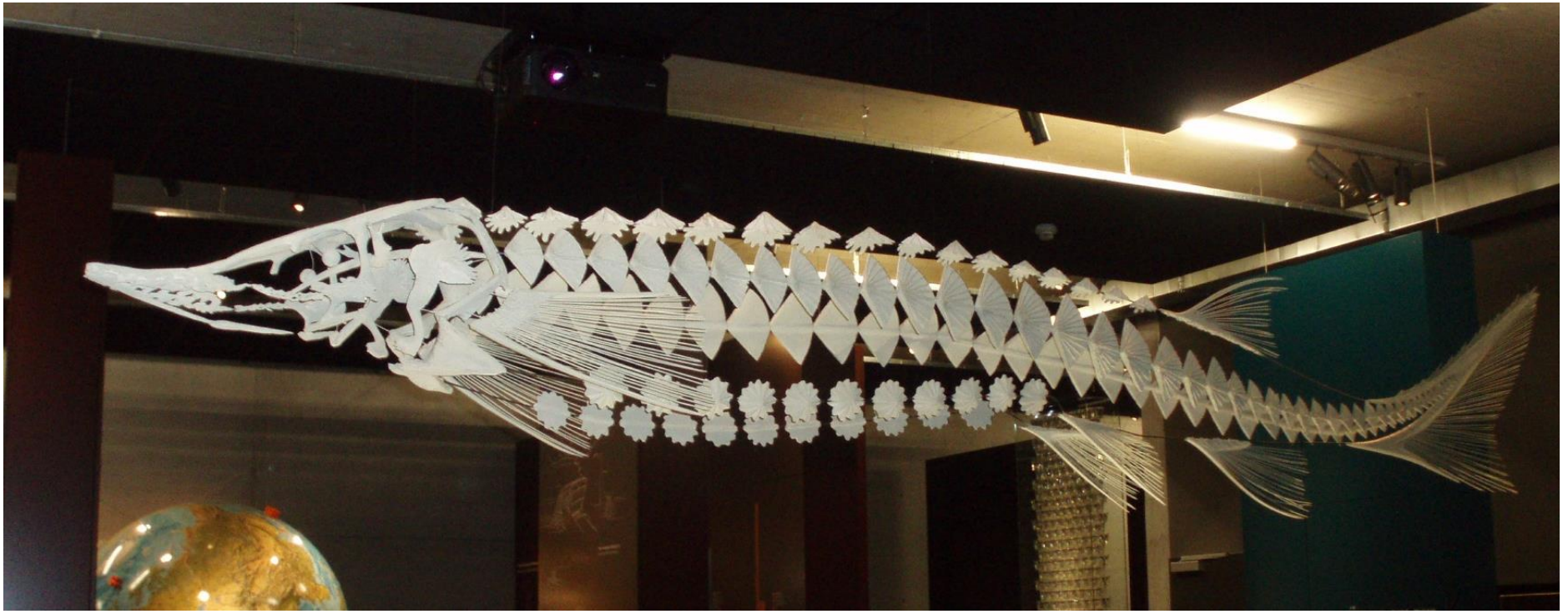
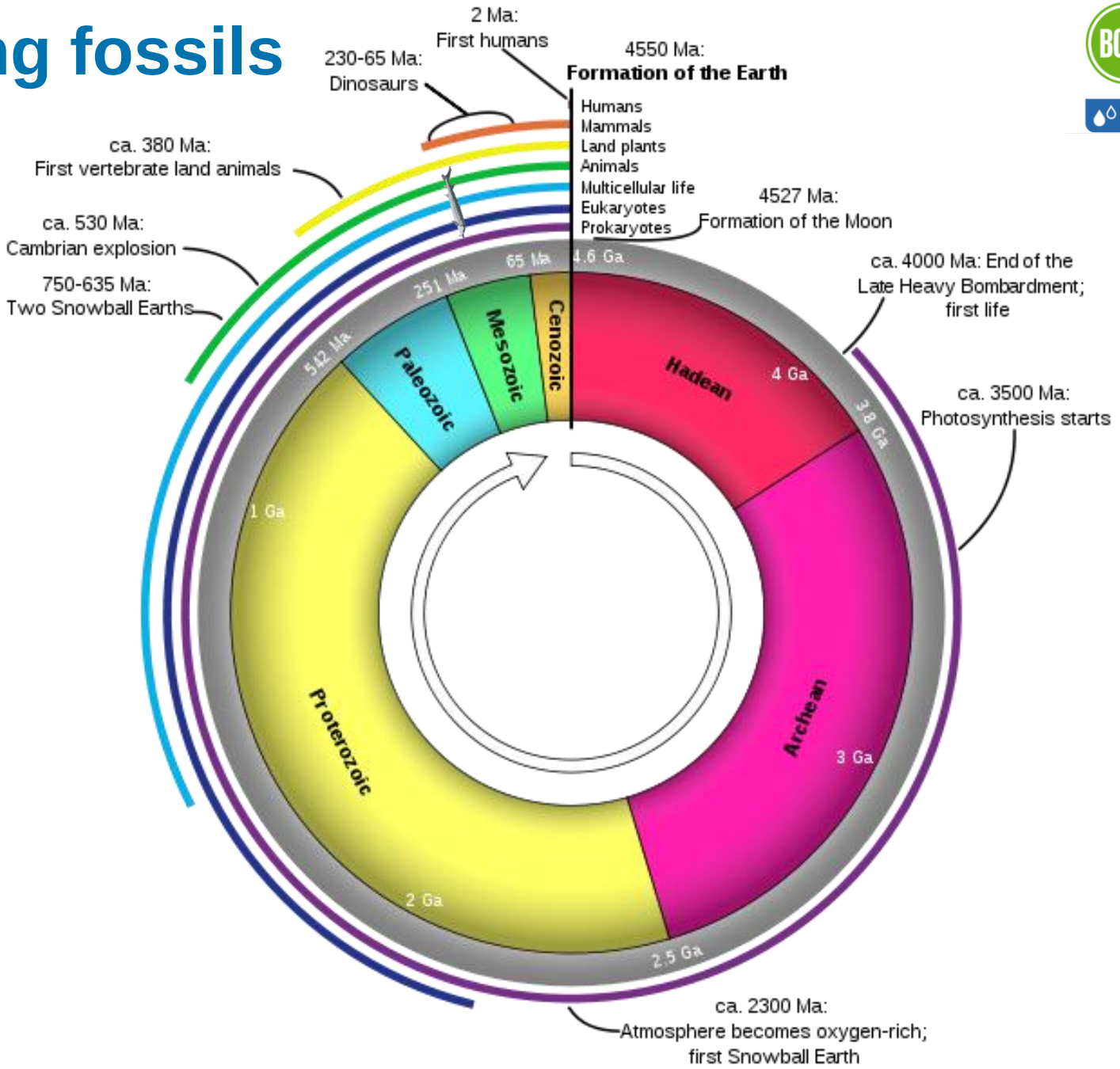
“Status and future challenges for aquatic biodiversity conservation - the example of European Sturgeons”

DI Thomas Friedrich
Univ. Prof. Dr. Thomas Hein

Living fossils….



Living fossils



Giants….

Giants….

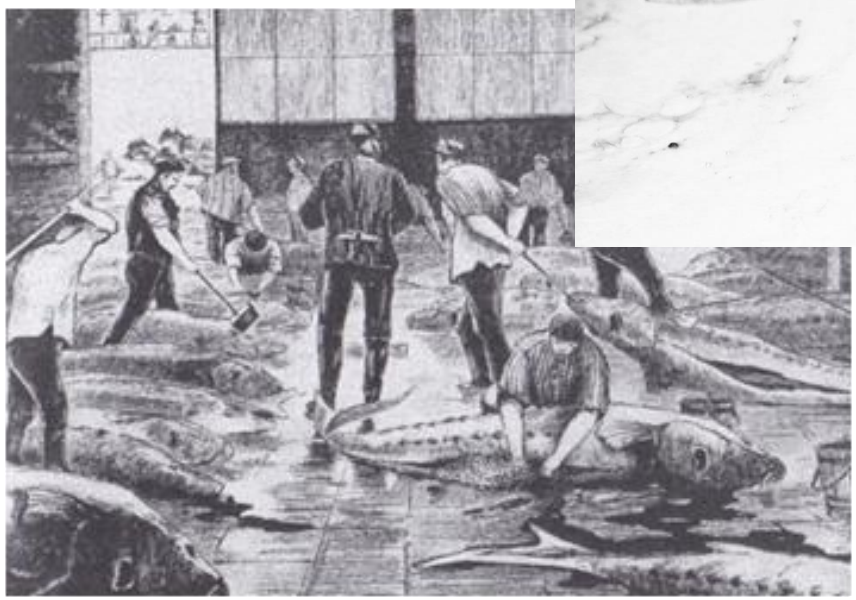
Age: 25 - 200 years.

Size: 35cm – 7m

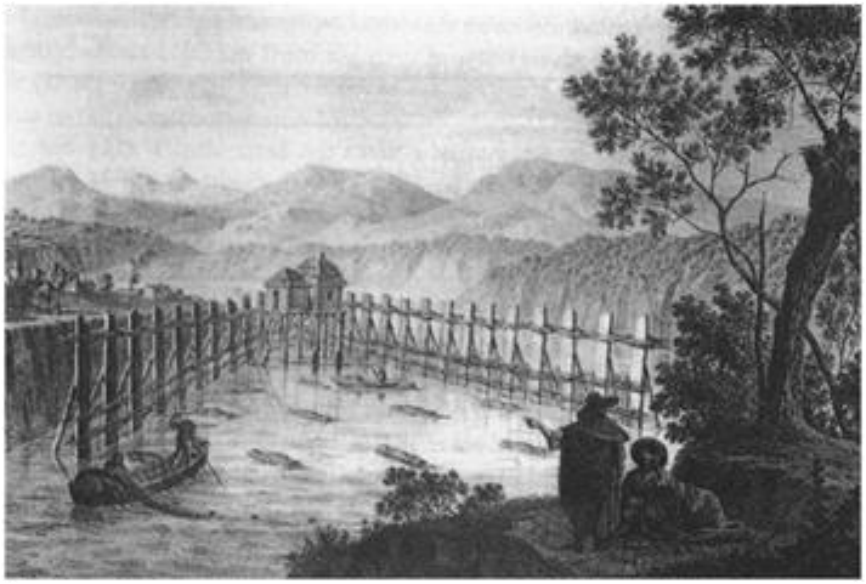
Reproductive age: 3-5 and up to 18-20 years

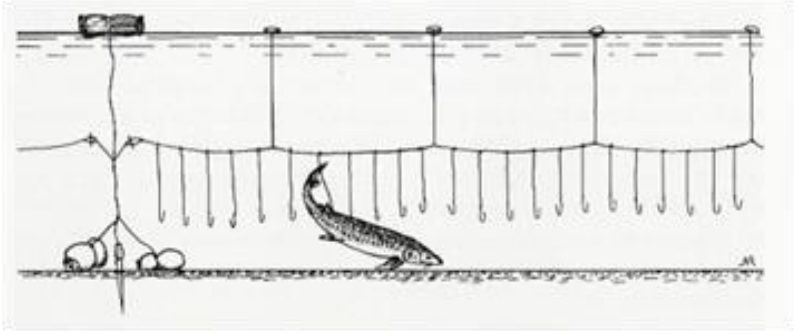
Diet: Bentic invertebrates, fish roe, fish

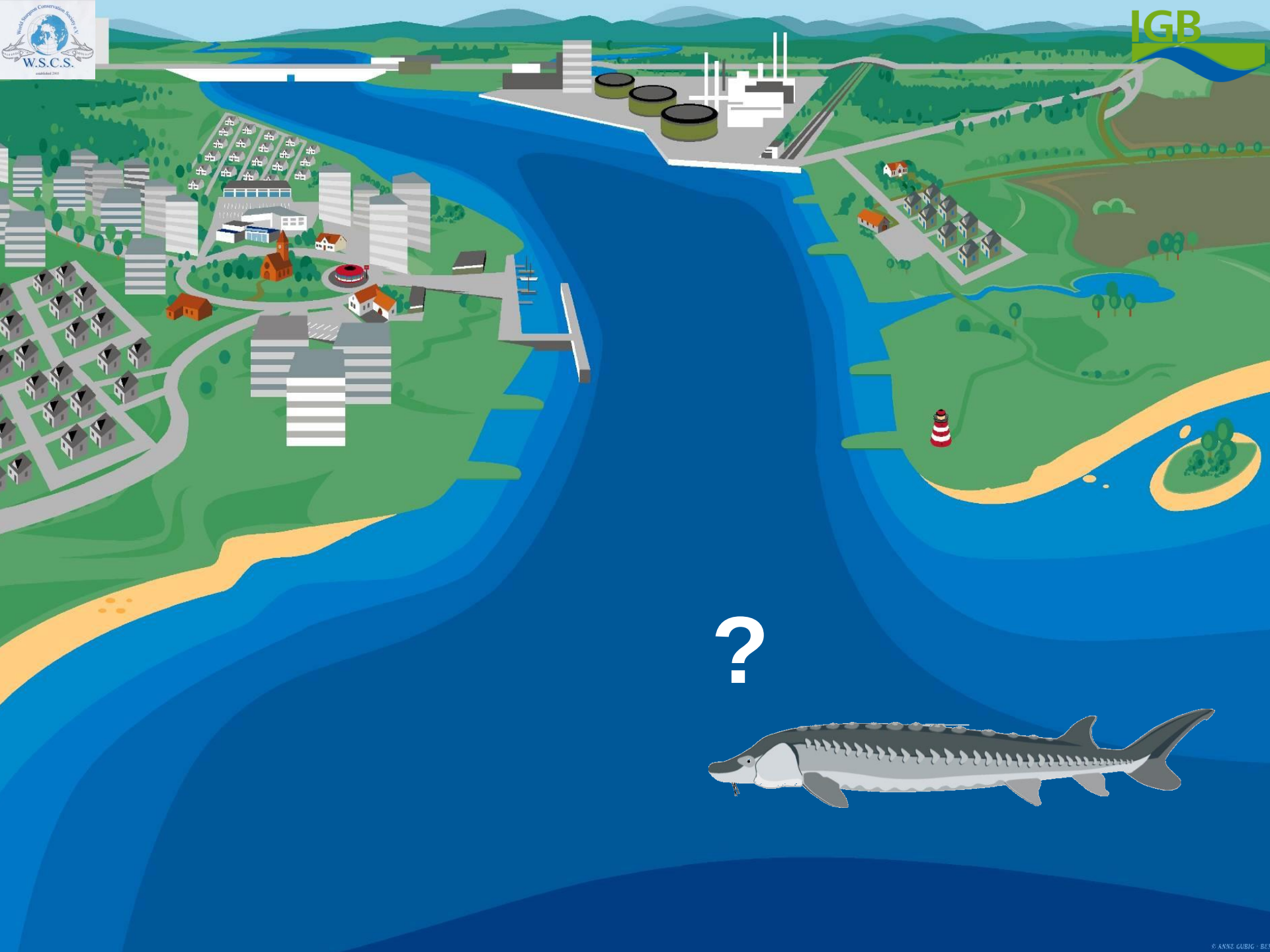
Resource….

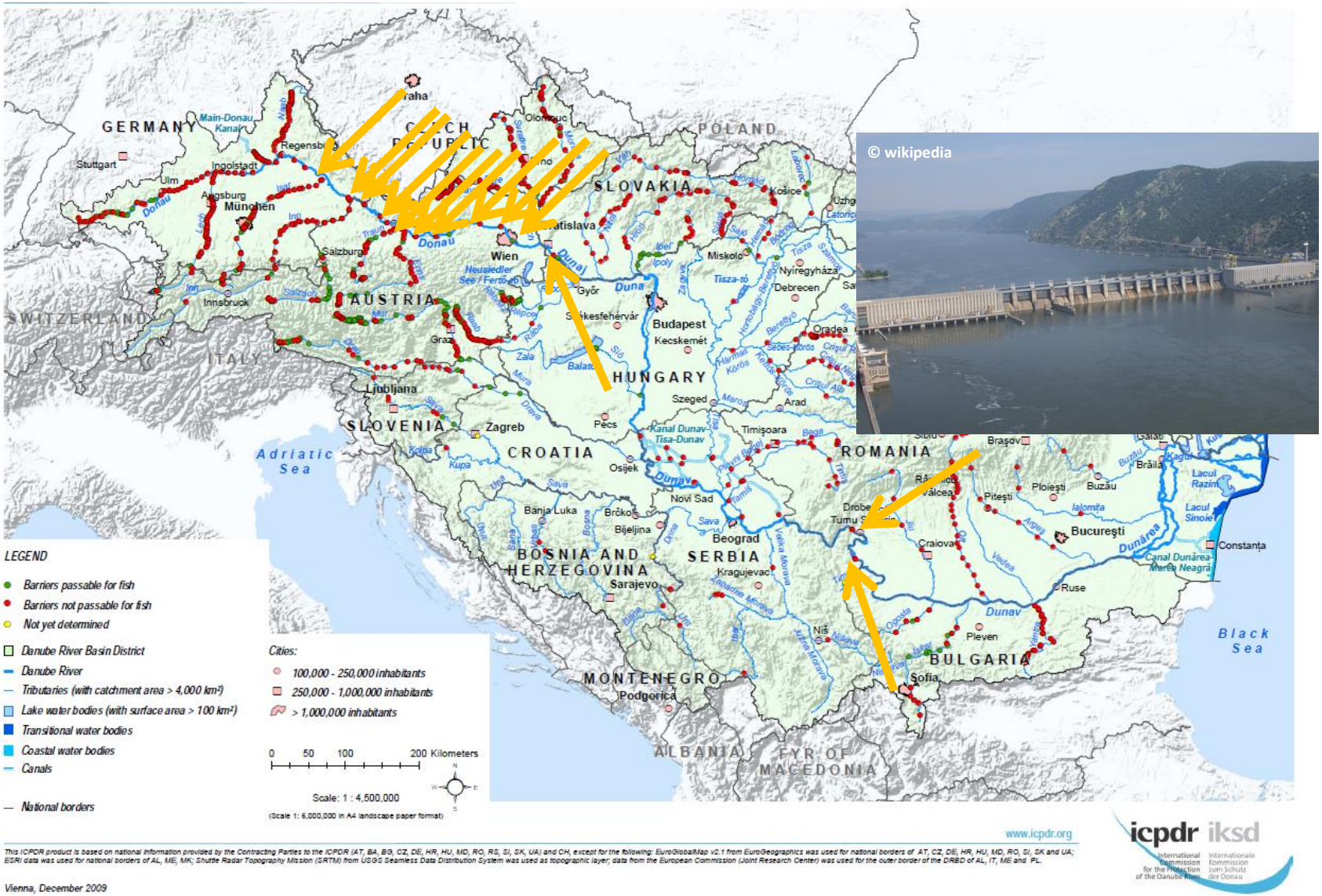


Resource….






W.S.C.S.
IGB
?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ROMANIA
BOSNIA AND HERZEGOVINA
SERBIA
MONTENEGRO
BULGARIA
ALBANIA
FYR OF MACEDONIA
Adriatic Sea
Black Sea
Main-Donau Kanal
Donau
Dunaj
Duna
Dunav
Kanal Donau-Tisa-Dunav
Kanal Dunav-Tisa-Dunav
Dunărea
Canal Dunărea-Marea Neagră
Stuttgart
Ulm
Augsburg
München
Ingolstadt
Regensburg
Salzburg
Innsbruck
Wien
Heusiedler See / Fertő-tó
Graz
Ljubljana
Zagreb
Osijek
Pécs
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Budapest
Kecskemét
Szeged
Miskolc
Debrecen
Nyíregyháza
Košice
Oradea
Arad
Timişoara
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Beograd
Banja Luka
Brčko
Bijeljina
Sarajevo
Kragujevac
Niš
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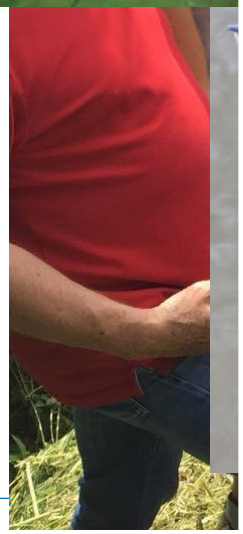
Râmnicu Vâlcea
Piteşti
Ploieşti
Buzău
Brăila
Galaţi
Braşov
Bucureşti
Constanţa
Ruse
Pleven
Sofia
Lacul Razim
Lacul Sinoie
Ialomiţa
LEGEND
Barriers passable for fish
Barriers not passable for fish
Not yet determined
Danube River Basin District
Danube River
Tributaries (with catchment area > 4,000 km²)
Lake water bodies (with surface area > 100 km²)
Transitional water bodies
Coastal water bodies
Canals
National borders
Cities:
100,000 - 250,000 inhabitants
250,000 - 1,000,000 inhabitants
> 1,000,000 inhabitants
0 50 100 200 Kilometers
Scale: 1 : 4,500,000
(Scale 1: 6,000,000 in A4 landscape paper format)
www.icpdr.org
icpdr iksd
International Commission for the Protection of the Danube River
Internationale Kommission zum Schutz der Donau
This ICPDR product is based on national information provided by the Contracting Parties to the ICPDR (AT, BA, BG, CZ, DE, HR, HU, MD, RO, RS, SI, SK, UA) and CH, except for the following: EuroGlobalMap v2.1 from EuroGeographics was used for national borders of AT, CZ, DE, HR, HU, MD, RO, SI, SK and UA; ESRI data was used for national borders of AL, ME, MK; Shuttle Radar Topography Mission (SRTM) from USGS Seamless Data Distribution System was used as topographic layer; data from the European Commission (Joint Research Center) was used for the outer border of the DRBD of AL, IT, ME and PL.
Vienna, December 2009


Past freshwater habitat
Present freshwater habitat
Marine habitat
N
0 250 500 1 000 Kilometers

We a



Strasbourg, 30 November 2018
[Inf06e_2018.docx]

T-PVS/Inf(2018)6

CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE AND NATURAL HABITATS

Standing Committee

38th meeting
Strasbourg, 27-30 November 2018

PAN-EUROPEAN ACTION PLAN FOR STURGEONS

Document prepared by
the World Sturgeon Conservation Society and WWF

LIFE- Sterlet

Establishment of a self- sustainig population of >2000 adult mature specimens in all project areas

a) Rearing fingerlings under nature like conditions
b) Successful releases
c) Monitoring of performance
d) Awareness raising

Aim: „Facilitate transfer of approaches to other sturgeon species“

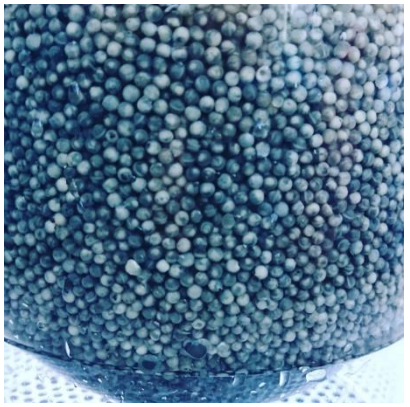
Rearing, Release & Monitoring

- Wild broodstock from Danube
- Incubation of eggs with Danube water
- Rearing in Danube water with natural sediments, natural feeds
- 30.000/a
- Telemetry & targeted monitoring

Public outreach

- > 120 Print articles
- > 15 television features
- 2 radio shows
- Exhibition on site

- Homepage updated on a regular basis with news
- Instagram Account „sturgeon_conservation“
- YouTube Channel „LIFE-Sterlet“
- Presentation of the project for visitors, school classes and at conferences



Interreg
EUROPEAN UNION
Danube Transnational Programme
MEASURES

MEASURES

Managing and Restoring Aquatic Ecological Corridors for Migratory Fish Species in the Danube River Basin

Project co-funded by European Union funds (ERDF, IPA)

Lead partner:
University of Natural Resources and Life Sciences, Vienna

Overall project budget: **2,512,931.08 €**
ERDF and IPA Contribution: **2,135,991.36 €**
ERDF Contribution: **2,045,645.09 €**
IPAII Contribution: **90,346.27 €**

(1) Identification & mapping of migratory fish habitats.

(2) Development of a harmonized & improved strategy (including prioritization) for the re-connection of migratory fish habitats to secure and re-establish vital ecological corridors in the DRB to be implemented into policy and management plans.

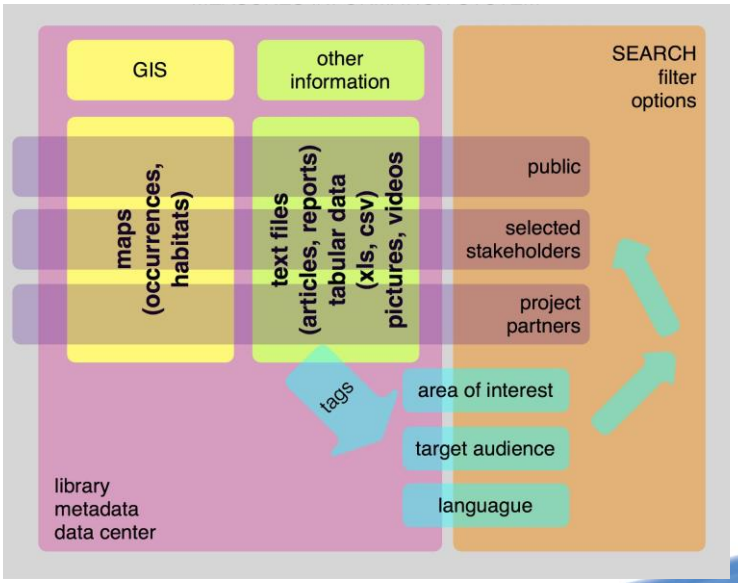
(3) Provision of a strategy to conserve Danube sturgeon species, including an appropriate design of broodstock facilities.

12 partner institutions across the Danube region

+ 12 Associated Strategic Partners

Activities & Outputs

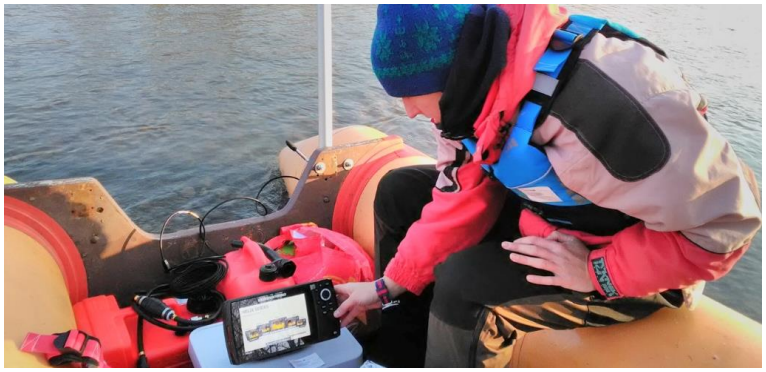
a) T1 - MEASURES Information System



b) T1 – Stakeholder Workshops

- Network building + enhancing institutional capacity of eco-corridors

Project co-funded by European Union funds (ERDF, IPA)



c) Mapping the corridor

- Experts training
- Mapping of the Danube and selected major tributaries
- Migratory fish habitat mapping manual

d) Strengthening the populations

- Ex-situ gene stocks of Danube sturgeons
- Method for presence of rare Danube sturgeons
- Pilot restocking of Russian sturgeon and sterlet
- Design of ex-situ preservation sites

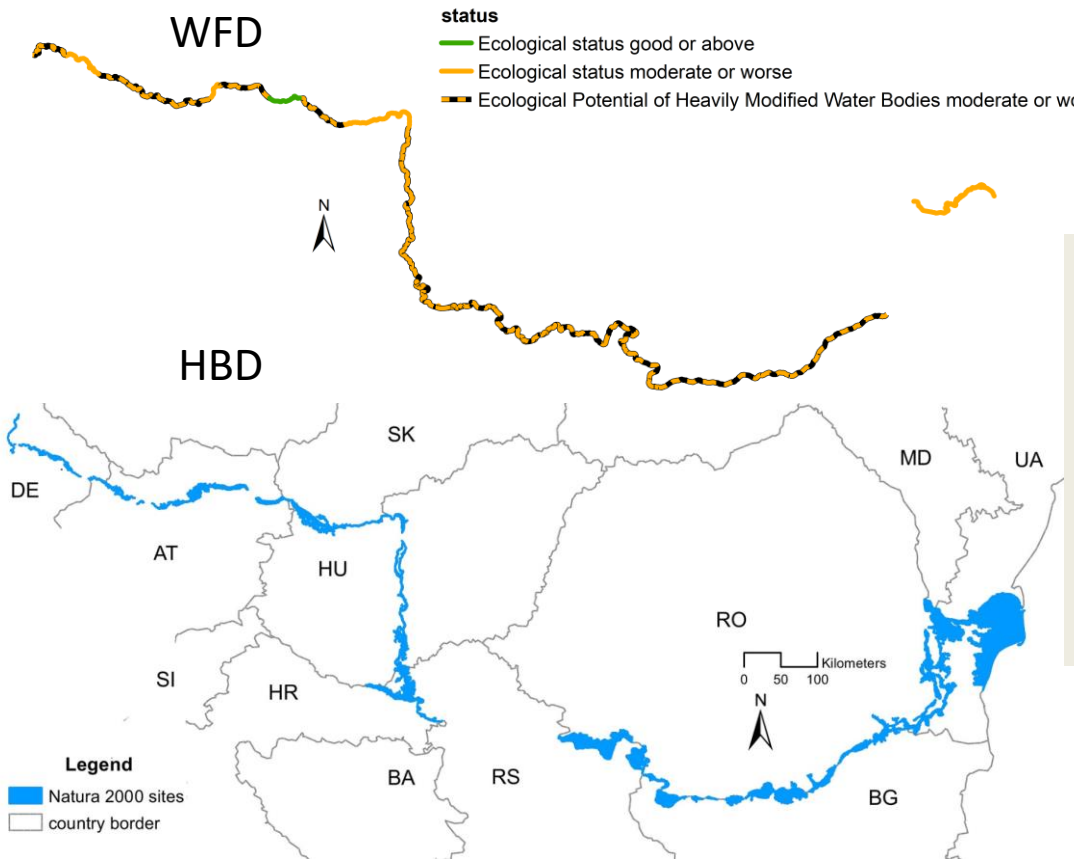
THE FINAL GOAL

e) Securing the ecological corridor

- Strategy for the Danube ecological corridor
- Lessons learnt manual
- Stakeholder Training Workshop

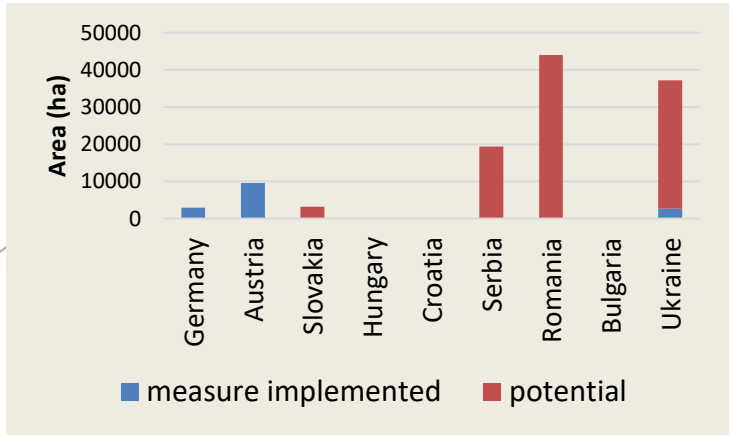
Project co-funded by European Union funds (ERDF, IPA)
www.interreg-danube.eu/measures

Biodiversity at river scale



ICPDR, 2016

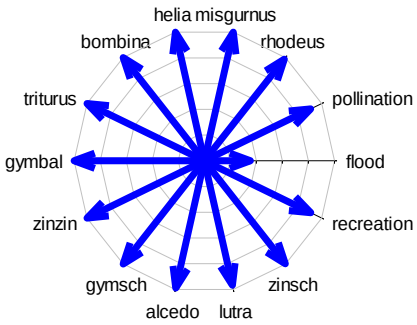
Restoration potential



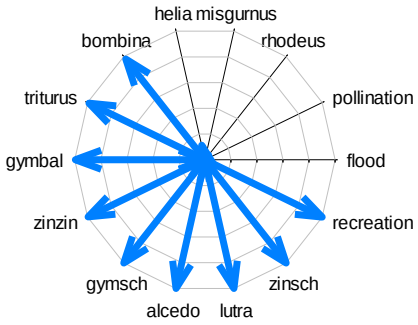
EEA, 2016

- What is the conservation and restoration potential of the river-floodplain systems along the Danube?

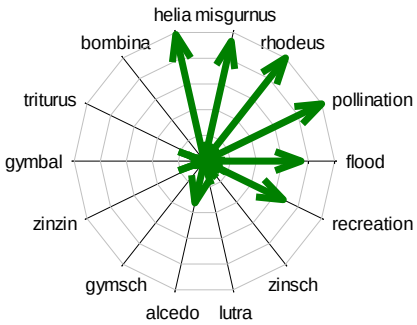
Multifunctionality

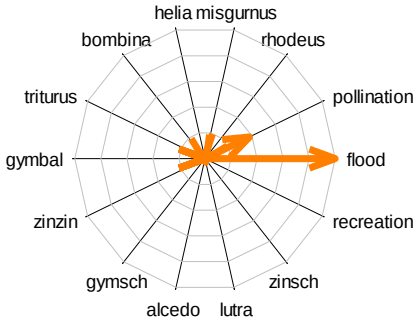


conservation

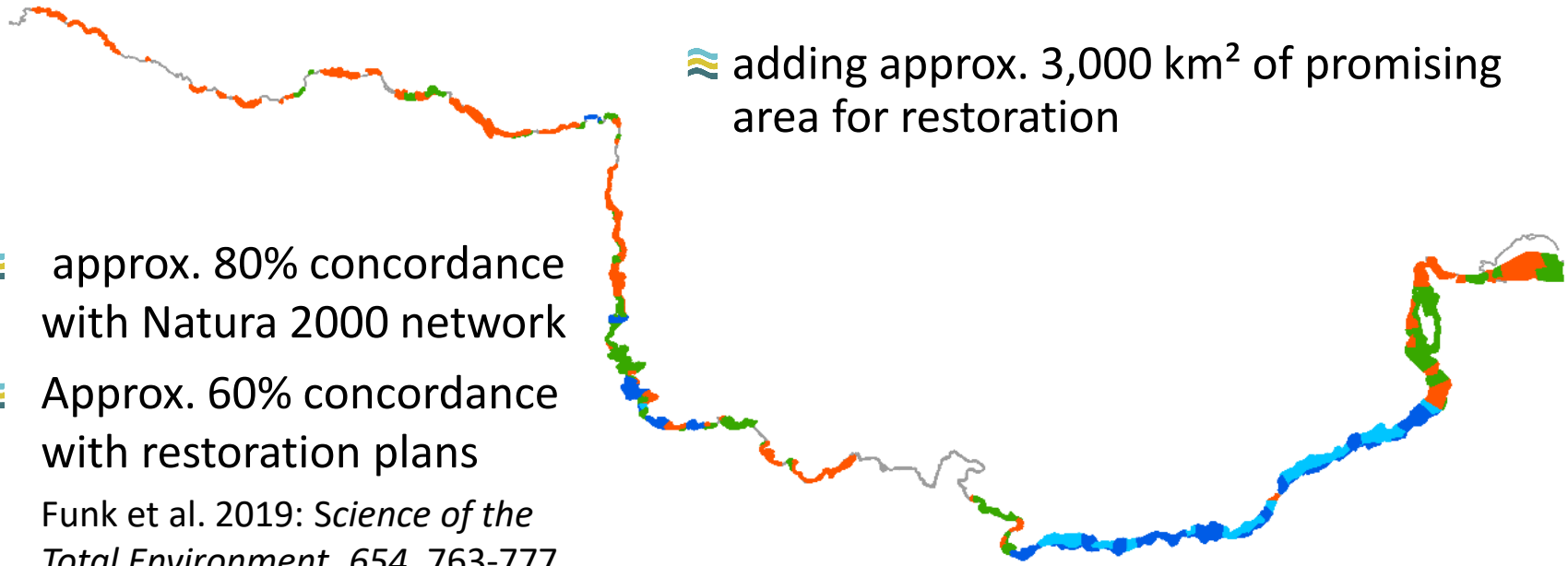


restoration





mitigation



- adding approx. 3,000 km² of promising area for restoration

- approx. 80% concordance with Natura 2000 network
- Approx. 60% concordance with restoration plans
- Funk et al. 2019: *Science of the Total Environment*, *654*, 763-777.

...but what do we need to implement it?

- A strong Water Framework Directive
- Intensive coordination on macro-regional level – both in governance, science and management
- Long term programmes and funding schemes for implementation and operation
- Increased protection status in FFH- Directive

Without coordination and implementation on European and basin-wide level the European Sturgeon Action plan ist just paper....

....and extinction is forever!