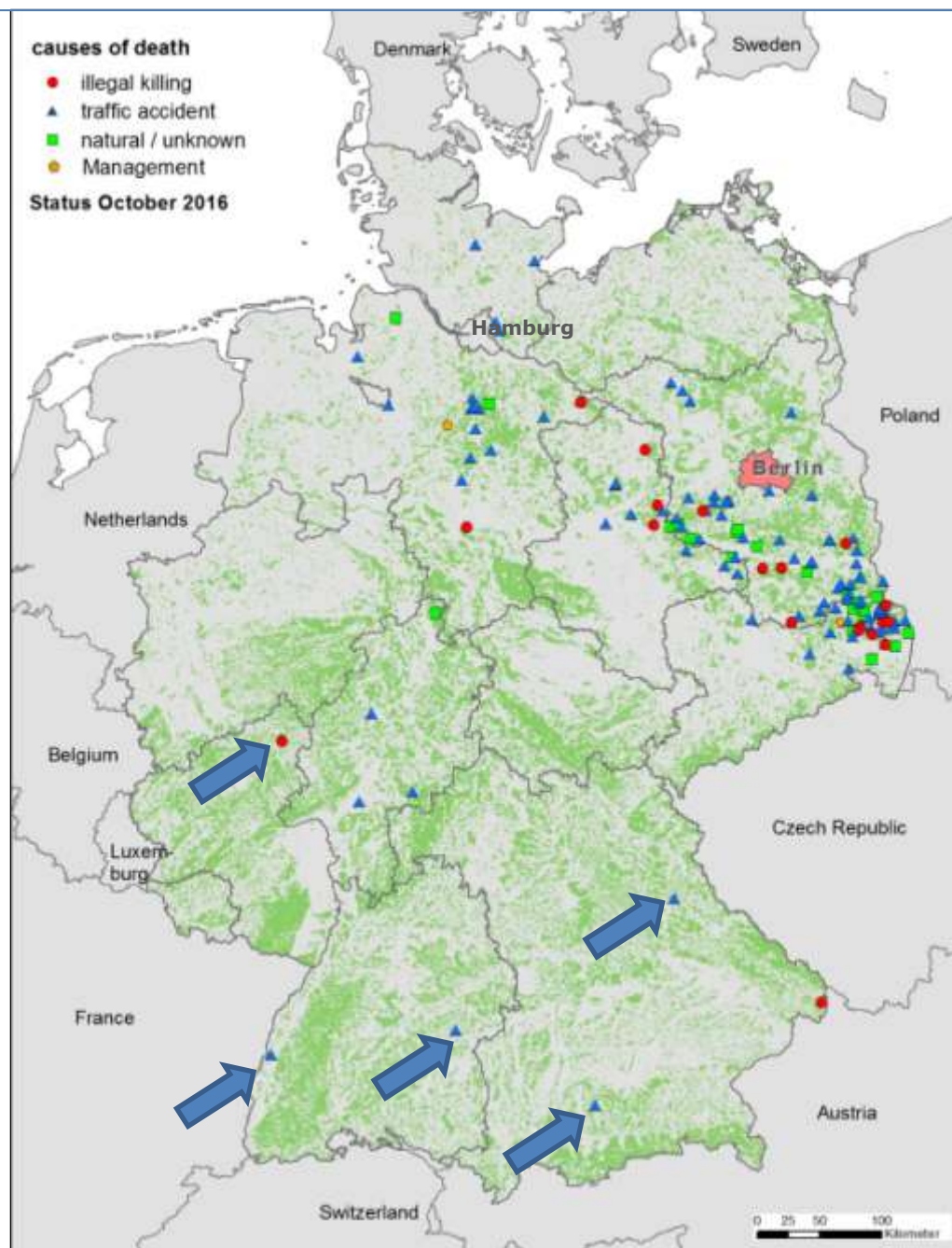
15 pairs

4 single resident wolves



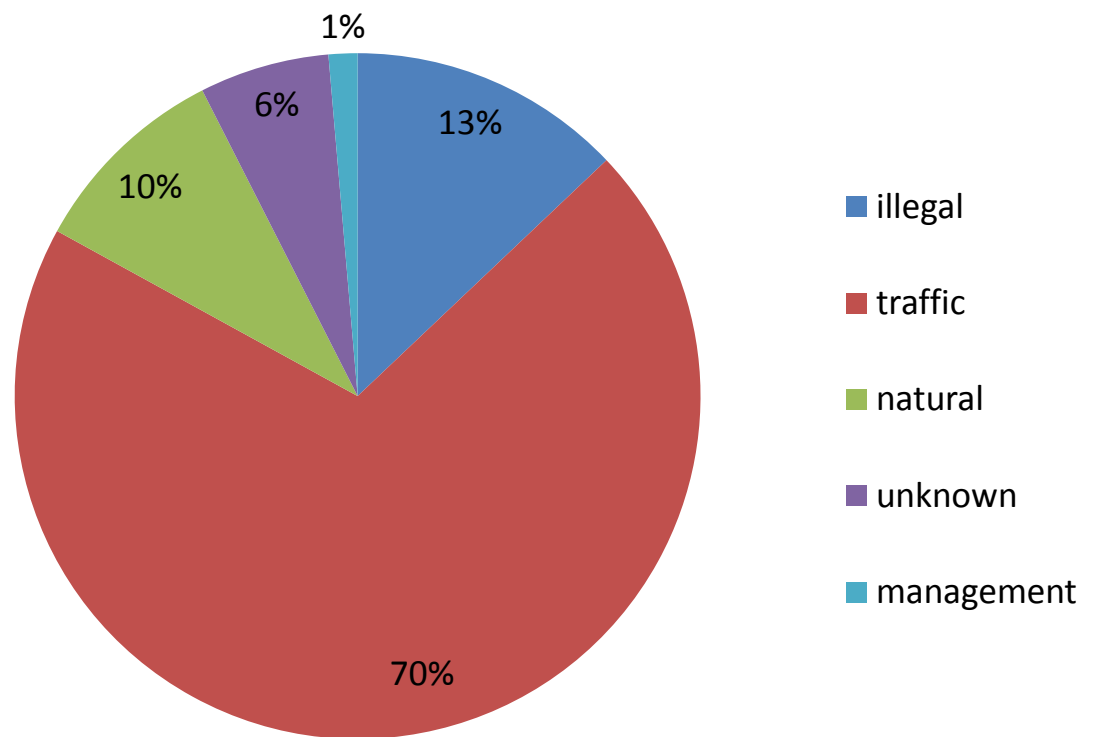
**Wolves found dead  
since 2000 (n = 147)**  
(status 01.10.2016)

➡ immigrants from the  
Alpine population

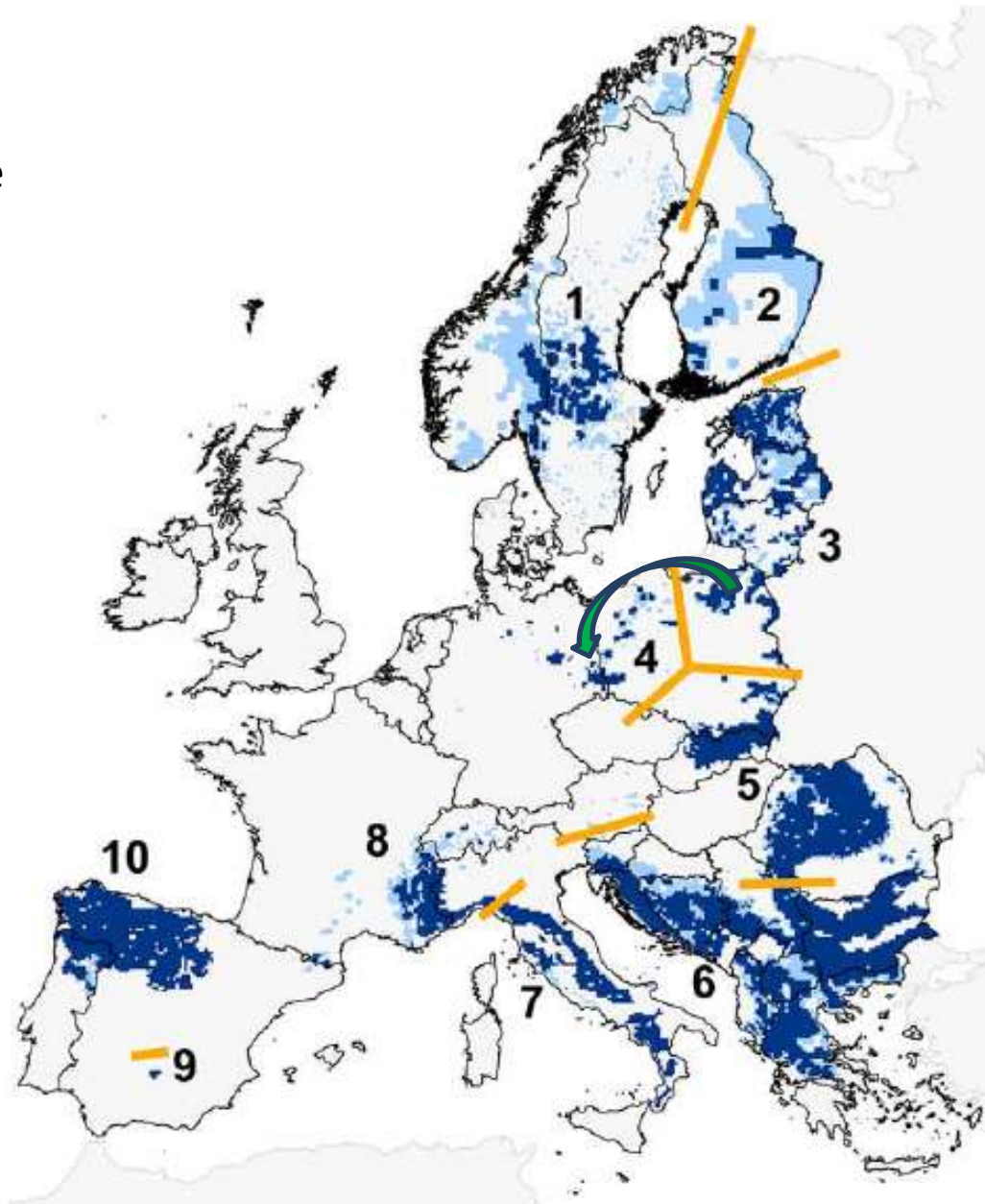




Causes of known deaths; 2000 - 01.10.2016, n = 147



Founder animals immigrated from the Baltic population.



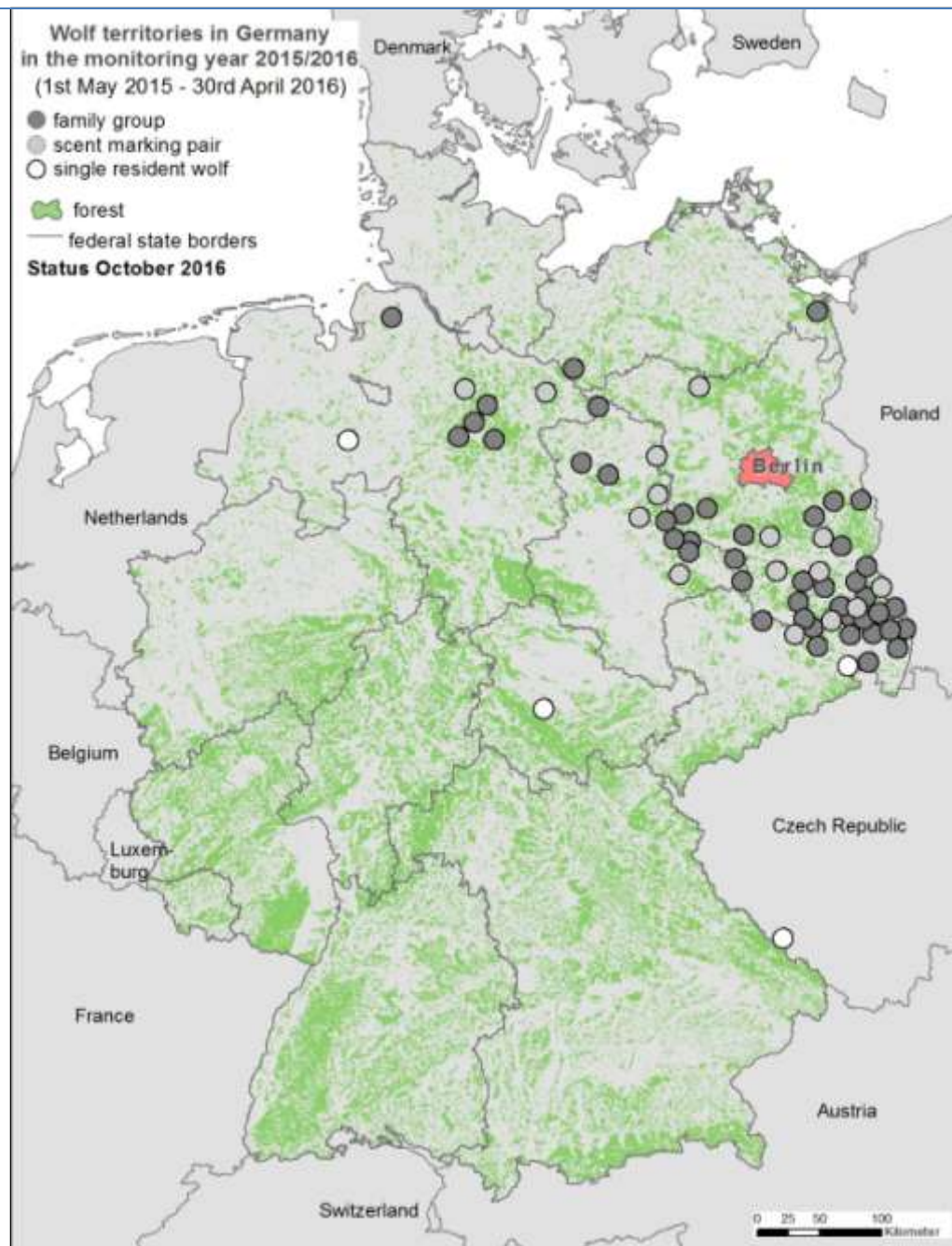


Most packs in Germany closely related.

Only few immigrants from the Baltic population.

No genetic proofes from the Carpathian population yet.

No reproduction of wolves from the Alpine population yet.



Germany is a federalist country.  
→ **Decentralized management system.**

Although LCs are listed as strictly protected by the Federal Nature Conservation Act the enforcement relies on the 16 federal states (Bundesländer).





### Decentralised management system

Regional **Wolf management plans** are implemented in all Federal States, except Berlin, Hamburg, Bremen.

These regional Wolf MPs are mainly action plans or guidelines that deal with regional conflict mitigation and competences.



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## Compensation & prevention system

Compensation & prevention systems vary between the federal states.

In some Länder compensation for wolf damages is linked to prevention (e.g. Saxony, Brandenburg), in others it is not.



### Compensation & prevention system

Damage prevention systems vary between the federal states too.

Mitigation measures (e-fences / LGDs) may be funded from 0 to 100% according to regional regulations.

Examples of wolf damage prevention funding in different Federal States:

Where	How much?	What?	To whom?
Brandenburg	75%	Fences & LGDs	Professionals only
Saxony	80 (+20%)	Fences & LGD	Professional & hobby owner
Saxony-Anhalt	80%	Fences & LGD	Hobby owner only
Hessen	0%	-	-



### Wolf caused damages on livestock in Germany

2015: 61 reproductive units  
199 attacks on livestock (wolf confirmed / wolf likely)  
715 livestock killed / wounded

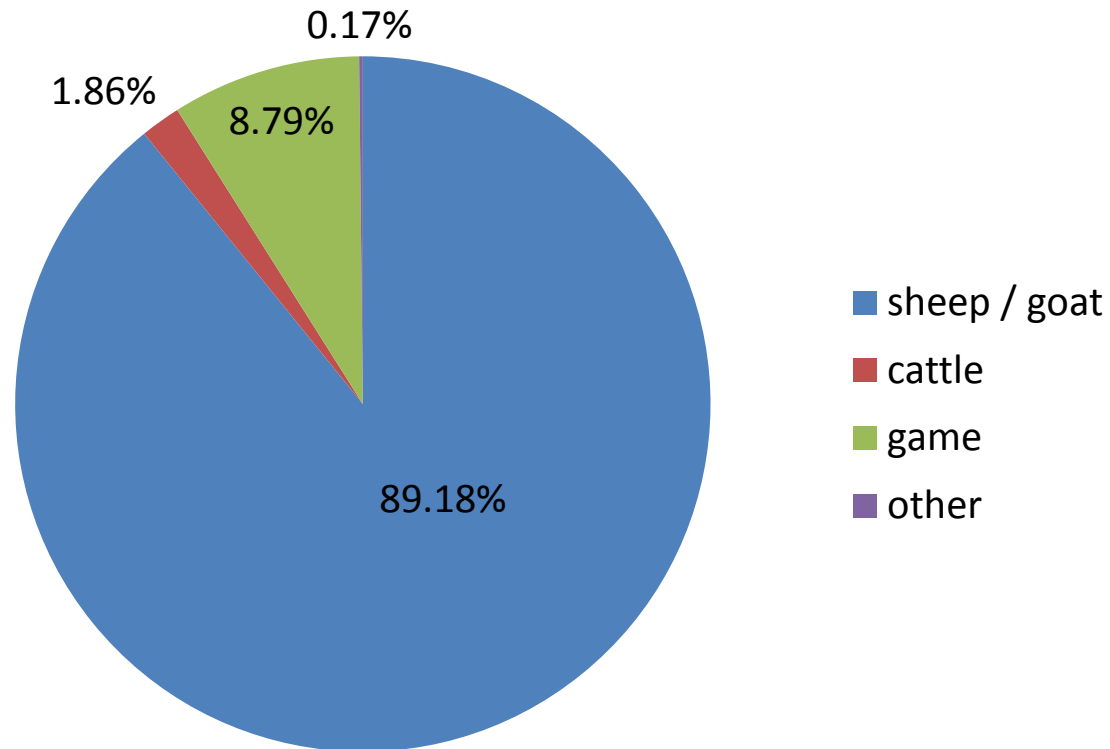
107,783 € compensation  
1,045,855 € prevention

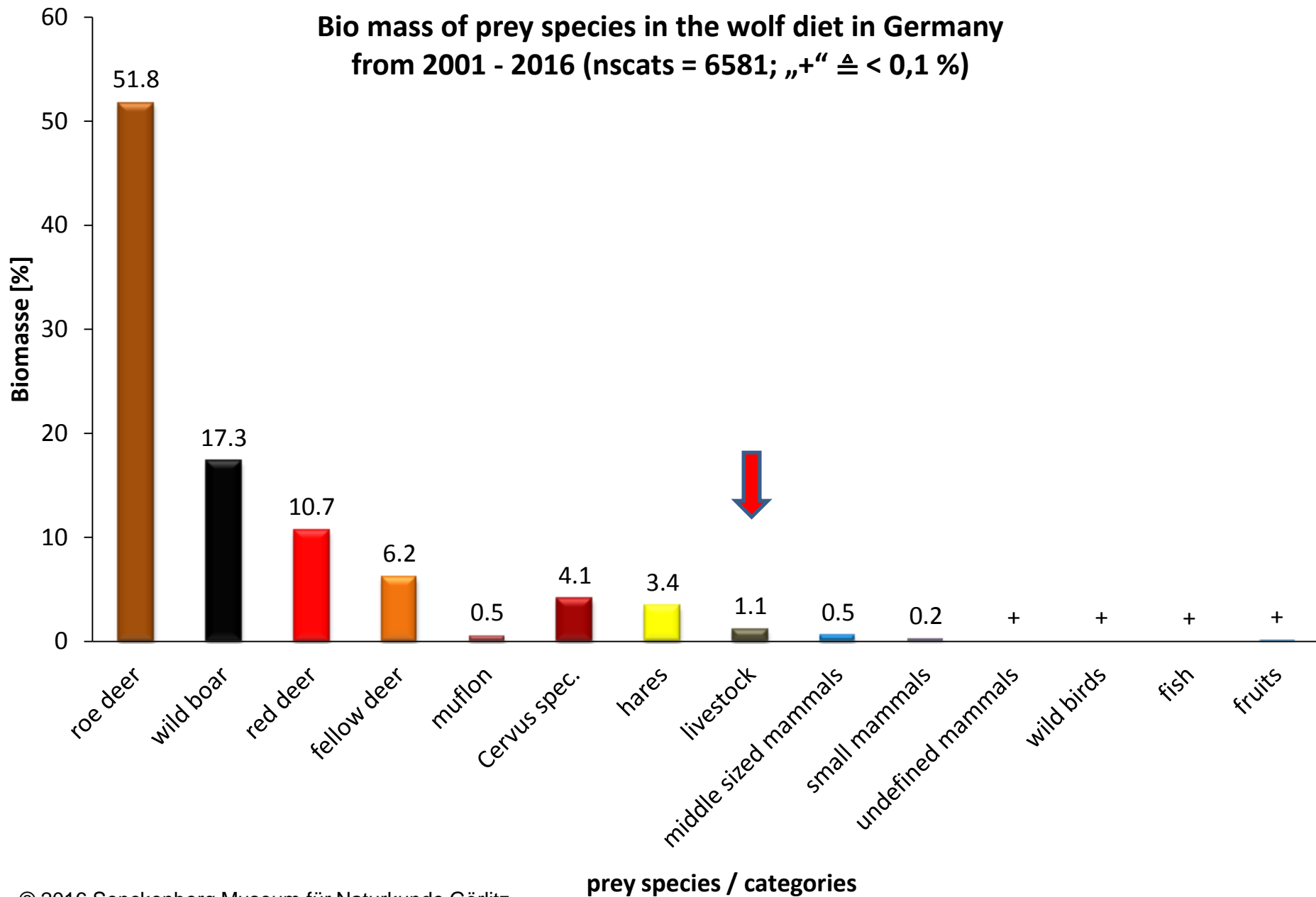
Note: in some Länder damages on not protected sheep is not compensated.





## Wolf caused damages on livestock in Germany 2002 – 2015, n = 2374









## National monitoring standards since 2009 (revised in 2015)

Collecting robust & verifiable data.

→ Yearly national assessment of population size (no. packs & pairs) and area of occurrence according to shared standards.

### Monitoring von Großraubtieren in Deutschland



BfN-Skripten 251

2009

Kaczensky et al. 2009

Ilka Reinhardt, Gesa Kluth, Sabina Nowak  
and Robert W. Mysłajek

### Standards for the monitoring of the Central European wolf population in Germany and Poland



BfN-Skripten 398

2015

Reinhardt, I., Kaczensky, P., Krauer, F., Rauer, G., Kluth, G., Wölfl, S.,  
Huckschlag, D., Wotschikowsky, U.

### Monitoring von Wolf, Luchs und Bär in Deutschland



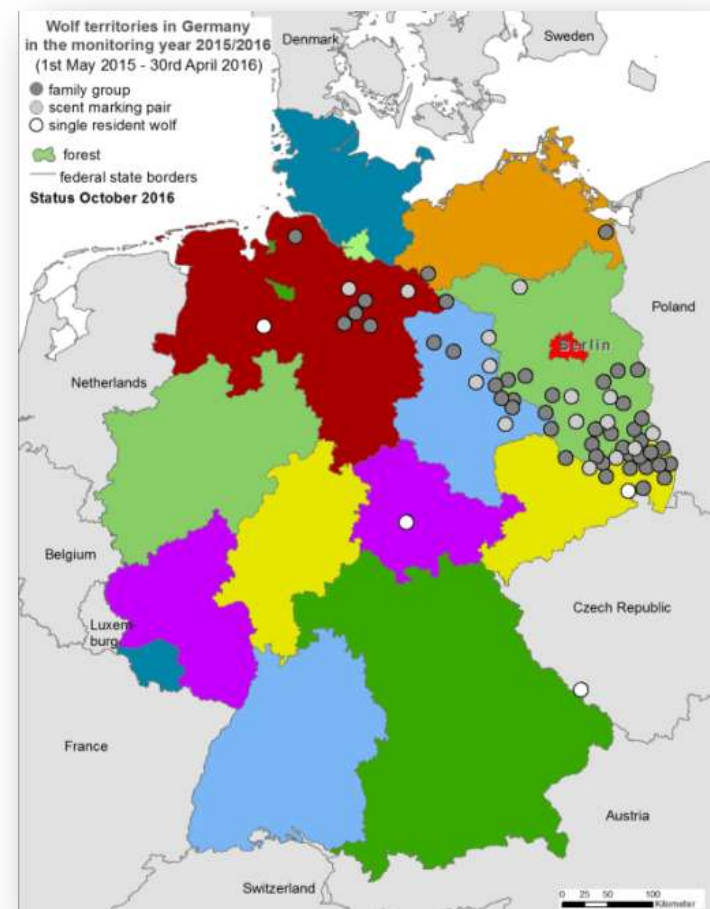
BfN – Skripten 413

2015

### National monitoring standards since 2009 (revised in 2015)

But, effort and funds invested vary widely between federal states.

→ Gets more and more difficult to get reliable data on national level.



### 1) Monitoring methods that are not snow dependent

#### Active Monitoring:

- presence sign survey: search for tracks / scats *year round*
- camera traps (for reproduction, minimum pack size, individual identification)
- genetic analyses (individual identification, pack reconstruction  
→ tell neighbouring packs apart)
- (telemetry)





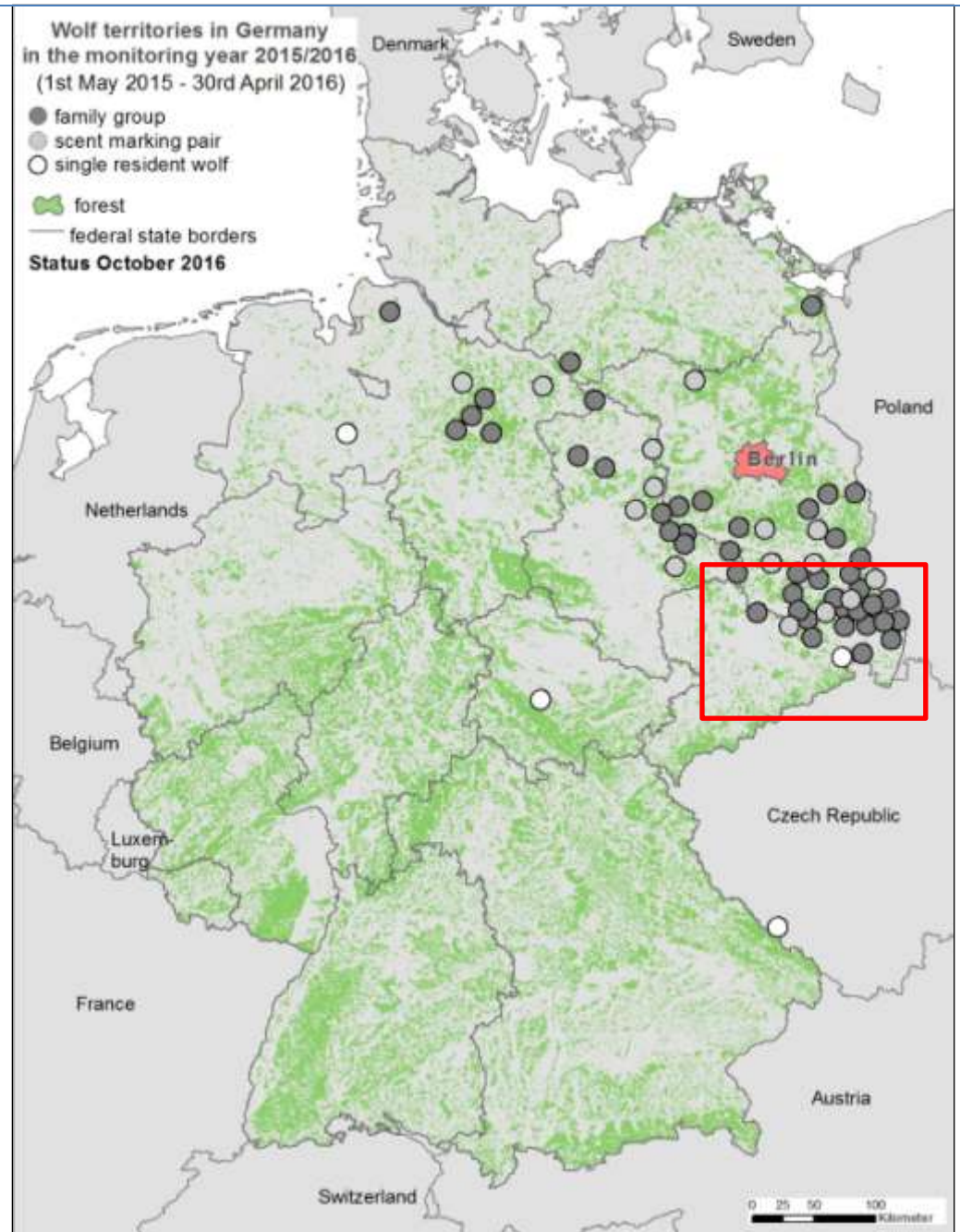
Reproduction is mostly confirmed with camera traps



Rendezvous site of the Spremberg pack (Saxony/Germany) 2012



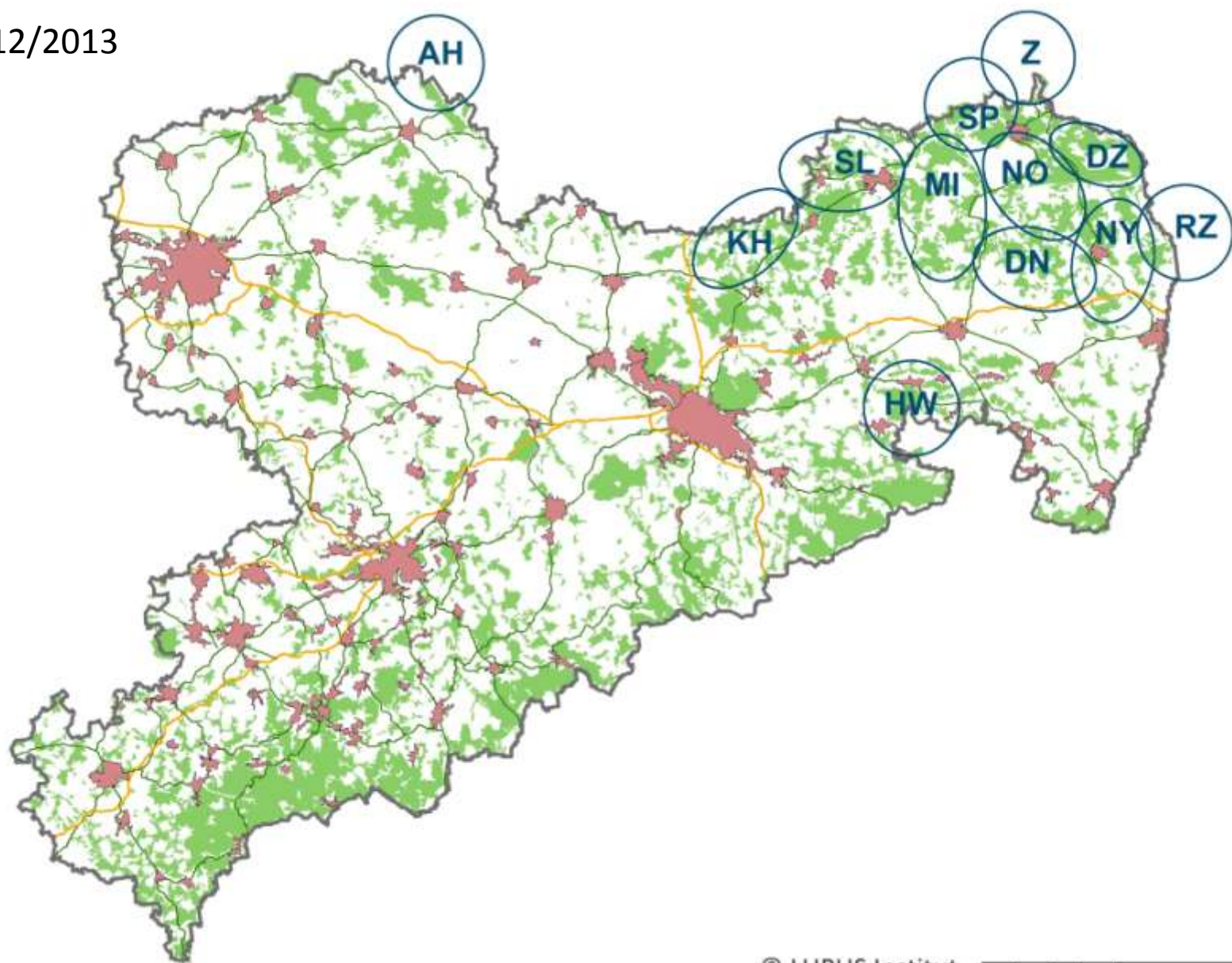
Challenges for wolf monitoring:



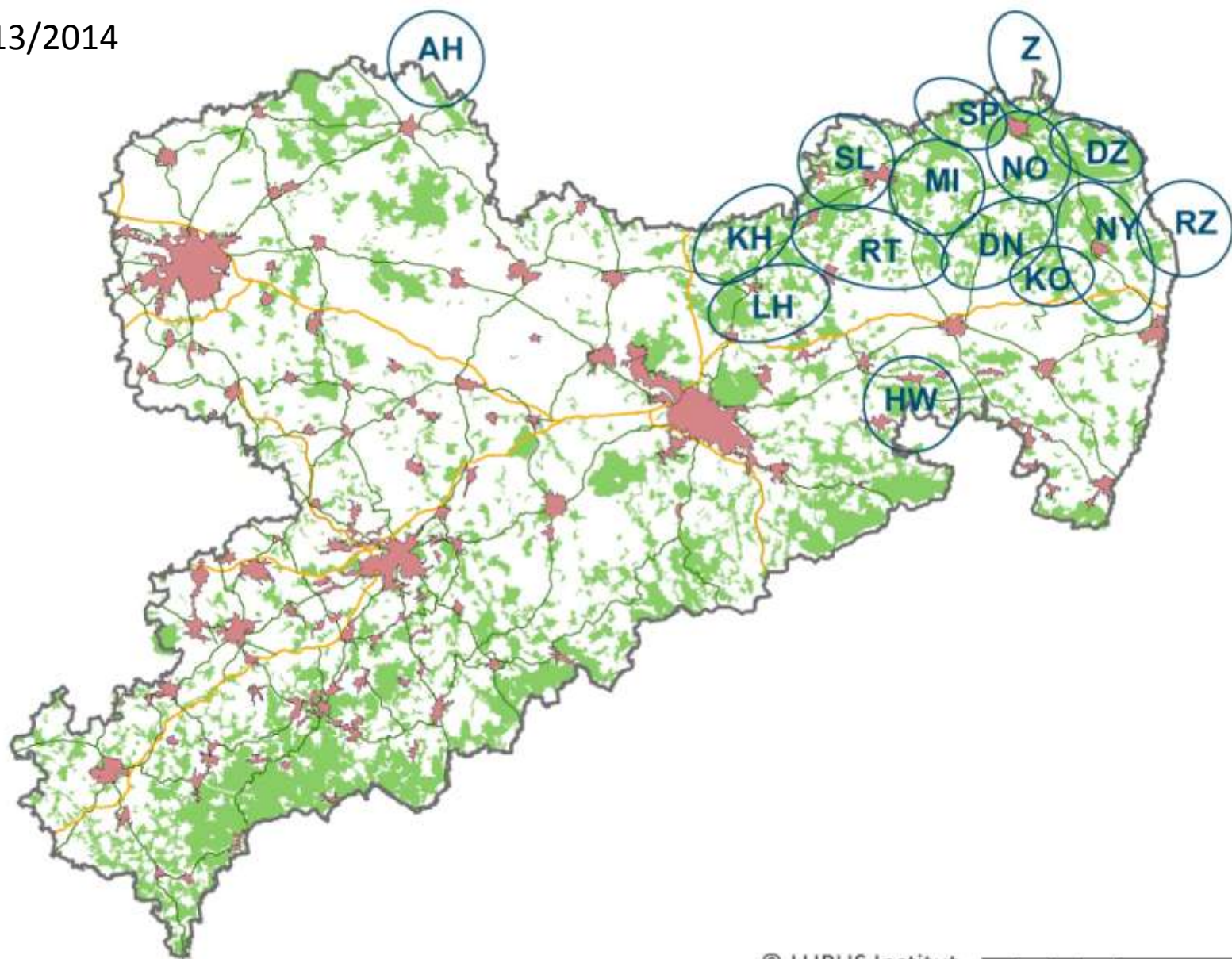


## Wolves in Germany - monitoring

WJ 2012/2013

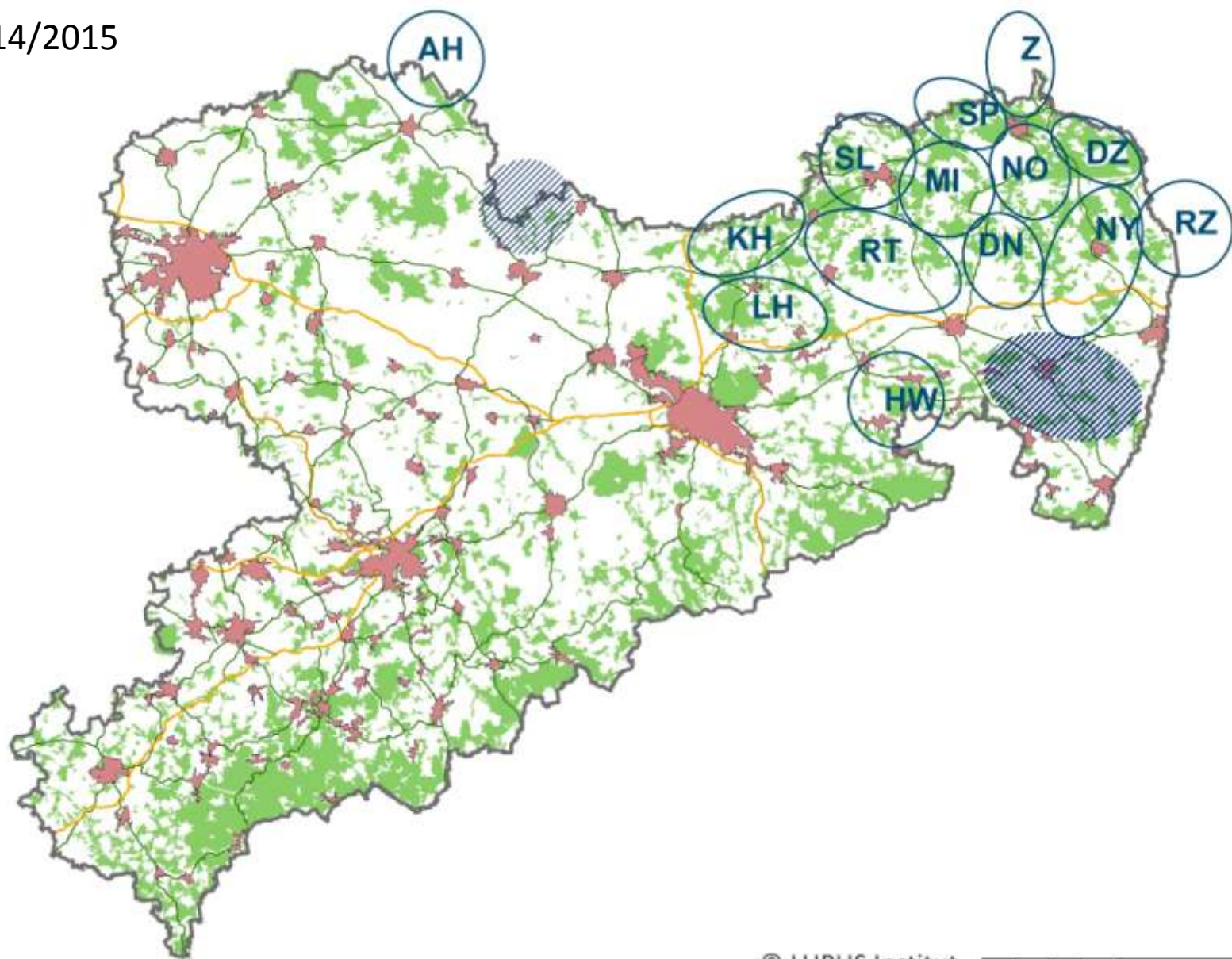


WJ 2013/2014



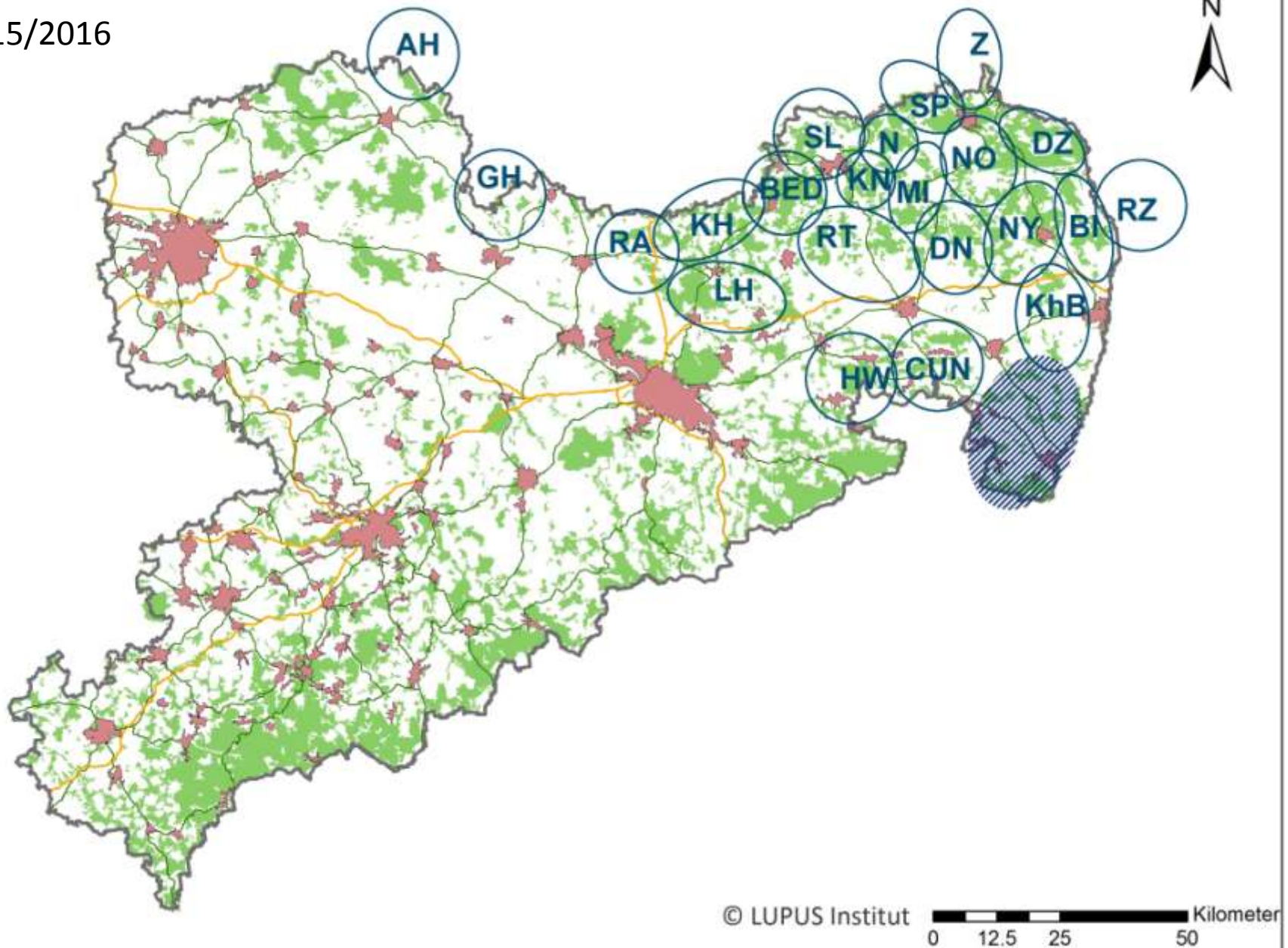


WJ 2014/2015





WJ 2015/2016



### Challenges for wolf monitoring:

fast growing population

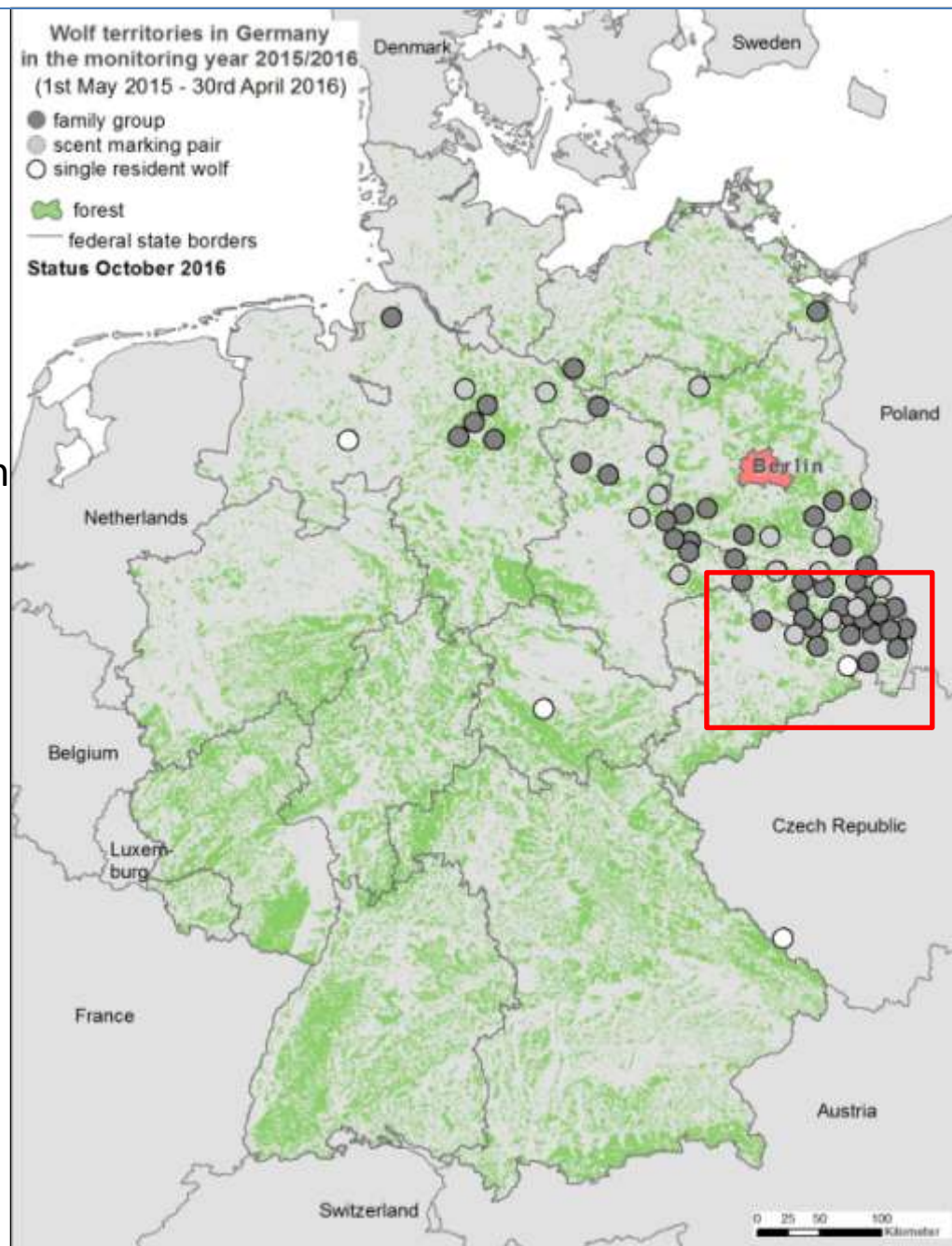
+

management / monitoring fragmentation

+

wide range of territory size

→ makes extrapolation of population size very difficult.





### Threats / challenges:

- management / monitoring fragmentation
- lacking public relation work in most federal states  $\leftrightarrow$  sensational media reports
- low acceptance in hunters





Thank you!



Foto: H. Anders