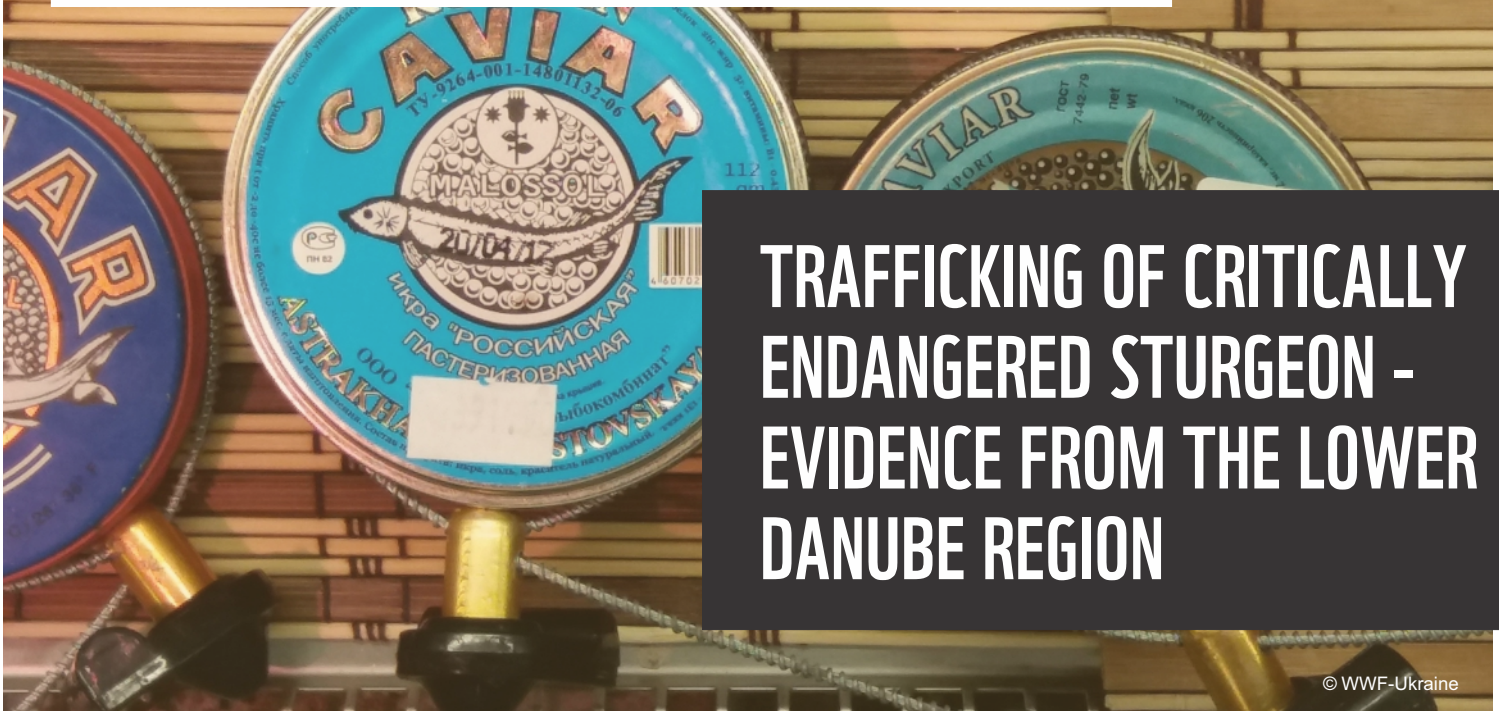




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Leibniz Institute for Zoo and Wildlife Research
IN THE FORSCHUNGSVERBUND BERLIN E.V.



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This activity was part of the LIFE project "Sustainable protection of lower Danube sturgeons by preventing and counteracting poaching and illegal wildlife trade" (LIFE FOR DANUBE STURGEONS, LIFE 15 GIE/AT/001004), focused on Bulgaria, Romania, Serbia and Ukraine. WWF and project partners gratefully acknowledge funding support from the European Commission. All content and opinions expressed in this publication are solely those of WWF and project partners.

A market survey of sturgeon meat and caviar demonstrates the occurrence of sturgeon trafficking in the Lower Danube Region, specifically in Bulgaria, Romania, Serbia and Ukraine, and provides first-time evidence of the scale of poaching and illegal trade of wild-caught sturgeons. Illegal fishing and trade in sturgeon products (meat and caviar) are cited as significant threats to many sturgeon populations worldwide. However, until now, substantiated data has rarely been available.

A unique compilation of evidence revealed the threat of wildlife trafficking on the sturgeon populations of the Lower Danube Region by combining: **(1) official data on illegal fishing activities from competent authorities;** **(2) the results of a large-scale market survey and forensic analysis of meat and caviar samples**

In all four countries surveyed, fishing and trade of sturgeon was illegal in the timeframe of the survey (with the exception of Serbia, where the fishing and trade of sterlet larger than 40 cm was legal until 1st January 2019).

The survey ascertained whether the sturgeon products obtained were in fact from legal sources, or whether products from wild sturgeons were being sold illegally. The survey also examined whether CITES regulations (such as mandatory labels on caviar containers, indicating the species, source and geographical origin of sturgeon) were being respected.

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Sturgeon meat sample, Serbia

METHODOLOGIES

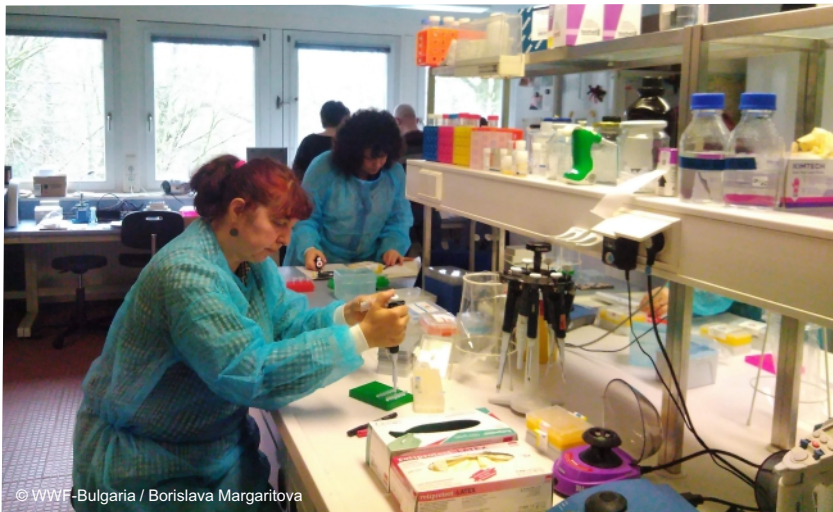
1. MARKET SURVEY SAMPLE

COLLECTION: In all four countries surveyed, a total of 145 sturgeon samples were procured from October 2016 to July 2020 (87 meat samples and 58 caviar samples). The aim was to map the current market situation in the region, with a broad variety of retailers. The samples were then sent to Germany for forensic analysis.

2. DNA AND STABLE ISOTOPE

ANALYSIS: The samples were analyzed

genetically in order to identify the sturgeon species or hybrids they derived from. They were also analyzed for isotope composition in order to assess whether samples were from wild or aquaculture sources. In several cases, also the geographical origin could be determined. This exceptional combination of two forensic methods enabled a first-time insight into the wide range of illegal activities targeting sturgeons. Details of how these were performed are provided in the report.



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DNA analysis

3. ANALYSIS OF AUTHORITY DATA ON STURGEON TRAFFICKING: Official data was compiled from a range of sources on wildlife trafficking in all four countries, mainly from competent authorities (including police forces, fishing and CITES authorities). For this survey, reported incidents between January 2016 and December 2020 were considered.



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Components highlighted for replication:

combination of data from agencies and market surveys; combination of information on poaching and illegal trade; collection of various samples from diverse retailers; undercover approach; combination of genetic and isotope analysis to determine both species (incl. if sturgeon or just sold as such) and source (wild-caught or captive-bred).

RESULTS AND CONCLUSIONS

The survey provides evidence that illegal fishing and trade in wild sturgeon products is happening on a regional level. A breakdown of the results is as follows:

- The isotope analysis proved that in all four countries, wild sturgeon products were sold, with 27 out of all 145 samples (19%) proving to be wild. Of these illegally sourced samples, 25 were meat and 2 were caviar.
- In addition, 17 samples of caviar (12% of all samples and 29% of all caviar samples) were sold not in compliance with mandatory CITES regulations. This was due to illegal import into the country of purchase, being sold without mandatory CITES labelling, and having incorrect codes for species or country of origin.
- In several cases, information provided by suppliers (salespersons, waiters, etc.) was deceptive. In one case, meat sold as farmed was proven to be wild (“white-washing”). In several other cases, the reverse was true, and products declared as wild proved to be farmed (“black-washing”). This points to a worrying consumer demand for illegal, wild-caught sturgeon products. Also, meat from European catfish or Nile perch was sold as sturgeon.
- Additionally, 214 cases of illegal incidents were recorded in Romania (82 cases), Bulgaria (82 cases) and Ukraine (50 cases). No data could be obtained for Serbia. These incidents included seizures of illegal fishing gear for targeting sturgeon, seizures of actual sturgeon in boats or nets of fishermen, transportation of poached sturgeon, and sale of caviar or meat of poached sturgeon. In Bulgaria alone 594 illegal hook lines were detected, adding up to more than 23.5km.

RECOMMENDATIONS

The report includes the following (non-exhaustive) list of recommendations:

- Enhanced controls of domestic trade.** These must cover all parts of the trade chain and different types of retailers, and should entail inspections where there is reasonable suspicion, which should be random and unannounced.
- Control of CITES caviar labelling requirements.** Enforcement agencies in EU Member States need to make sure that any caviar container on the domestic market is labelled correctly. Recommendations for better labelling are also provided.
- Inter-agency cooperation and coordination.** A number of different law enforcement agencies are responsible for the control of different parts of the trade chain. Close cooperation is essential, and while national authorities have started to establish formal or informal groups, this should be expanded.
- Increased border controls.** Relevant national enforcement authorities should ensure that CITES provisions of sturgeon products leaving or entering their country are observed.
- State-of-the-art forensic analysis.** There is a need for consistent controls of sturgeons and their products, using genetic and isotope analysis, in order to help detect illegal harvesting and trade.
- More and recurrent market surveys.** Finally, it is strongly recommended that this kind of survey be repeated in the Lower Danube region to help evaluate whether or not the situation changes, and if the measures taken have had a positive effect. Also, replication in other key sturgeon markets is essential.



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