



**OTTER FISHING
CONFLICTS
THE CASE OF AUSTRIA**

Andreas Kranz
IUCN OSG
Conflict Resolution
Task Force

- 1 LUXEMBOURG
- 2 LIECHTENSTEIN
- 3 SAN MARINO
- 4 ANDORRA
- 5 MONTENEGRO
- 6 KOSOVO
- 7 MACEDONIA
- 8 VATICAN
- 9 MONACO

Austria

Norwegian Sea

Barents Sea

Gulf of Bothnia

North Sea

Baltic Sea

ATLANTIC OCEAN

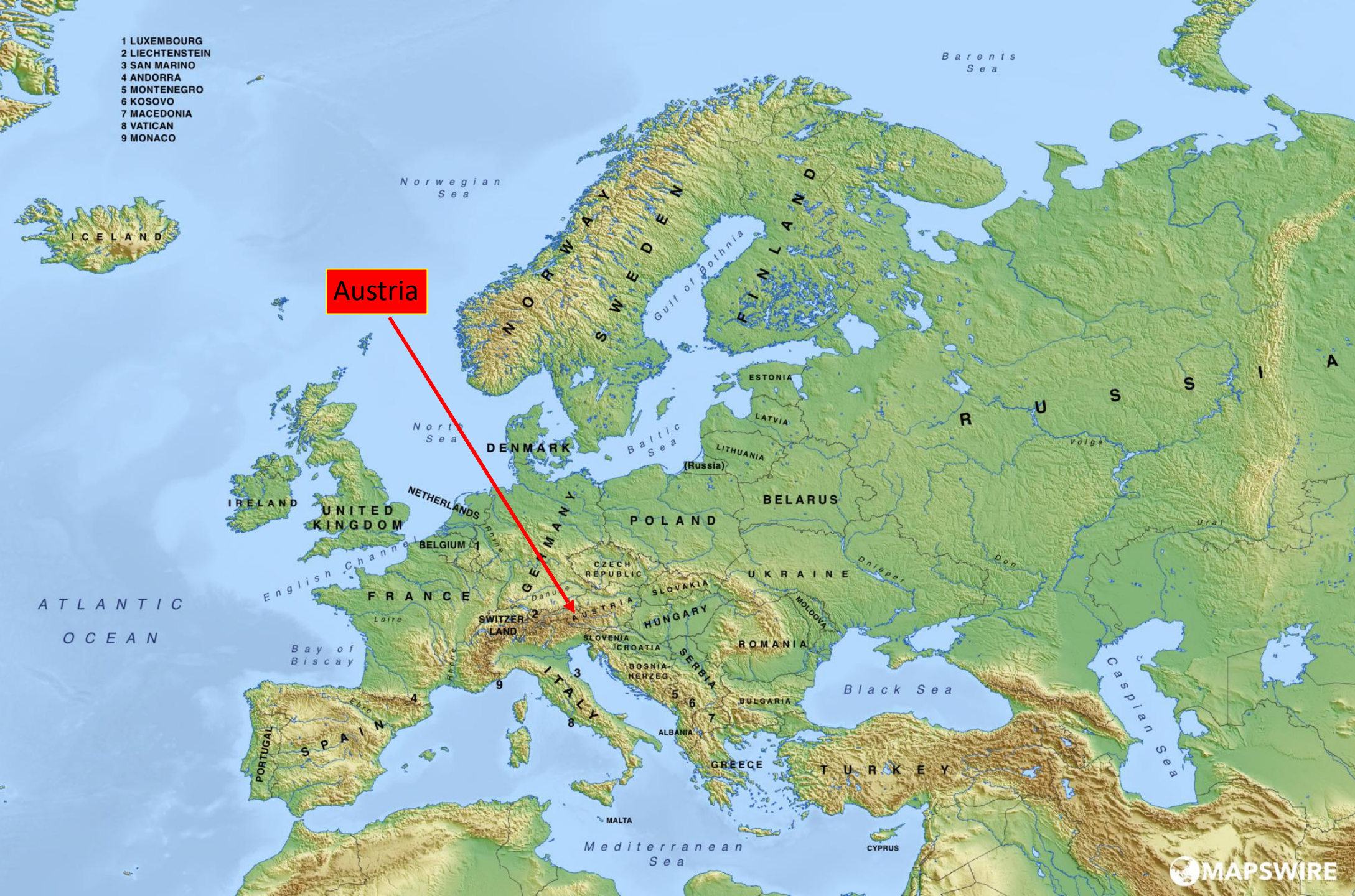
English Channel

Bay of Biscay

Black Sea

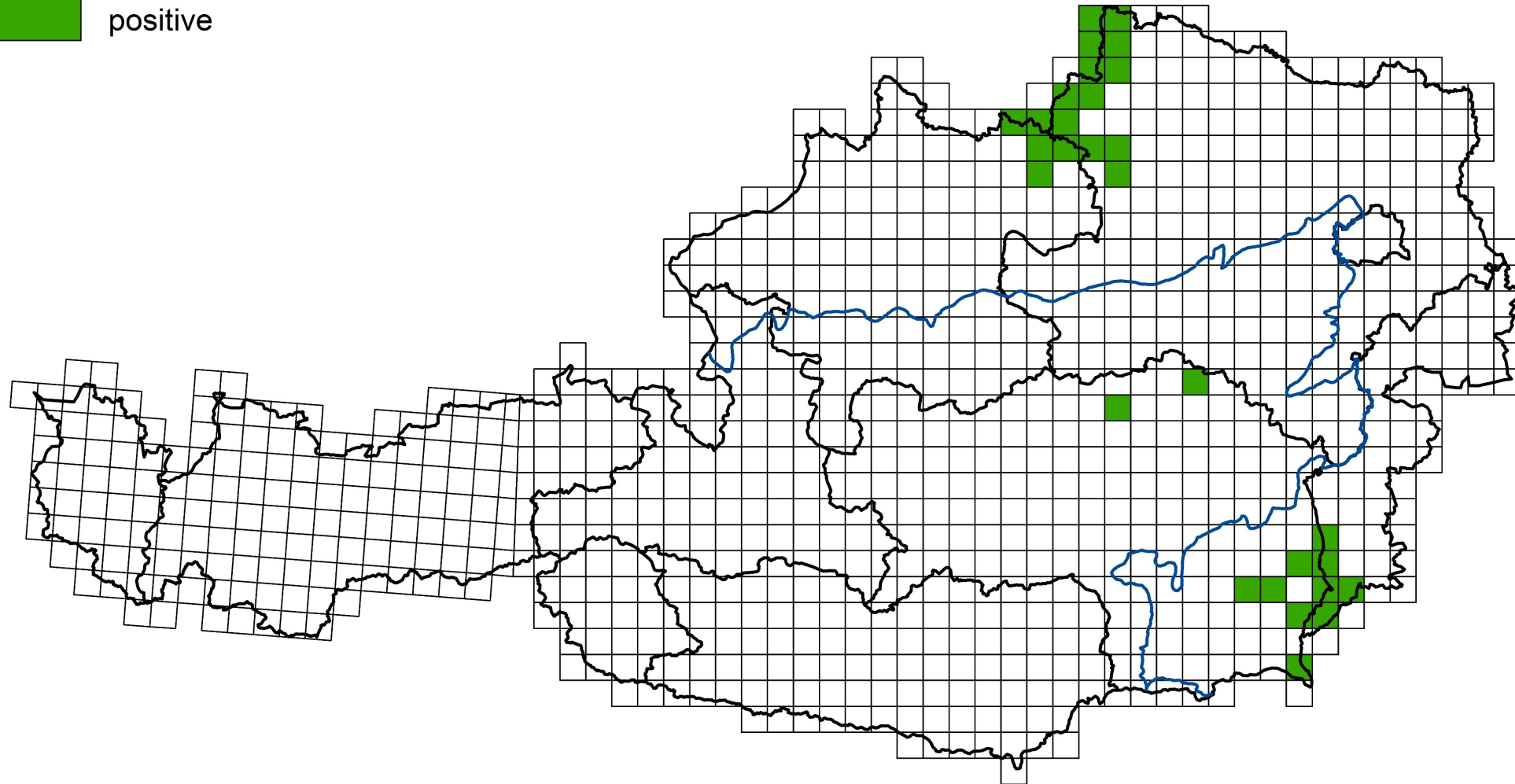
Caspian Sea

Mediterranean Sea



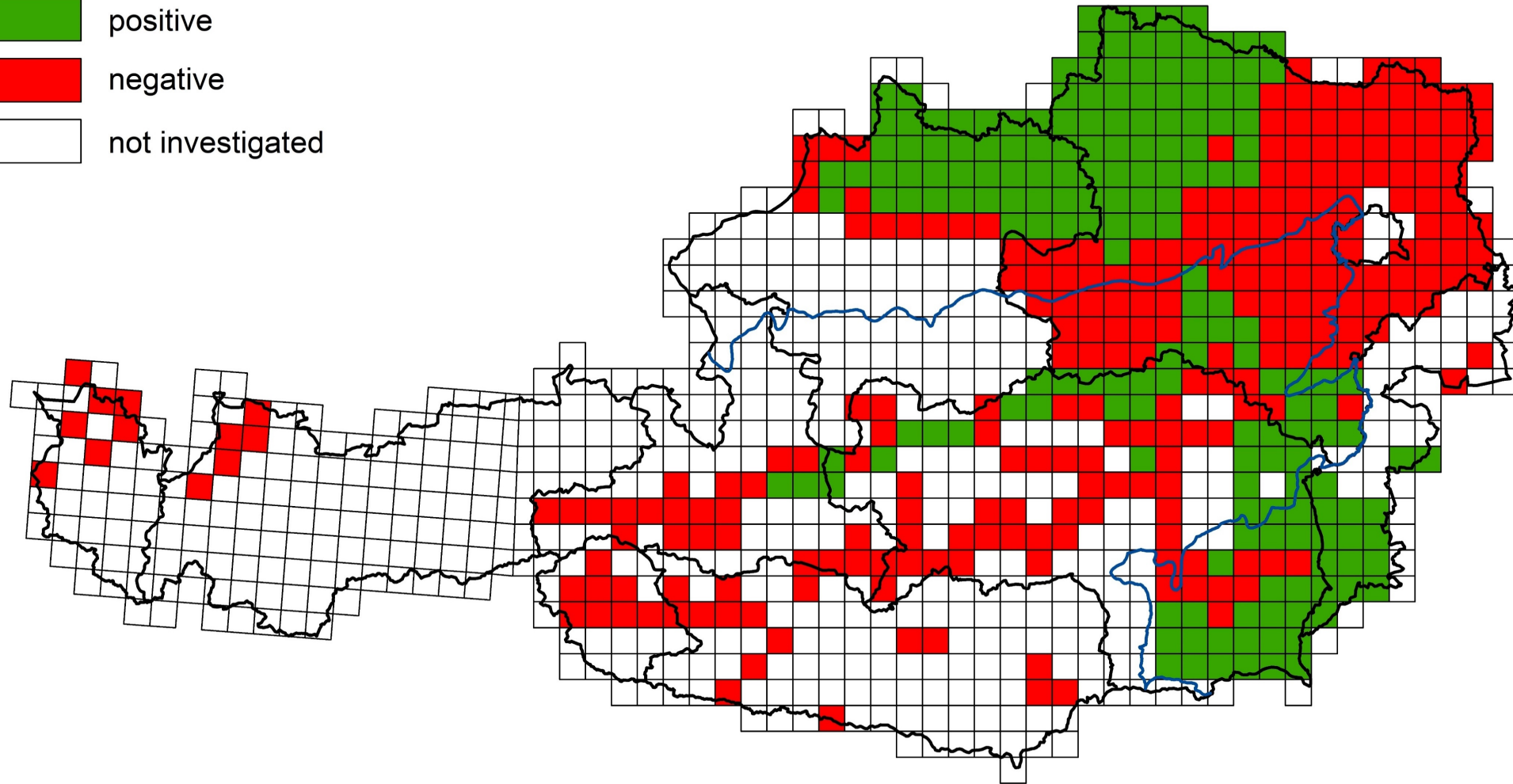
Natural recolonization of Austria: 1986

- border Continental / Alpine Region sensu EU FFH-Directive
- positive

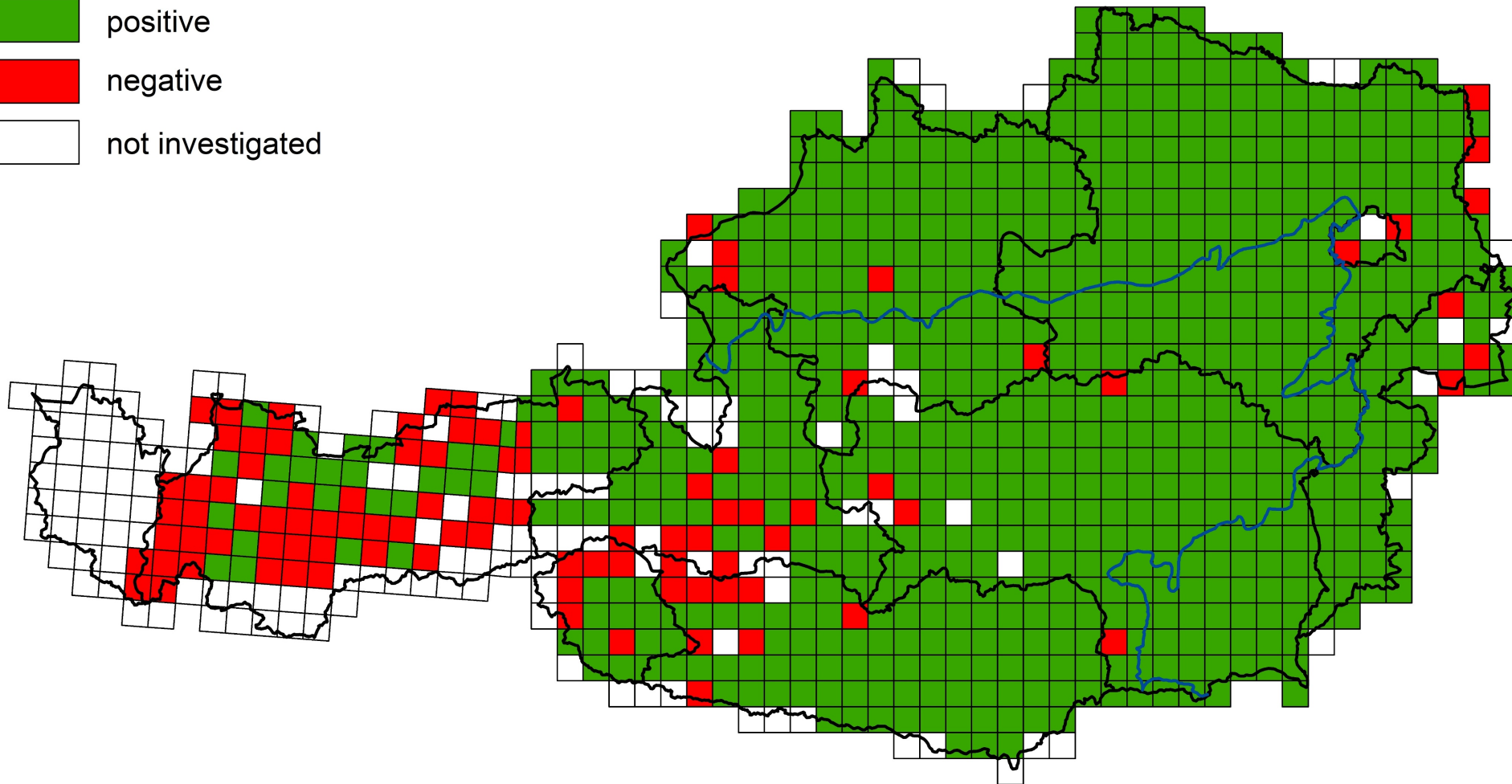
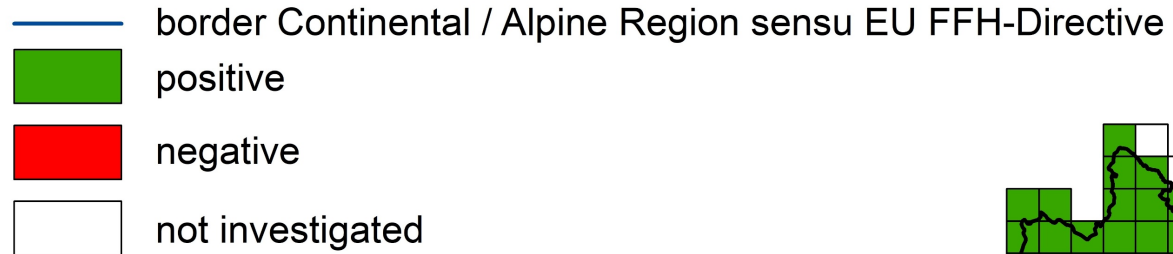


Natural recolonization of Austria: 1999

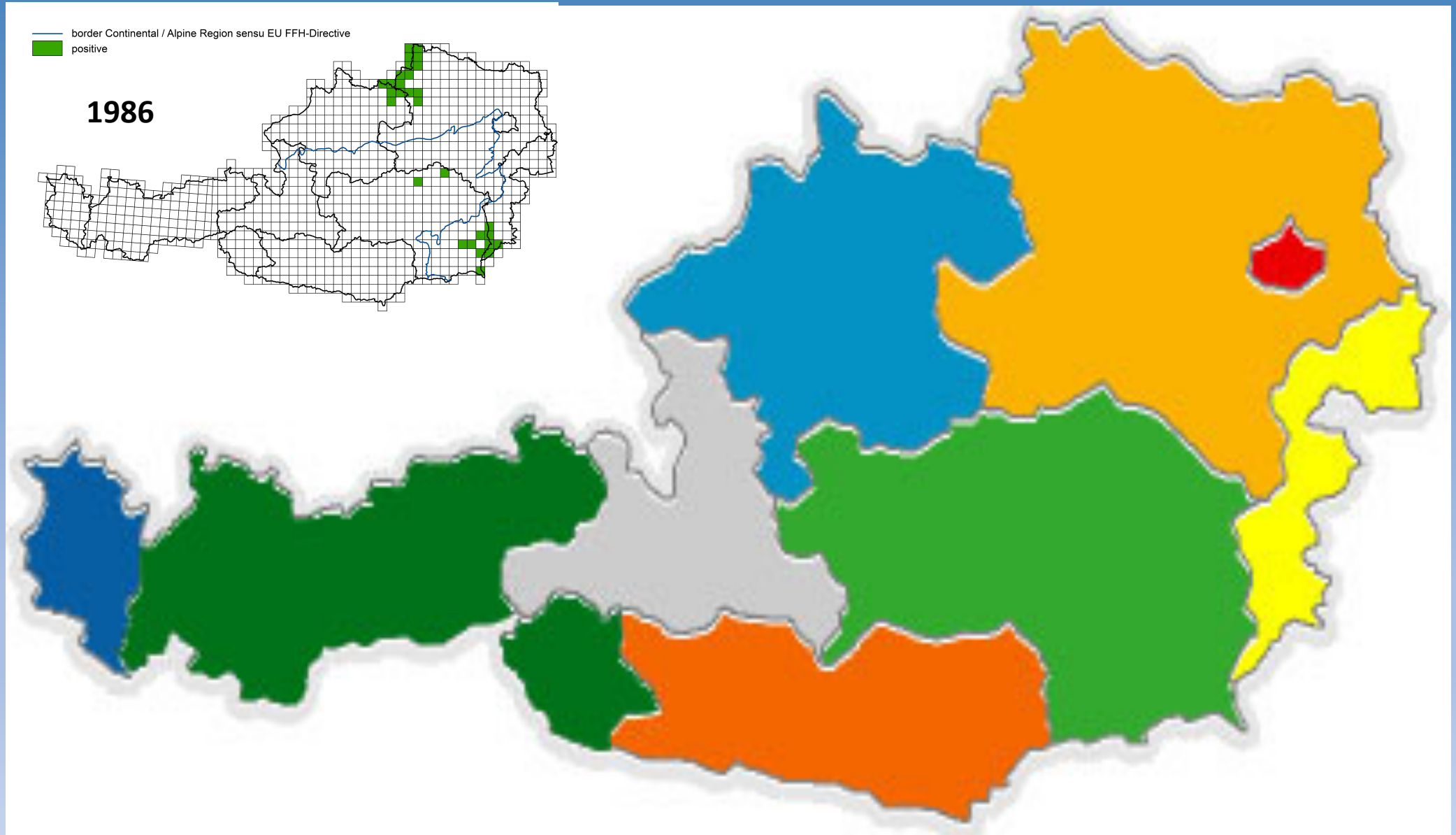
- border Continental / Alpine Region sensu EU FFH-Directive
- positive
- negative
- not investigated



Natural recolonization of Austria: 2020



Federal States of Austria (86.000 km²)



Otter entering the fish pond



Culling of otters (2017 - 2021)



2001 first attempt to get licences to kill o.

1999



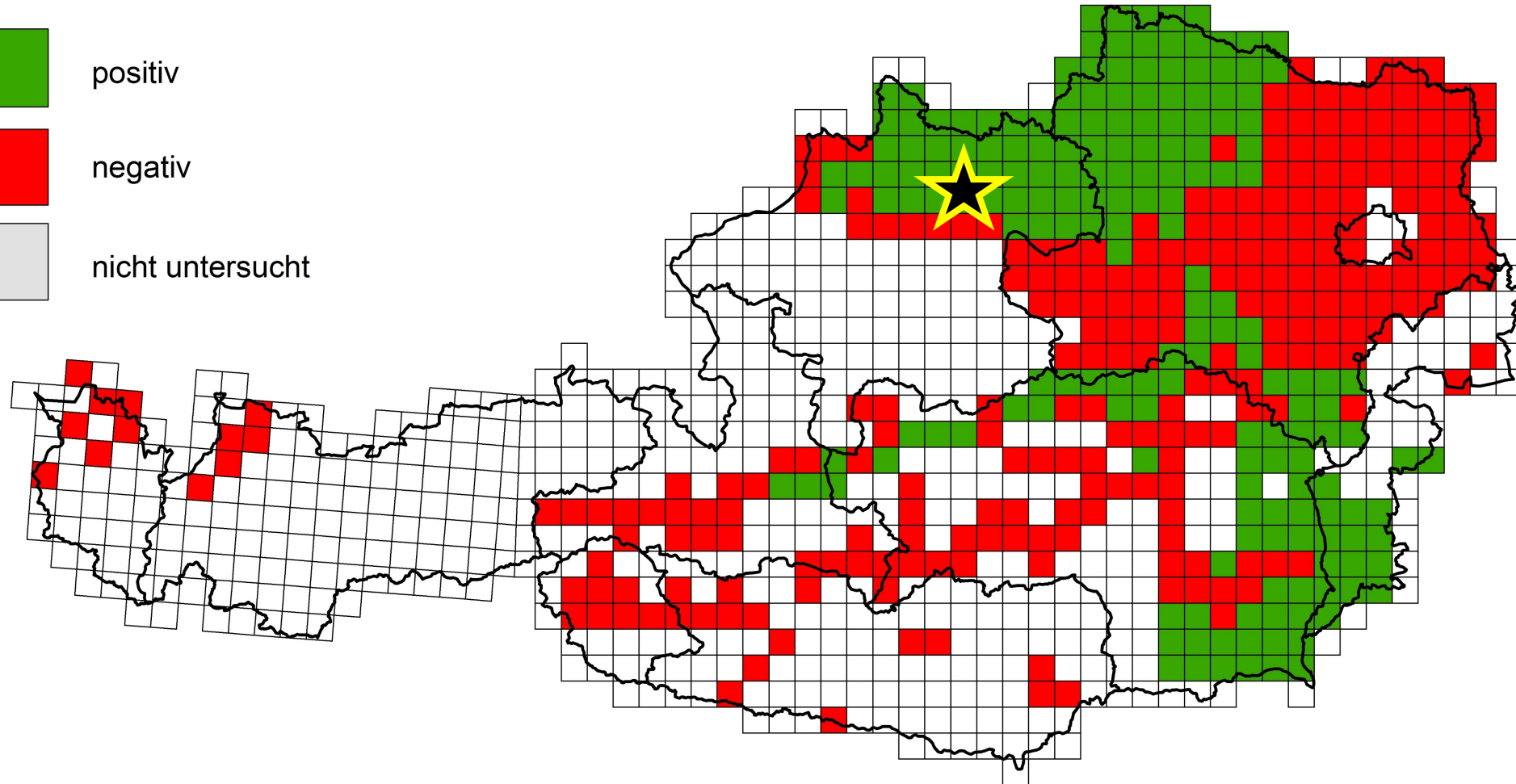
positiv



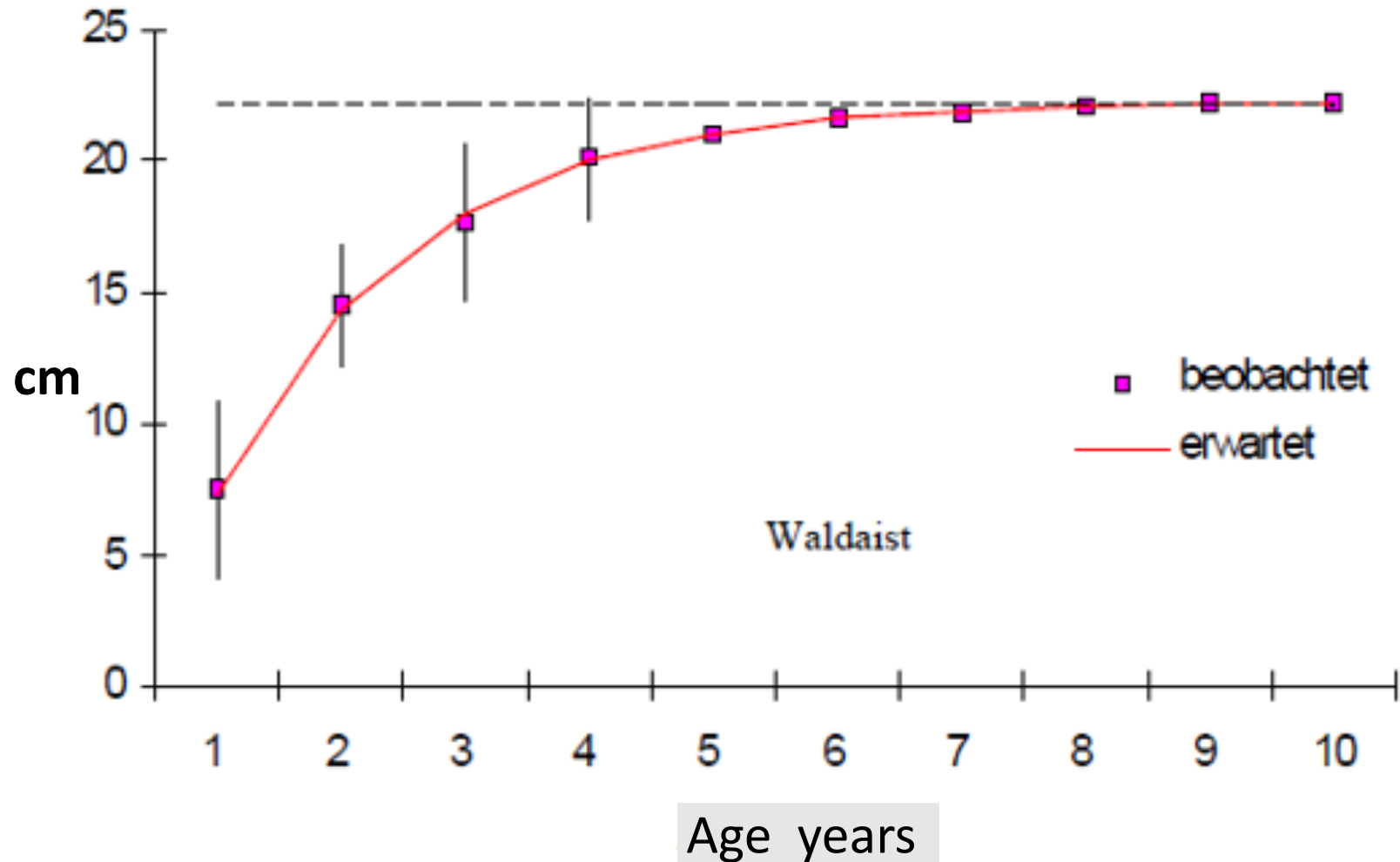
negativ



nicht untersucht



Brown trout (*salmo trutta*) growth



... and 15 years later: 2018 (Upper Austria)

- Trout biomass did not improve, but reproduce well, many young
- Otters are still there in „high“ numbers
- Otters heavily predate on non-native crayfish, which recently arrived there
- Otter trout predation equals the standing crop of trout
- In spring no trout larger 22 cm are left to catch for anglers: **inacceptable**
- **Otter removal experiment 2018 -2021 was inevitable**

Development of biomass in 3 trout streams in Carinthia from 1990 - 2019

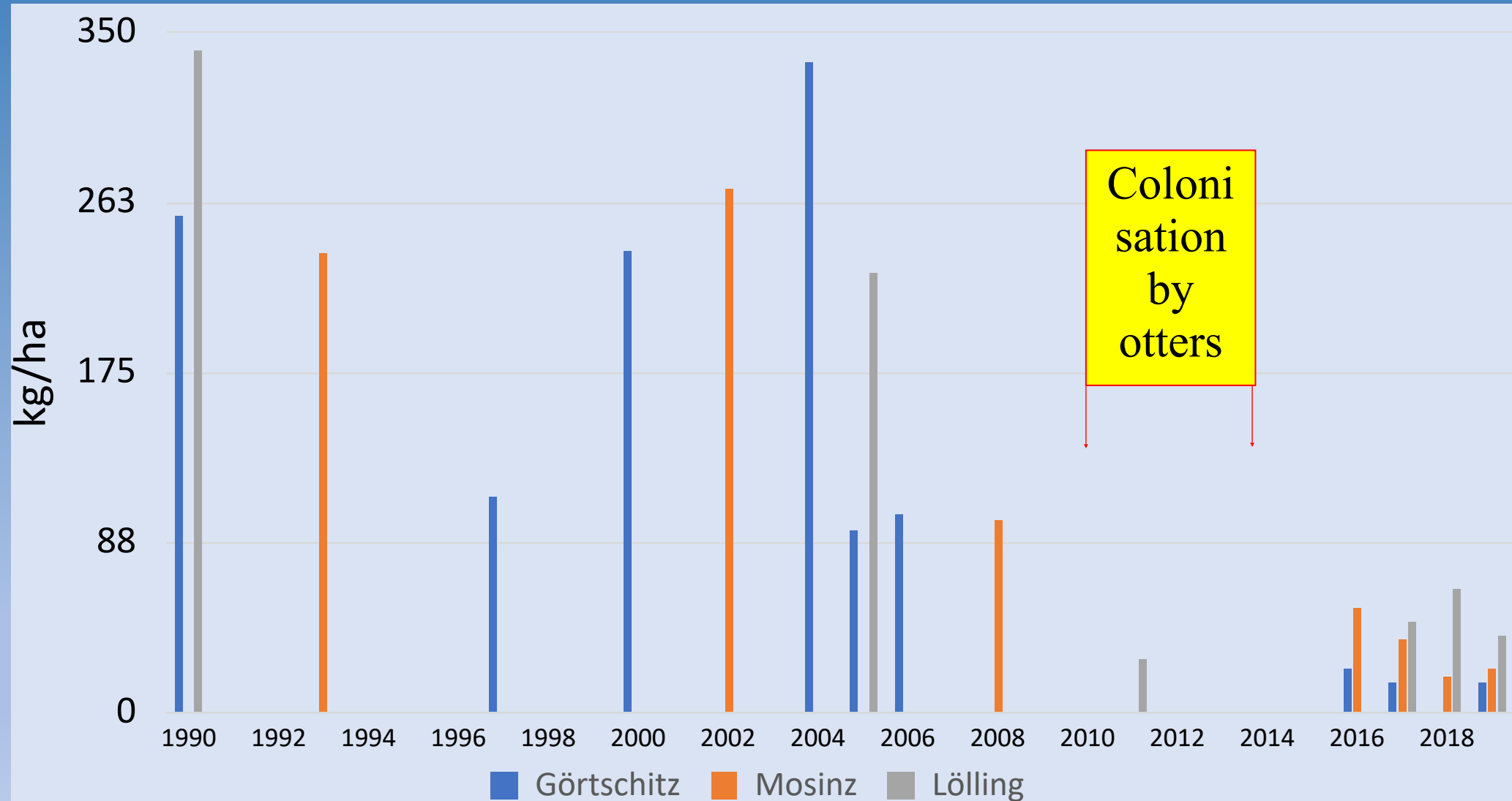
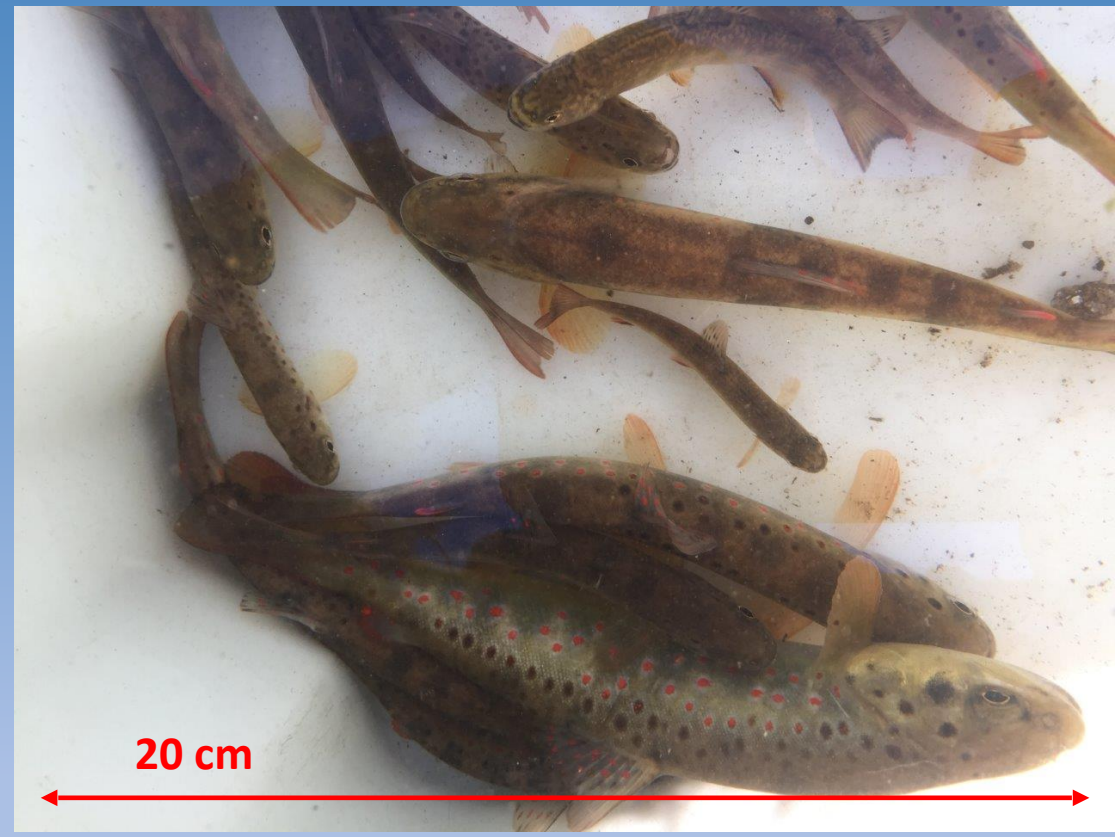






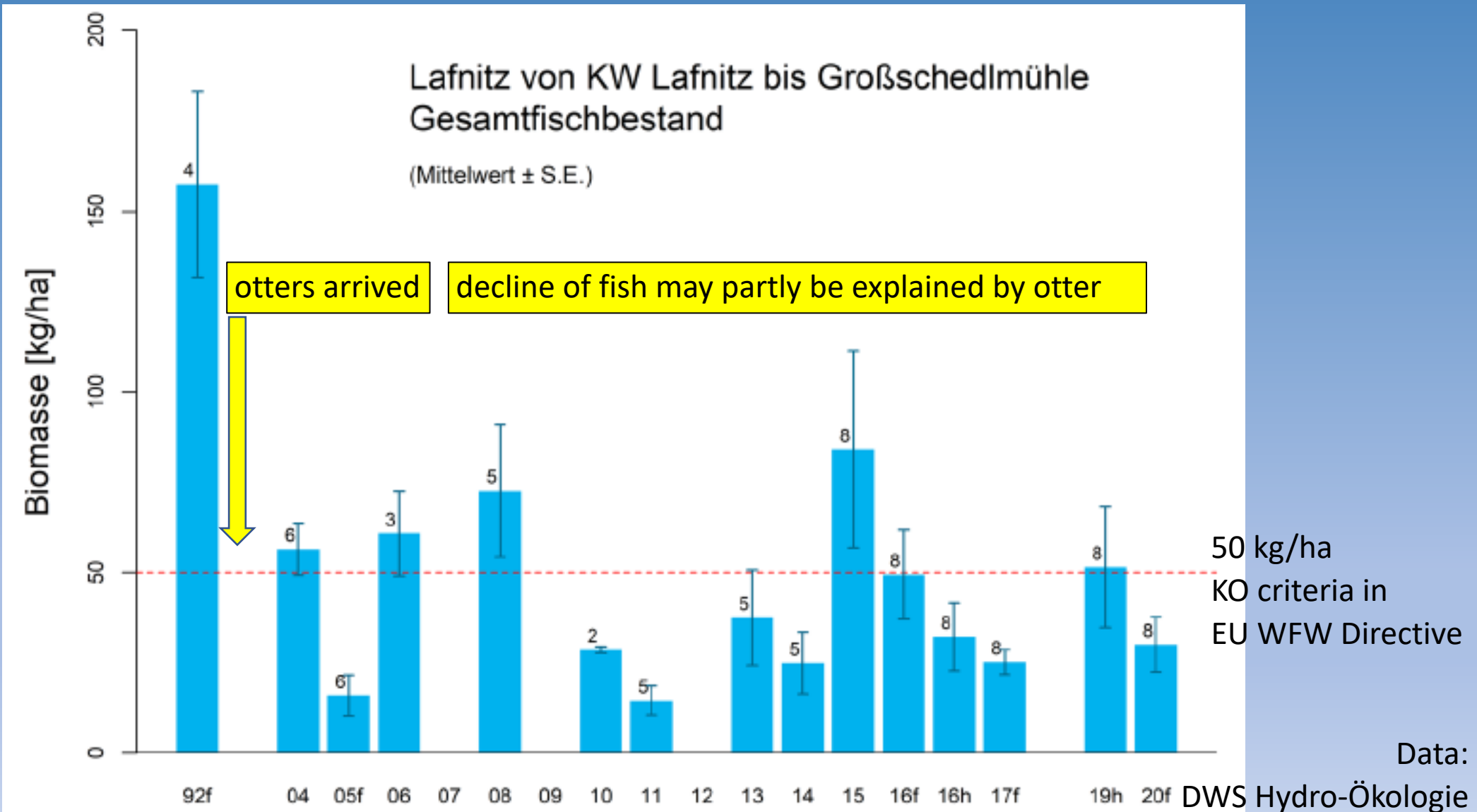
Foto: © T. Friedl



Grayling (*Thymallus thymallus*) River Lafnitz



Development of biomass in a grayling-trout river from 1992 - 2020





Drastic decline of ...



... fish in trout and grayling rivers, why ...

Reasons for fish decline in trout/grayling river

- Lack of nutrition (water purification effect)
- Decline of food for fish (decline of insects, macrozoobenthos)
- Problems with reproduction (spawning grounds, pollution?)
- Fish diseases (PKD spreading due to fish stocking & water temp. increase (climate change))
- Predation by otters, etc.

Fish decrease due to splashing reservoirs



1000s of new hydro power stations
& hydro peaking
detrimental for fish


Fish decrease due to too little residual water



1000s of new hydro power stations
& hydro peaking
detrimental for fish

Lessons learnt from Austria:

- ✓ Conflicts at fish farms (ponds) can be handled and solved
- ❖ Conflicts with anglers in rivers and streams are not solved & alarming, why ...

A brown beaver is walking on a thin layer of ice that is floating on water. The beaver is facing right, and its reflection is visible in the water below. The background is a blue sky.

... because of lack of food
Lutra lutra's future
is on very thin ice
at least on
trout & grayling
rivers

Thank you
for your attention