

37 years of effort to restore fish migration in the Rhine river basin – where do we stand?

Session “20 years of Water Framework Directive:
What did this bring to free-flowing rivers”
Free Flow Conference
15 April 2024 – Groningen (NL)
Marc Daniel Heintz (ICPR)



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zum Schutz
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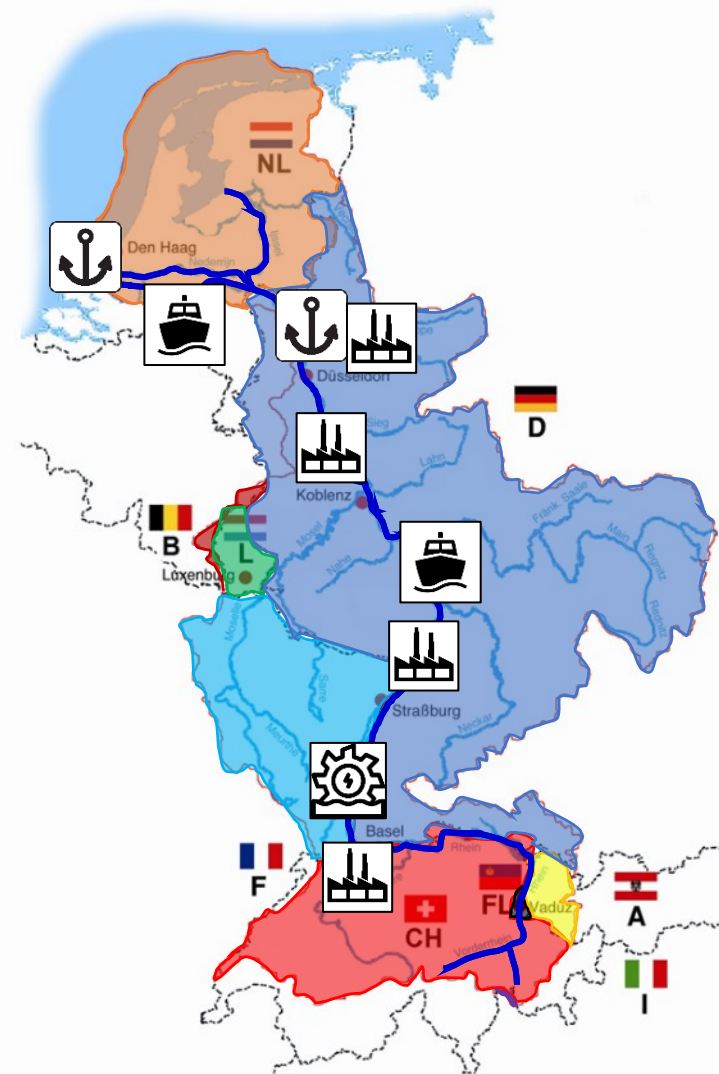
Internationale
Commissie ter
Bescherming
van de Rijn

International
Commission
for the
Protection of
the Rhine

The Rhine and its river basin



- River Rhine ~ 1,200 km long
- Basin: >200,000 km²
- Population: 60 million



- Netherlands
- Belgium (Wallonia)
- Luxembourg
- France
- Germany
- Austria
- Liechtenstein
- Switzerland
- European Union

Topics dealt with in the ICPR



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Water quality



Ecology

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Climate change adaptation

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Flood risk management



Low water

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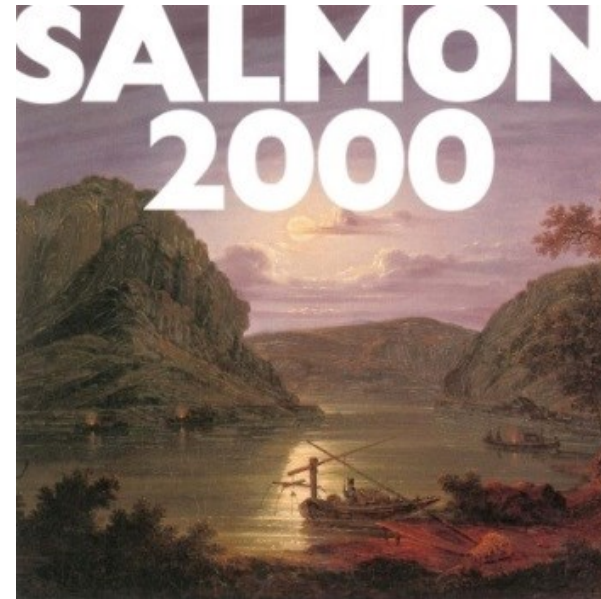
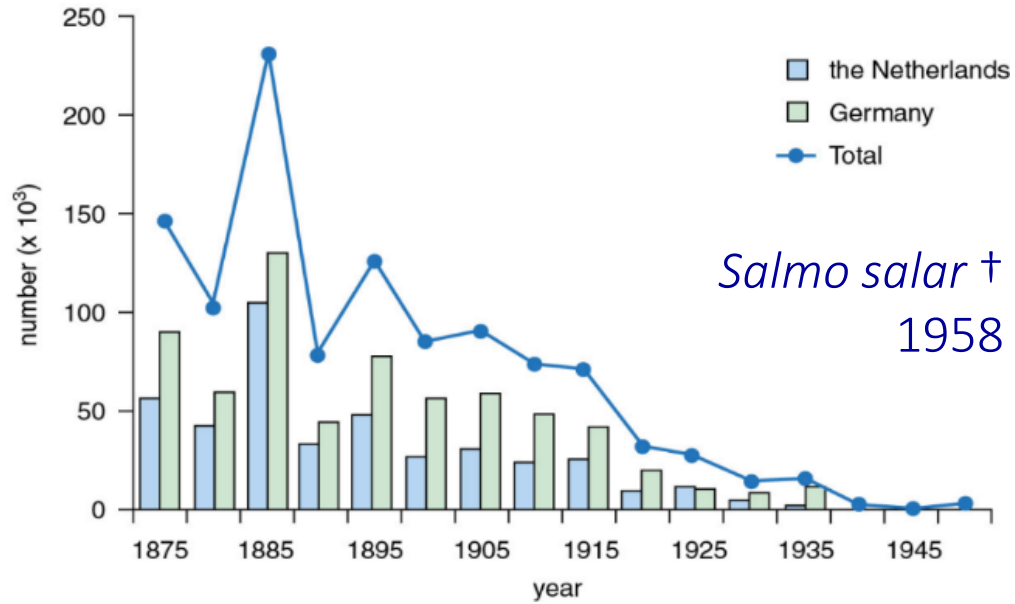
The **CCNR** commission is responsible for river navigation.

ICPR governance model

- Founded 11 July 1950, international treaty
- Definition of objectives, consensus principle, no sanctions
- National states responsible for implementation & financing of measures
- Expert groups, 20 observers (NGOs)
- 3 working languages (DE, FR, NL)
- Secretariat in Koblenz (DE)
- Programme „Rhine 2040“, adopted at Ministers' Conference (2020)



The Atlantic Salmon – vision for a healthy Rhine



Master Plan Migratory Fish

- Since 2009, updated: 2018
- Goal: self-sustaining, stable populations of migratory fish in the Rhine catchment as far as Rhine falls (CH)

Long distance migratory fish

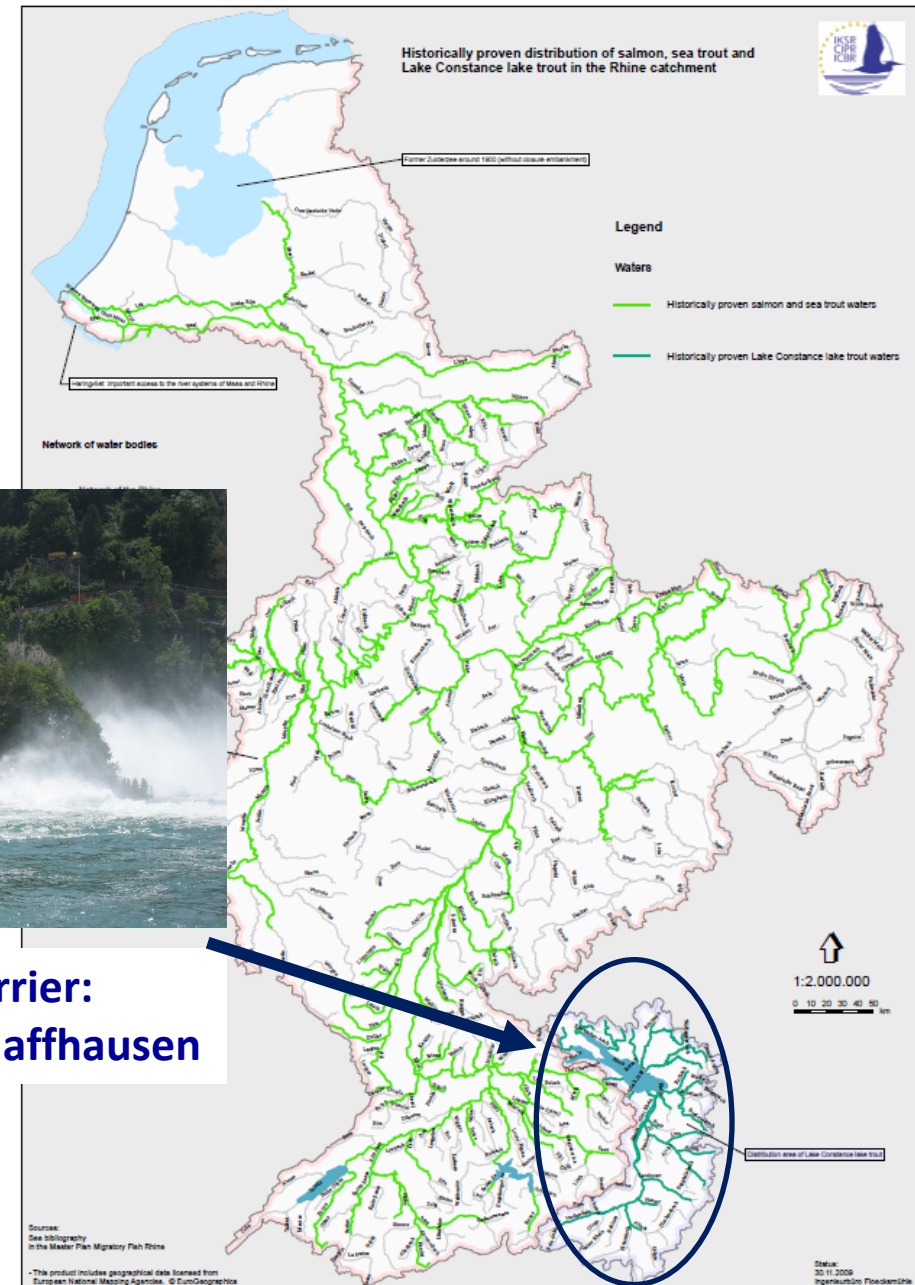
- Salmon, sea trout, allis Shad, eel
- Lake Constance trout

Measures

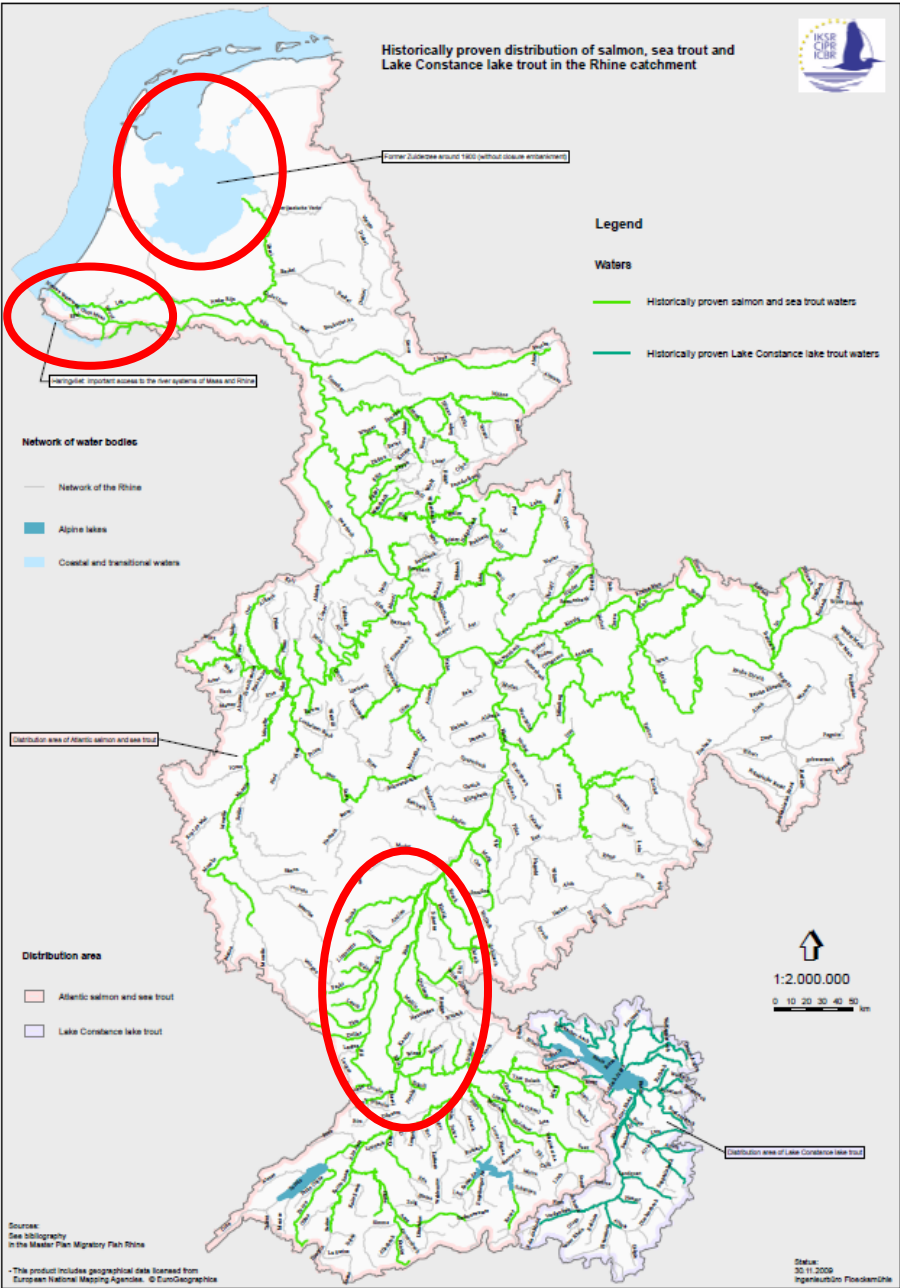
- Continuity measures (upstream + downstream)
- Restoration of habitats
- Stocking (salmon, allis shad)
- Reduction of bycatches and illegal catches



**Natural barrier:
waterfalls at Schaffhausen**



River continuity: Free-flowing section vs. bottlenecks



Nature restoration (2000-2020)

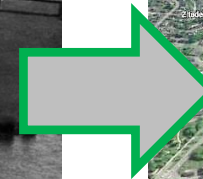


140 km²
of floodplains have
been reactivated

Structural
diversity along
166 km
of riverbanks has
been increased

124
lateral water
bodies
reconnected
to the river
Rhine

592
obstacles
to
migration
have been
made
passable



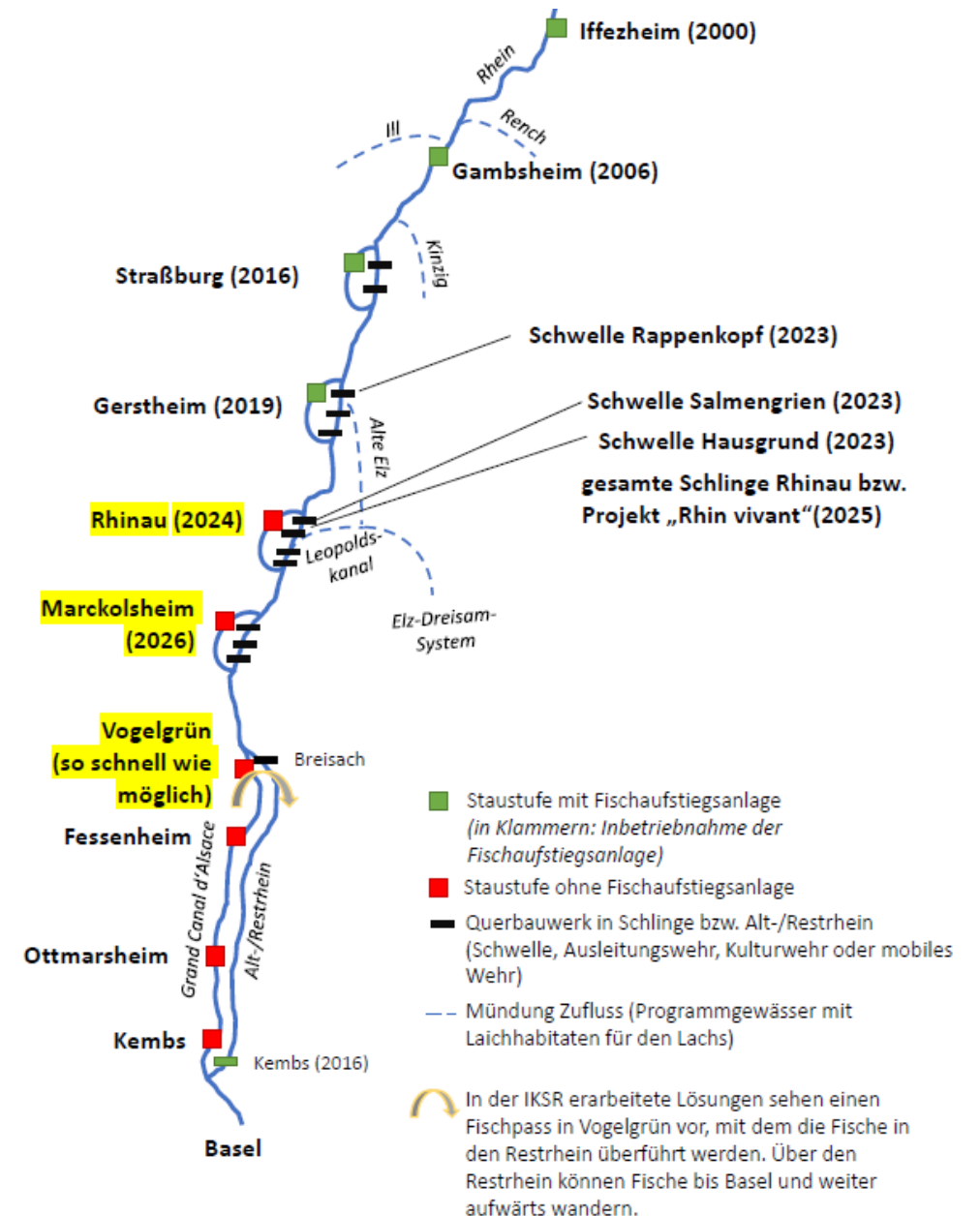
Situation 2020: milestones vs. bottlenecks

- 71 fish species are native again
- Rhine delta accessible: Haringvliet (2018)
- Fish ladders on the Upper Rhine:
 - Iffezheim (2000)
 - Gamsheim (2006)
 - Straßburg (2016)
 - Gerstheim (2019)
- 33% of former salmon spawning grounds reconnected

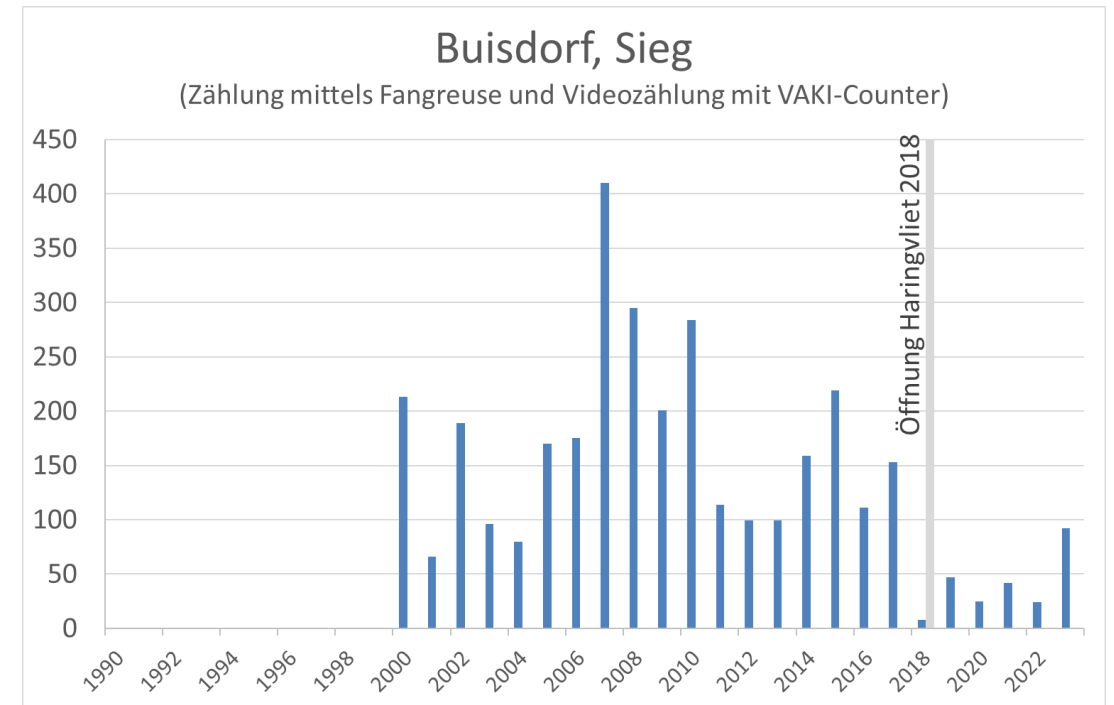


„Rhine 2040“ measures

- Fish pass Rhinau (2024)
- Fish pass Marckolsheim (2026)
- Fish pass Vogelgrün (asap)
- Make 300 additional migration obstacles passable (2030)
- Re-connect 60 % of the potential salmon habitats
- Recommendations for downstream fish migration & protection (2024)



Recent developments: Success control study (2023/2024)



Fewer returning salmon than expected, suspected reasons:
Predation (cormorant, catfish), navigation (esp. during low water),
deficits in habitat quality, climate change
Study to identify stressors and recommend measures



Thanks for your attention !



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