



XL

International School of Hydraulics

23 - 26 May 2023 • Kąty Rybackie • Poland



Restoring the continuity of the Jasiołka River: the hydraulics of water flow through a fish ladder. Case study - Szczepańcowa, Poland



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23-26 May 2023



1

Free flowing rivers

River status

Free-flowing rivers
(CSI ≥ 95% over entire
length of river)

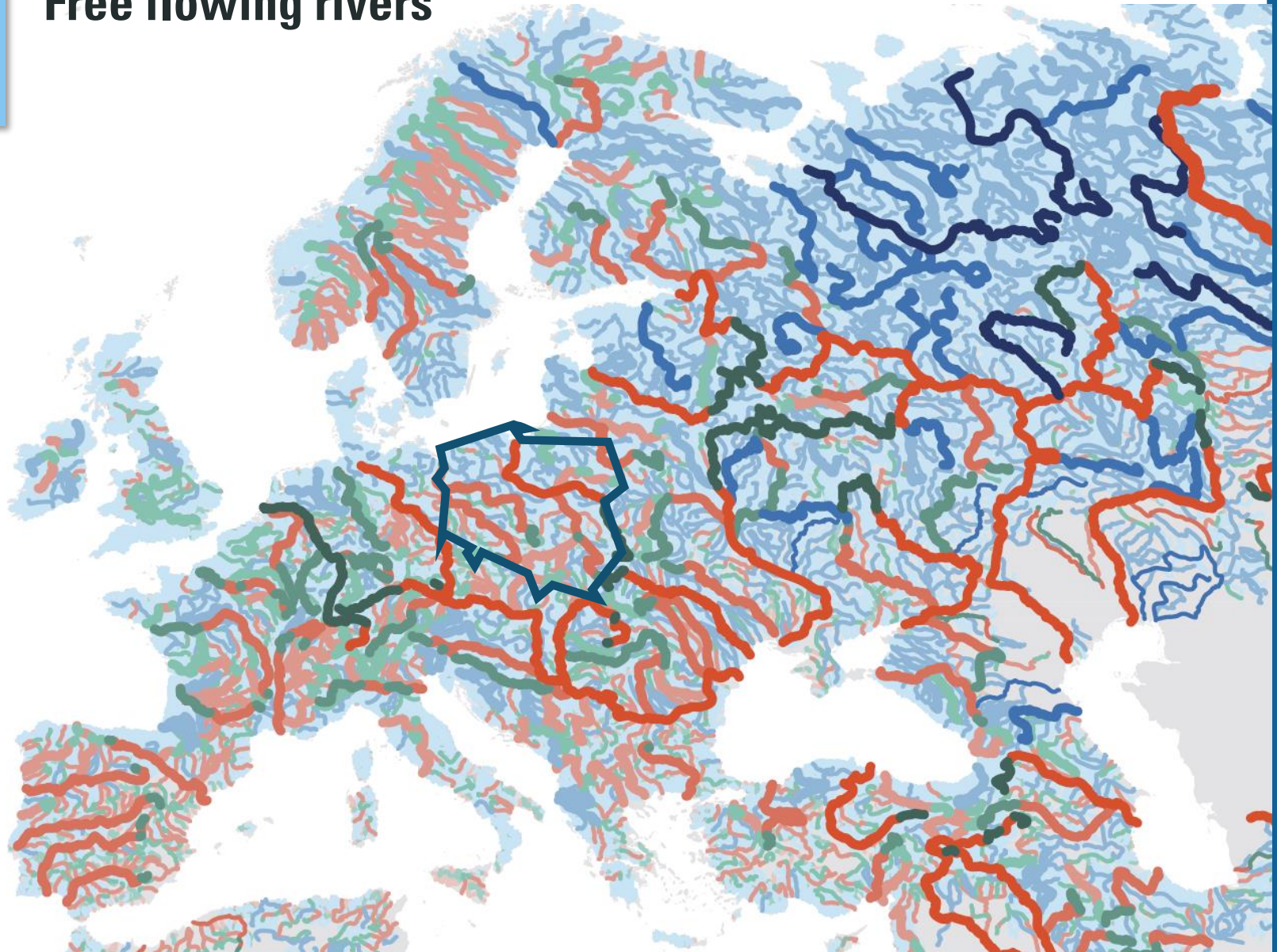
VL L M S
VL: Very long river (> 1000 km)

Good connectivity status
(CSI ≥ 95% over parts of river)

VL L M S
L: Long river (500-1000 km)

Impacted (CSI < 95%)

VL L M S
M: Medium river (100-500 km)



1



Reconstruction of the fish ladder at the Włocławek 2014. Monitoring 2014-2017.



- Ryby idą - trocie, cery, leszcze - mówi prof. Piotr Dębowski z Instytutu Rybactwa Śródlądowego w Olsztynie kierujący grupą ichtiologów, która przyjechała na tamę - Teraz przeszło około 200 troci. Mamy też silny ciąg cery. Wczoraj zanotowaliśmy sto kilkadziesiąt tych ryb na przepławce.

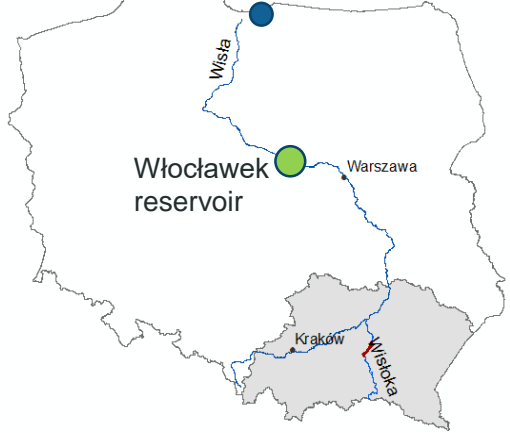


Historical spawning area

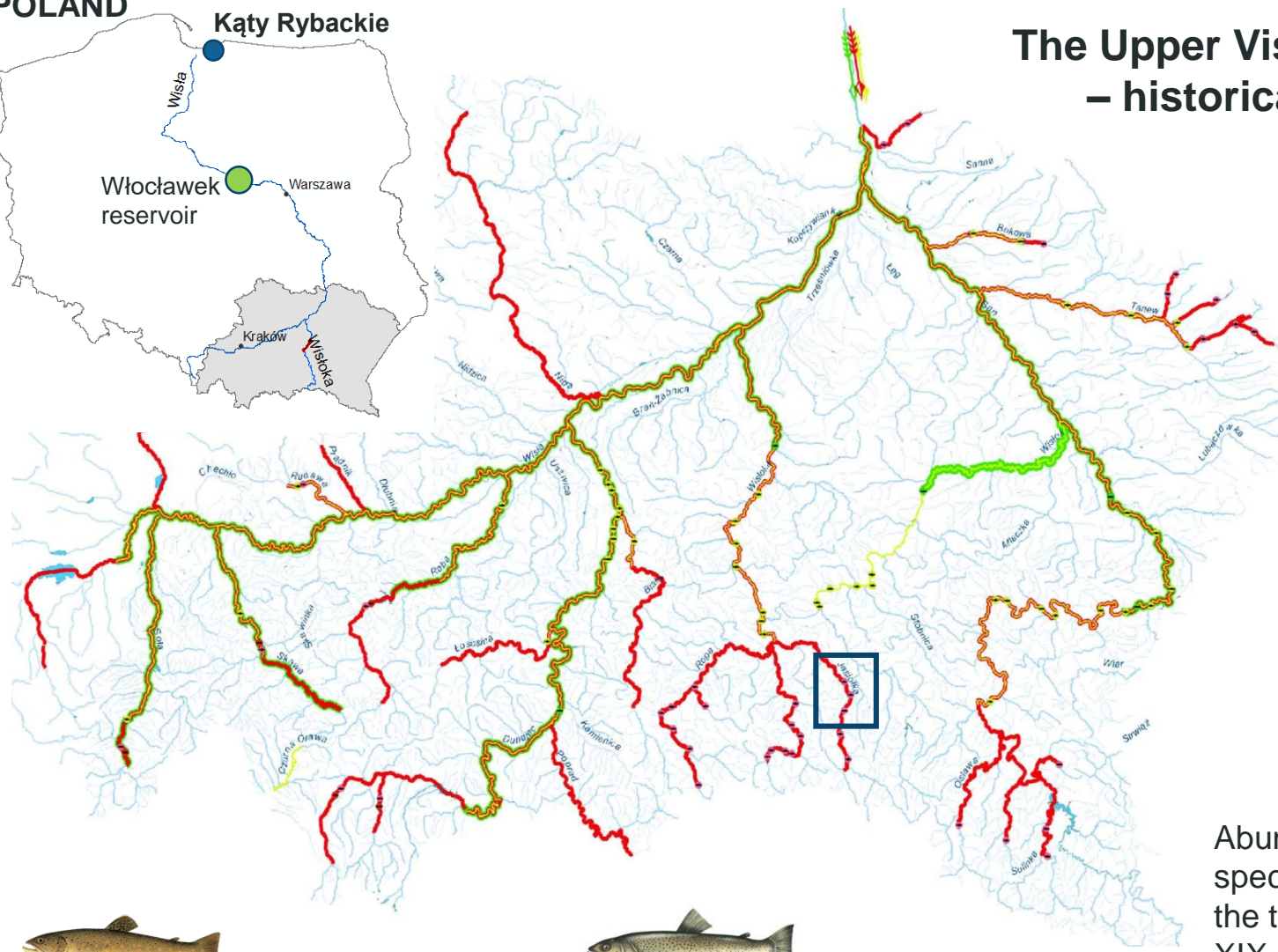


POLAND

Kąty Rybackie



The Upper Vistula River Basin – historical spawning area



Channel incision;
during the 20th
century riverbed
elevation lowering
from 2 to 4 meters



RIFFLE – POOL
sequence
transformation



Abundance of fish
species:
the turn of the century
XIX and XX – 35 fish
species,
70's XX – 25;
2002 – 22;
2011 – 33 (fish
stocking)



Reophile fish – needs fast moving, well-oxygenated water and gravel surfaces



Diadromous fish travels from the Baltic Sea into river's spring sections to spawn

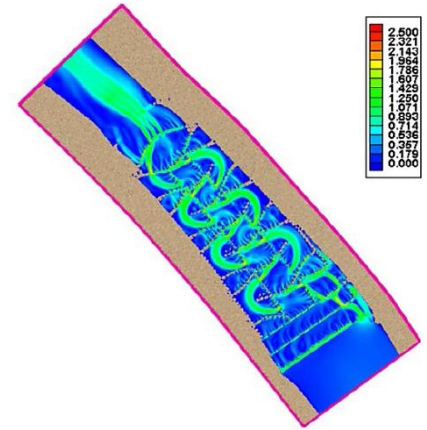
rivers, streams	hydraulic structures	embankments	
100000 km	32792	8638 km	392



2

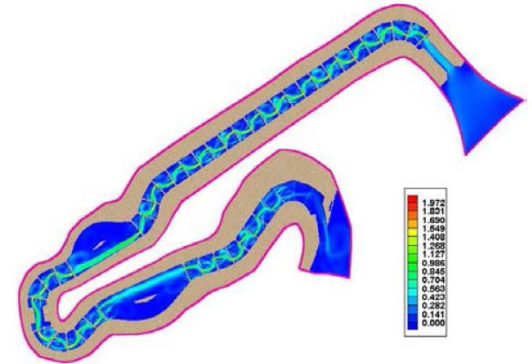
Mielec

full channel width fish ladder
in the form of a 96-metre-long
rapid



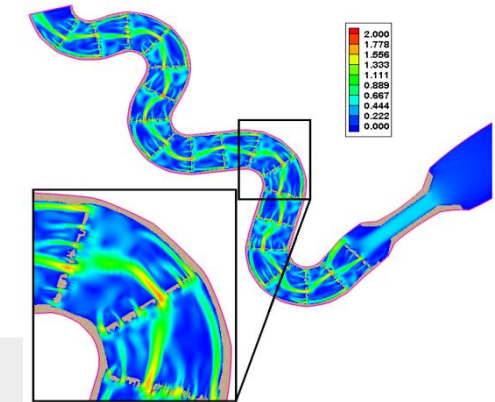
Mokrzec

fish ladder in the form of a
bypass, next to the small
hydroelectric power station,
approximately 460 m long

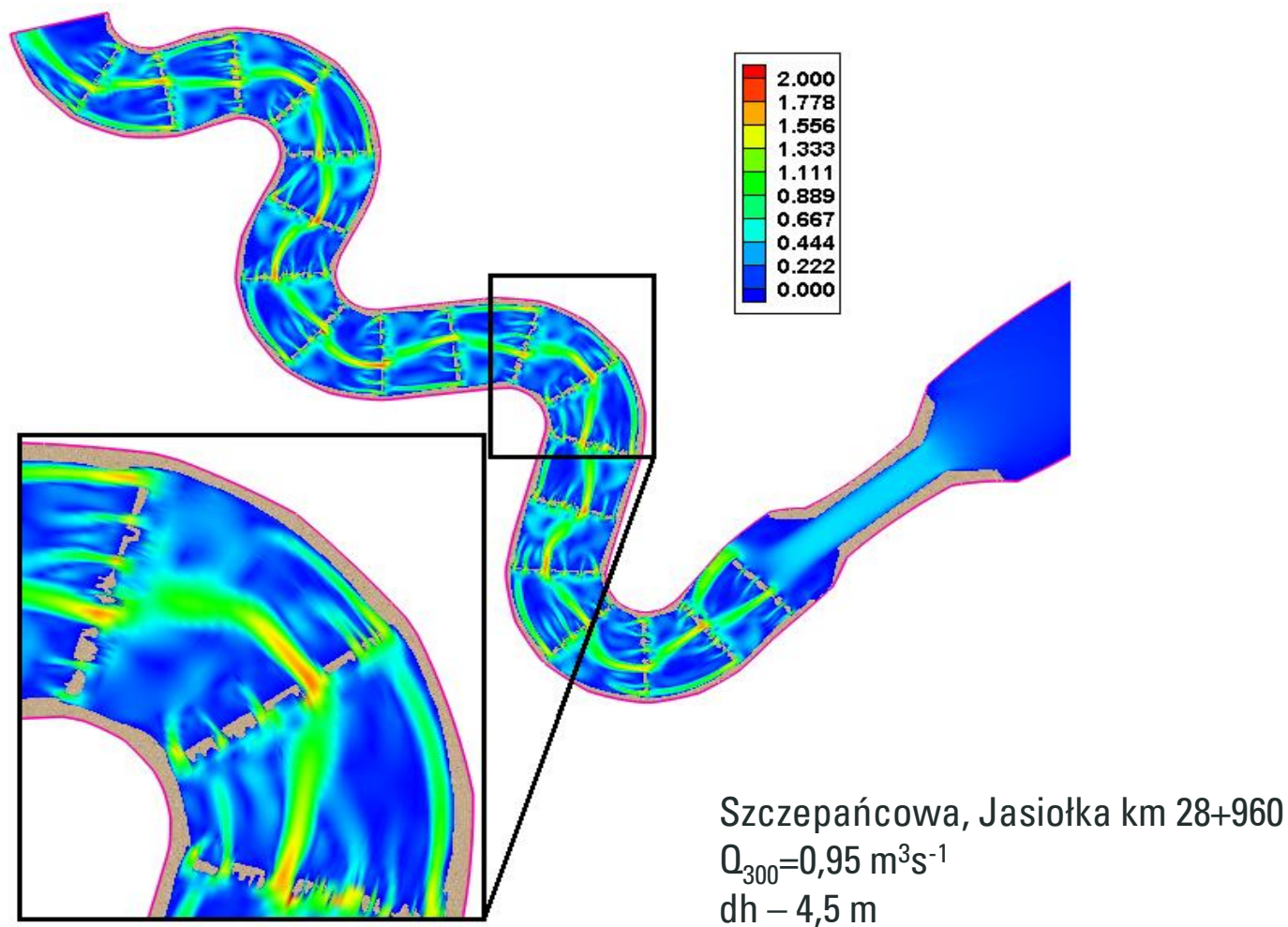


Szczepańcowa

fish ladder, bypass: 165 m
long winding route



Fish ladder - Szczepańcowa



3

Fish ladder close to nature

Szczepańcowa – fish ladder in the form of a bypass, 165 m long winding route (circulation channel)



State Water Holding - Polish Waters received the international Fish Passage 2022 award for the restoration of the Biała Tarnowska and Wisłoka!

