



LIFE-Boat4Sturgeon

Working Report 2024



PARTNERS



CO-FINANCIERS



Legal Notice

LIFE-Boat4Sturgeon is under the project lead of the BOKU University. The majority of the funding (67%) is provided by the EU through the LIFE programme. Additional project partners are the Austrian Federal Ministry of Agriculture, Forestry, Regions and Water Management, Vienna, the City of Vienna, WWF Romania, WWF Ukraine, WWF Bulgaria, Revivo, MATE AKI HAKI, the Federal Agency for Water Management and the Haus des Meeres. Co-Financiers of the project are the Hungarian Ministry "Miniszterelnökség", the Slovenian Ministry for Natural Resources "Ministrstvo za naravne vire in prostor", Niederösterreichischer Landesfischereiverband, Security KAG, Oberösterreichischer Landesfischereiverband Österreichische Fischereigesellschaft 1880, Verband der Österreichischen Arbeiter-Fischereivereine, Wiener Fischereiausschuss, Fischereirevierverband I, Fischereirevierverband II, Fischereirevier Donau C, Nationalpark Donau-Auen, Marktgemeinde Drösing, Municipality of Apače and several smaller investors.

Authors

Thomas Friedrich, Heidrun Eichhorn, Jakob Neuburg

Contact Coordinating Beneficiary

DI Dr. Thomas Friedrich

BOKU University

Department of Water, Atmosphere and Environment

Institute of Hydrobiology and Aquatic Ecosystem Management

Gregor-Mendel-Straße 33, 1180 Vienna

Mail: lb4s@boku.ac.at

Website: <https://lb4sturgeon.eu/>

Instagram: sturgeon_conservation

YouTube: LIFE-Boat4Sturgeon



With the contribution of the LIFE-Programme of the European Union



| | |
|--|----|
| Contents | |
| Project description | 4 |
| WP 1 – Project management..... | 5 |
| WP 2 – Ex situ AT..... | 6 |
| T.2.1 Construction of the LIFE-Boat | 6 |
| T.2.2 Collection of broodstock..... | 9 |
| T.2.3 Rearing & reproduction & T 2.4 rearing & release..... | 12 |
| WP 3 – Ex situ HU | 15 |
| T.3.1 Maintenance of backup broodstock holding & construction of juvenile rearing system | 15 |
| T.3.2 Collection of broodstock..... | 18 |
| WP 4 – Ex situ SI | 19 |
| T.4.1 Construction of the hatchery container..... | 19 |
| WP 5 – Monitoring | 20 |
| T.5.1. Sturgeon Monitoring Network..... | 20 |
| T.5.2 eDNA survey | 21 |
| T.5.3 Population assessment-capture- recapture..... | 21 |
| WP 6 – In situ conservation | 25 |
| WP 7 – Public relation & dissemination..... | 28 |
| T.7.1 PR Strategy | 28 |
| T.7.2 Media releases & products | 28 |
| T.7.3 Events & visitor information..... | 37 |
| T.7.4 Scientific dissemination | 42 |
| WP 8 – Sustainability | 44 |

Project description

The project LIFE-Boat4Sturgeon builds upon the methods and results of the LIFE-Sterlet project. From 2022 to 2030, the project has the aim to establish a genetically diverse captive broodstock of mature animals for all four remaining Danube sturgeon species Russian sturgeon, sterlet, stellate sturgeon and beluga sturgeon in at least two locations (AT and HU). Those stocks will be maintained over the long-term to preserve the gene pool and to support all four species with genetically diverse, autochthonous and fit juveniles. In Austria, a floating rearing station in the Danube in the centre of Vienna will be built in addition to the existing LIFE-Sterlet hatchery container. A similar hatchery container will be built in Apače in Slovenia, next to the Mura River. The broodstock of all species will be constantly expanded through different genotypes and the reproduction through a studbook enables the greatest possible genetic diversity of the offspring. The goal is to release a total 1.6 million juveniles within the project time.

Existing monitoring efforts are to be continued and intensified to document the development of the populations. Furthermore, an investigation along the whole Danube and selected tributaries for possible residual populations, will be carried out. For the whole Danube Region and other European catchments, a long-term database and manual for ex situ actions and monitoring in sturgeon conservation will be provided. Further objectives are the coordination with fishing authorities and communities along the Lower Danube and Black Sea to reduce IUU (illegal, undocumented, unreported) fishing and to raise public awareness.



WP 1 – Project management

The project partnership between PSBCSAS (Centrum biologie rastlin a biodiversity SAV, v.v.i.) has been terminated. The work packages affected by this change are taken over by the COO BOKU and partially subcontracted to the Slovak Angler`s Association.

The zoo “Haus des Meeres” has joined the project as a new partner and renovated an aquarium where juvenile sturgeons are raised until becoming part of the parent broodstock in one of the projects ponds. This collaboration notably contributes the public awareness and outreach goals of the project, as more than 900,000 people visit the Haus des Meeres annually.

On the 29th of June, a meeting with all project partners took place at the Inselinfo on the Danube Island Vienna.

WP 2 – Ex situ AT

T.2.1 Construction of the LIFE-Boat

Ship conversion

For the conversion of the ship MS Negrelli into a sturgeon hatchery, an EU-wide tender was carried out based on the best bidder principle. The ÖSWAG shipyard in Linz received the order. The entire procurement process was supervised and examined by the law firm E+H. The ship was transferred to the shipyard on May 22, 2024, and extensive renovation and conversion work has been carried out since then. First, the ship was taken ashore on the slipway, the hull was cleaned and areas of corrosion were removed (Figure 1, Figure 2, Figure 3). The former exhibition rooms on the ship were dismantled in order to be able to renovate the substructure (Figure 4). It became apparent that the substructure was severely corroded in places and required more renovation work than was foreseeable in the planning phase (Figure 5, Figure 6). To date, the shipyard has been awarded two additional contracts for the necessary additional work, which include the following positions:

- replacing the waste holding tank
- replacing the drinking water tank
- cleaning the fuel tank
- installing ballast tanks
- installing additional pumps and pipes
- installing electrical cables and water pipes

Furthermore, the Schottel drives and the propeller screw were repaired and a crack in the outer skin of the ship was repaired. The progress of the work is continually monitored and documented by the construction supervision. The need for this additional work was confirmed by the construction supervision.

In connection with the conversion of the MS Negrelli, the planning and tender results as well as the additional works needed led to changes in the detailed items compared to the cost estimate in the funding application. In total, the estimated total costs for the conversion will be slightly exceeded. But all changes are in line with the project objectives and are necessary to achieve the objectives. The project objectives are not jeopardized by these changes.



Figure 1: Transfer of the ship to the shipyard on May 22, 2024 (© Zinner).



Figure 2: In the shipyard, the MS Negrelli was lifted onto the slipway (© Zinner).



Figure 3: Cleaning the ship's hull from shells and corrosion (© Zinner).



Figure 4: Dismantling of the ship's deck (© Zinner).



Figure 5: After the superstructure was removed, severe corrosion damage was found under the cargo holds (© Semrad).



Figure 6: Renovation of the substructure under the cargo hold (© Zinner).

Aquaculture

The company Kunststoff Spranger GmbH was commissioned to manufacture the aquaculture systems for the LIFE Boat. Since Kunststoff Spranger GmbH had also carried out the planning of the aquaculture facilities of the LIFE-Sterlet project, an EU-wide market survey as required by public procurement law was carried out. It became apparent that only Kunststoff Spranger GmbH met the criteria necessary for the project and could provide the required services. The entire procurement process was supervised and examined by the law firm E+H. Kunststoff Spranger GmbH has started manufacturing the aquaculture systems and the containers for the fish farming have already been delivered by a subcontractor (Figure 7, Figure 8). Viadonau together with the COO BOKU visited Kunststoff Spranger GmbH in mid-October to check on the progress of the aquaculture system.



Figure 7: Container for the future Incubation and early rearing system to be located above the aft cargo hold (© Kunststoff Spranger GmbH).



Figure 8: In October, all aquaculture components in the container were prefabricated and the piping was 60% completed (© Kunststoff Spranger GmbH).

Construction supervision

The civil engineering office “Kanzlei Anzböck” was commissioned with the local construction supervision for the control and inspection of the ship conversion.

Mooring point

There were in depth discussions regarding the mooring point where the ship is to be moored for the duration of the project. The design of the forecourt was determined, as were the electricity and water connections required for the ship.

In 2024, the planning of the mooring point was completed and all necessary permits have been obtained. Construction work has already been awarded and the construction work started on October 16th. The work is expected to be completed by the end of January.

T.2.2 Collection of broodstock

In cooperation with the IUCN S.O.S. STURGEX project (lead by BOKU) adult beluga (*Huso huso*), stellate (*Acipenser stellatus*) and Russian sturgeons (*Acipenser gueldenstaedtii*) were acquired from the Romanian caviar farm “Danube Caviar” near the Danube Delta in 2024, after verification of origin, sex and pedigree. A total of 224 samples namely, 152 beluga sturgeon,

54 Russian sturgeon and 18 stellate sturgeon, were analyzed. The LIFE-Boat4Sturgeon team transported the sturgeons to the project facilities in Vienna and Hungary in a specially designed trailer during a 22-hour journey (Figure 9). Currently, eight stellate sturgeons, 13 Russian sturgeons and 16 beluga sturgeons are part of the mature broodstock (Table 1). Multiple sub-adults have also been obtained from multiple sources. All subadult individuals will reach maturity within the projects duration as opposed to the juvenile individuals which will reach maturity after the project ends. Additional options for purchasing mature sturgeons of all three species are being investigated.

For the potamodromous species, the sterlet, the captive broodstock currently includes more than 1,200 individuals from more than 20 families.

WWF Ukraine collected samples of Russian sturgeon and stellate sturgeon given by the TOV “Odeskyi osetrynnyskyi kompleks” (limited liability company under the law of Ukraine “Odesa sturgeon complex”) and sterlet given by the Farm Enterprise “Ishkhan”. After receiving a CITES certificate the samples will be send to the Leibniz Institute for Zoo and Wildlife Research for genetic analyses on their origin.

Table 1: Overview of acquired broodstock of the anadromous species

| species | sex | mature | subadult | juvenile |
|--|---------|--------|----------|----------|
| Stellate sturgeon (<i>A. stellatus</i>) | ♂ | 2 | - | - |
| Stellate sturgeon (<i>A. stellatus</i>) | ♀ | 6 | - | - |
| Russian sturgeon (<i>A. gueldenstaedtii</i>) | ♂ | 2 | 40 | |
| Russian sturgeon (<i>A. gueldenstaedtii</i>) | ♀ | 11 | - | 34 |
| Russian sturgeon (<i>A. gueldenstaedtii</i>) | unknown | - | - | 160 |
| Beluga sturgeon (<i>H. huso</i>) | ♂ | 14 | 13 | 25 |
| Beluga sturgeon (<i>H. huso</i>) | ♀ | 2 | 11 | 21 |
| Beluga sturgeon (<i>H. huso</i>) | unknown | - | - | 202 |



Figure 9: Russian sturgeon broodstock from Romania kept in one of the ponds in Austria and to be transferred onto the LIFE-Boat upon completion ©BOKU IHG

Table 2: Release data of sterlet in 2024, showing the release numbers of the different size classes and used tagging methods. PIT (Passive Integrated Transponder), Floy (T-bar anchor tags), telemetry (active tags sending a radio or acoustic signal), VIE (Visible Implant Elastomer)

| 2024 LB4S | larvae | feeding fry | 3 -5 cm | 5 -10 cm | 10 -15 cm | 15 -20 cm | 20 -30 cm | 30 -40 cm | 40-50 cm | 50 -60 cm | 60 -70 cm | 70 -80 cm | 80 -90 cm | 90 -100 cm | >100 cm | TOTAL | PIT | Floy | Telemetry | VIE |
|-------------------------------------|-----------------------|----------------------|----------------------|---------------------|-------------------|---------------------|-------------------|-------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------------|---------------------|-----------------|-----------------|---------------------|
| BOKU | | | | | | | | | | | | | | | | | | | | |
| Wachau | 54800 | 7680 | 30580 | 710 | | 241 | 282 | 27 | 2 | | | | | | | 94322 | 375 | | | 444 |
| Altenwörth - Greifenstein | | | | | | | | | | | | | | | | 0 | | | | |
| Greifenstein-Freudenau | 8.000 | 960 | 3450 | 900 | 40 | 50 | 130 | 30 | | | | | | | | 13560 | 82 | | | 180 |
| Nationalpark Donauauen | 50530 | 11900 | 7882 | 1030 | 903 | 372 | 276 | 110 | 1 | | | | | | | 73004 | 562 | | | 1262 |
| Gabčíkovo | 7000 | | | | | | | | | | | | | | | 7000 | | | | |
| March | | | | | | 50 | 98 | | | | | | | | | 148 | 148 | | | 148 |
| Asten | | | | | | 300 | | | | | | | | | | 300 | | | | 300 |
| Traisen | | | 3500 | 350 | | | | | | | | | | | | 3850 | | | | |
| TOTAL | 120330 | 20540 | 45412 | 2990 | 943 | 1013 | 786 | 167 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 192184 | 1167 | 0 | 0 | 2334 |
| HAKI | | | | | | | | | | | | | | | | | | | | |
| Körös - Békésszentandrás dam | 20.000 | | | | | | | | | | | | | | | 20000 | | | | |
| Körös - Gyomaendrőd bridge | 15.000 | | | | | | | | | | | | | | | 15000 | | | | |
| Sebes Körös-Kettős Körös confluence | 15.000 | | | | | | | | | | | | | | | 15000 | | | | |
| TOTAL | 50.000 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 50.000 | - | - | - | - |
| TOTAL | <u>170.330</u> | <u>20.540</u> | <u>45.412</u> | <u>2.990</u> | <u>943</u> | <u>1.013</u> | <u>786</u> | <u>167</u> | <u>3</u> | <u>=</u> | <u>=</u> | <u>=</u> | <u>=</u> | <u>=</u> | <u>=</u> | <u>242.184</u> | <u>1.167</u> | <u>=</u> | <u>=</u> | <u>2.334</u> |



T.2.3 Rearing & reproduction & T 2.4 rearing & release

Due to the record catches during net sampling in spring (see Chapter T.5.3 Population assessment-capture- recapture), BOKU was able to reproduce 7 females, resulting in a record year regarding rearing and releases of sterlet.

Several hundred fish of the different families of the 2024 year-class are still kept in Austrian facilities for further releases and as future broodstock.

MATE AKI HAKI provided ~150,000 fertilized sterlets eggs to BOKU, for rearing and release in the frame of the project, which translated to the release of 62,000 larvae, 11,900 feeding fry and 5,200 small juveniles.

Over 242,000 sterlets were released this year, mor than a third of the planned total of 700,000 to be achieved by 2030 (Table 2).

About 192,000 were stocked in the Austrian Danube and tributaries. The fish were incubated and reared in the container hatchery stemming from the predecessor LIFE-Sterlet on the Viennese Danube Island. Roughly 1,170 individuals were tagged with PIT-tags and 2,300 individuals were marked with blue VIE (Visible implant elastomer) (Figure 11).



Figure 10: Sterlet release in the Upper Danube Nationalpark Donau-Auen. ©BOKU IHG



Figure 11: Color coded sterlet with blue VIE. ©BOKU IHG

Together with the project IUCN S.O.S. STURGEX, Russian and stellate sturgeon larvae were obtained from the caviar farm “Danube Caviar” and transported by Romanian WWF project members (Figure 12, Figure 13) and distributed between the COO’s LIFE-Sterlet hatchery container, the BAW’s hatchery Kreuzstein and the hatchery of the BEN MATE-HAKI. In collaboration, LIFE-Boat4Sturgeon released about 10,000 larvae and small young of the year (YoY) Russian sturgeons and over 6,000 small YoY stellate sturgeons into the Danube in the Nationalpark Donauauen (Figure 10, Figure 14). Most of the remaining individuals, living now in the hatchery container and the Hatchery Kreuzstein in Austria as well as HAKI in Hungary (Figure 14), will be released in the Lower Danube below the two hydropower plants at the Iron Gate early 2025, while a small number will stay in the project facilities as future broodstock. In April, 677 one year old (1+) Russian sturgeons were purchased after genetic verification of the origin from the same farm in project IUCN S.O.S. STURGEX, tagged with PIT & VIE and released to the Romanian Danube.

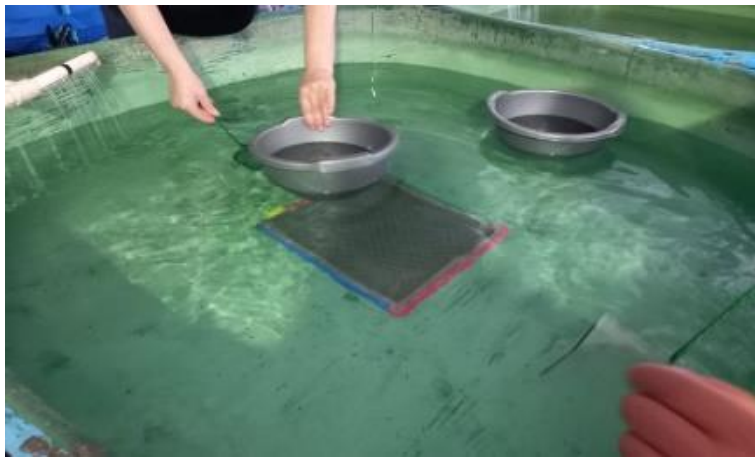


Figure 12: Collection of the Russian and stellate sturgeon larvae in Romania © George Caracas



Figure 13: Transport of the sturgeon larvae from Romania to Austria © George Caracas

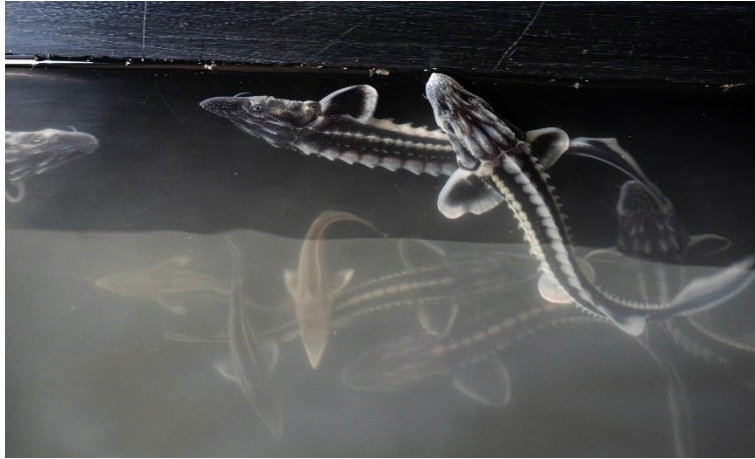


Figure 14: Russian sturgeons and sterlets in the Austrian hatchery. ©BOKU IHG

An additional release, in cooperation between IUCN S.O.S. STURGEX and LIFE-Boat4Sturgeon, took place in Isaccea in August 2024. IUCN S.O.S. STURGEX provided 500 PIT tags and VIE for YoY release of stellate and Russian sturgeons by the Research and Development Institute for Aquatic Ecology, Fishing and Aquaculture - Galati (RDIAEFA), the tagging being done by the BEN WWF Romania, thus contributing to the release numbers of the LIFE-Boat4Sturgeon project. A total of 1310 fingerlings have been stocked, 370 Russian sturgeons and 940 stellate sturgeons. All sturgeon specimens were marked with blue-colored elastomer paint (VIE). Of these, an additional 350 Russian sturgeon and 134 stellate were PIT-tagged. Beside the organizers, representatives of NAFA, Ministry of Agriculture, Academy of Agricultural and Forestry Sciences "Gheorghe Ionescu-Sisești", Operational Fishery Programme, Danube Delta National Institute, Border Police and Romanian Police attended the event (Figure 15).



Figure 15: WWF Romania representative Cristina Munteanu being interviewed at the release event in Isaccea. © Alexandru Fratea

WP 3 – Ex situ HU

T.3.1 Maintenance of backup broodstock holding & construction of juvenile rearing system

The preservation of sturgeon species, a vital component of aquatic biodiversity, requires ongoing efforts to ensure their survival. At the sturgeon *ex-situ* site in Hungary, a dedicated team continuously monitors and maintains optimal conditions for these ancient fish. Through regular maintenance and careful management, this site plays a crucial role in the conservation of sturgeons, providing a suitable environment for their growth, health, and sustainability.

At the sturgeon *ex-situ* site in Hungary, continuous maintenance works are carried out to ensure the well-being of the sturgeon population. The tasks include regular feeding, water quality monitoring, and fish health assessments. Additionally, the Hungarian University of Agriculture and Life Sciences (MATE), Institute for Aquaculture and Environmental Safety (AKI), Research Centre for Fisheries and Aquaculture (HAKI) conducts seasonal harvests in spring and autumn to update batch inventory and evaluate the growth and health of the sturgeon species and the selection of the suitable broodstock for seasonal reproduction. These comprehensive activities are essential for the successful management of the site, supporting both the preservation of the species and ongoing research in different fields, such as aquaculture, biodiversity conservation, and ecosystem management. The broodstock in Hungary consists currently of 4,525 individuals (Table 3).

Table 3: Overview of the current broodstock at the facilities in Hungary.

| Species | Classification | Year class | Total number | Total weight (kg) |
|--|--------------------|------------------|--------------|-------------------|
| Sterlet (<i>A. ruthenus</i>) | mature | 2008-2018 | 208 | 730 |
| Sterlet (<i>A. ruthenus</i>) | subadult | 2017 | 65 | 104 |
| Sterlet (<i>A. ruthenus</i>) | subadult | 2018 | 8 | 21 |
| Sterlet (<i>A. ruthenus</i>) | subadult | 2019 | 124 | 179 |
| Sterlet (<i>A. ruthenus</i>) | subadult | 2020 | 276 | 221 |
| Sterlet (<i>A. ruthenus</i>) | juvenile | 2021 | 12 | 12 |
| Sterlet (<i>A. ruthenus</i>) | juvenile | 2022 | 191 | 337 |
| Sterlet (<i>A. ruthenus</i>) | juvenile | 2023 | 270 | 126 |
| Sterlet (<i>A. ruthenus</i>) | juvenile | 2024 | 350 | 19 |
| Sterlet (<i>A. ruthenus</i>) | juvenile, subadult | 2017-2024 | 1296 | 1019 |
| Russian sturgeon (<i>A. gueldenstaedtii</i>) | subadult | 2014 | 38 | 388 |
| Russian sturgeon (<i>A. gueldenstaedtii</i>) | juvenile | 2020 | 156 | 628 |
| Russian sturgeon (<i>A. gueldenstaedtii</i>) | juvenile | 2024 | 350 | - |
| Russian sturgeon (<i>A. gueldenstaedtii</i>) | juvenile, subadult | 2014, 2020, 2024 | 544 | 1016 |
| Stellate sturgeon (<i>A. stellatus</i>) | juvenile | 2024 | 630 | - |
| Beluga sturgeon (<i>H. huso</i>) | subadult | 2009 | 7 | 314 |

During the spawning season of sterlet, which takes place in March and April in Hungary, the previously selected broodstock were successfully reproduced on April 2, 2024. This process involved carefully managing the breeding conditions to ensure optimal fertilization and survival rates for the offspring, contributing to the sustainable management and conservation of the species.

A total of 7 female sterlets and 6 males were involved in the reproduction process. The average fertilization rate exceeded 75%, resulting in the production of over 250,000 fertilized eggs.

Out of these, 150,000 fertilized eggs were provided to the project coordinator for further rearing and restocking purposes as part of the species conservation efforts. Additionally, 20,000 larvae were retained for *ex-situ* stock maintenance, representing the 2024-year class. Another 50,000 larvae were offered to the local angling association (Association of Fishing Associations of Körösvidék) for release into multiple locations along the Körös River, contributing to population enhancement (Figure 16, Table 2: Release data of sterlet in 2024, showing the release numbers of the different size classes and used tagging methods. PIT (Passive Integrated Transponder), Floy (T-bar anchor tags), telemetry (active tags sending a radio or acoustic signal), VIE (Visible Implant Elastomer) Table 2).

The remaining fertilized eggs and larvae were sold to aquaculture production sites, supporting the commercial sector and ensuring that surplus stock is utilized in a sustainable manner. This comprehensive approach balances conservation efforts with local ecological needs and aquaculture production, ensuring the ongoing viability of sterlet populations both in the wild and in controlled environments.



Figure 16: Sterlet larvae release to the Körös river by the Fishing Associations of Körösvidék.

As part of ongoing efforts to conserve and sustain sturgeon populations, collaborative initiatives between research institutions play a crucial role in genetic diversity and species management. Within the framework of the agreement on the exchange of sturgeon genetic materials (MATE-SZIC/482-1/2023), established between the project coordinator BOKU IHG (Institute of Hydrobiology and Aquatic Ecosystem Management, University of Natural Resources and Life Sciences, Vienna) and project partner MATE AKI HAKI (Research Centre for Fisheries and Aquaculture, Hungarian University of Agriculture and Life Sciences, Gödöllő), significant exchanges of sturgeon genetic materials have taken place. These exchanges aim to promote both *in-situ* and *ex-situ* conservation efforts, enhancing the genetic resilience and future sustainability of sturgeon species across various habitats.

Under the framework agreement on the exchange of sturgeon genetic materials (MATE-SZIC/482-1/2023) between the project coordinator BOKU IHG and project partner MATE AKI HAKI, the following key exchanges were carried out:

- 150,000 fertilized sterlet eggs provided from the sturgeon *ex-situ* site at MATE AKI HAKI to BOKU IHG for further rearing and eventual release into natural habitats. This effort supports the strengthening of wild sterlet populations.
- BOKU IHG has placed two beluga sturgeon and three Russian sturgeon specimens for maintenance to the *ex-situ* pond site of MATE AKI HAKI, ensuring the continuation of parallel conservation efforts of valuable *ex-situ* populations.
- 5,000 Stellate sturgeon larvae and 3,000 Russian sturgeon larvae were transferred from BOKU IHG to the *ex-situ* site of MATE AKI HAKI for preservation of this ecologically significant species.

These exchanges are instrumental in fostering genetic diversity, supporting conservation and enabling the successful restocking and recovery of sturgeon species in their native habitats. By collaborating across national borders, the partners are addressing both conservation challenges and aquaculture opportunities, safeguarding the future of these endangered species.

The development of a state-of-the-art infrastructure for sturgeon conservation and juvenile rearing (training) for restocking purpose plays a pivotal role in ensuring adequate conditions for growth and management of young of the year sturgeon stocks. As part of ongoing efforts to enhance sturgeon rearing capabilities in semi-natural conditions, a public procurement process was initiated for the construction of a specialized juvenile rearing system. This facility is expected to significantly contribute to strengthening endangered sturgeon populations through more efficient restocking programs (Figure 17).

A public procurement for the construction of a sturgeon juvenile rearing system was announced on March 27, 2024. However, the first round of procurement failed due to insufficient competition, as only one tender was submitted. In response, a second call for tenders was published on May 15, 2024, through the online public procurement system. This time, eight tenders were received. After a thorough evaluation process, including a request for additional information from the bidders, only two offers met all the compliance criteria. The contract was awarded to the bidder with the most favorable budget proposal. As a result, RMB-Transz Ltd. was selected for the construction of the sturgeon juvenile rearing system. The construction contract was signed on September 16, 2024, and the project site was officially handed over to RMB-Transz Ltd. on September 20, 2024. Preparations for construction have already commenced. According to the contract, the sturgeon juvenile rearing system is expected to be completed by the end of September 2025, including a one-month trial run. However, RMB-Transz Ltd. has proposed an accelerated timeline, aiming to finalize the project, including the trial period, by the end of May 2025.

This state-of-the-art facility will be integral to the rearing of juvenile sturgeons, supporting conservation programs ultimately contributing to the long-term survival of these endangered Danube sturgeon species.



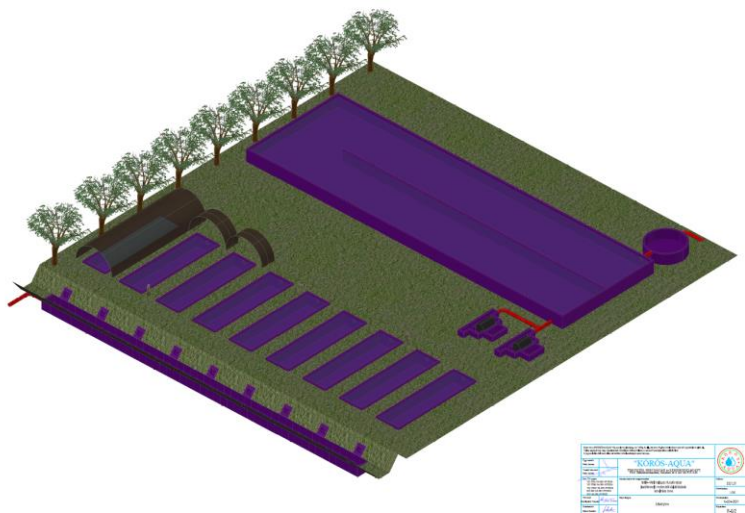


Figure 17: Schematic illustration of the juvenile rearing system.

T.3.2 Collection of broodstock

An agreement between BOKU and MATE was made upon the share of live sturgeons and gametes within the LIFE-Boat4Sturgeon project. MATE AKI HAKI has received two Beluga sturgeons and three Russian sturgeons for further *ex-situ* maintenance. MATE AKI HAKI complies a new test kit for genetic sex determination on sterlet, beluga and Russian sturgeon species.

The acquisition of high-value sturgeon broodstock presents significant challenges due to the complexities of Hungarian legislation. Since the cost of procuring broodstock exceeds the threshold for public procurement, this method would typically be required for such purchases. However, the public procurement procedure is not well-suited for the acquisition of sturgeon broodstock, as the individuals are sourced from various countries, companies, and sites. Moreover, sturgeon candidates needed to be tested for their geographical origin and sex, adding further complexity to the process.

Providentially, with the support of the university's legal department, a solution was found that allows MATE to bypass the public procurement process, ensuring that the genetically appropriate sturgeon broodstock can be acquired in a more efficient and targeted manner. This approach allows for the collection of sturgeon broodstock through a standard procurement process, requiring three quotations. This method streamlines the acquisition while still ensuring compliance with legal requirements, enabling MATE to obtain the necessary broodstock more efficiently from this autumn.

WP 4 – Ex situ SI

T.4.1 Construction of the hatchery container

REVIVO continued collaborating with a subcontractor to prepare all necessary documents for the construction permit. The process of securing official agreements for access to areas and water from the hatchery to the Mura River was underway, involving various stakeholders such as the Water Agency, Fisheries Research Institute, Institute for Nature Conservation, Municipality of Apače, Slovenian Forestry Institute, and the Chamber of Agriculture and Forestry of Slovenia.

Due to some last-minute changes in the contract, the final version is still awaiting the Slovenian Forestry Institute's signature. The whole process is slightly delayed as a permit from the Water Agency took from November 2023 until September 2024 to be granted.

The application process for the construction permit in the Municipality of Apače was initiated at the administrative unit of Gornja Radgona. Once finalized, permission to begin the construction phase will be sought. In the meantime, a permit was received from the Ministry of Natural Resources and Spatial Planning to stock € 200,000 worth of sterlets for conservation purposes.

In May 2024, the REVIVO team attended a 3-day training at the hatchery in Vienna, where the BOKU team demonstrated daily operations and procedures for handling potential issues. This training covered the daily maintenance work at the hatchery, fish handling and feeding, cleaning of the basins as well as guidance for equipment purchases.

WP 5 – Monitoring

T.5.1. Sturgeon Monitoring Network

Habitat & Population Monitoring of European Sturgeons - Supporting Conservation Actions to implement the Pan-European Action Plan

The project “Habitat & Population Monitoring of European Sturgeons – Supporting Conservation Actions to implement the Pan-European Action Plan” is in line with the Pan-European Action Plan for sturgeon (PANEUAP) and aims to assess existing knowledge on sturgeon habitats and migration obstacles on a European-wide scale as well as to create guidelines for habitat monitoring and population monitoring. A comprehensive report on bycatch of sturgeon in commercial and recreational fisheries was compiled and includes best practice examples to protect sturgeon from being bycatch. Furthermore, a technical guidance for *ex-situ* breeding and release programs is going to be developed. In order to communicate the findings and deliverables, intersectoral meetings will be organized in key regions to garner increased stakeholder support.

The guidelines provide standardized methodologies to assess sturgeon habitats and population parameters based on life-cycle stages for all European species and will be applicable throughout Europe. Together with the population monitoring guideline, a datasheet and field-protocol will be provided. Both are based on the datasheet and field-protocol of the LIFE-Boat4Sturgeon project. The extended datasheets and protocols from SCUTE will be used in future population monitoring in the LIFE-Boa4Sturgeon project.

The guidelines close to finalization and are currently being proofread and reviewed by the European Commission.

MonStur

The LIFE-Boat4Sturgeon team in close cooperation with the Danube Sturgeon Task Force, supports efforts to develop the first ever Danube basin wide sturgeon population monitoring database- to be officially hosted by the ICPDR. A consortium led by the Romanian Ministry of Environment, supported by WWF-CEE and BOKU, consisting out of actors from 12 Danube countries has formed and submitted a proposal for the MonStur project at Interreg Europe in June 2024, aiming to establish a joint monitoring system for sturgeon population data and a habitat inventory through the collection of already existing and new data. A key ambition is to engage DRB countries, authorities, expert institutions, and other sturgeon conservation actors in improving and standardizing monitoring practices (also based on the outcomes of the SCUTE project), data collection and knowledge sharing, elaborating and implementing management plans and other national/macro-regional policies.

JDS 5

On October 15th and 16th, a workshop for ICPDR’s Joint Danube Survey 5 (JDS 5) fish and sturgeon groups was held in Bad Deutsch-Altenburg to harmonize the sampling strategy. The LB4S team contributed with presentations and field work applications to both the fish sampling as well as to the sturgeon sampling and data collection approach. The goal of the sturgeon group is to contribute to the JDS5 reporting via data collection and analysis of sturgeon data that was gathered in the 5-year period between JDS4 and JDS5 in the Danube region.



Monitoring Ukraine

The State Fishery Agency developed the National Sturgeon Monitoring System and through the mediation of WWF-Ukraine it was given to the National Red Book Committee for the comments and suggestions. After that it is planned to submit it for consideration to the Sturgeon Working Group in the Ministry of Environmental Protection and Natural Resources of Ukraine.

T.5.2 eDNA survey

In October 2023, an eDNA survey at 16 sites in the Danube between Straubing in Germany and Hainburg in Austria as well as at one site in both the Morava and Thaya rivers was conducted. The goal was to collect information on the use of different sections of the Danube and tributaries by sterlets. Positive results of sterlet occurrence would inform about new possible sites to expand the ongoing monitoring.

During the survey, positive DNA signals of sterlets were collected from two sites, below the hydropower plant Freudenua where monitoring activities are already in place, and below the hydropower plant Altenwörth. In the latter area, no confirmation of sterlet occurrence was available to date. However, even though knowledge exists about the existence of a sterlet population in the impoundment Aschach, no positive DNA signals were obtained there. Also, positive signals were missing from the Wachau valley, the sections along the National Park Donauauen (sample at Hainburg), and from the Thaya and Morava rivers, despite the existence of sterlets is either proven through occasional captures or very likely due to ongoing stocking activities.

However, during the eDNA survey, the first evidence of the amur sleeper goby (*Perccottus glenii*) for the Austrian Danube was collected. A short article was published in "Österreichs Fischerei".

T.5.3 Population assessment-capture- recapture

Austria

In February 2024, the BOKU team caught 28 sterlets during six nights of netting. Of those, 15 individuals were unmarked and hence new captures. Genetic samples were collected, and all new captures are currently being tested on origin and pedigree. Some of the captured fish were <50cm and could be from former stocking activities during the LIFE-Sterlet project. After checking the gonads of all catches with an ultrasound device, thirteen sterlets were kept for reproduction in April and the rest were released back into the Danube.

In June and August 2024, during the bottom trawl monitoring in the Upper Danube carried out by the BOKU project CDL-MERI (Christian Doppler Laboratory for Meta Ecosystem Dynamics in Riverine Landscapes), three YoY sterlets were caught (Figure 18) close to Tulln and Muckendorf. Their total lengths were 130, 163 and 280 mm. The origin (wild offspring or stocked in an early life stage) of those individuals will be investigated through genetic analysis. However, the three sterlets were caught downstream of a site where several 10.000 larvae and feeding fry were released.





Figure 18: YoY sterlet, caught during bottom trawl monitoring. ©BOKU IHG

Three reports of caught sterlets in the Austrian Danube by recreational anglers reached the BOKU-Team in Summer 2024. All individuals were photographed and released immediately back into the river. All reports were rewarded with a sturgeon plushy. Additionally, three captures of non-native sturgeons, two from the Danube and one from the Saalach river, were reported.

In August 2024, the Canadian sturgeon expert Dr. James Crossman and Dr. Molly Webb from Montana, USA joined the BOKU team during a research stay. Both contributed to the writing process of two scientific papers on telemetry surveys conducted on sterlets in the Austrian Danube in the frame of the LIFE-Sterlet project and to the development and adaption of the already ongoing sterlet monitoring program in the Austrian Danube.

The adaptation of the sterlet population monitoring program will lead to a stronger focus on the use of the sterlet of the whole stretch below the hydropower plant Freudenau along the National Park Donau-Auen and to a more comprehensive assessment of the effects of ongoing stocking activities on the development of the sterlet population in this area.

The sterlet monitoring for autumn 2024 in Austria just started with the first two night sessions on October 24th and 25th. During both nights, a total of 34 sterlets were captured. Among them, 22 fish were captured the first time and 12 fish were recaptures. Most excitingly, eight fish belong to the 0+ age class, which means they hatched from the egg in spring 2024. If they come from natural reproduction or were stocked during project activities is not known at this point but will be tested genetically. Also, three fish were captured, initially captured and tagged in the impoundment from the hydropower plant Aschach and, hence, passed nine hydropower plants on their journey. The bad news was the capture of the first Siberian sturgeon (*Acipenser baerii*) during the net monitoring below Vienna. Since also several reports of accidental captures of non-native sturgeons were documented by the project crew after the flood event in autumn 2024, this specimen is likely to come from a pond or aquaculture facility as well. This hypothesis is well supported by the condition and overall appearance of the fish. After a very successful start, the net monitoring is going to be continued during the next weeks to reach a total effort of 10-12 net nights.

Slovakia

On five consecutive days in April, net fishing was carried out in the Slovakian Danube below the HPP Gabčíkovo resulting in 81 captures of sterlets. Four individuals already had PIT tags from monitoring activities carried out by Slovakian institutions in the past years. However, 77 fish were new captures and all fish were in excellent condition (Figure 19).



Figure 19: Ultrasound examination during net monitoring in Slovakia. ©BOKU IHG

Bulgaria

In July, the team of the Bulgarian Academy of Sciences (BAS) monitored the sturgeons in the section of the protected area "Esetrite – Vetren (Sturgeons-Vetren)", (between river kilometres 397 and 395)", accompanied by our expert (Freshwater Program Manager and sturgeon expert Stoyan Mihov). During the monitoring, several specimens of YoY sterlet were recorded.

In August the WWF Bulgaria team, together with local fishermen employed by the project, visited the village of Vetren again. During the surveys 14 sterlets were recorded - two of which were juveniles and the remaining 12 were YoY that hatched in the Lower Danube this year.

In July and September, WWF Bulgaria also visited the village of Gomotartsi (Vidin region). On this stretch of the river 14 YoY sterlet were caught, as well as several juvenile sterlets and two

hybrids. There was a recapture of one of these sterlets, which is evidence of the persistence of YoY sterlets in this stretch of the river (Figure 20, Figure 21).

The survey was carried out using a standard sampling method with a bottom drifting trammel net deployed from a boat over a defined section of the river; between 3 and 8 nets were deployed per day. All fish caught were immediately released from the net, all specimens were identified to species level and then returned to the river. All data were recorded on standard forms.

All sturgeon were tagged with internal PIT tags, measured for length and weight, sampled for genetic testing and released at the site of capture.



Figure 20: YoY Sterlet caught near Gomotartsi village (816 rkm) © WWF BG



Figure 21: YoY Sterlet caught near Gomotartsi village (816 rkm) © WWF BG

WP 6 – In situ conservation

T.6.1 Strengthening law enforcement during time of releases 2022-2029

Romania

Two trap cameras have been purchased for Romanian Police in May 2024 in order to help them tackle poaching activities along the Danube and the procedure for their transfer has begun. This will take a few months from previous experiences but, WWF Romania tries to speed up the process by drawing on the track record of the finalized LIFE SWiPE project on wildlife crime. The protocol is not signed yet.

In April 2024, the first meeting with law enforcement authorities took place in Bucharest. Four representatives of Romanian Police, Transport Police, NAFA and Danube Delta Biosphere Reserve Administration participated to the meeting where the LIFE-Boat4Sturgeon project, the report on illegal sturgeon fishing and trade from 2023 and market study report on the legality of sturgeon products (2016-2020) were presented. Issues related to fisheries control and how to get the approval of the authorities for the future sturgeon stocking in the LIFE-Boat4Sturgeon project were also discussed.

Bulgaria

In 2024, targeted fishing communities were visited and discussions on by-catches of sturgeon were held. Fishing communities were visited in the Black Sea (Varna region) and the Danube (Silistra, Belene and Vidin regions).

For the period January - June 2024, sturgeon advocates visited 13 villages in the Black Sea (5 villages) and the Danube (8 villages), meetings were held with 50 fishermen. For the same period, 18 sturgeons caught as by-catch were documented, namely two Russian sturgeons in the Black Sea and 16 sturgeons (4 sterlet, 5 Beluga, 4 stellate sturgeon and 3 Russian sturgeon) in the Danube. Additional incomplete information was collected on other sturgeon, where the species, size and other details were not specified.





Figure 22. Young Russian sturgeon caught at the Bulgarian North Black Sea coast near Krapetz © WWF BG. [Social media post on sturgeon migration from Turkey to Bulgaria](#)

Meetings were also conducted with representatives of the Executive Agency for Fisheries and Aquaculture (EAFSA), and a joint inspection was carried out with EAFSA inspectors in Vidin to check fishermen's fishing licences and the catch of prohibited or undersized fish.

Additionally, a meeting took place with the Border Police, during which they were provided with a sonar device (purchased under another project) to use for inspections on the Danube to confiscate illegal fishing gear, such as bottom hooks used for sturgeon fishing.

Data and information for the period July - December 2024 has not yet been collected and summarised due to upcoming meetings with fishermen and institutions that will take place before the end of the year. Sturgeon Advocate reports for the period July - December will be provided by them in December 2024.

T.6.2 Securing fishermen support and reduce by-catch of released sturgeon 2022-2029

Romania

WWF RO continued to work with fishing communities from Fetești, Borcea and Galați in various projects.

In the IUCN funded project "SOS Romania" the bycatch reporting system was developed by WWF together with NAFA (National Agency for Fishing and Aquaculture) and National Institute for Marine Research and Development "Grigore Antipa" (NIMRD) and finished in the beginning of 2024, in order to offer the fishers the possibility to transfer information about sturgeon bycatch to the institution they trust the most. Also, the three entities developed a communication campaign aiming fishers on sturgeon by-catch reporting. Those fishers who

renew their annual fishing licenses received a flyer from the fishing authorities with information on where and how to report the sturgeon by-catches. The fishers' associations also received a poster with details on reporting. The campaign proved to be successful as by the end of September 2024, 106 sturgeon by-catches were reported, of which five were even from outside pilot communities (from Sulina). Most of the reports are on YOY and not on mature specimen, which nevertheless offers an image of the reproduction success in the last two years. All these steps are useful in order to receive information in the future about LIFE-Boat4Sturgeon released sturgeons that have been caught accidentally.

The social recognition scheme was finalized in January 2024. A guideline on implementation and rules for the fisher communities involved in the campaign have been developed. The Scheme has been promoted in the three targeted communities in June-July 2024 and will be tested there by the end of the year.

Ukraine

On May 22-23, 2024 WWF Ukraine patrolled the part of Danube delta together with Odesa Fish Patrol involving the field expert dr. S. Bushuiev. During the patrolling WWF-Ukraine experts managed to communicate with representatives of the fishing community. Unfortunately, according to the observations of fishermen, sturgeon species of fish are increasingly rare in the waters of the Danube.



WP 7 – Public relation & dissemination

T.7.1 PR Strategy

Due to changes in partnership several materials are currently being reworked, mainly updating the logos. The PR-strategy (events, media releases) for 2025 is currently in the works.

T.7.2 Media releases & products

Awarding of film work

A 3-minute short film was commissioned in order to document the renovation work on the ship. Offers were obtained from several film teams for the filming and the Zinner company was finally commissioned to carry out the work. So far, the transfer of the ship and the renovation work have been filmed.

Press overview

From the beginning of the project in autumn 2022 until the end of October 2024 a total of 230 media releases were documented.

- 182 online articles (167 in 2024)
- 28 print articles (25 in 2024)
- 9 radio releases (2 in 2024)
- 11 TV broadcasts (5 in 2024)

Online articles

The majority of the online articles in 2024 concerned the Event for the Danube Day 2024 and the opening of the sturgeon-aquarium in the “Haus des Meeres” (Figure 23, Figure 24). WWF published an article calling for action to save sturgeon, including a statement of the European Commissioner for Environment, Oceans and Fisheries Virginijus Sinkevicius underlining the importance and legal obligation for Member States to conserve sturgeon species in the Lower Danube (Figure 25). WWF Bulgaria contributed an article published on several online platforms about the project and the actions taken by WWF Bulgaria (Figure 26). The restocking activities in Romania were communicated to the public through several press releases taken up by publications with national coverage (Figure 27)

WIEN

Vor NHM Wien steht nun das größte mobile Aquarium Europas

1 KOMMENTAR

21.06.2024 12:40 (Akt. 21.06.2024 12:50)



"Life-Boat 4 Sturgeon" auf dem Maria-Theresien-Platz vor dem Naturhistorischen Museum in Wien. ©APA/TOBIAS STEINMAURER

Figure 23: Online article on Vienna.at about the aquarium for the Danube Day 2024

Stark gefährdet: Wie die Störe in die Donau zurückkehren sollen



Im neuen Stör-Aquarium im Haus des Meeres wachsen derzeit 43 Jungtiere heran. APA

Figure 24: Online article about the sturgeon aquarium at Haus des Meeres



EU Commissioner calls for action to save sturgeon

Posted on 08 March 2024

European countries must accelerate efforts to tackle poaching of critically endangered species

With all sturgeon species in Europe facing extinction, the European Commission has urged EU Member States to scale up efforts to tackle poaching and trafficking of sturgeon to save the continent's remaining species.

The call was prompted by a question from a Spanish Member of the European Parliament, who was concerned by the alarming statistics in a recent paper in *Current Biology* on the **Poaching and Illegal Trade in Danube Sturgeon** - a paper that was based on groundbreaking EU-LIFE funded WWF reports into poaching and sturgeon crime in the lower section of the river.



Sturgeon are world's most threatened group of species
© WWF

Figure 25: Article published by WWF

WWF ще пусне в Дунав 1,6 милиона есетри

09 Април 2024 | 20:08



Те ще бъдат отглеждани в плаващи развъдници в горното течение на реката /КРОСС/ Европейската комисия призова държавите-членки да увеличат усилията си за

Figure 26: Online article about the project and actions taken by WWF Bulgaria

Populare sturioni în Dunăre. Protejăm împreună sturionii și biodiversitatea Dunării

Institutul de Cercetare-Dezvoltare pentru Ecologie Acvatică, Pescuit și Acvacultură Galați (I.C.D.E.A.P.A. Galați) are plăcerea de a anunța finalizarea cu succes a activității de populare a fluviului Dunărea cu puiet de sturioni, desfășurată în data de 30 august 2024, la km 100 al fluviului Dunărea, în dreptul localității Isaccea.

Rezultatele Evenimentului

În cadrul acestui eveniment, organizat în colaborare cu WWF România, au fost eliberate în apele Dunării un număr total de 370 pui de nisetru și 940 pui de păstruș, având dimensiuni cuprinse între 18 și 23 cm. Materialul biologic eliberat provine din genitori de generație F1, din speciile *Acipenser stellatus* (Pallas, 1771) și *Acipenser gueldenstaedtii* (Brandt & Ratzeburg, 1883).

Importanța Evenimentului

proiectul „Modernizare Sistem Pilot de Cercetare-Dezvoltare pentru Reproducere Artificială și Dezvoltare Postembrionară a Speciei de Pești

mativ 100 de elevi și cadre didactice.

Acestă acțiune este rodul muncii depuse de colectivul institutului nostru și este, dacă vreți, o încununare a efor-

Este a doua populare la care participăm anul acesta ca organizatori. Ne dorim ca actualele populații de sturioni să fie cât mai mult susținute.



Figure 27: Online article about the release event in Isaccea, Romania.

Погода / Новини / Еко / Величні мандрівники: як осетрові пережили динозаврів, та можуть зникнути назавжди

Величні мандрівники: як осетрові пережили динозаврів, та можуть зникнути назавжди

Редакція GreenPost разом з Всесвітнім фондом природи Україна (WWF-Україна) дослідили життя осетрових в Україні

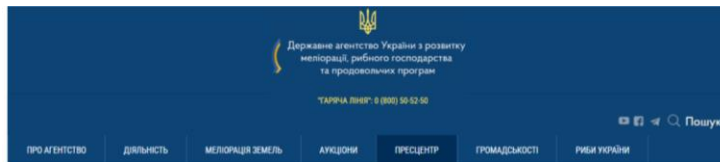
Ветрова Євлада 10 хв на прочитання / 27 Серпень 2024, 15:23 / 0



Сторінка (Фото © Christian Forthner)

Figure 28: Online article on Greenpost.ua about the importance of preserving the sturgeon populations and the LIFE-Boat4Sturgeon project.

WWF-Ukraine is committed to building strong partnerships with key stakeholders such as the State Agency of Water Resources of Ukraine, The State Agency of Melioration and Fisheries of Ukraine, local governments, and environmental regulatory bodies. Therefore, we produced a series of joint communications that highlighted the LB4S project.



Питання збереження, захисту та відновлення осетрових видів риб у Дунаї обговорили на Одещині

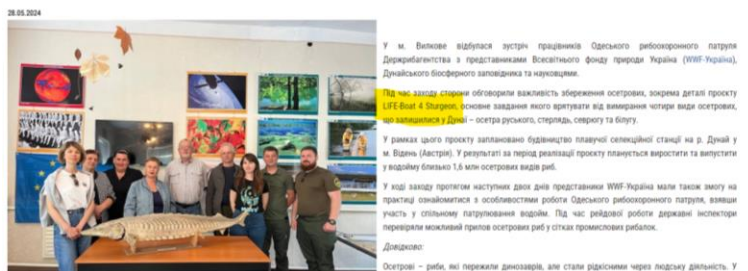


Figure 29: Online article highlighting the WWF-Ukraine meeting in Vylkove, Odesa region, published on the website of the State Agency of Water Resources of Ukraine.

Print articles

Several articles were published about the Event for the Danube Day 2024 as well as for the opening of the sturgeon-aquarium in the "Haus des Meeres" (Figure 30). The newspaper "Chornomorski Novyny", distributed in the southern regions of Ukraine (average circulation - 16,000 copies), has published three articles about the project.





In der Donau werden Fische ausgesetzt



Thomas Friedrich hat sich dem Stör verschrieben

In einem Aquarium im Haus des Meeres schwimmen 43 Sterlets DOMINIK MOSER (3)



Wie die Donauriesen zurückkehren

Figure 30: Print article in "Kleine Zeitung" about the sturgeon-aquarium in the "Haus des Meeres"



Figure 31: Print article in Ukrainian newspaper "Chornomorski Novyny".

Radio contributions

In 2024 one radio contribution was released on Radio Radieschen (Figure 32) and the project was mentioned on the Ukrainian radio station "Hromadske Radio" (Figure 33).



Figure 32: Radio Radieschen interviewed project leader Thomas Friedrich



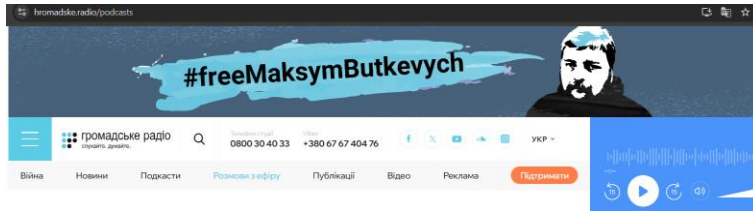


Figure 33: The project was mentioned on the well-known Ukrainian radio station "Hromadske Radio".

TV contributions

The Austrian project hatchery was visited by film crews from several TV channels including ORF and Niederösterreich Heute (Figure 34). The restocking activities in Isaccea, Romania, was covered by a few national TV channels (Figure 35).

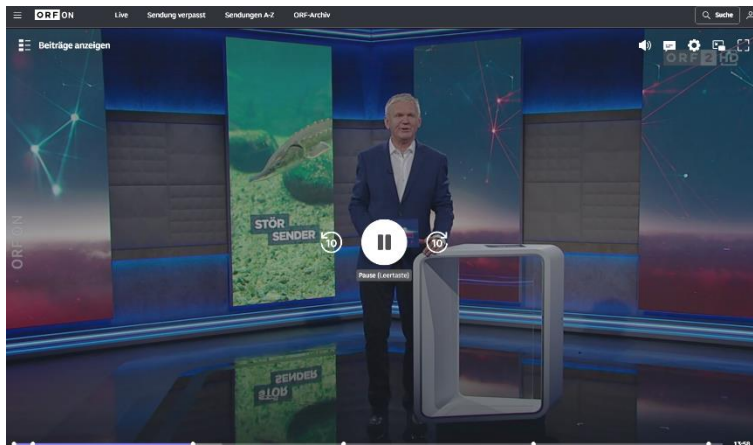


Figure 34: TV contribution on ORF 2 in the tv show "Mayrs Magazin".



Peste o mie de sturioni, eliberați în Dunăre. Braconajul sălbatic a dus această specie în pragul dispariției



31 august 2024, 20:51 (actualizat 31 august 2024, 21:02)

Figure 35: TV contribution about the release event in Isaccea, Romania.



Information boards

The information board about the project was attached directly to the hatchery container on the Danube Island. On the 2,2 x 1,5 meter large board the contents of the project as well as general information about the Danube sturgeon species are presented (Figure 36). The board shows the EU-LIFE logo, the Natura 2000 logo, a text with reference to the EU funding as well as the logos of all project partners and co-financiers.

Smaller information boards were installed at four ponds in Lower Austria (e.g. Nationalpark Donauauen) and Styria which are used for broodstock (Figure 37, Figure 38).



Figure 36: Information board on the hatchery container in Vienna. ©BOKU IHG



Figure 37: Information board at pond in Styria. ©BOKU IHG



Figure 38: Information board at a pond in Lower Austria. ©BOKU IHG

Additional information boards were placed at Unterwasserwelt Schrems (AT), Haus am Strom (DE), Isar Aquarium (DE) and Haus des Meeres (AT) where sturgeons from the project can be seen in aquaria.

Additional products

WWF Ukraine produced for their team members a special vest featuring the project logo, to increase the projects visibility (Figure 39). Additionally, a banner about the project was designed (Figure 40). WWF Bulgaria produced small giveaways for stakeholders (Figure 41).



Figure 39: Darya Boldarieva, WWF-Ukraine's Freshwater Project Officer, while on a Danube River patrol.



LIFE-Boat 4
Sturgeon




ПОВНИЙ ВПЕРЕД

Приєднуйтеся до нас
для порятунку осетрових в Дунаї!

За підтримки програми
Європейського Союзу LIFE












Figure 40: Banner about the project created by WWF Ukraine.





Figure 41. Small give-aways for stakeholders © WWF BG

T.7.3 Events & visitor information

In 2024, ten events were either organized by project or involved project participation. Through these outreach activities, more than 5,000 people were reached.

Earth Day

On 21 April, in connection with the celebration of Earth Day, at the request of the "VI. Varnenchik" Scout Club from Varna, the sturgeon advocate gave a presentation on the LIFE-Boat4Sturgeon project and WWF's work on sturgeon conservation. The presentation was given to a total of 35 people, three groups of scouts, who were interested to learn more about the Danube-sturgeons. The event was also attended by the Minister of Environment and Water eng. Petar Dimitrov and the Director of the Black Sea Basin Directorate eng. Yavor Dimitrov.



Figure 42: Stephania, the sturgeon advocate, tells the Scouts about the sturgeon. © WWF BG

Long night of research and World fish migration day

In May, BOKU University was represented at the Long Night of Research with more than 50 stations. The Austrian project team seized the change and connected this event with the World Fish Migration Day. Thirteen sterlets from the projects hatchery were displayed in a small basin equipped with a small PIT antenna provided by the Christian Doppler Laboratory for Meta Ecosystem Dynamics and Riverine Landscapes (MERI). All sterlets were tagged and individually named, with the name appearing on a display each time the fish swam through the antenna (Figure 43).



Figure 43: Long night of research exhibition at BOKU University with PIT-antenna and tagged sterlets. ©BOKU IHG

An online quiz with prizes (promo material produced by the project) was organised for the World Fish Migration Day by WWF Romania. 196 people took part in the quiz (Figure 44).



Figure 44: Online quiz for the World Fish Migration Day

Danube Day 2024

With the largest mobile aquarium in Europe placed in the heart of Vienna from June 21st to 23rd, attention was drawn to the precarious situation of the sturgeons and the importance of preserving and protecting the unique habitat of the Danube. This impressive installation, measuring twelve meters in length and containing 60,000 liters of water, featured sturgeons and other Danube fish and brought the project and the Danube ecosystem closer to the public (Figure 45). At the opening event representatives of the largest Austrian project partners were awarded with certificates as godparent for a sturgeon adoption as a symbol of their long-term commitment and the winner of the “Danube Art Master”, a band from Serbia, performed a song about the Danube. There was also a tombola, where visitors to the event could write their wishes for the sturgeons on small cards. Three of these wishes were then randomly chosen and the winners were rewarded with a sturgeon plush toy. Three of those wishes were then randomly drawn and This event, part of the Danube Day 2024, was made possible through collaboration with the Natural History Museum and the Burghauptmannschaft.





Figure 45: Opening day of the Danube Day aquarium with Managing Director from viadonau Hans-Peter Hasenbichler, City Councillor Uli Sima and Federal Minister Norbert Totschnig holding a plushy sturgeon in the middle. ©Mirjam Reither.

Wassererlebnistag Vöcklabruck

The project participated at the “Wassererlebnistag Vöcklabruck”, an event celebrating the “Treasure of our water” with over 40 different stations covering different topics related to water. In the morning several groups of school kids visited the project stand and learned about Sterletts, PIT-tagging and the major threats for sturgeon species (Figure 46). In the afternoon, the stand was open for the general public.



Figure 46: „Wassererlebnistag“ in Vöcklabruck. ©BOKU IHG

Haus des Meeres

As a new project partner, the Haus des Meeres has transformed a 13,000 liter aquarium into a Danube basin (Figure 47). Juvenile sturgeons are being raised here to serve as future broodstock, helping to sustain the sturgeon population in the Danube. The Haus des Meeres is, with its 900 000 annual visitors, an ideal partner in contributing to the public awareness. Haus des Meeres CEO Hans Köppen stated that the aquarium’s involvement aligns with their commitment to species protection, further supporting the goals of the LIFE-Boat4Sturgeon initiative. Further information on the Haus des Meeres can be found on their website <https://www.haus-des-meeres.at/> and <https://www.instagram.com/hausdesmeeres/>.



Figure 47: Danube aquarium in the Haus des Meeres. ©Jeff Schreiner

Strong for sturgeons

Bob Kreiken, a nature and biology enthusiast from the Netherlands, embarked a two-month expedition of 3.500 kilometers across Europe, along the Rhine by bicycle and Danube by kayak (Figure 48). His goals were to raise awareness and € 50.000 for the WWF to fund sturgeon conservation projects. Along his journey Bob visited the sturgeon hatchery facility in Vienna and the mural which was sprayed in autumn 2023. More information about Bobs journey can be found on his website <https://www.danube-dinosaur.com/> or Instagram <https://www.instagram.com/strongforsturgeons/>.



Figure 48: Visit from Bob Kreiken to the Austrian hatchery and sturgeon mural. ©BOKU IHG

Ferienspiel Niederneukirchen

Under the motto "My municipality - my home", 20 children from Niederneukirchen set out on a journey of discovery to the construction yard, recycling center and community pond as part of the holiday pass campaign in their town, where a special surprise awaited them (Figure 49). Thomas Friedrich from the LIFE-Boat4Sturgeon project examined the Danube sturgeons living in the community pond and was able to give the children lots of exciting information about the endangered sturgeon species in the Danube.



Figure 49: Summer event for children in Niederneukirchen. © SPÖ Niederneukirchen

Release Event Drösing

In September, young of the year sterlets were released together with the elementary school of Drösing into the Morava River (Figure 50). All fish are tagged with PIT and a blue color dot in the nose for monitoring purposes.



Figure 50: Release event in Drösing. ©BOKU IHG

Visits to the hatchery station

Until the end of October 2024 the hatchery in Vienna was visited by over 300 people from 11 different institutions, including 34 children from preschool and 155 students from German and Austrian Universities. At the beginning of July, Vienna's Mayor Michael Ludwig and City Councilor Uli Sima visited the project's facility.

T.7.4 Scientific dissemination

In 2024 six scientific articles written by the BOKU project team were published. This included an articles series of three about the current status of the sterlet in Austria focusing on the population size, migration pattern, growth and maturation rates and their implications for management. Additionally, informative articles about the LIFE-Boat4Sturgeon project were published in several Austrian fishing magazines including a call for reporting sturgeon catches by fisherman and anglers, encouraging the fishing community to get in touch with the project team.

In 2024 nine scientific presentations including the presentation of the project as well as scientific research were held in front of a total of 274 people including stakeholder groups from nature conservation and fishing communities. A master thesis about the stomach contents of sterlet titled “An experimental and applied approach with metabarcoding content identification for the sterlet (*Acipenser ruthenus*)” was finished in mid-October 2024.

Between September 2nd-6th, the WSCS General Assembly and the 30th Anniversary of the IUCN Sturgeon Specialist Group were held, followed by a 1,5-day workshop on sturgeon bycatch organized by INRAE in Bordeaux, France. LIFE-Boat4Sturgeon project members from Austria and Romania participated. The event was accompanied by a tour through the hatchery at St. Sourin, a large experimental site and cradle of a high number of the Garonne-Dordogne’s estuary wild European sturgeon (*Acipenser sturio*), run by INRAE and MIGADO.

One of the LB4S group members was able to join the INRAE sturgeon team during their trawl sampling campaign in the Garonne-Dordogne estuary. A great opportunity to touch one of – currently – few European sturgeon that still roam in the wild.



WP 8 – Sustainability

A possibility to generate funds by private donations, by the means of a “sturgeon adoption”, was established by the end of 2023, to provide financial support after the finalization of the LIFE-Boat4Sturgeon duration.

So far 25 sturgeons have been adopted, namely 20 sterlets, three stellate sturgeons, one Russian sturgeon and one beluga sturgeon. All donations are paid into an account independent of the project account. The donors received a certificate (Figure 51) and a sturgeon plushie as a token of appreciation.



Figure 51: Certificate template for a sturgeon adoption.

