



Council

CNL(16)56

***Atlantic Salmon in the Rhine
- from being extinct to the master plan migratory fish
(Presentation by Laura Gangi)***

Atlantic salmon in the Rhine - from being extinct to the master plan migratory fish

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Expert Group FISH



Annual meeting of NASCO
7-10 June 2016, Bad Neuenahr-Ahrweiler



Internationale
Kommission zum
Schutz des Rheins

Commission
Internationale
pour la Protection
du Rhin

Internationale
Commissie ter
Bescherming
van de Rijn

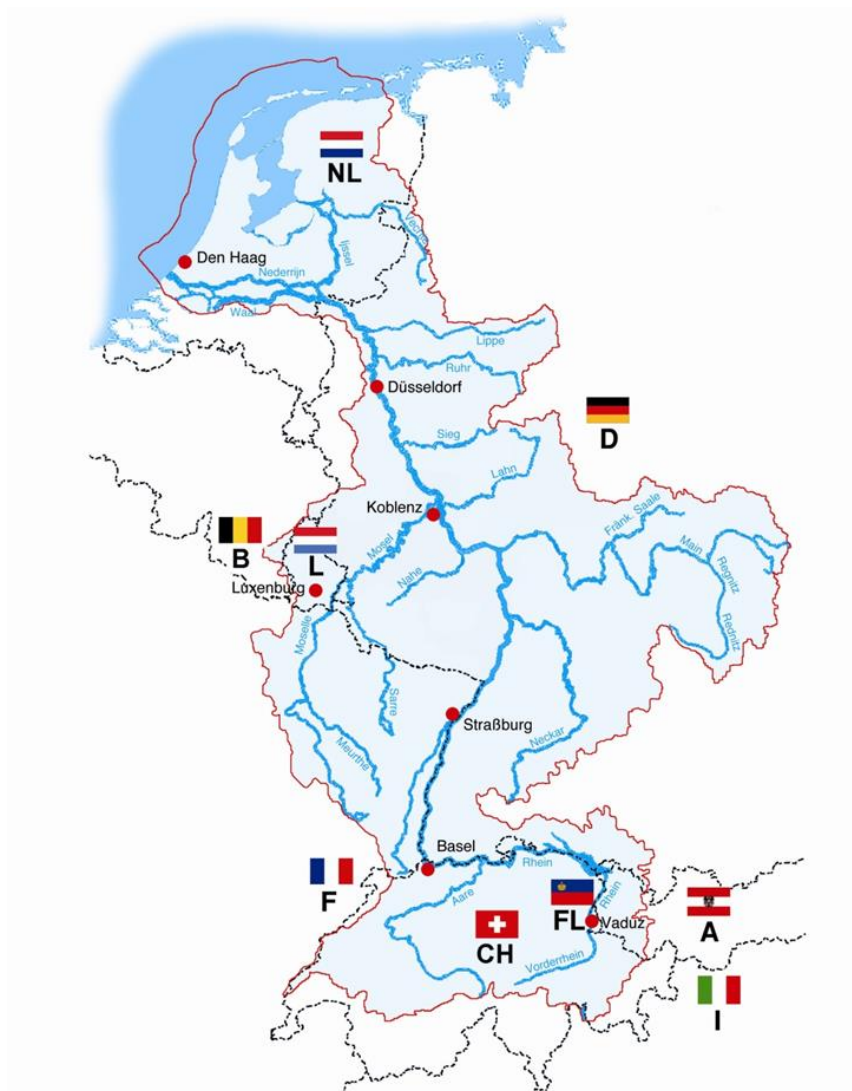
**International
Commission
for the
Protection of
the Rhine**

The Rhine river basin





The Rhine river basin

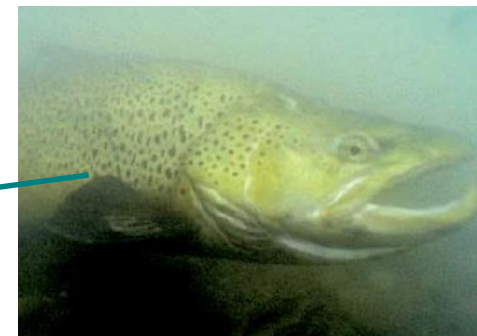


- **Main stream: 1230 km**
- **navigable on 825 km**
- **9 countries**
- **Inhabitants: 60 million**
- **Drinking water supply for 30 million people**

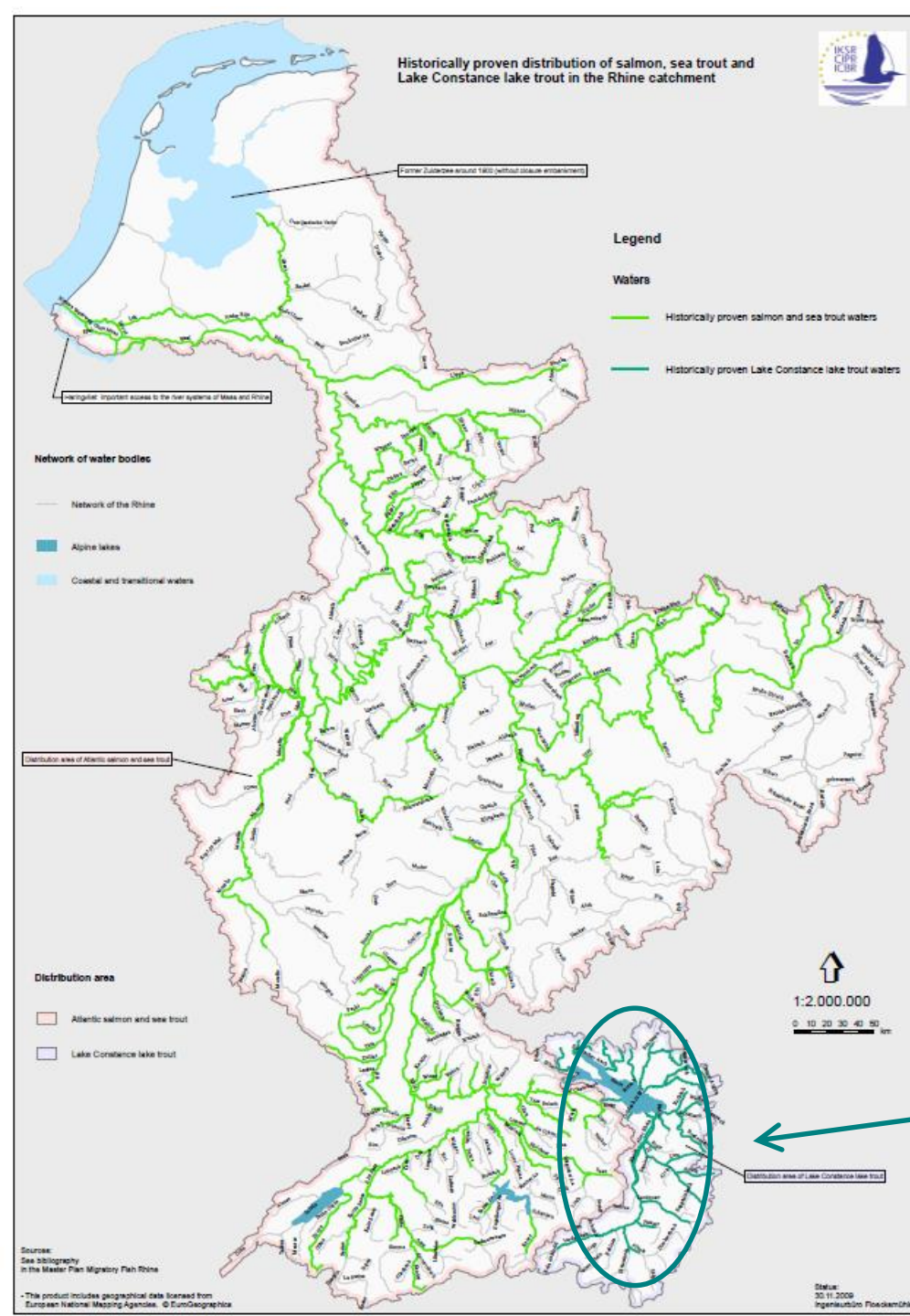
Historical salmon waters in the Rhine river basin



**Natural barrier:
waterfalls at Schaffhausen**



Lake Constance trout



Decline of the salmon population

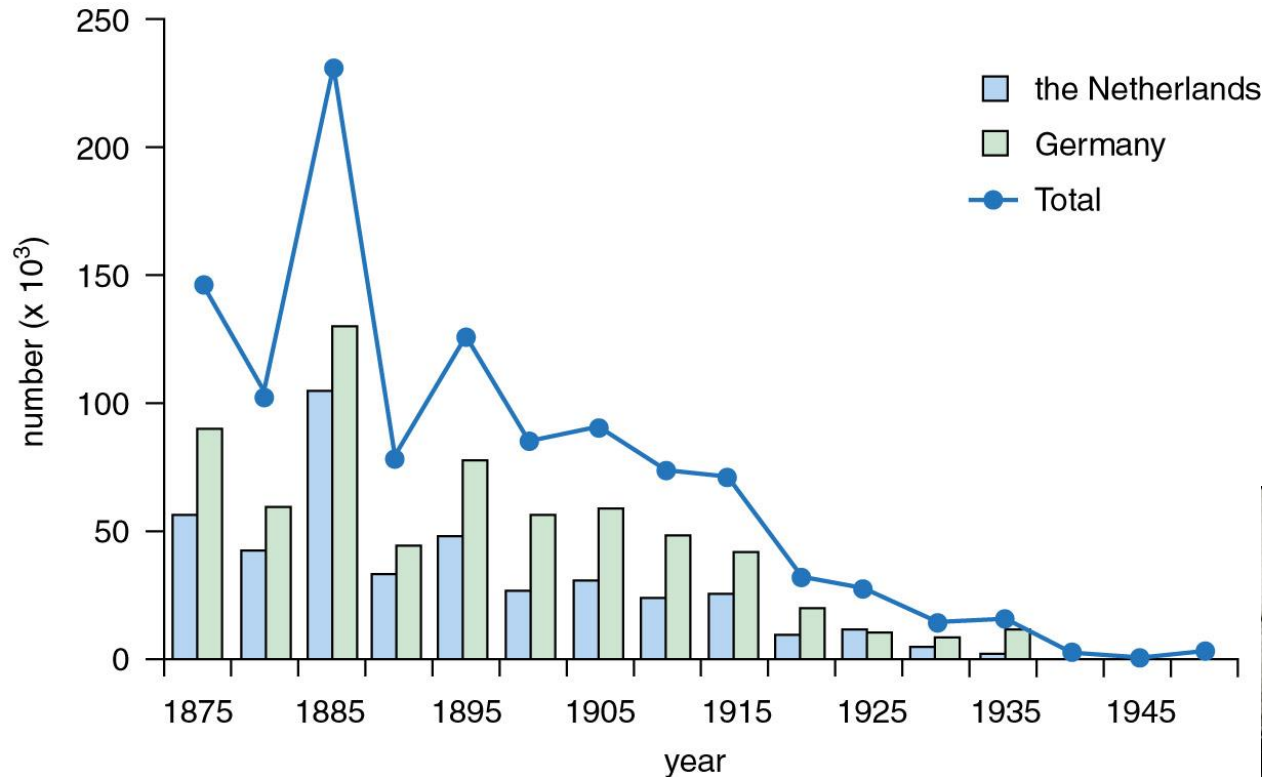


... not a new issue!

- **1449 Straßburger Ordnung der Rheinfischerei**
- **1885 International Salmon Treaty**



Decline of the salmon population



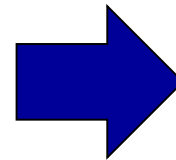
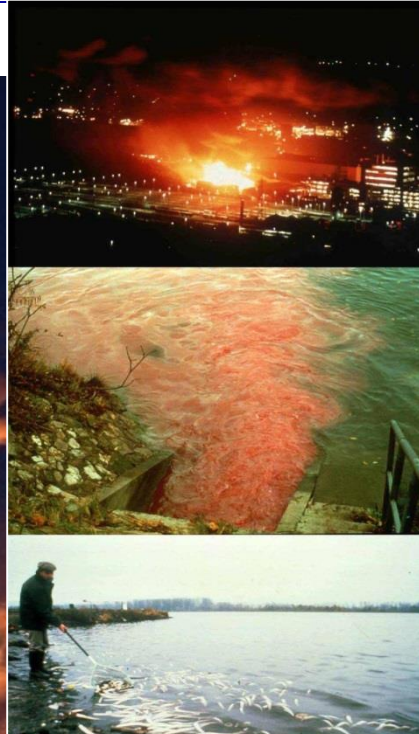
***Salmo salar* † 1958**



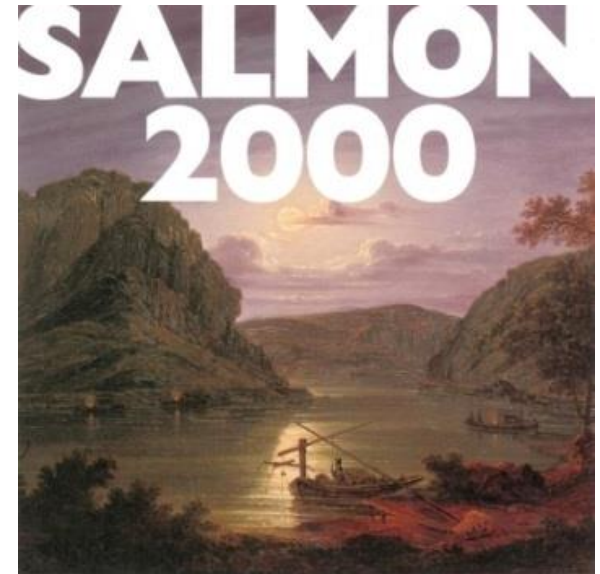
The Sandoz disaster – a turning point



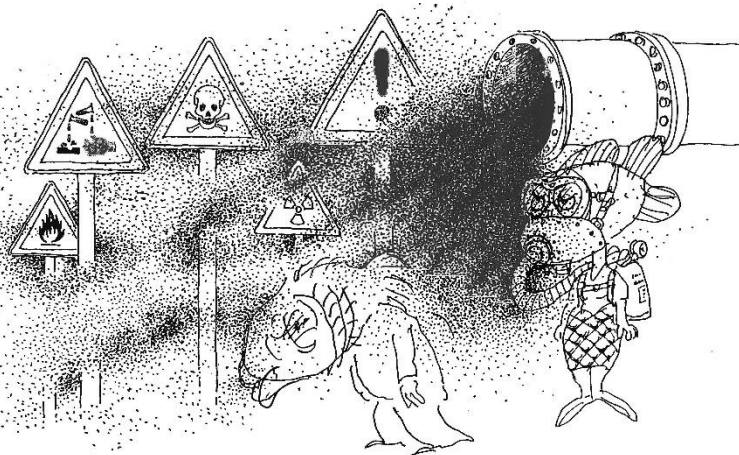
**Sandoz fire
1986**



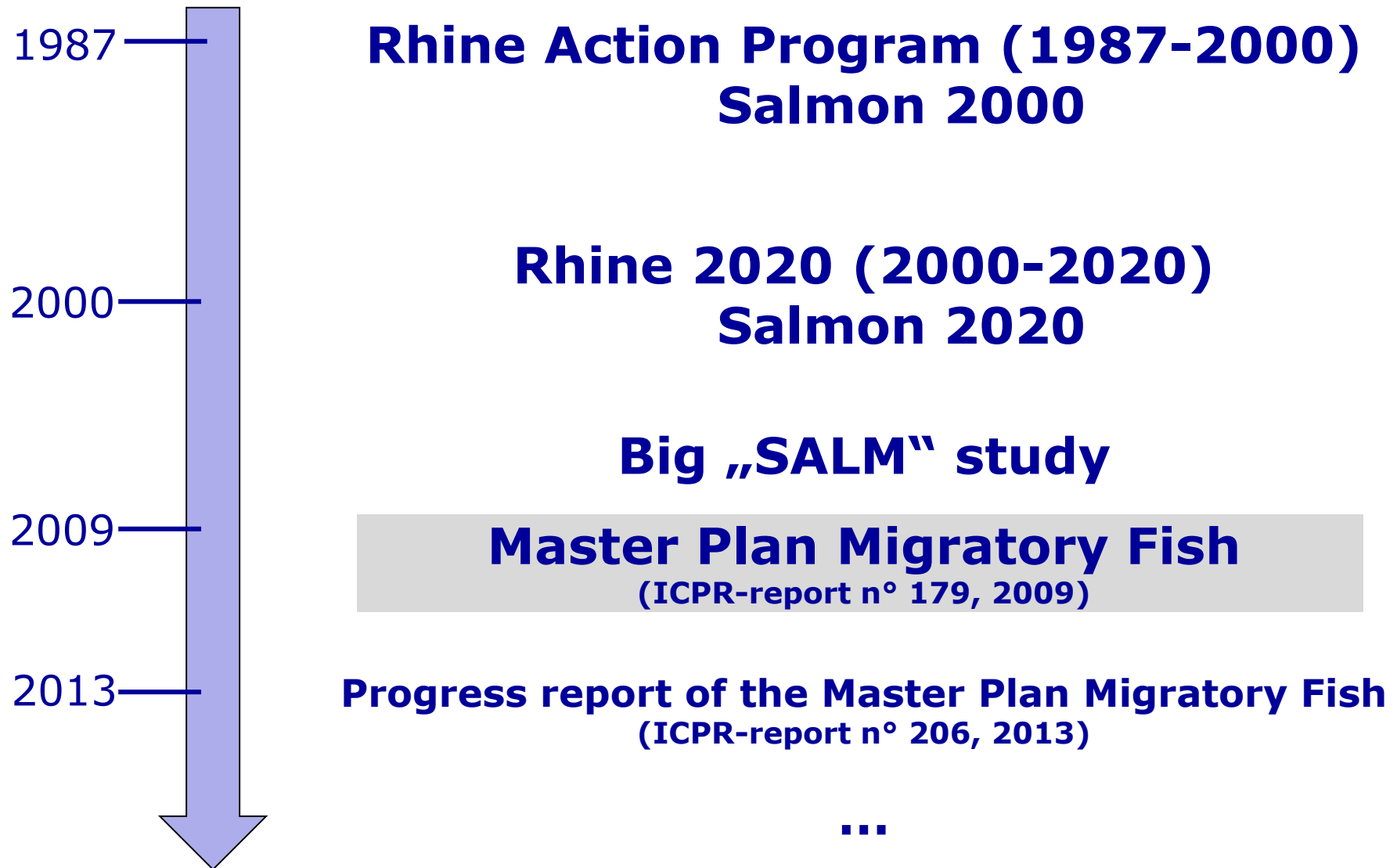
**Rhine Action
Programme 1987**



**symbol
for a healthy Rhine**



ICPR programs for migratory fish



Master Plan Migratory Fish Rhine



Goal: self sustaining, stable populations of migratory fish in the Rhine catchment as far as Basel (CH)



Measures:

- River continuity in the program waters
- Restoration of habitats
- Stocking (i.a. salmon, allis shad)



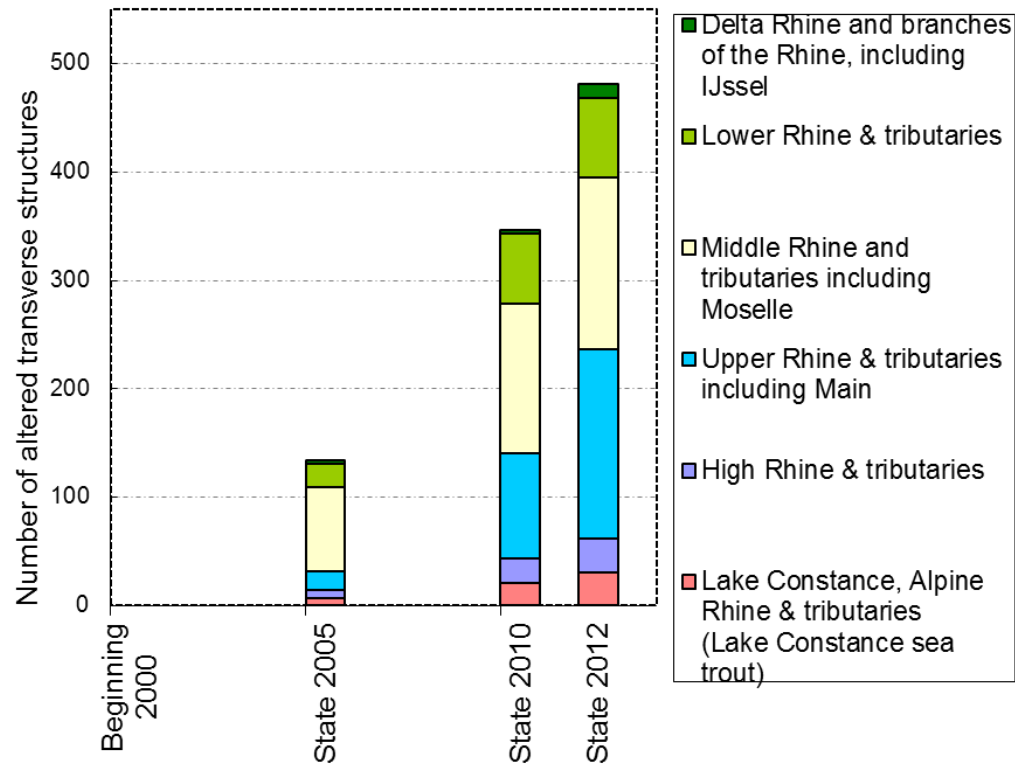
Total costs: € 627 Mln (data December 2015)



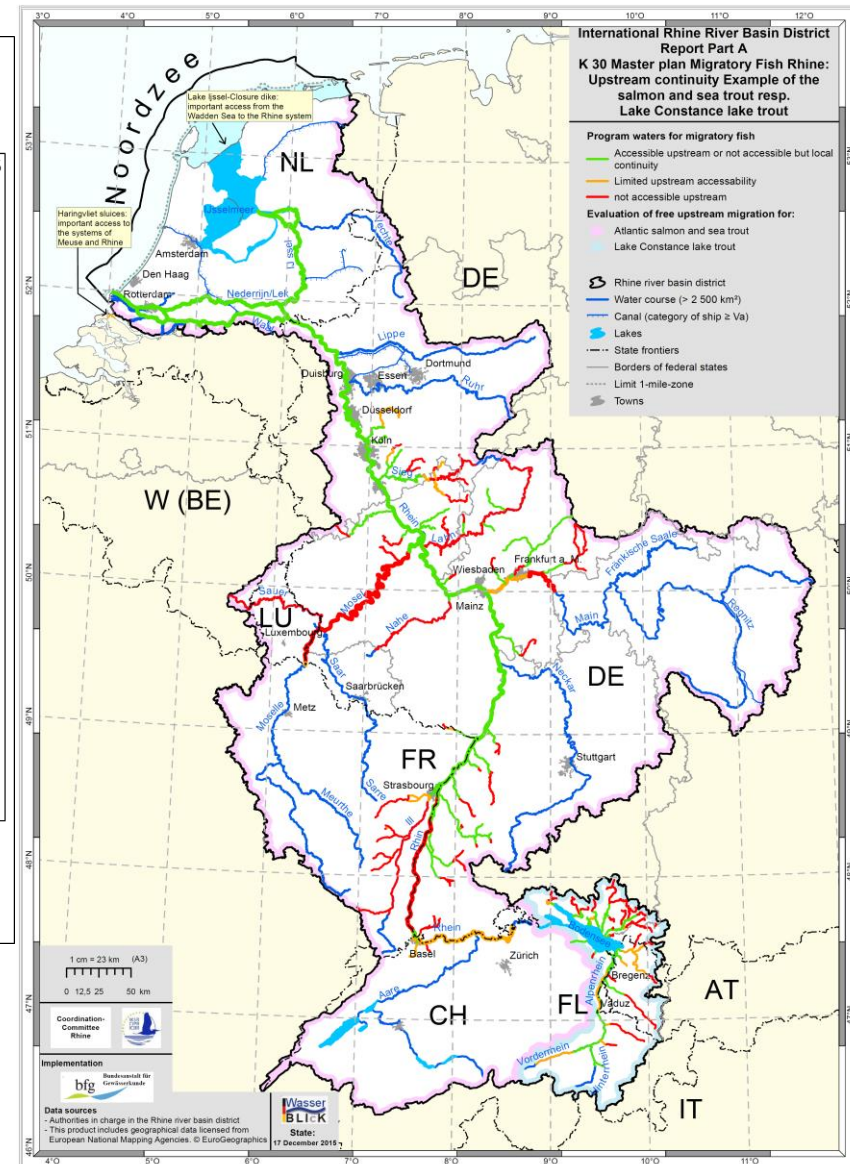
Restoration of river continuity



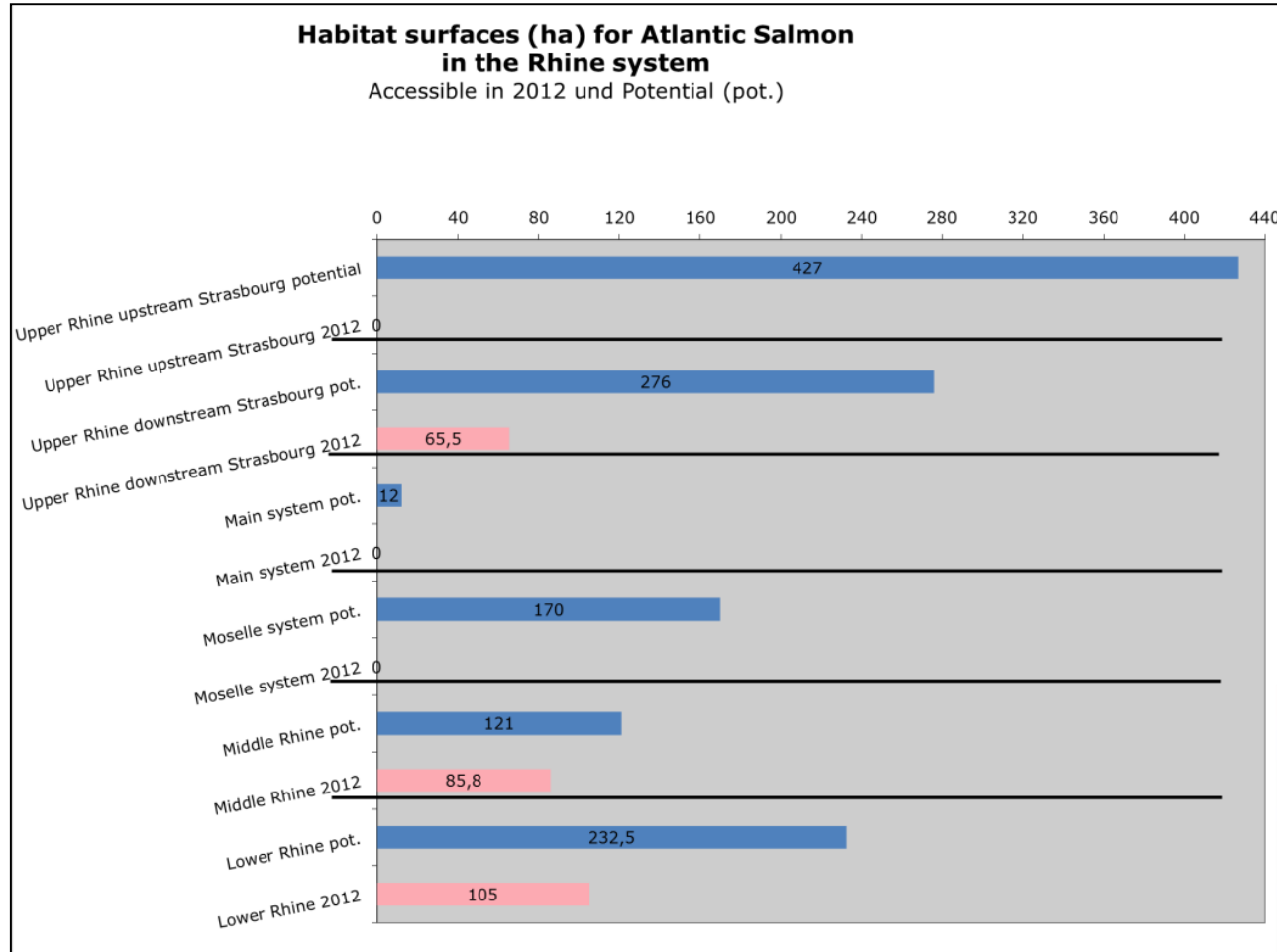
Improvement of river continuity



→ improvements at 500 sites



Habitat restoration

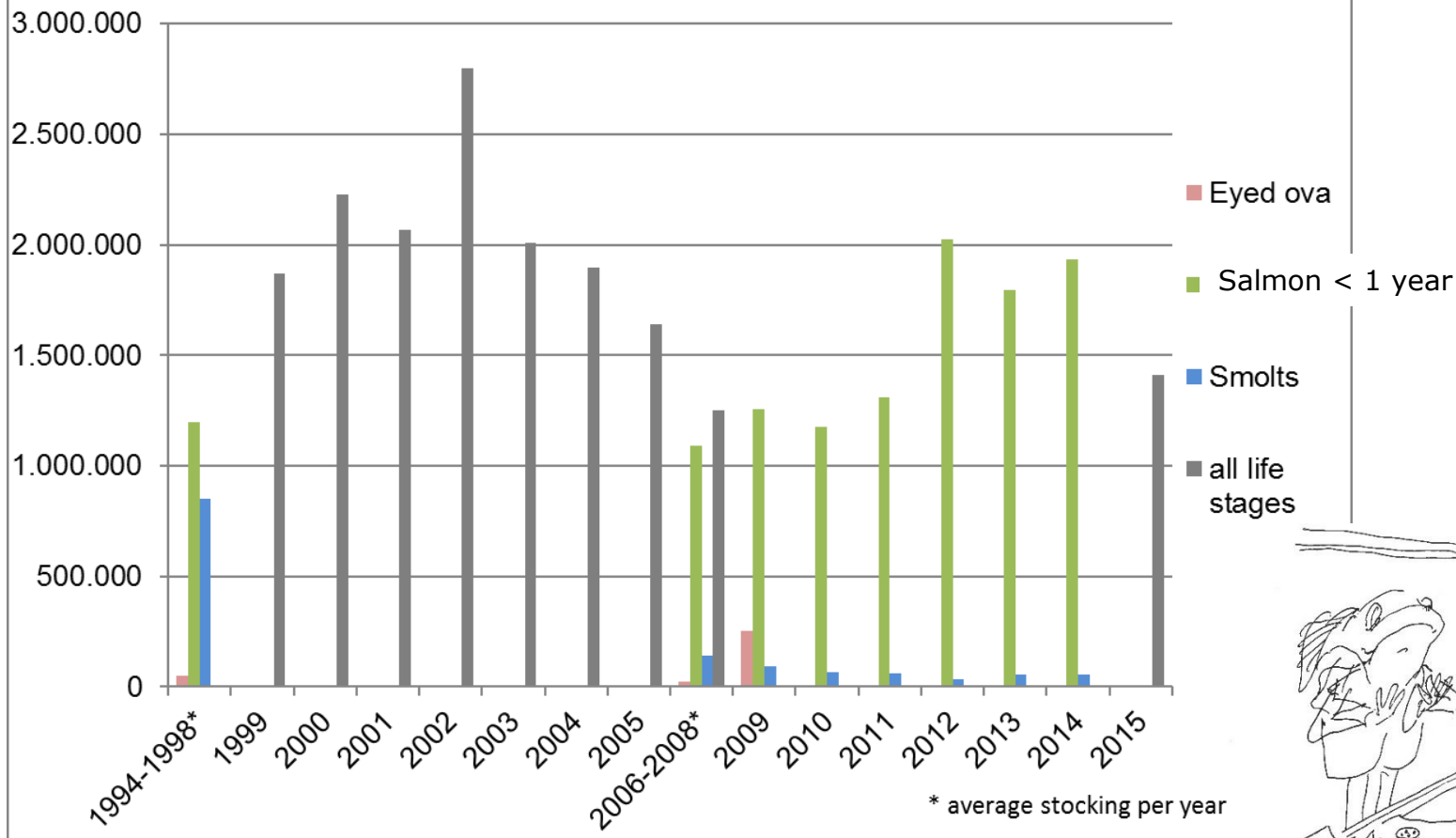


→ 21 % of the salmon habitats (1200 Ha) are accessible in 2015

Salmon stocking

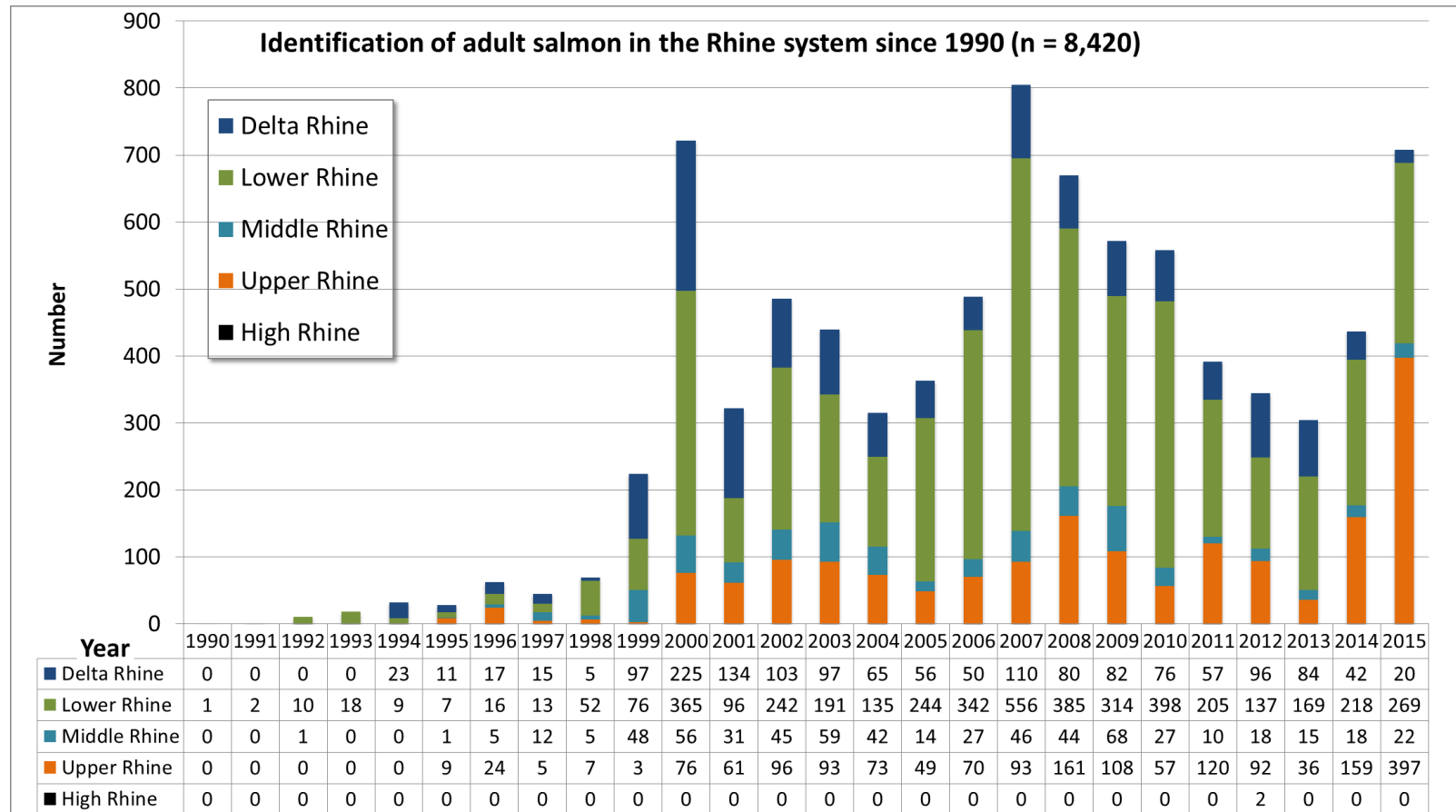


Stocking with different life stages
of Atlantic Salmon in river Rhine 1994 - 2015



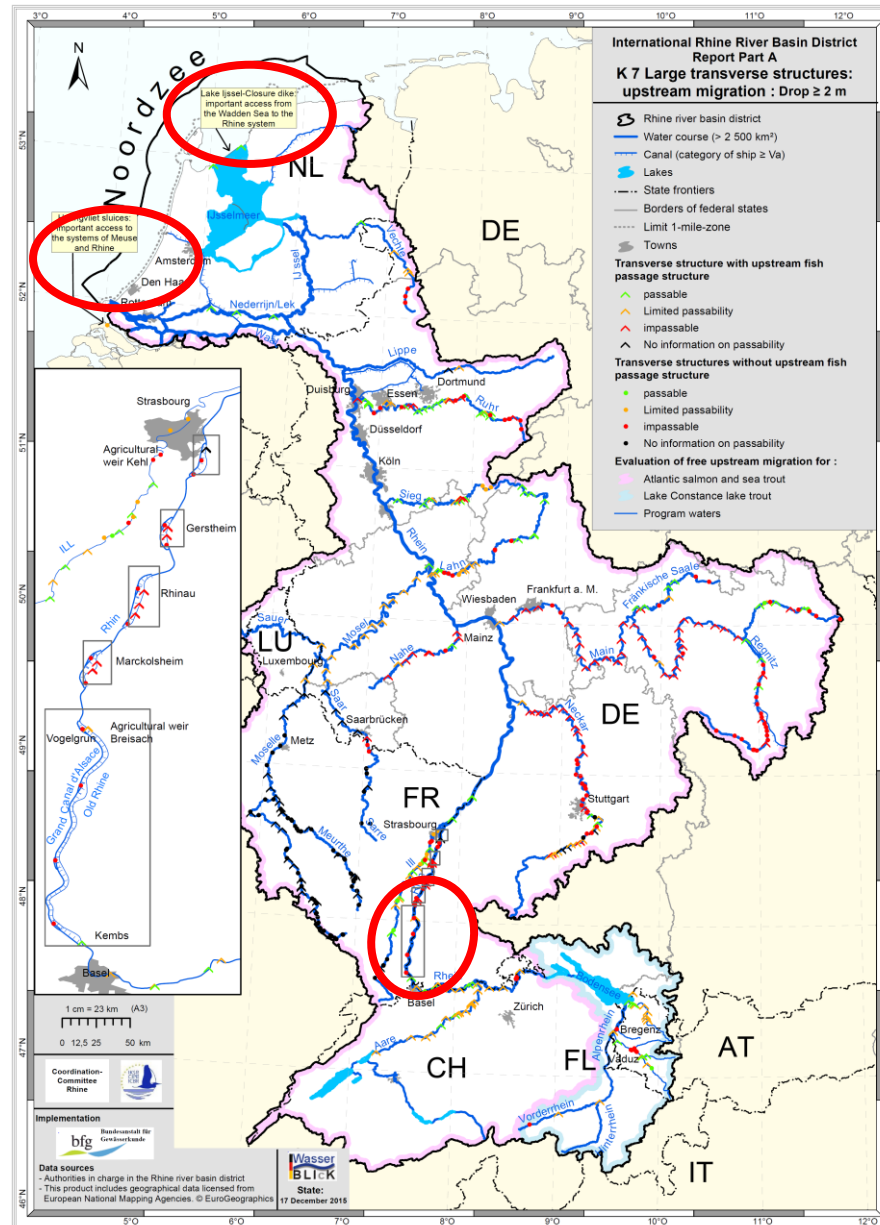
→ Reproduction in every *accessible* program water
(although not every year)

The comeback of Salmon in the Rhine



- since 2014 increasing number of returners
- 2015 number of counted salmon at control station Iffezheim
- Salmon is the symbol but other migratory fish (allis shad, houting) are on the rise as well

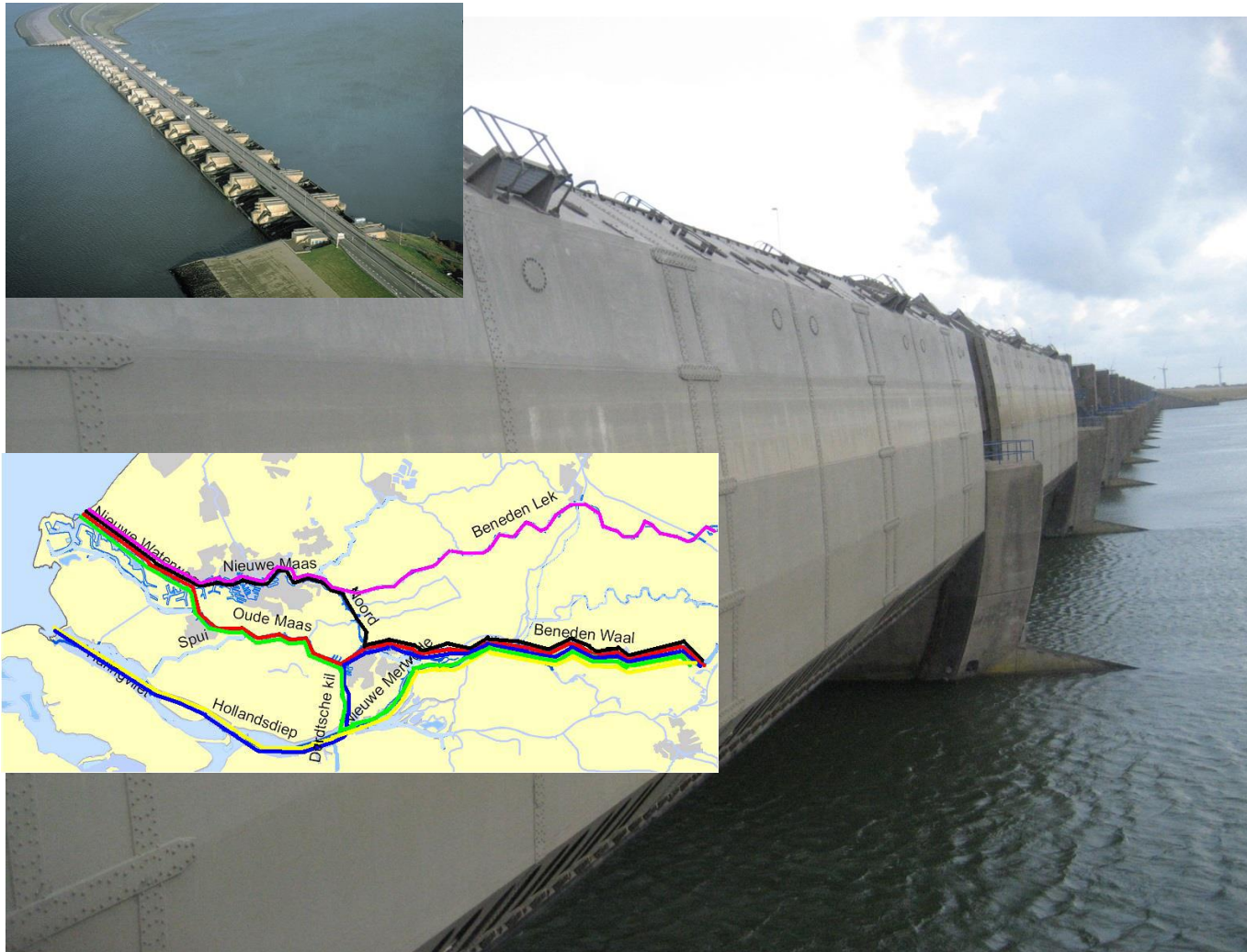
Outlook: River continuity



Outlook: Optimizing access to Rhine system



Partly opening of Haringvliet sluices in 2018



Outlook: Optimizing access to Rhine system



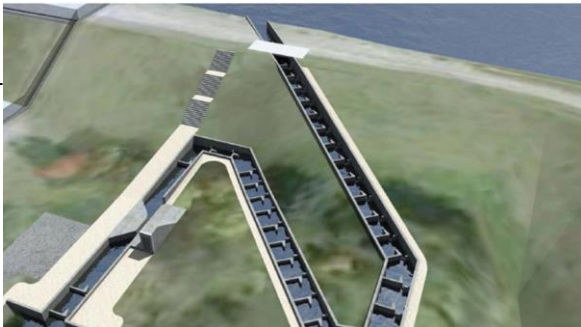
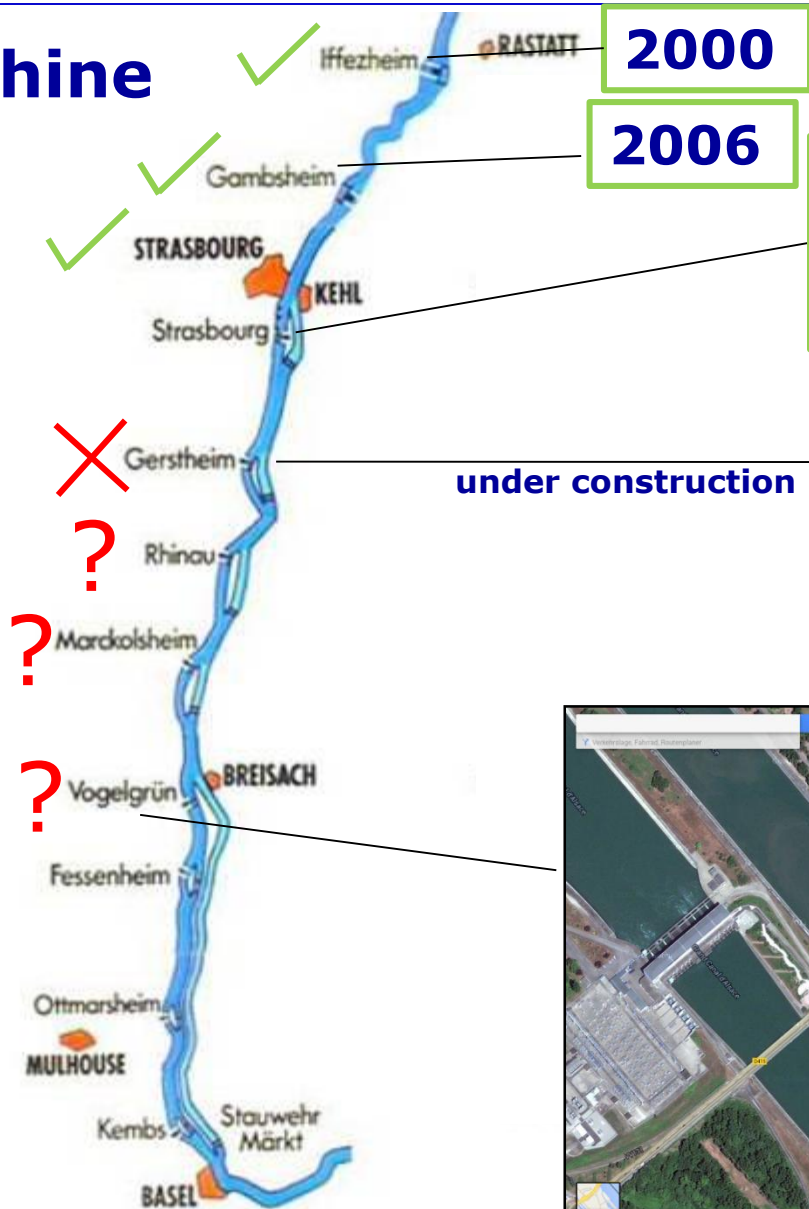
Fish migration river at closure embankment of IJsselmeer (starting 2018)



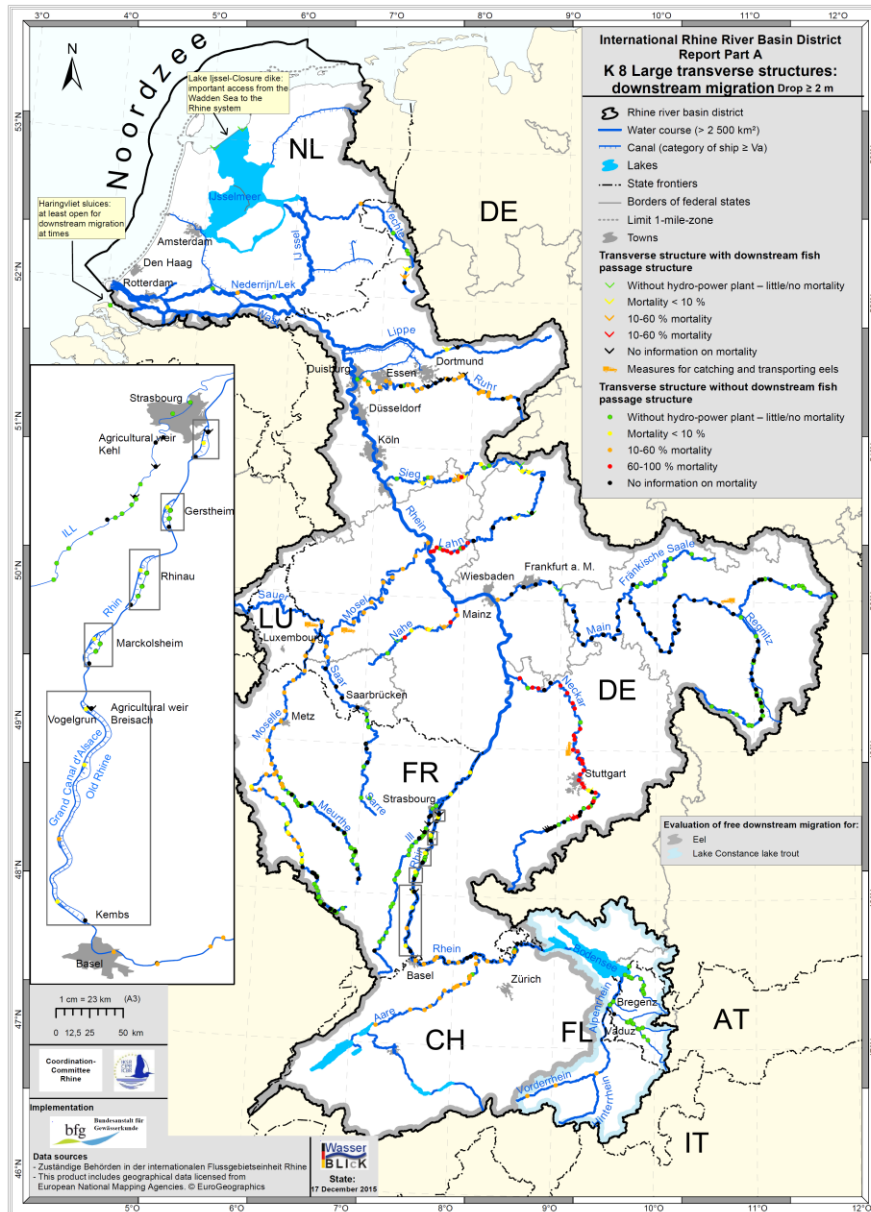
Outlook: Restoring river continuity



Upper Rhine



Outlook: Fish protection during downstream migration

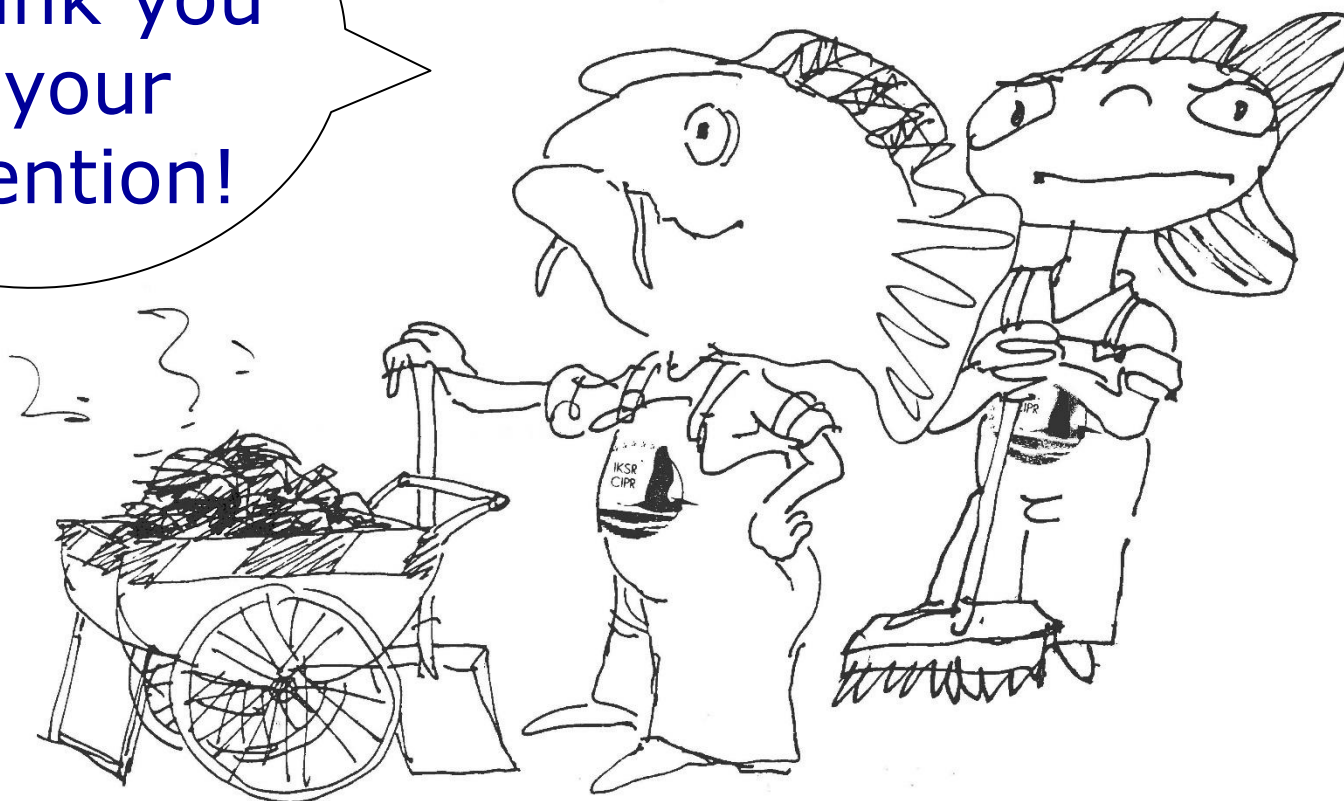


International workshop on downstream fish migration 6-7 october 2016 in Roermond (NL)





Thank you
for your
attention!



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