

IUCN 10th International Otter  
Colloquium  
Oct. 10. – 17. 2007  
Hwacheon, South Korea

# Monitoring distribution and population trends in European Otter (*Lutra lutra*) on a regional level

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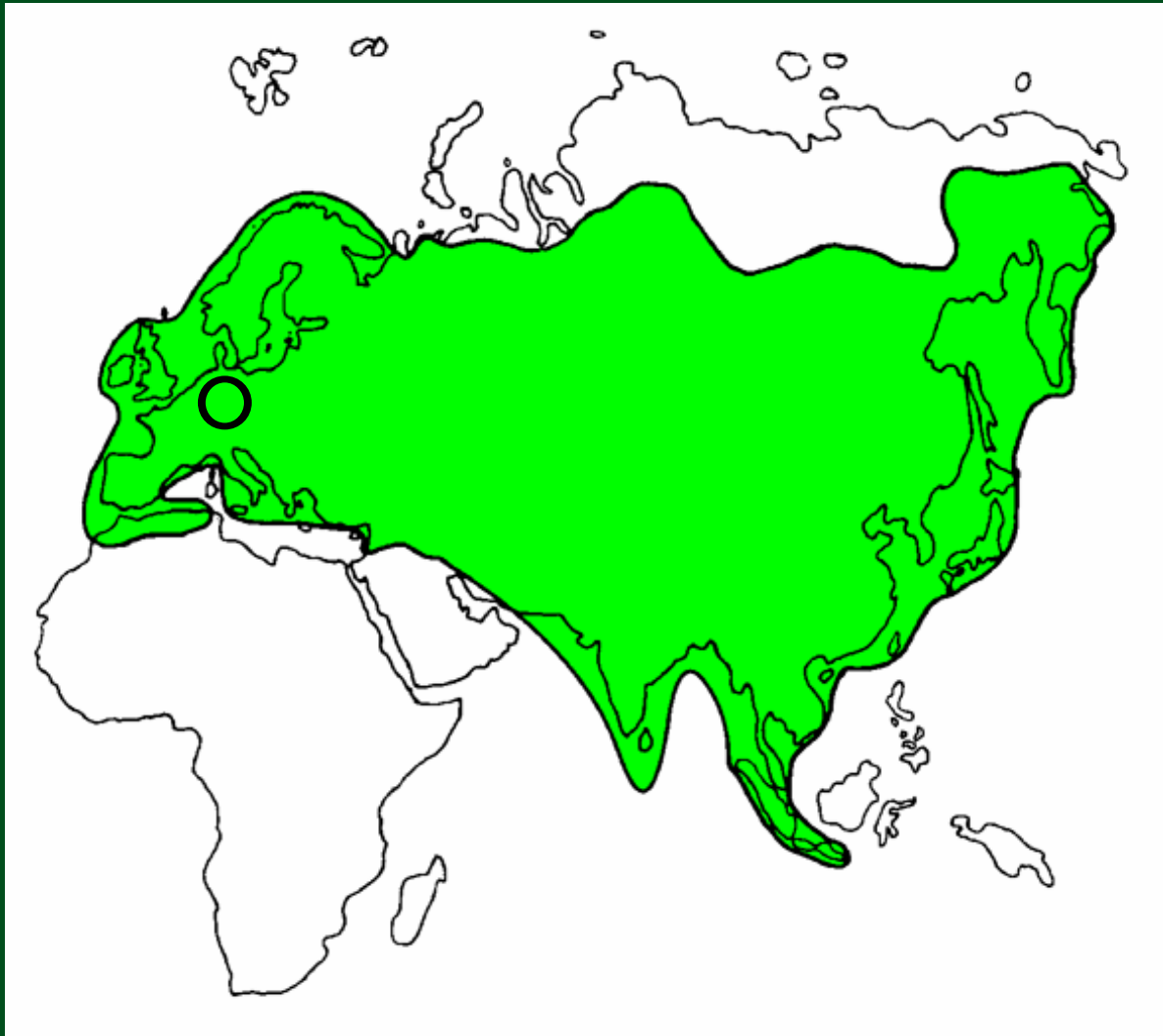


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- The Eurasien Otter was common throughout Germany until the beginning of the 20th century
- Around the middle of the 20th century the otter declined
- presently the distribution of the otter is reduced to isolated areas in the east of Germany
- the combination of several factors has caused the decline
- but since 20 years the otter population in Germany is increasing

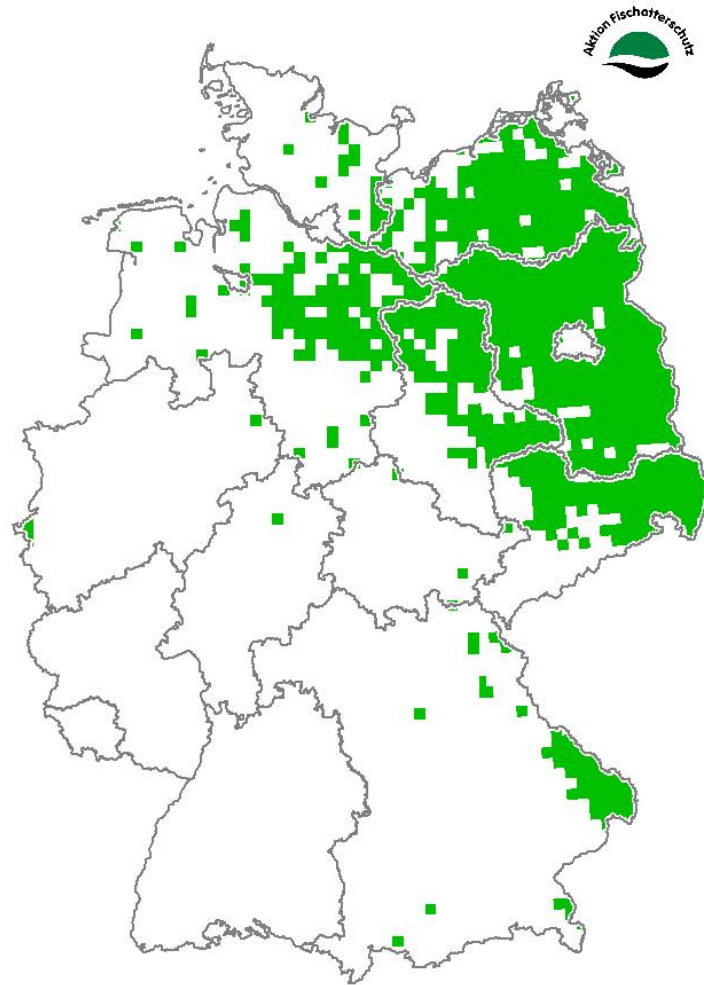


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The original range of  
the European otter and  
the site of the study  
area

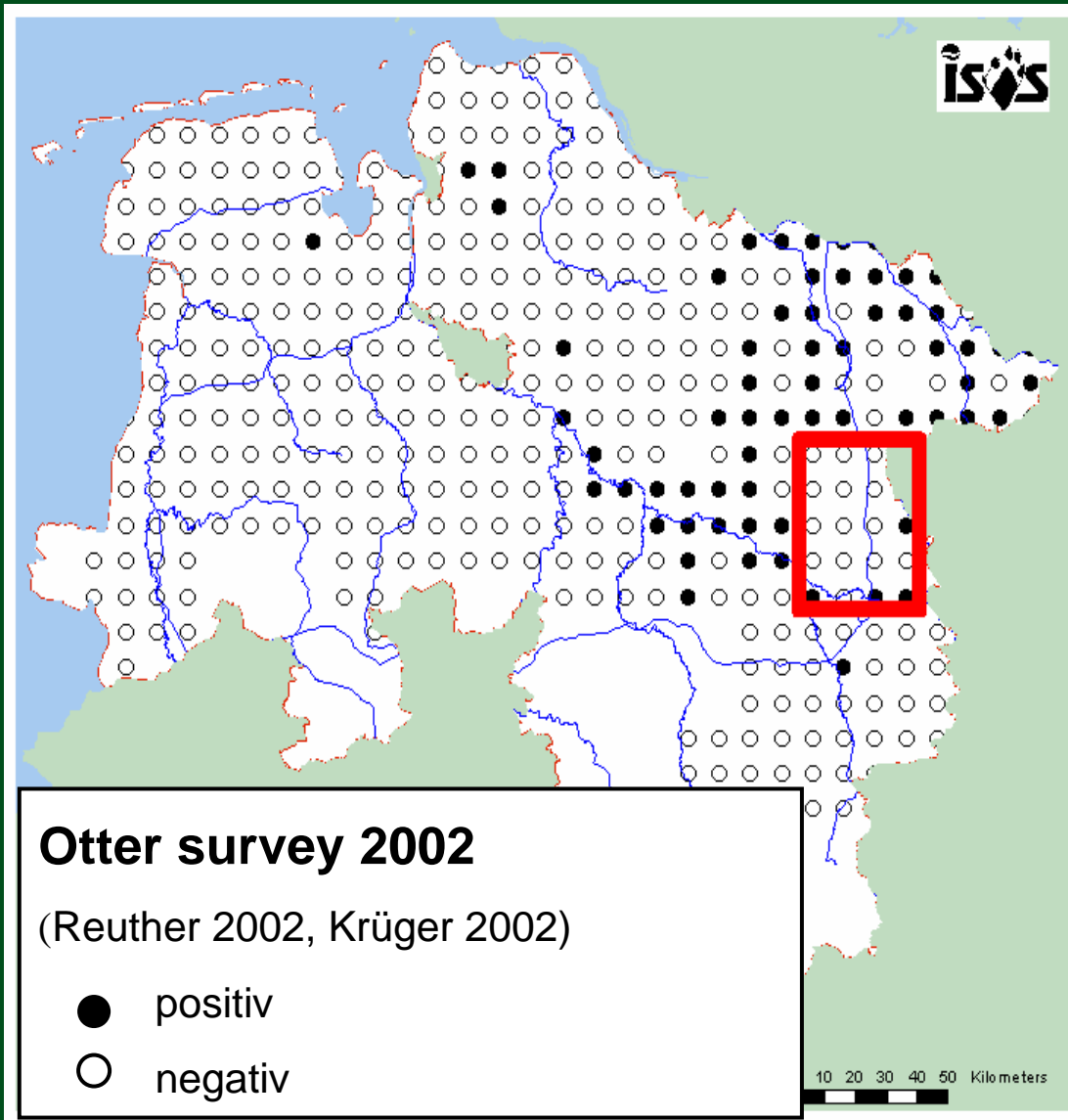
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■ Positive site

The present distribution of  
otters in Germany

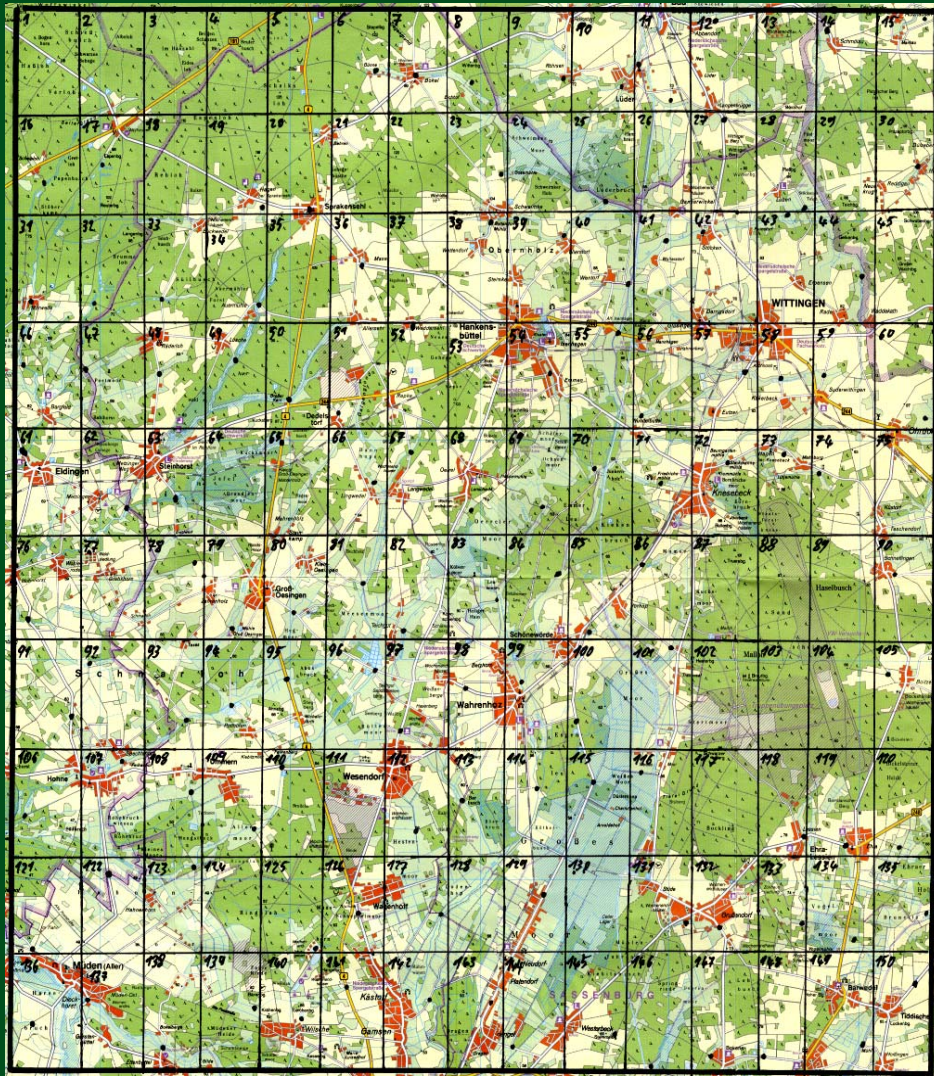




-In the northern part of Germany the otter is very rare.

-Especially in the area of the study site, around the OTTER-ZENTRUM, a survey (IUCN-standard-method) revealed that otter signs are very scarce

-to ascertain the status and the development of the population a continuous survey was started in this region in 1998



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**Method:**

**Size of the survey region: 1.245  
km<sup>2</sup>**

**The survey is based on a grid with  
one site investigated in each  
square**

**The grid is adapted to the system  
of geographic degree coordinates**

**A grid of 150 squares, resulting in  
130 survey sites (20 squares  
without any creek or open water**

**One grid covers the surface of 8.3  
km<sup>2</sup>**



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**Method:**  
**Landscape of the study**  
**area:**

**The river „Ise“, partly**  
**restored**

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**Method:**  
**Landscape of the study  
area:**

**A mixture of meadows,  
arable land, forests and  
villages**





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**Method:**  
Survey sites were usually  
bridges and culverts

**Only the immediate  
surroundings of the sites  
were searched for 10m of  
both banks**





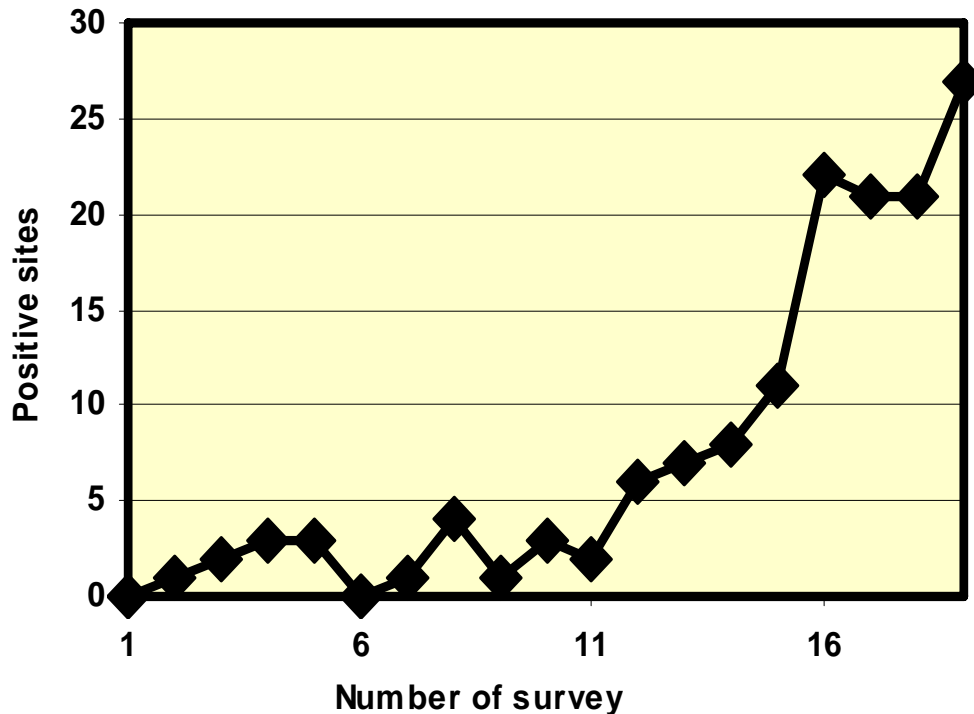
**Method:**

**The surveys were conducted in harvest and spring**

**If spraints or tracks were found the site was treated as positiv**

**Until now a total of 130 squares were visited 19 times since 1998**

Development of positive sites in ISE river system  
1998 -2007



## Results

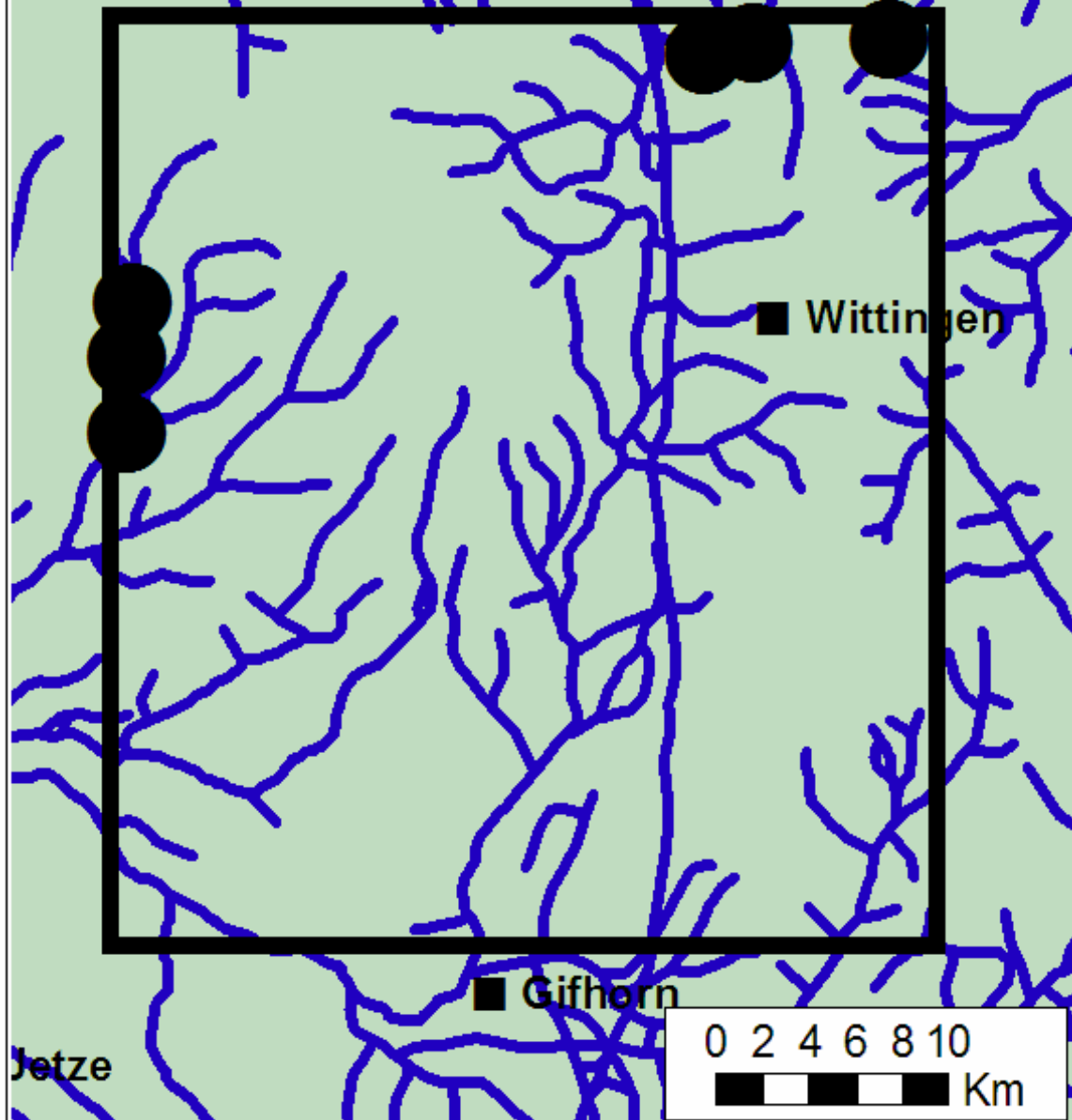
Until 2002 (survey no. 11)  
otter signs were rare, most  
of the otters were transient

Since 2003 we found for  
the first time that one or  
more otters were in  
residents and the number  
of positive sites increased

2007 two otters were hit by  
car, one was a lactating  
female

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1998/1999



## Results

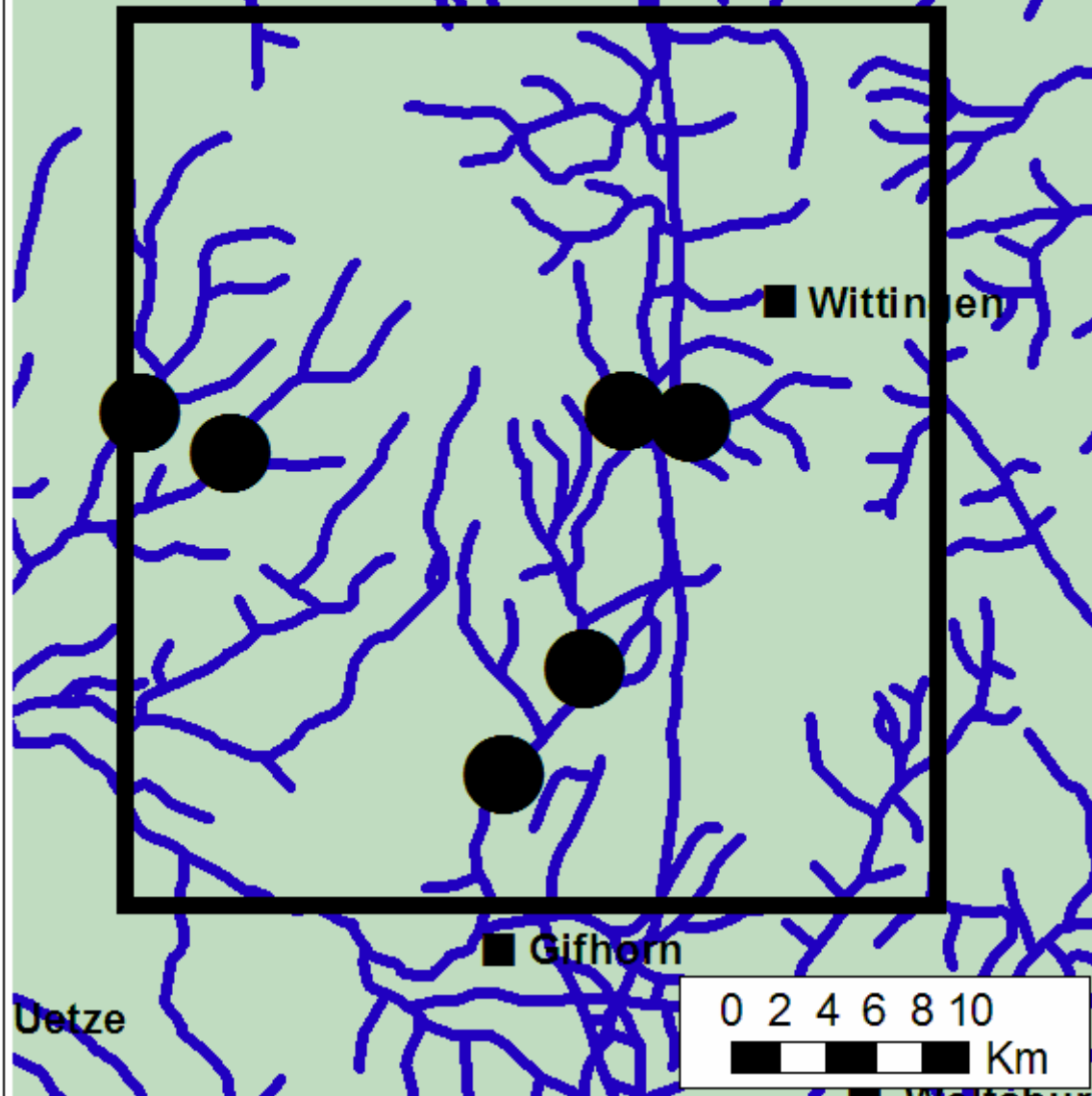
Positive sites in the map

In the first time otters  
occured only at the edges  
of the survey region



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2000/2001



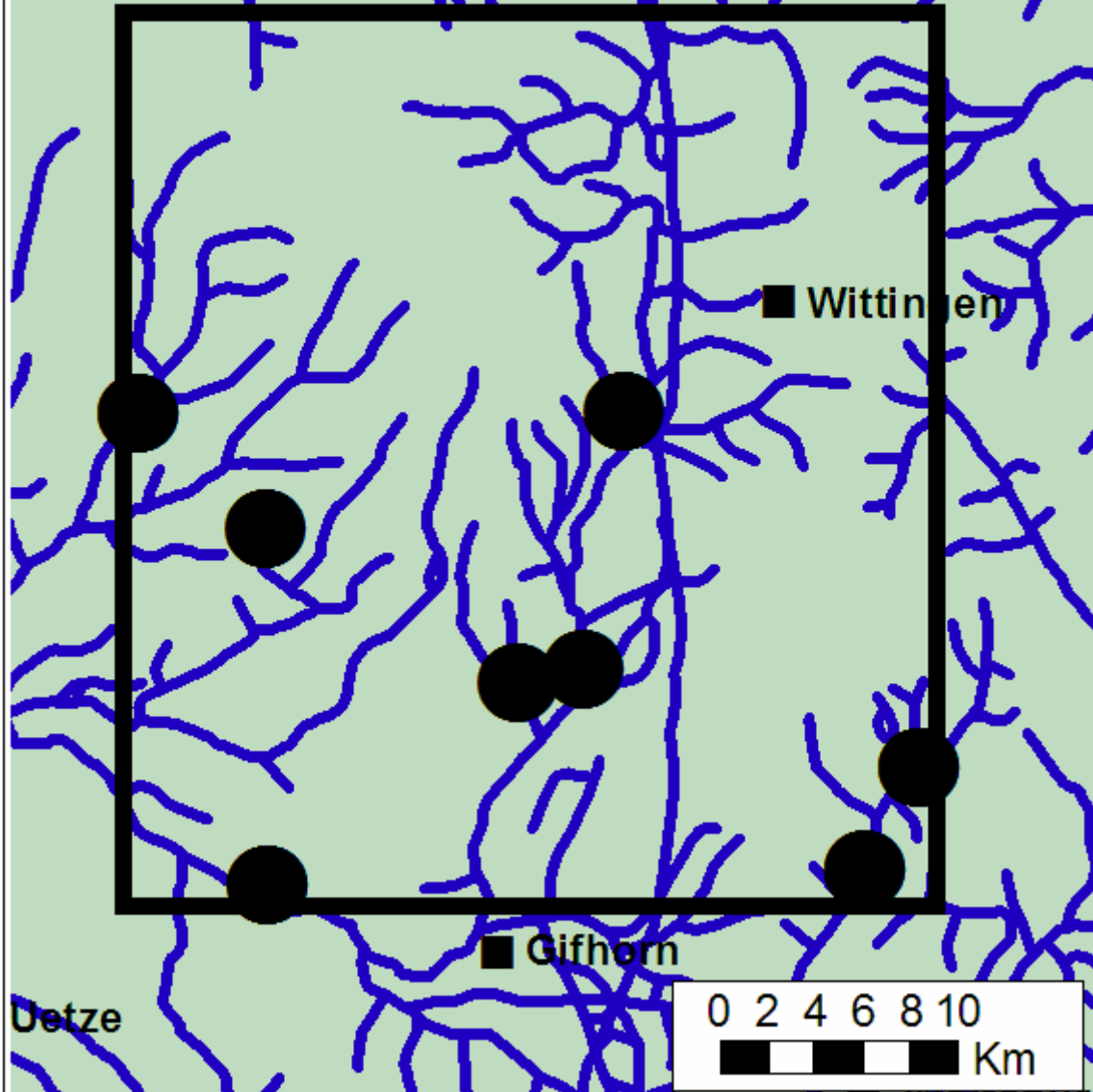
## Results

Positive sites in the map

Since 2000/2001 some positive sites could be found in the middle of the region at the river „Ise“



2002/2003

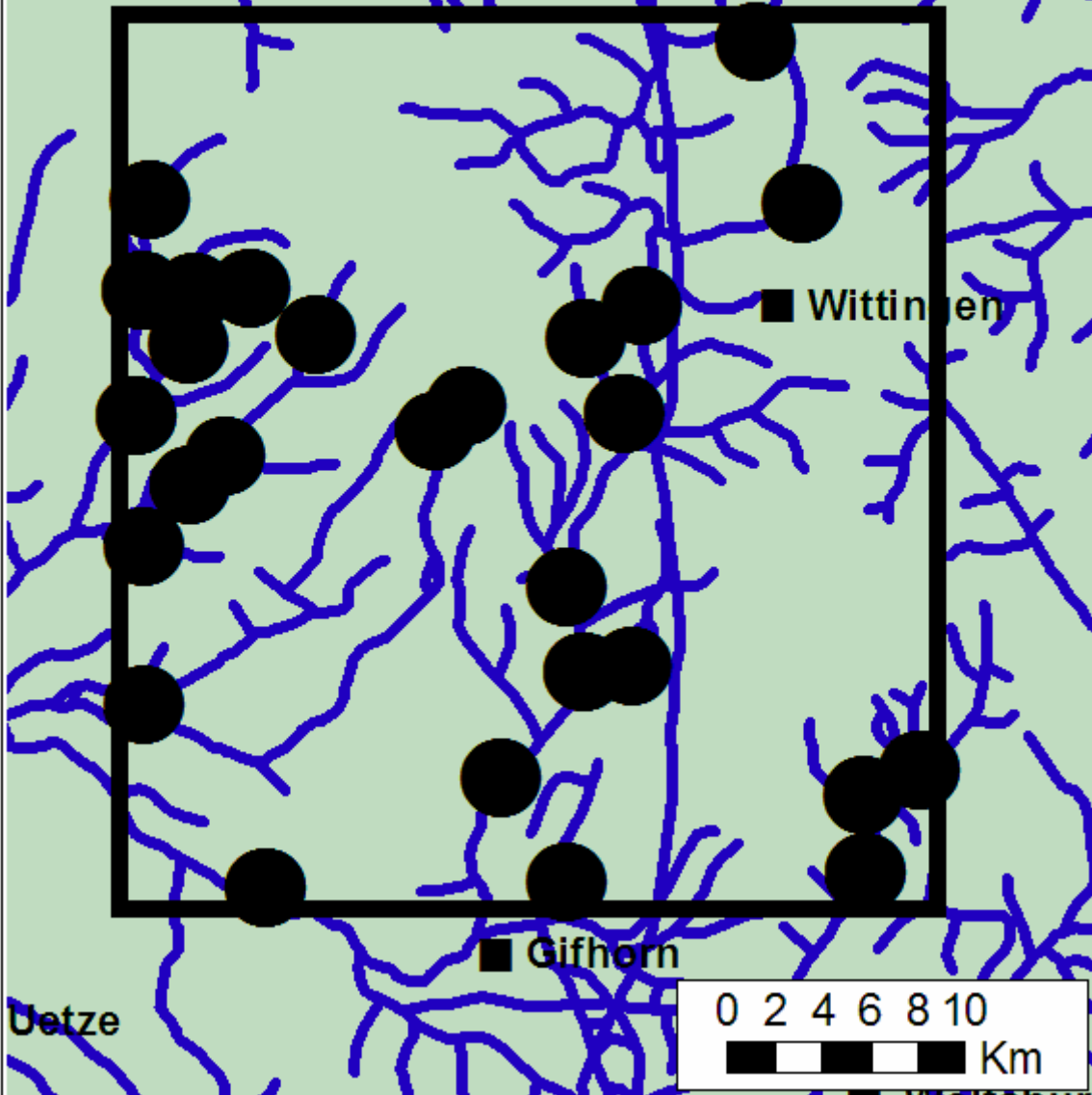


## Results

Positive sites in the map

In 2002 and 2003 the  
increase in positive sides  
was low

2004/2005



## Results

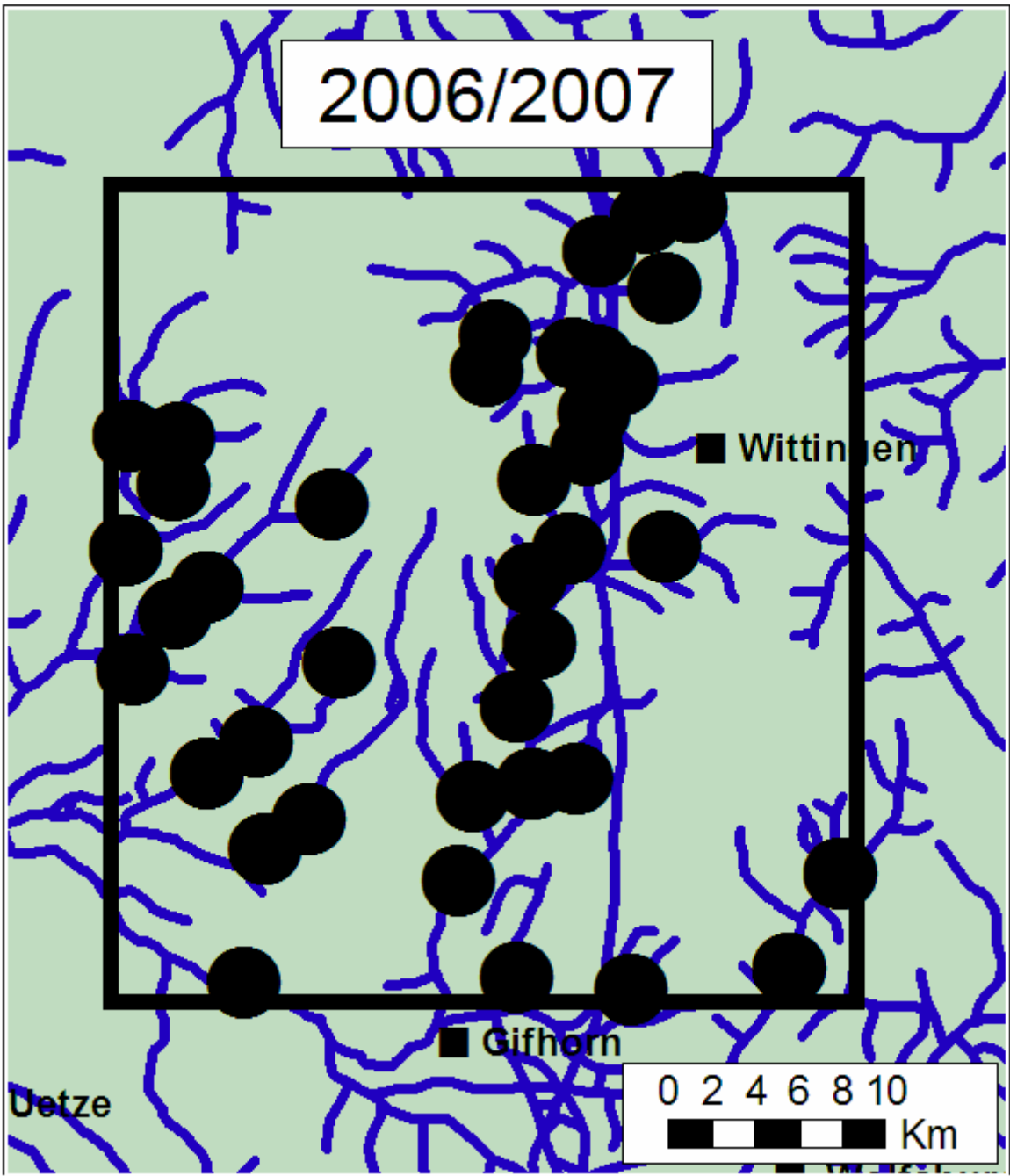
Positive sites in the map

In 2004 and 2005 more and more positive sites could be found

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**Results**  
Today the otter has  
recovered the whole region

2006/2007



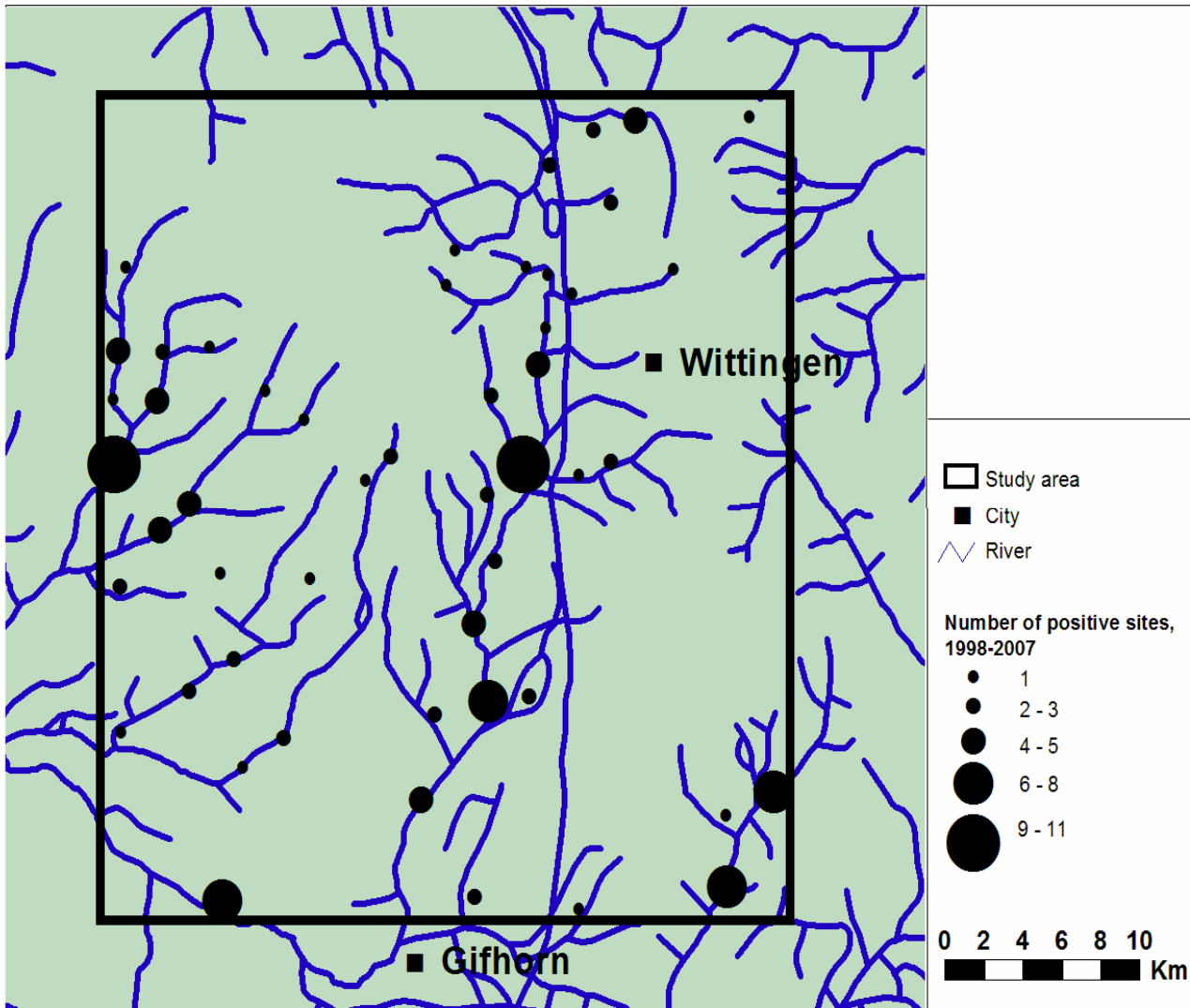


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## The distribution of positiv sites for 19 surveys

There seem to be core  
areas in the distribution  
of otters

Or are this sites with a  
high detetcion  
probabiltiy?





5



3



2

## Six categories for the „probability of otter detection“

1 extrem low

2 very low

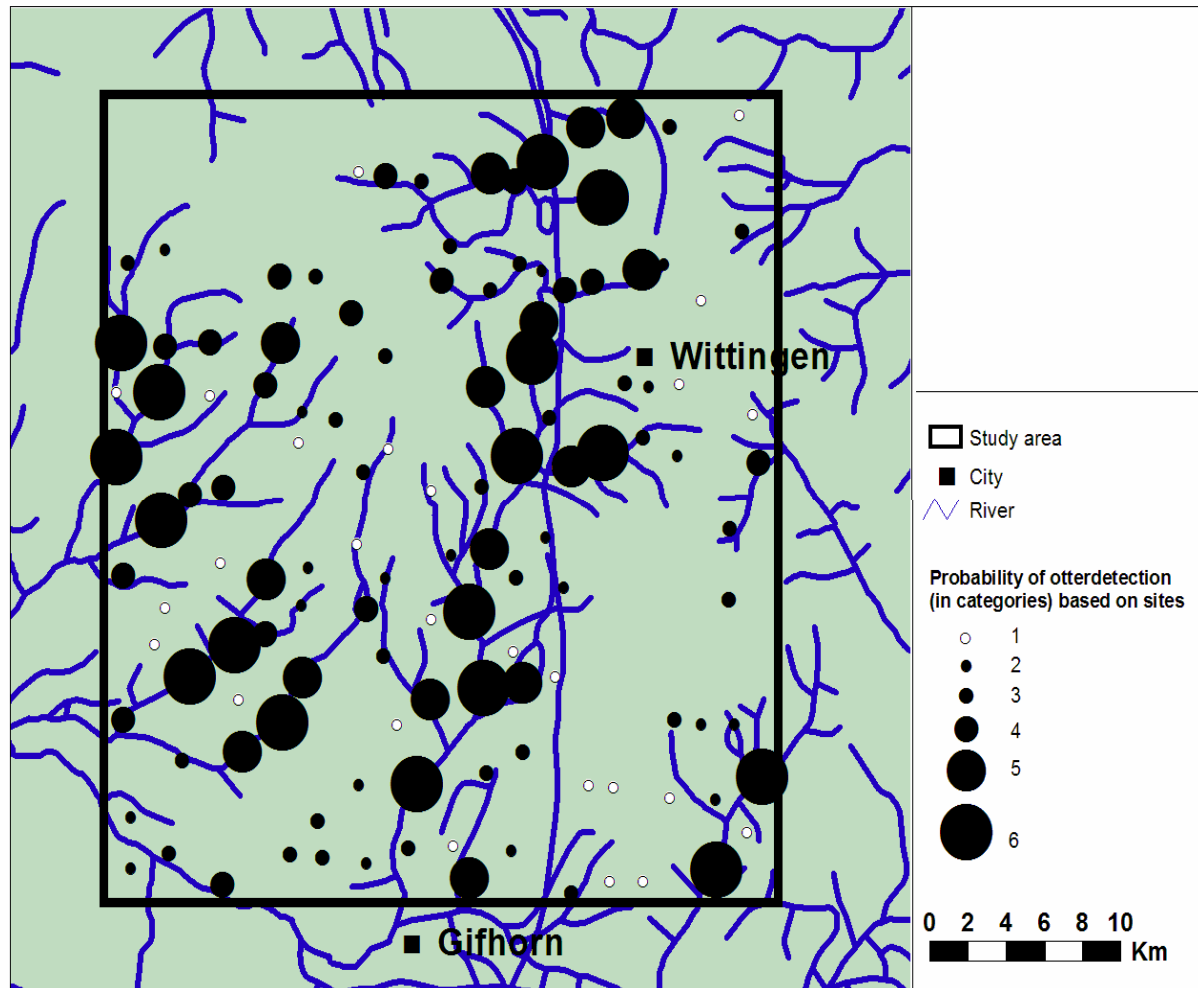
3 low

4 medium

5 good

6 very good

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## Map of the distribution of the „otter detection probability“

1 extrem low

2 very low

3 low

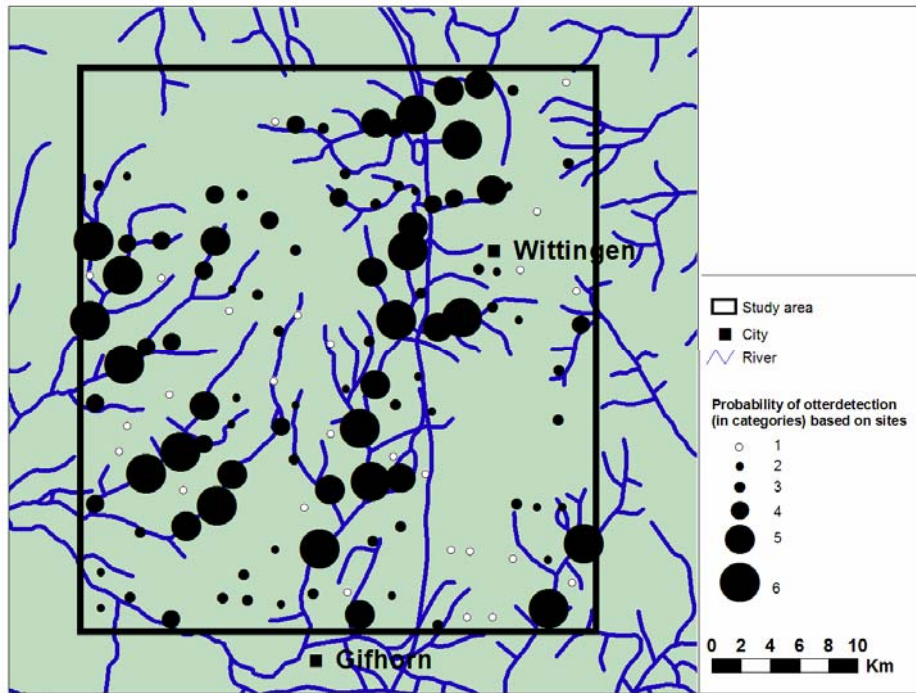
4 medium

5 good

6 very good

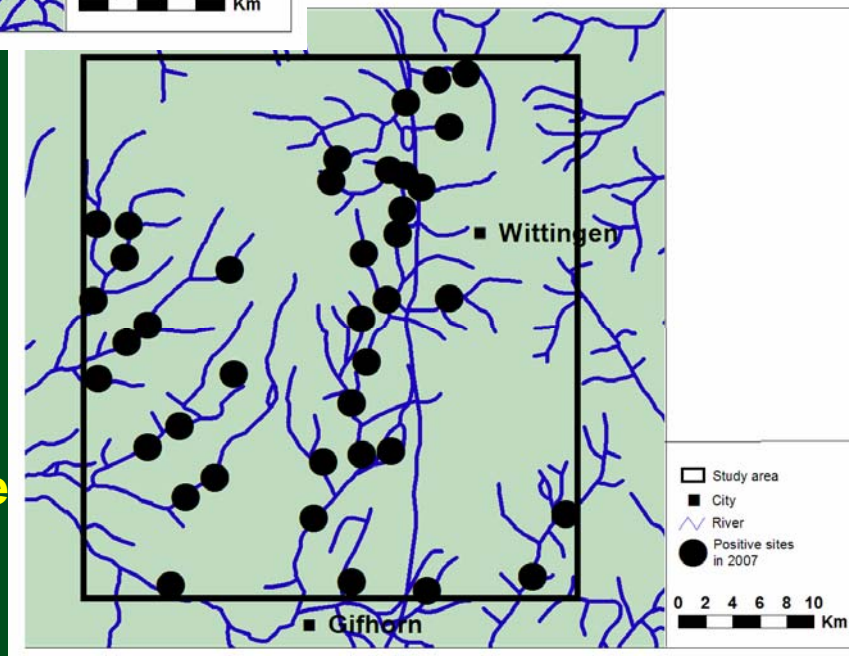
## Probability of otter detection

- 1 extreme low
- 2 very low
- 3 low
- 4 medium
- 5 good
- 6 very good

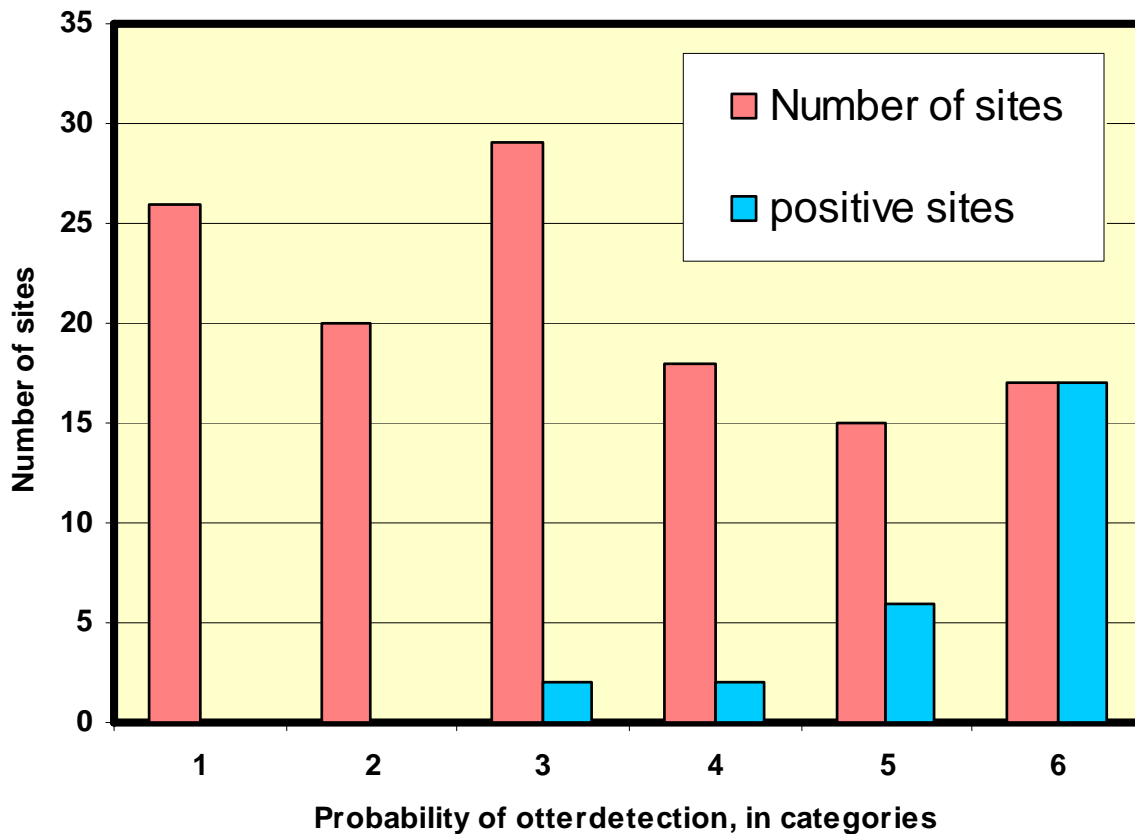


## Positive sites in the years 2006/07

Otter evidence is  
more likely to be  
found where suitable  
bridges are present



### Probability of otterdetection



**This graph shows that there is a high correlation between the probability of otter detection and positive sites**

**(numbers from one survey)**

**1=extreme low**

**6=very good**

**Spot checks at suitable bridges provide the best indication of otter presence**



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Thank you for  
your attention!

