

European Regional Vice-Chair of the IUCN-SSC/WI  
Freshwater Fish Specialist Group

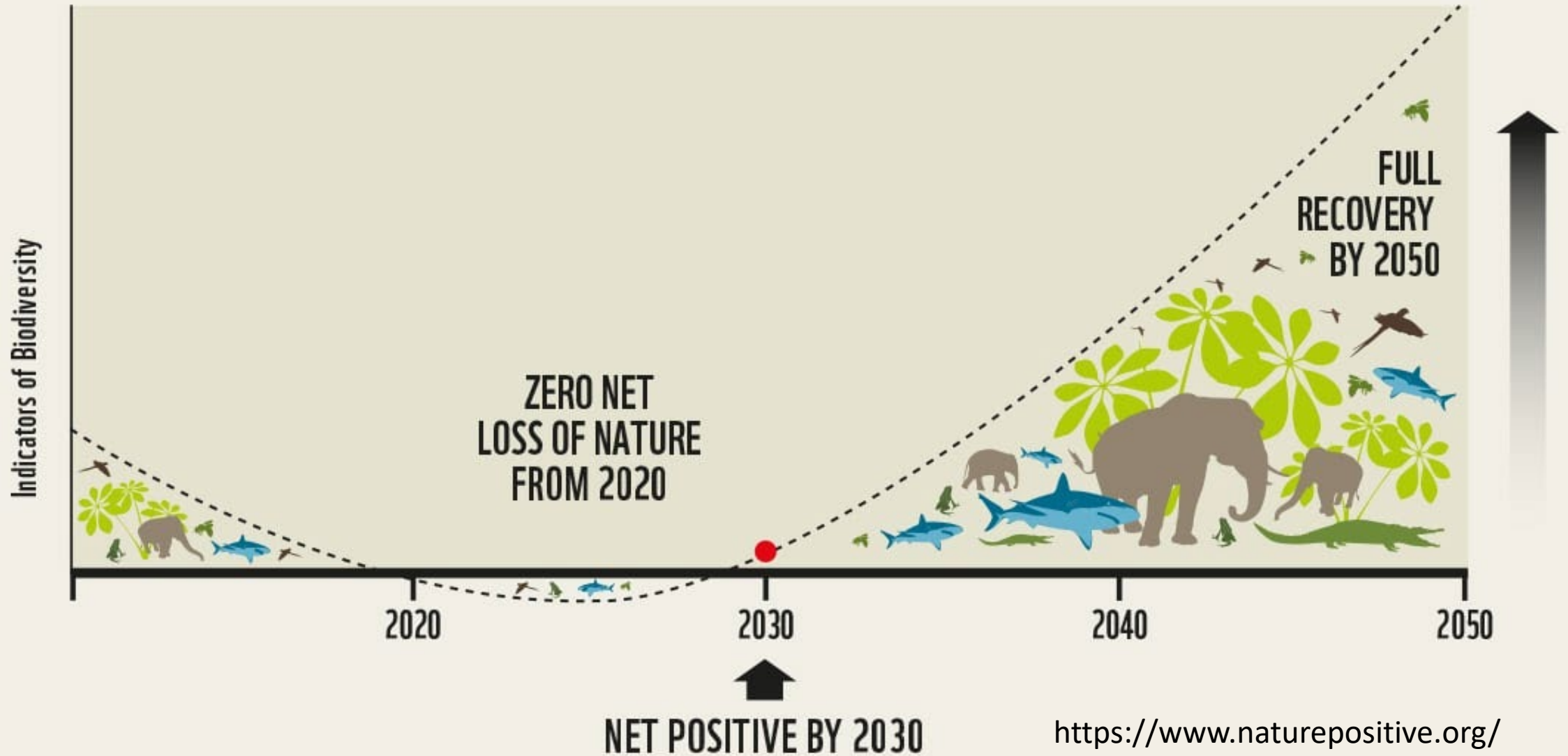


IUCN Red List (conservation status improvement target),  
Habitats Directive and WFD data, and the protected  
area target

Jörg Freyhof



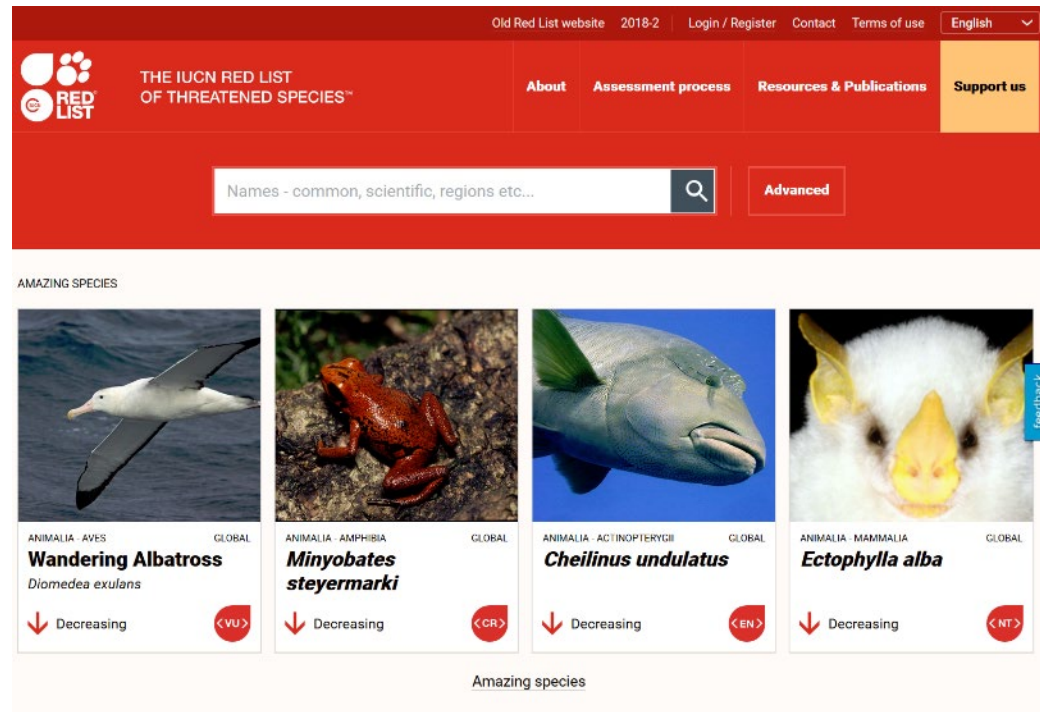
# Global Goal for Nature: Nature Positive by 2030



# What is the IUCN Red List?

*World's most comprehensive information source for extinction risk of species at the global level.*

- Extinction risk categories assigned to species based on data-driven and objective criteria
- Based on the best scientific information available
- Produced by the world's leading species experts and conservation scientists
- Online scientific journal – open access

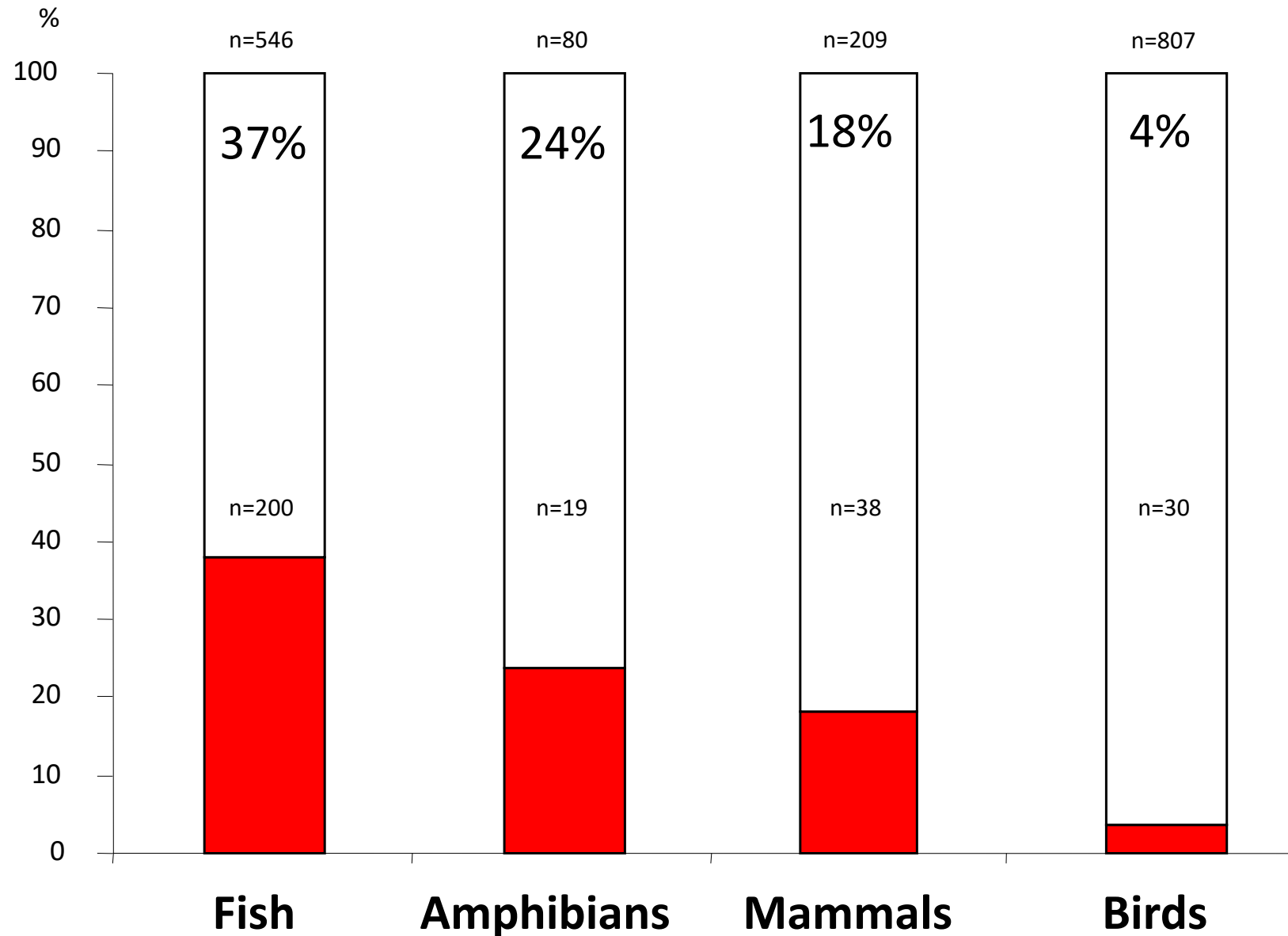


The screenshot shows the IUCN Red List website interface. At the top, there is a navigation bar with the IUCN Red List logo, the text "THE IUCN RED LIST OF THREATENED SPECIES™", and links for "About", "Assessment process", "Resources & Publications", and "Support us". A search bar is located below the navigation bar, with the placeholder text "Names - common, scientific, regions etc..." and a search icon. To the right of the search bar is an "Advanced" button. Below the search bar, there is a section titled "AMAZING SPECIES" which displays a grid of four species cards. Each card features a photograph of the species, its taxonomic classification (e.g., "ANIMALIA - AVES", "GLOBAL"), its name (e.g., "Wandering Albatross", "Minyobates steyermarki", "Cheilinus undulatus", "Ectophylla alba"), and its conservation status (e.g., "Decreasing", "VU", "CR", "EN", "NT").

<https://www.iucnredlist.org/>

# Freshwater Fishes, the most threatened of Europe's vertebrates

■ Threatened    □ Not Threatened

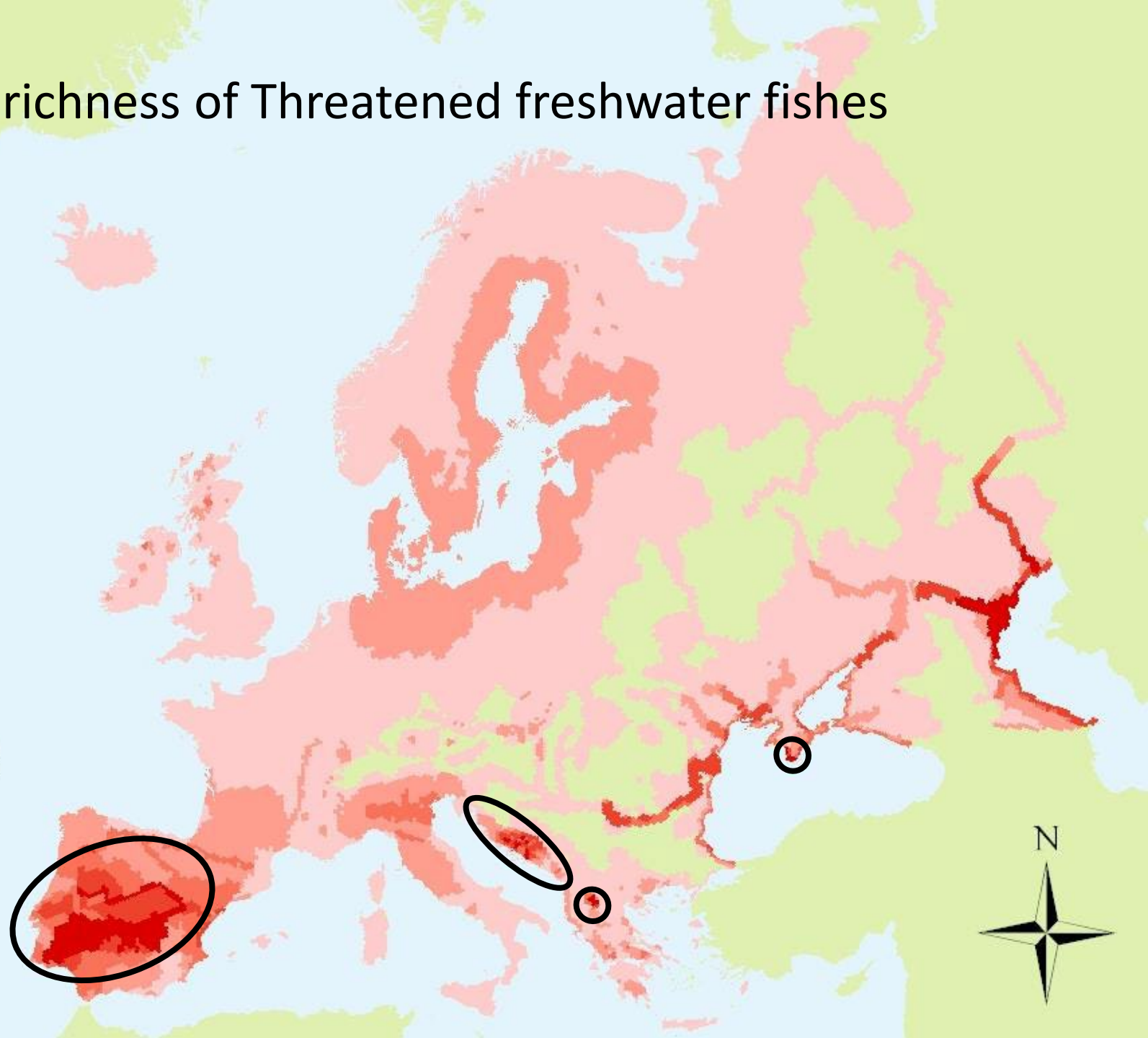
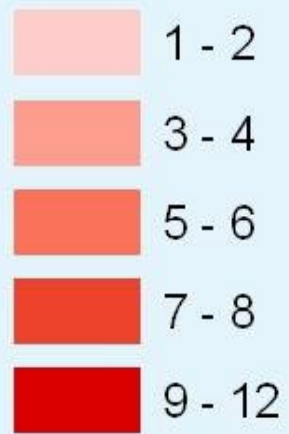


## European Red List of Freshwater Fishes

Jörg Freyhof and Emma Brooks



# Species richness of Threatened freshwater fishes



# New IUCN Red List in 2023

New maps based on data + expert knowledge

A set of about 4 million data will be made available

- 695 total species
- 647 native species
- 436 species endemic to Europe
- 332 species in the EU 27

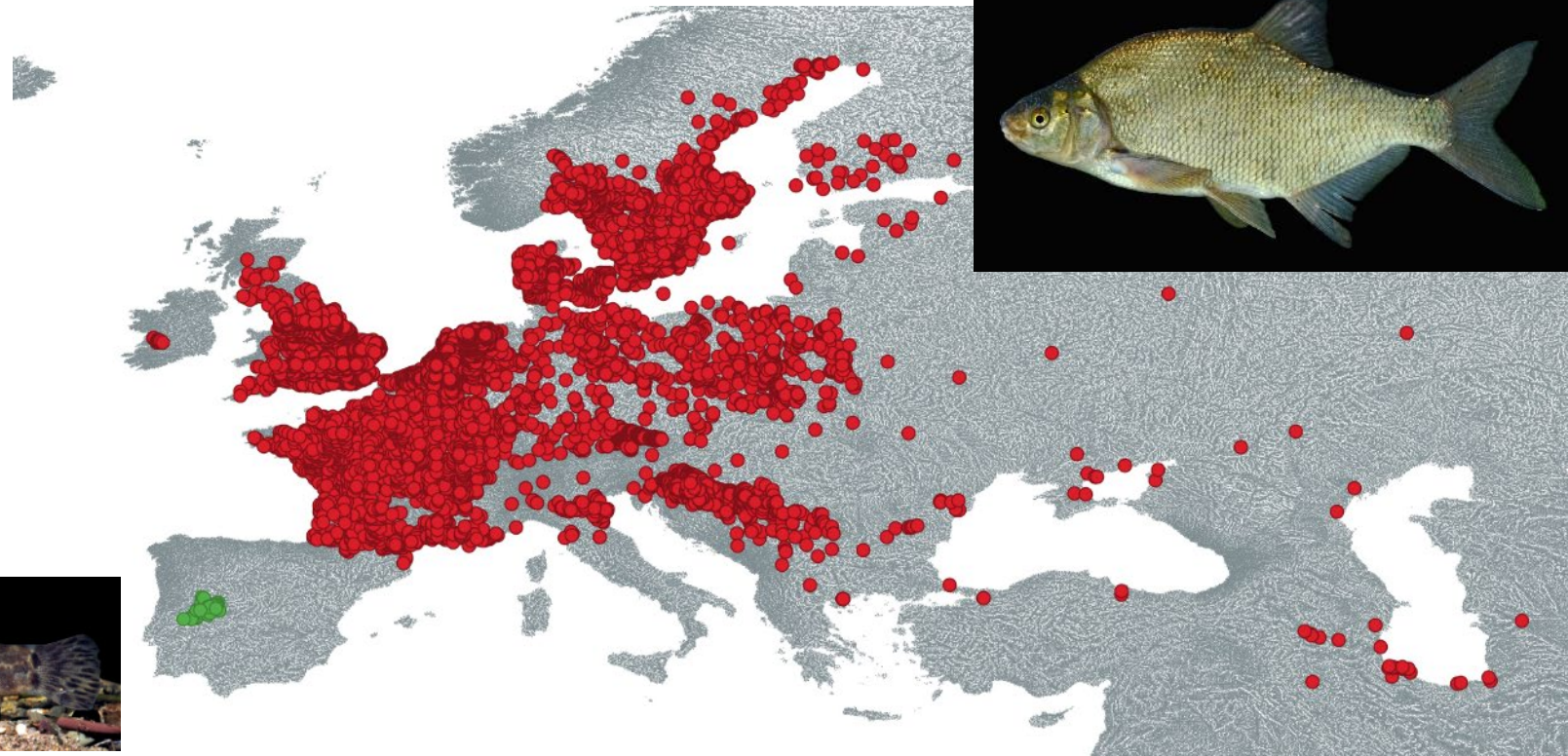
**We have learned a lot but  
results do not look good**



*Cobitis vettonica*



*Abramis brama*



Typical threatened species are range-restricted (lack of monitoring data)

Alien species are now the biggest threat for Europe's freshwater fish diversity

To be replaced by climate change soon



*Telestes croaticus*



*Delminichthys jadovensis*



Jadova polje, Croatia



*Cobitis jadovensis*  
by Perica Mustafic

## Alien species invasion



- Alien species are now the biggest threat for Europe's freshwater fish diversity
- Considerable areas in southern Europe are almost devoid of native fish species
- To be replaced by climate change soon





## Finally Extinct? Who cares?

Endemic to the Ljuta River drainage in the Konavle (aka Konavosko) polje, southern Croatia. It was thought to have gone extinct more than a century ago but was rediscovered in the Dragić stream tributary system in 2013. **Not found again despite of intensive research in 2022.**

It is threatened by habitat modification, with around 70% of the stream habitat modified into a concrete channel in 2014, while the natural flood cycle of the karst field has been completely altered by construction of a tunnel to drain water away.

The predatory non-native rainbow trout (*Oncorhynchus mykiss*) and black bullhead catfish (*Ameiurus melas*) also occur in the Ljuta River.

Although hydropower development in the immediate area is unlikely, projects in adjacent drainage basins could interfere with groundwater circulation and the discharge of springs.

**If this would be a bird .....**





# Fishes ≠ Fisheries

We strongly focus on ecosystem services provided by fish

Projects for globally threatened species are rare



Illustration by Julia Janicki

<https://seaturtles.org/food-for-thought-fish-are-wildlife/>



## THE WORLD'S FORGOTTEN FISHES



# Habitats Directive

Most species on the Annex Lists are not threatened by extinction

Many threatened species are not on an Annex

If a species is on an Annex countries need to report and designate name PAs

# Water Framework Directive


So great..... Still not much implementation

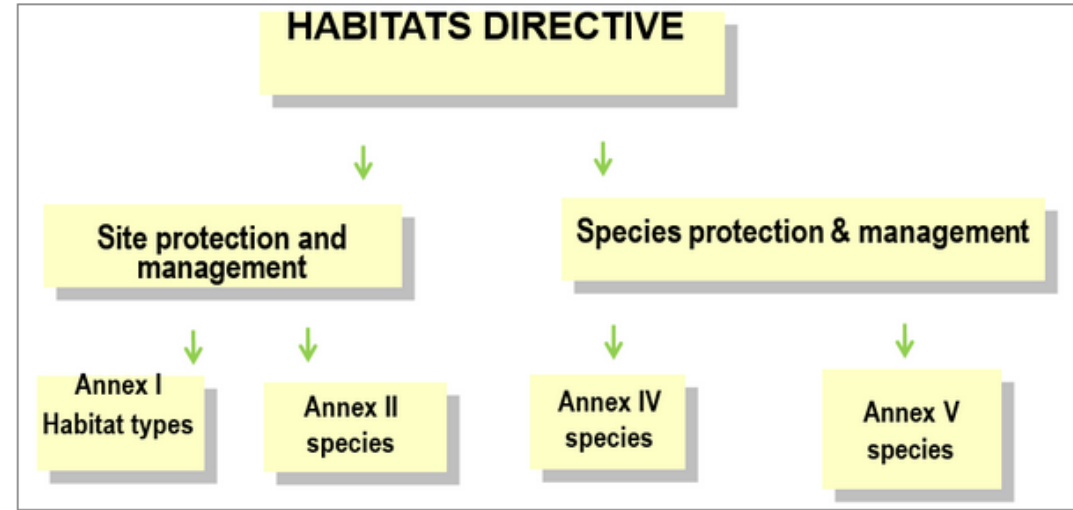
To destroy rivers seem always to have priority

Krško at Brežice/Slovenia

The Habitats Directive  is based on two pillars:

- the Natura 2000 network of protected sites;
- the strict system of species protection.

The directive protects approximately 1,000 animal and plant species and over 200 types of habitat, such as special types of forests, meadows, wetlands, etc., which are of great importance for Europe. The Member States identify and propose an exhaustive list of the sites, which, at national level, have an ecological interest which is relevant from the point of view of the Habitats Directive's objectives.  The Commission establishes a European list by selecting sites from Member State proposals to ensure a favourable conservation of habitats and species on a European scale.



Source: Joseph van der Stegen, DG Environment, European Commission

European Red List of Freshwater Fishes

King Freyhof and Emma Brooks



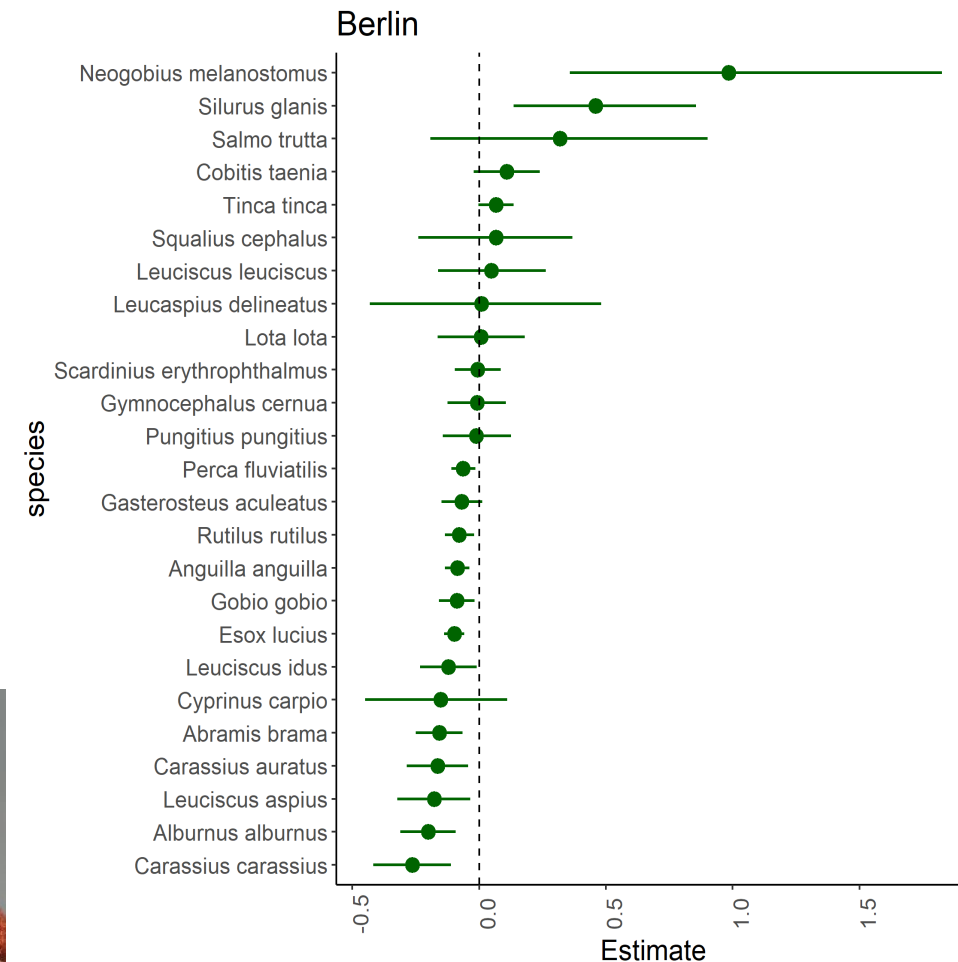
# Berlin Fishdata

WFWD: 2007- 2020,

Natura: 2009 & 2014

Monitoring sites: 159

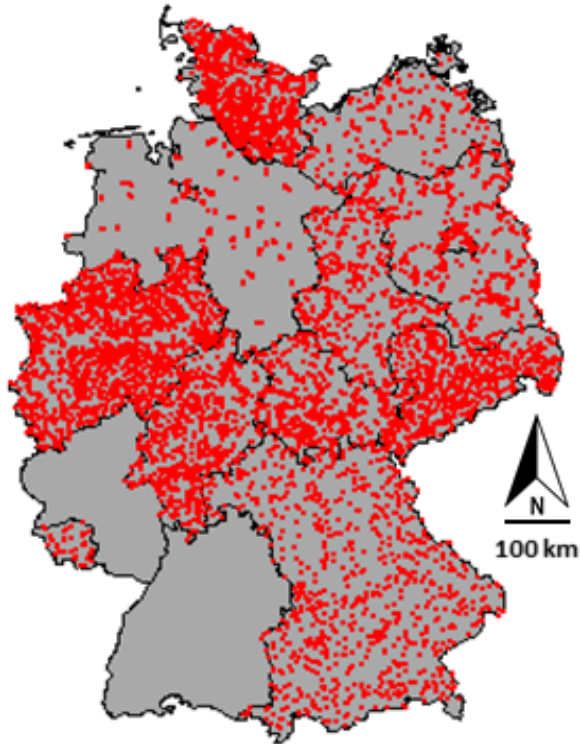
- 2395 Datasets
- Only electrofishing considered
- Data for 37 species



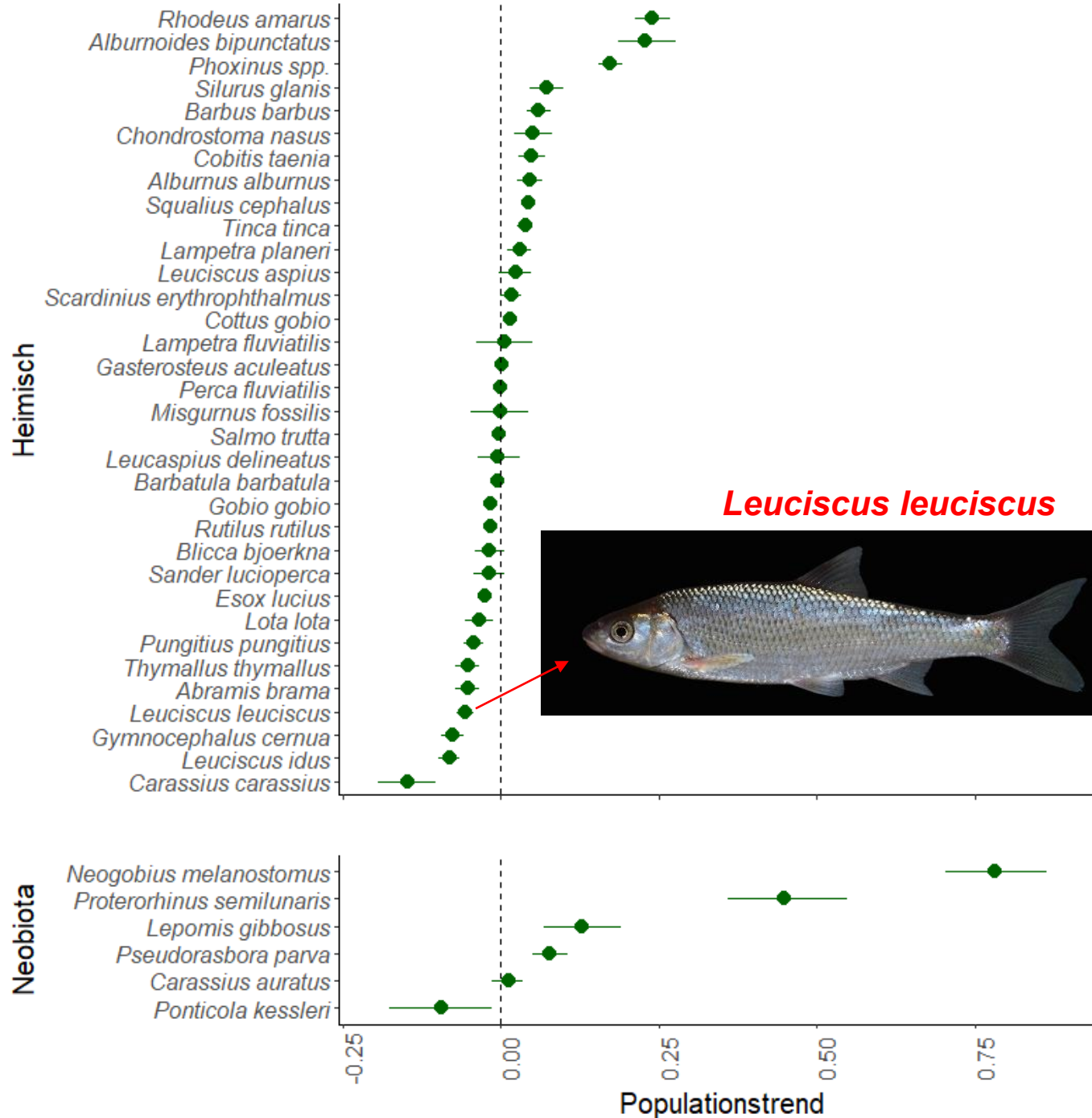
**Neogobius melanostomus**



German dataset largely open access soon (6.454 sites)



**Where are European datasets?**  
 We need a special effort to compile them/develop a monitoring system



# Biodiversity: Commission guidance on new protected areas to help put Europe's nature on path to recovery by 2030

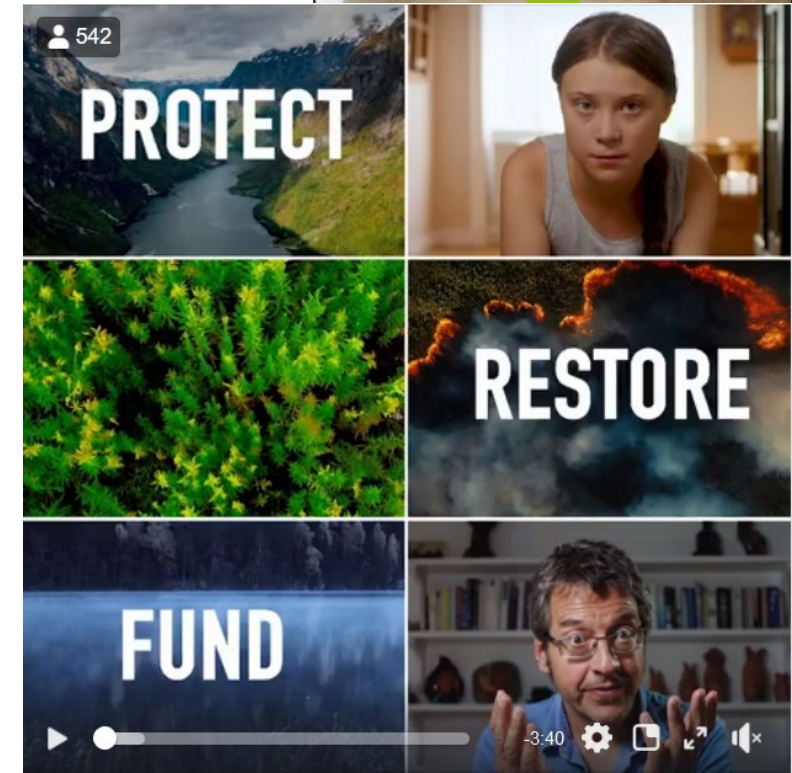
The [EU Biodiversity Strategy for 2030](#) sets the target of protecting 30% of EU land and sea by 2030. One third of this, areas of very high biodiversity and climate value, should be under strict protection. To help Member States achieve these targets and develop a coherent, transnational network, the Commission developed [criteria and guidance](#) for the identification and designation of additional protected areas.

## Funding is the challenge

- Freshwater biodiversity was forgotten for decades by conservation
- Very few experts, usually from fisheries, with little experience in conservation
- Threatened species are dull and often not found in classical “nature areas”
- “Fish are wildlife” – issue
- Enormous other interests “water is the new gold”
- Complicated funding schemes



LIFE and  
freshwater fish



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## Potential protected areas (yes!)

Threatened fish distribution data is available and we can propose areas of conservation importance





# Illegal water extraction in Spain



Source: Greenpeace

©DW



WWF Sturgeon  
@WWF\_Sturgeon

Illegal fishing and trade in [#sturgeon](#) is Wildlife Crime happening within and outside EU borders. The revised EU Action Plan against Wildlife Trafficking ([#EUWAP](#)) published yesterday by the EC is a critical step forward in the fight against wildlife crime!  
[wwf.eu/?8075941/Commi...](http://wwf.eu/?8075941/Commi...)

[Tweet übersetzen](#)



## Pläne Polens

# Umweltorganisationen legen Beschwerde gegen Oder-Ausbau ein

Wegen des geplanten Ausbaus der Oder haben Umweltorganisationen bei der EU-Kommission Beschwerde eingereicht.

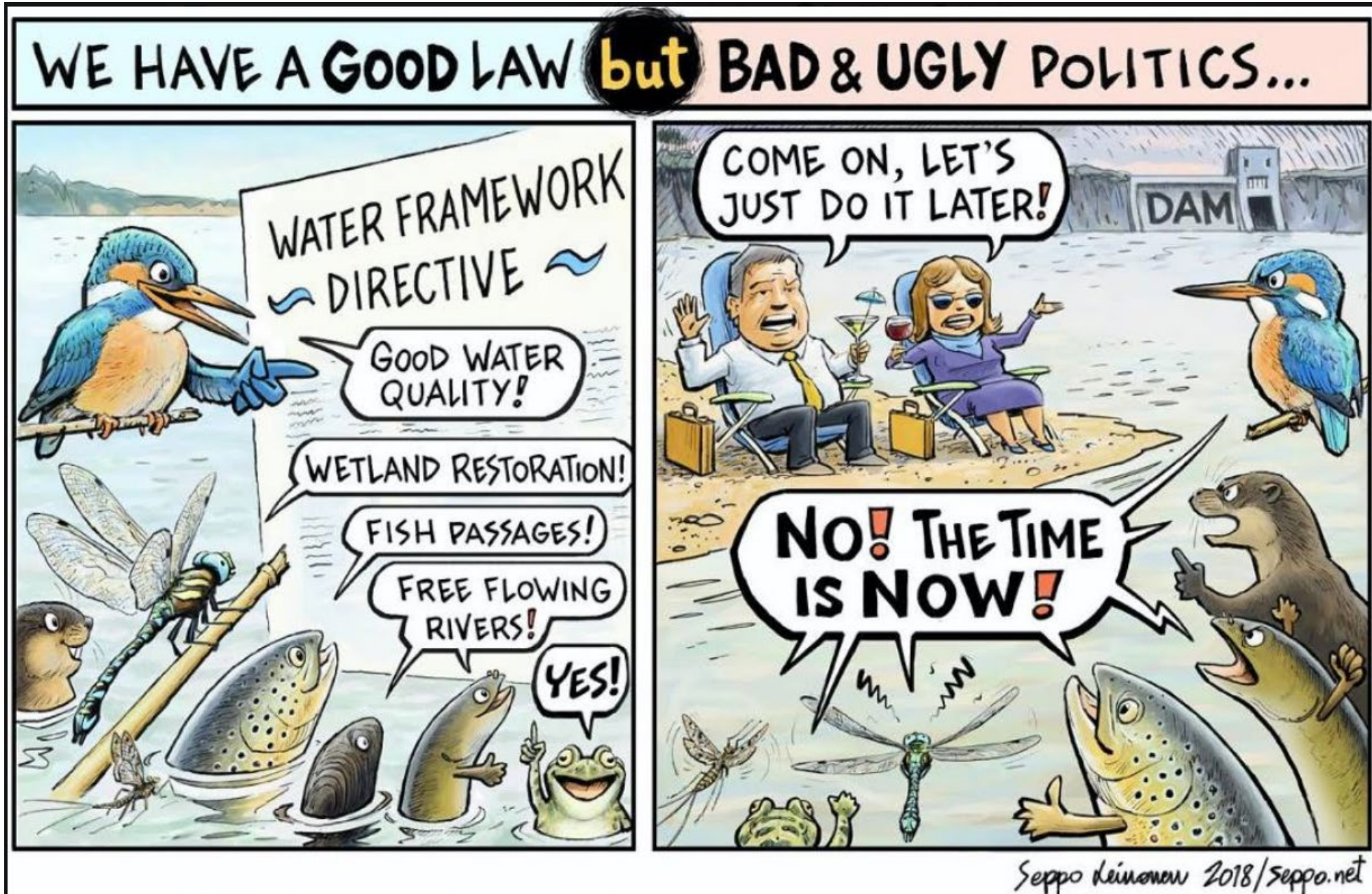
17.11.2022



Der Ausbau der Oder auf der polnischen Uferseite verstößt nach Ansicht von Umweltorganisationen gegen EU-Richtlinien. (Patrick Pleul / dpa)



All legislation is available – ....difficult to be implemented



**Freshwater fish have a very high resilience**

