

RESULTS ON BALTIC STURGEON BYCATCHES IN LITHUANIAN COASTAL FISHERY

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Artificial fish breeding and restocking

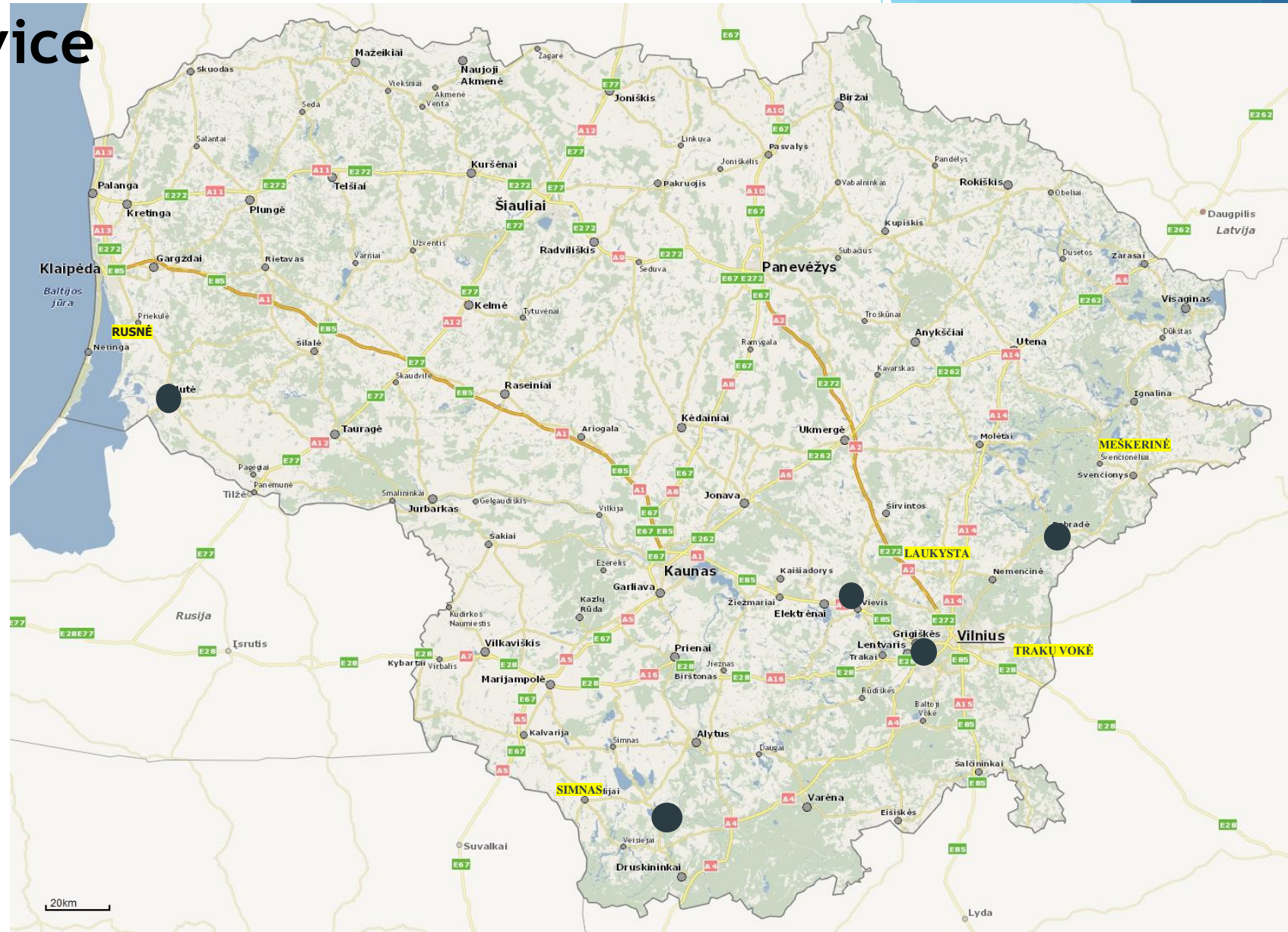
Lithuanian Ministry of Agriculture is the major manager of fish resources of the state's water bodies. Under the supervision of two ministries - the Ministry of Agriculture and the Ministry of Environment the Fisheries service undertakes the function of **artificial fish breeding and restocking.**



The Fisheries Service is a state institution of the Republic of Lithuania which implements European Union's Common Fisheries Policy, in fields of conservation, restoration of fish stocks and sea fisheries control.

The Fisheries Service

Pisciculture department of Lithuanian Fisheries Service consists of Western, Southern, and Eastern Region Fish Breeding Units



Pisciculture Strategy for 2022-2026

Restoration of fish migration routes

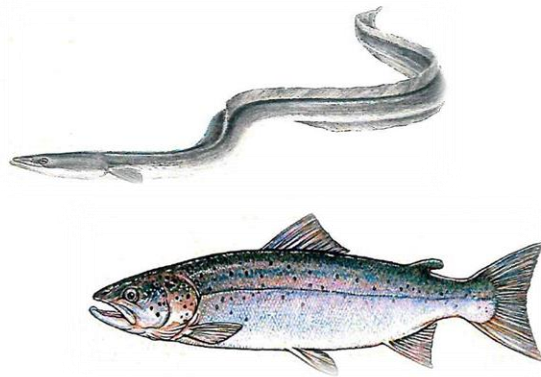
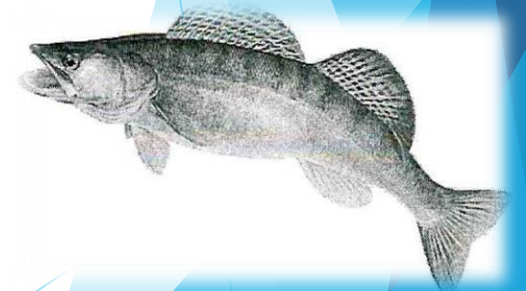
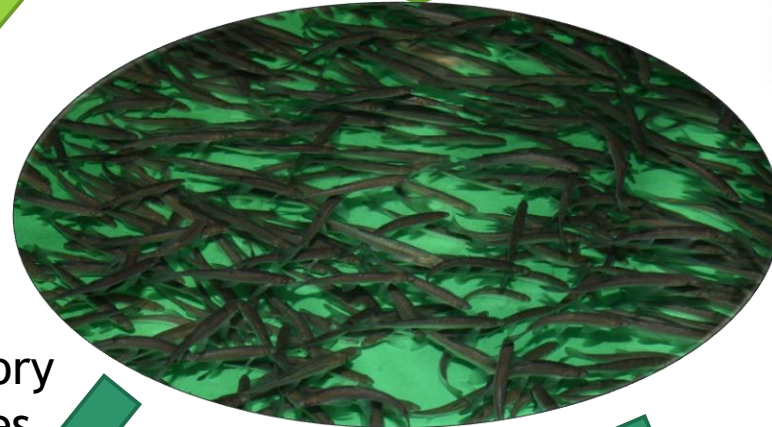
Deploying renewable energy sources in pisciculture units

Restoring fish stocks

Rare and endangered species

Migratory species

Predatory species



Reintroduction of *A. oxyrinchus* in Lithuania

Reintroduction of *A. oxyrinchus* in Lithuania was carried out on the basis of:

- Reintroduction program for sturgeon (*Acipenser oxyrinchus oxyrinchus* Mitchill) in Lithuanian waters (2010);
- HELCOM Action Plan for the protection and recovery of Baltic sturgeon *Acipenser oxyrinchus oxyrinchus* in the Baltic Sea area (2019);
- The program for the restoration of the *A. oxyrinchus* population in Lithuania in 2022-2026.

Lithuanian Baltic sturgeon restoration efforts

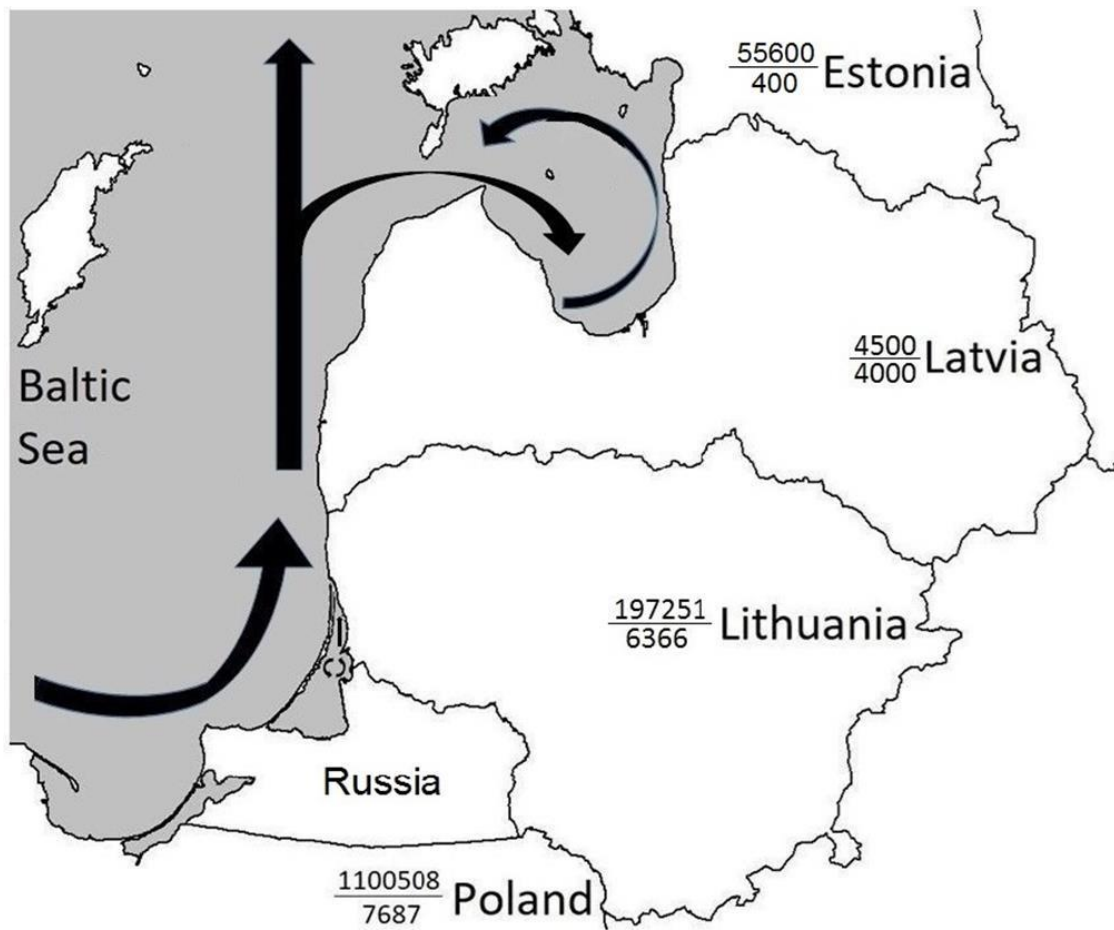


Fig 2. Atlantic sturgeon restoration in the eastern Baltic Sea 2011-2018: number of stocked sturgeons (upper number), number of tagged sturgeons (lower number), and dominant currents in the eastern part of the Baltic Sea and the Curonian Lagoon (redrawn from Leppäranta, & Myrberg, 2009). Survey-based assessment of recapture data for Atlantic sturgeon (*Acipenser oxyrinchus*) in Lithuanian fisheries (Stakėnas S., Pilinkovskij A., and Poviliūnas J.)

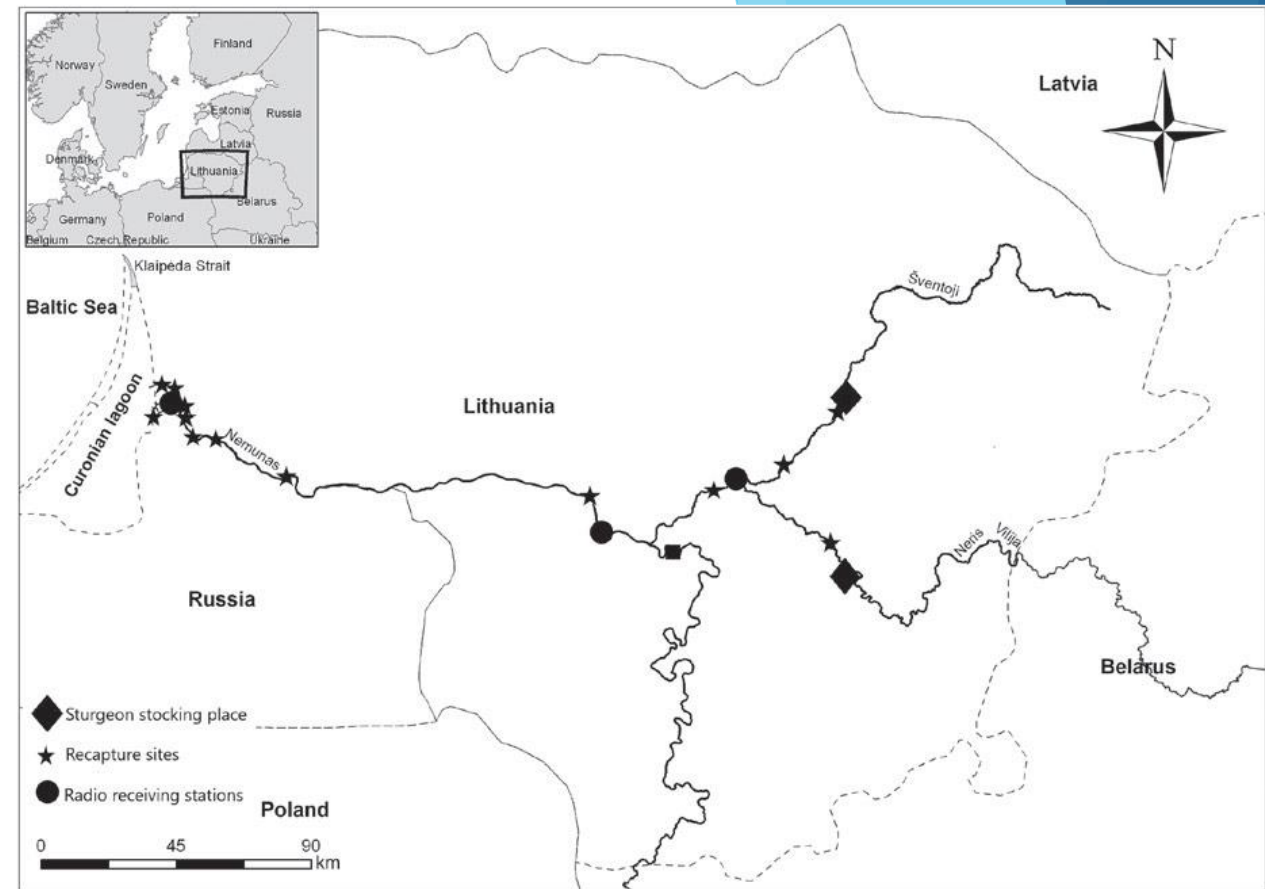


Fig 1. Stocking sites of tagged sturgeon; locations of automated radio listening stations and recapture points of tagged sturgeons in rivers (Stakėnas S., Pilinkovskij A., 2019)

Stocking sturgeon in rivers I

1. The selection of suitable rivers and habitats for sturgeon stocking has been based on historical, ecological, and hydro morphological criteria.

2. The ecological status of rivers is assessed by the values of physico-chemical, biological and hydromorphological quality indicators and the values of the Lithuanian Fish Index (LFI).

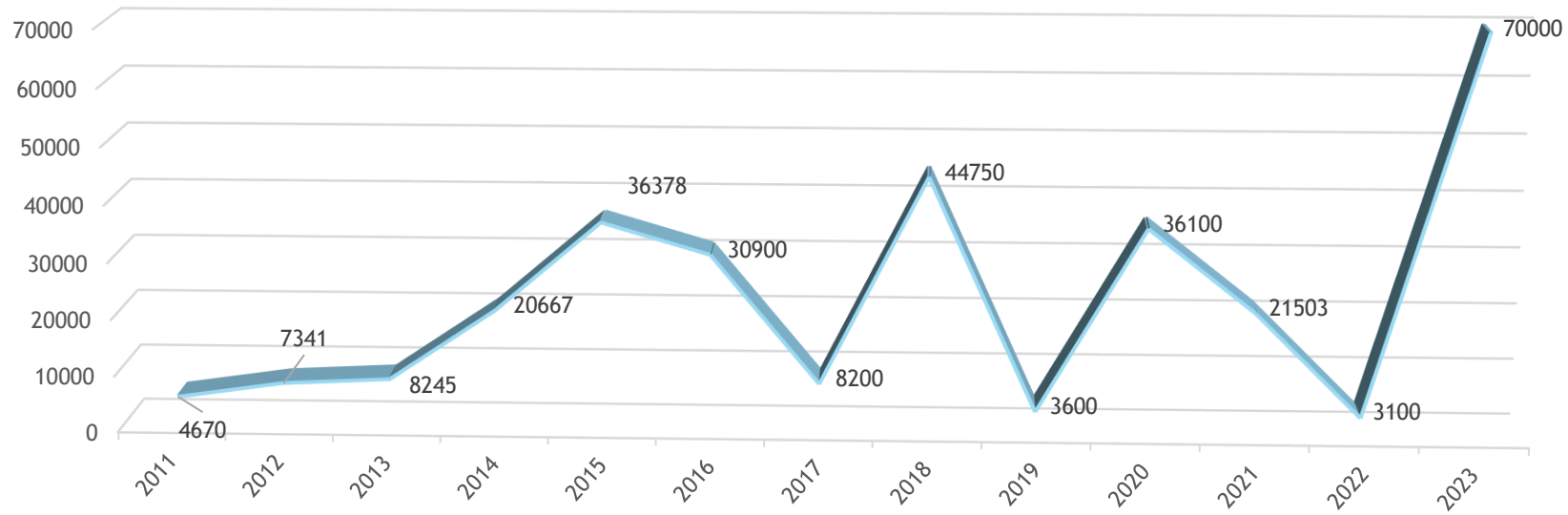


Indicators of ecological status of rivers	Nemunas	Neris	Šventoji
Ecological status	Medium	Good	Good
Physico-chemical status	Good-medium	Good	Good
Hydromorphological status	Good-medium	Good	Medium
Biological status	Good-medium	Good	Good

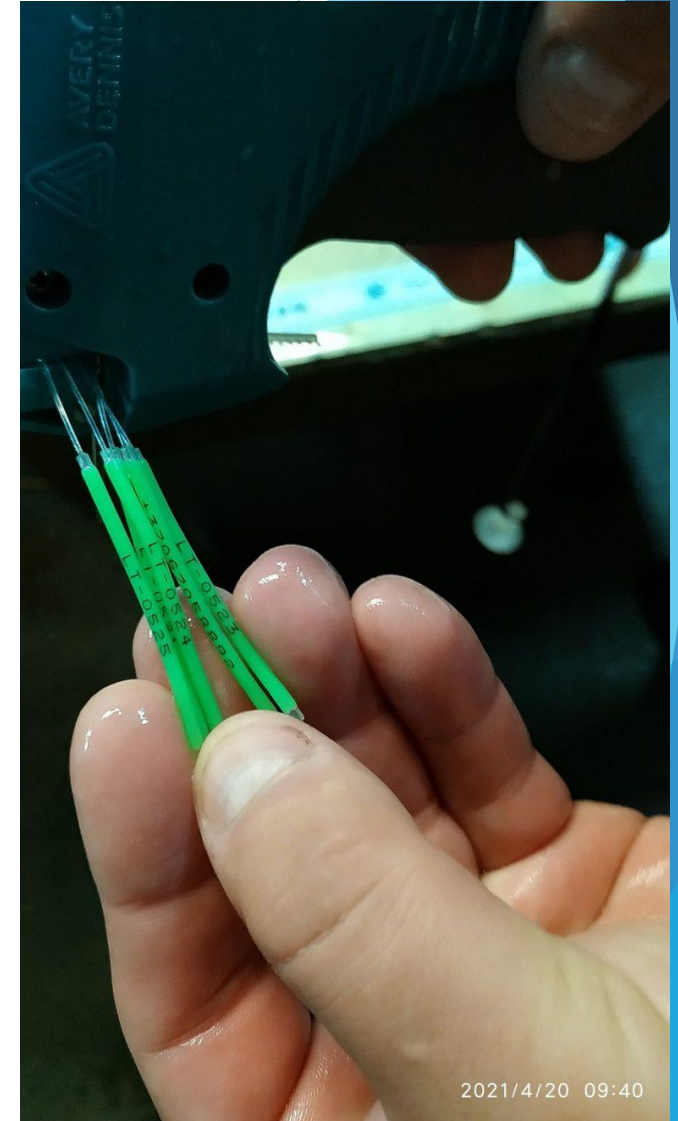
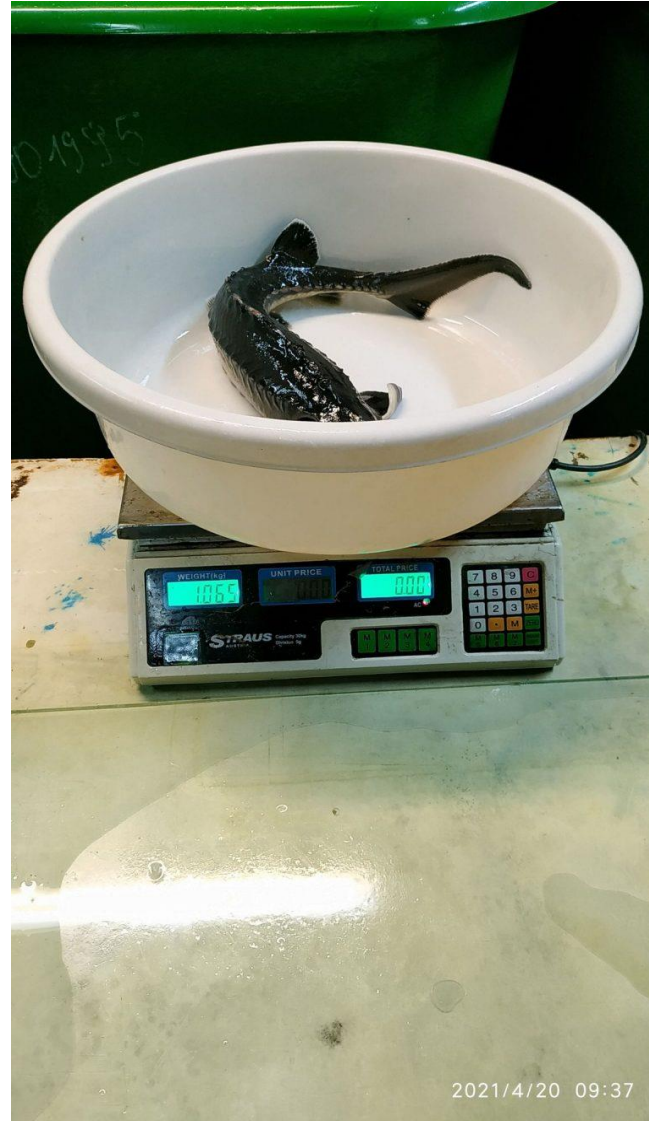
3. It is planned to carry out sturgeon stocking at 3 sites of the Neris River and 2 sites of the Šventoji River.

Release

Individuals



Sturgeon tagging



Sturgeon by-catch



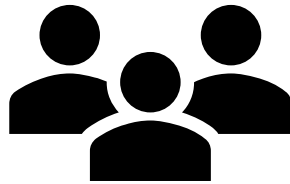
Evaluation of conventional sturgeon tagging study



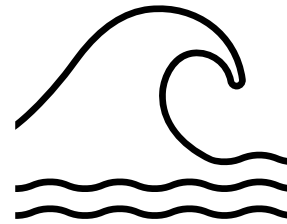
18
questions



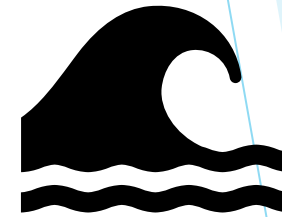
Phone
survey
/ 5
attempts



94 registered
fisheries /
86 operational /
78 contacts /
60 questioned

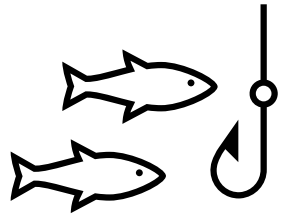


78 % of the
total fish
landings - the
Curonian
Lagoon
fisheries
representation

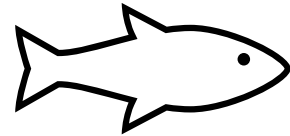


91.3 % of the
total fish
landings - the
Baltic Sea
coastal
fisheries
representation

Catches of Sturgeons in the Curonian Lagoon



Majority of fisheries (68.2%) caught their first sturgeon during 2011-2013



578 sturgeons (90 tagged / 488 untagged) caught during 2014-2018

Overall sturgeon bycatch rate was 1/8 576 kg

In 2018, at least 107 sturgeons were caught, while the year before yielded a slightly lower catch of 92 sturgeons. Of these, 158 specimens were caught with gill nets and 41 with fyke nets.

The sturgeon bycatch in fyke nets over the 2017-2018 period (1/15769 kg) was more than half of gill nets (1/8039 kg).

The overall sturgeon bycatch for the lagoon being 1/10405 kg and 1/8040 kg in 2017 and 2018, respectively.

Catches of Sturgeons in the Coastal Areas of the Baltic Sea



Majority of fisheries (63.3 %) caught their first sturgeon during 2011-2013.

Some fisheries (12.7 %) caught their first sturgeons even before the Atlantic sturgeon restoration program started.

415 sturgeons (57 tagged / 358 untagged) caught during 2014-2018.

Overall sturgeon bycatch rate was 1/5 197 kg .

In 2018, a total of at least 58 sturgeons were caught, while in 2017 yielded a higher catch of 71 sturgeons, though total fish landings were much higher in 2018. Of these, 103 sturgeons were caught with gill nets and 26 with fyke nets.

The overall sturgeon bycatch for coastal sea was 1/7069 kg and 1/10289 kg in 2017 and 2018 respectively.

In the Baltic Sea only 9.4 % of fisheries were certain that sturgeon bycatch was increasing, while the majority stated the same sturgeon numbers (64.0 %) or a decreasing bycatch (23.7 %).

Autumn was the best season in the Baltic Sea to catch sturgeon for 72.3 % fisheries with only one fishery indicating wintertime.

In the Baltic Sea, most caught sturgeons weighed from 1.0-2.0 kg with the biggest specimen recorded being ~12 kg.



THANK YOU!