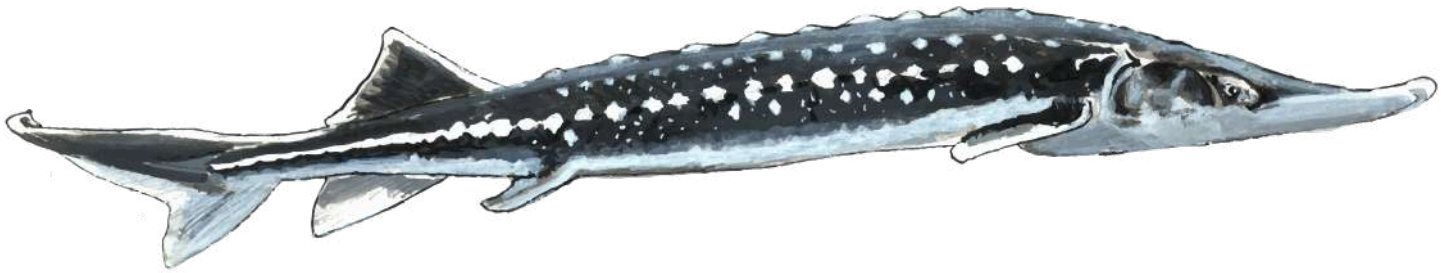
Interreg Danube Region

Co-funded by the European Union

MonStur in the Danube

MONSTUR IN THE DANUBE
FIRST-YEAR UPDATES



Welcome to the first MonStur in the Danube Update

One year after the launch of MonStur in the Danube, the project moved from planning to implementation, laying out the foundations for a coordinated approach to sturgeon monitoring across the Danube River Basin.

Throughout the first 12 months, project partners have worked together to establish common methodologies, strengthen scientific cooperation and advance the development of a Joint Monitoring System that will improve our understanding of sturgeon populations and critical habitats. From field activities and technical discussions to data harmonisation and stakeholder engagement, each step has contributed to building a shared framework for long-term conservation.

This first update provides an overview of the progress achieved across the project's specific objectives, highlights key milestones, and looks ahead to the activities planned for the coming year. It also reflects the value of transnational cooperation, bringing together expertise from across the Danube Basin in support of one common objective: improving the knowledge needed to protect Europe's most endangered migratory fish.

We would like to thank all Project Partners, Associated Strategic Partners, and collaborators for their continued commitment and valuable contributions during this first year. We look forward to continuing this journey together.

Progress by Specific Objectives

SO1 | Build a joint, transnational sturgeon monitoring system, facilitate expert and data user buy-in

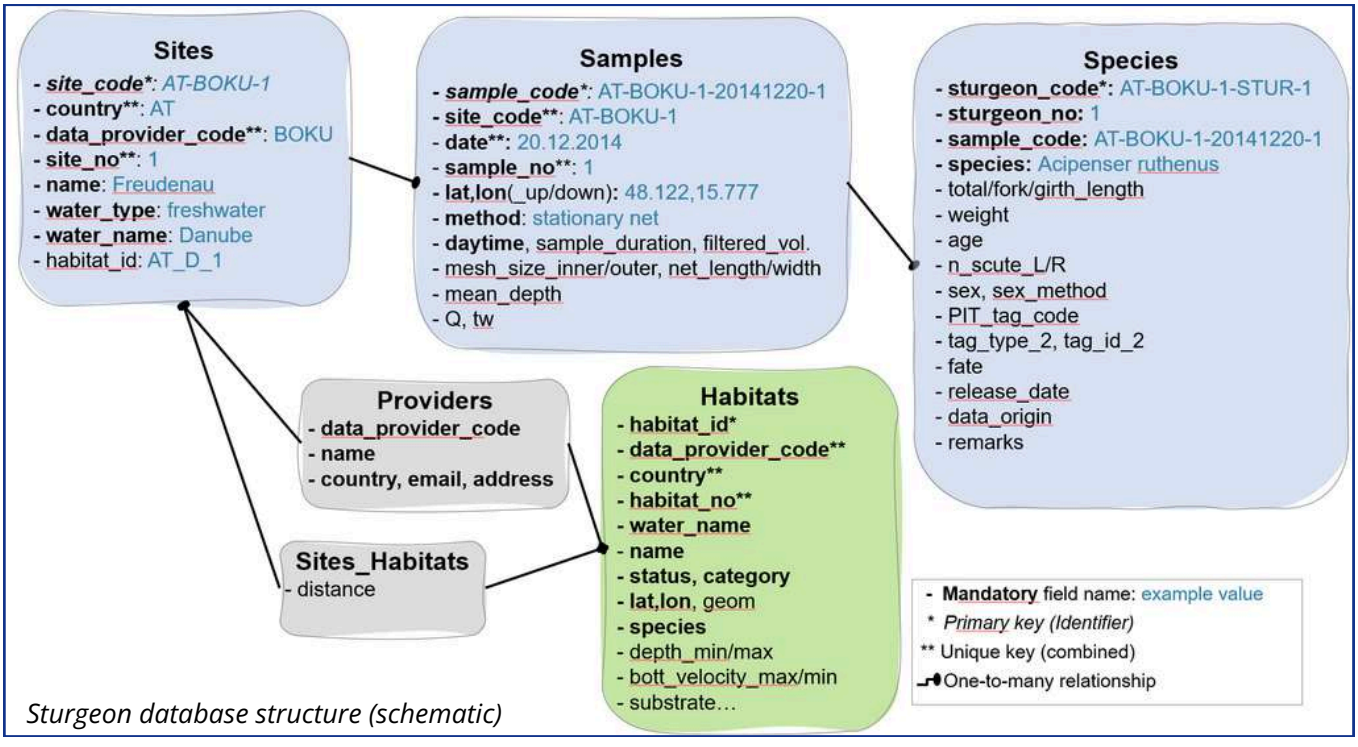
Objective

A coordinated monitoring system requires more than collecting data - it requires common methodologies, harmonised datasets, and a shared platform where information can be securely stored, validated and analysed. SO1 lays these foundations by developing a Joint Monitoring System for sturgeon, bringing together population and habitat data from across the Danube River Basin into a single, interoperable framework.

Year 1 highlights

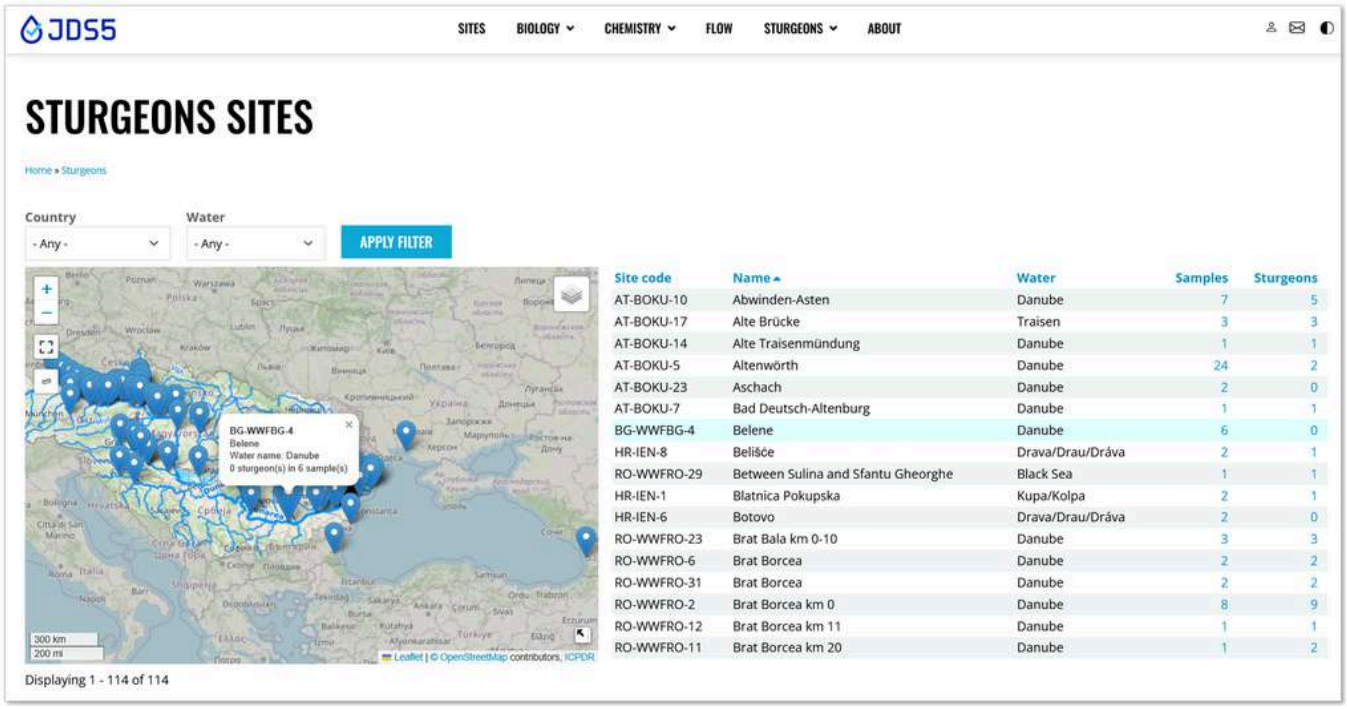
During its first year, MonStur made significant progress towards establishing the technical backbone of the future Joint Monitoring System. Common data templates for population and habitat information were developed, discussed during the 1st Expert Workshop in Bucharest and refined through several rounds of partner feedback before being finalised. Minor improvements continue as new datasets are incorporated, ensuring that the system evolves alongside practical implementation.

At the same time, work began on integrating the Joint Sturgeon Database into the ICPDR TransNational Monitoring Network (TNMN). This integration will allow authorised users to upload datasets, validate information automatically, manage data ownership and access harmonised records through a common interface, while ensuring compatibility with existing ICPDR infrastructure.



Sturgeon database structure (schematic)

Data integration is ongoing, and population datasets and habitat information provided by project partners are being harmonised and uploaded into the shared database.



Site code	Name	Water	Samples	Sturgeons
AT-BOKU-10	Abwinden-Asten	Danube	7	5
AT-BOKU-17	Alte Brücke	Traisen	3	3
AT-BOKU-14	Alte Traisenmündung	Danube	1	1
AT-BOKU-5	Altenwörth	Danube	24	2
AT-BOKU-23	Aschach	Danube	2	0
AT-BOKU-7	Bad Deutsch-Altenburg	Danube	1	1
BG-WWFBG-4	Belene	Danube	6	0
HR-IEN-8	Belišće	Drava/Drau/Dráva	2	1
RO-WWFRO-29	Between Sulina and Sfantu Gheorghe	Black Sea	1	1
HR-IEN-1	Blatnica Pokupska	Kupa/Kolpa	2	1
HR-IEN-6	Botovo	Drava/Drau/Dráva	2	0
RO-WWFRO-23	Brat Bala km 0-10	Danube	3	3
RO-WWFRO-6	Brat Borcea	Danube	2	2
RO-WWFRO-31	Brat Borcea	Danube	2	2
RO-WWFRO-2	Brat Borcea km 0	Danube	8	9
RO-WWFRO-12	Brat Borcea km 11	Danube	1	1
RO-WWFRO-11	Brat Borcea km 20	Danube	1	2

Expert exchange has played a central role in this process. The 1st Expert Workshop (Bucharest, July 2025) focused on monitoring methodologies, field protocols and equipment use, while the 2nd Expert Workshop (Vienna, June 2026) reviewed the first year of implementation, presented preliminary database analyses, trained participants in data analysis and strenghtened cooperation with experts beyond the project consortium. Intense discussion was held around the data policy and also explored synergies with complementary monitoring techniques such as telemetry and environmental DNA.

Technical spotlight | Joint Sturgeon Database

The Joint Sturgeon Database is being developed as a dedicated component of the ICPDR TransNational Monitoring Network (ICPDR TNMN). Population and habitat information can be submitted only through standardised templates containing built-in validation rules. Each dataset remains linked to its provider through unique identifiers, ensuring traceability, quality control, and the possibility to update records while maintaining basin-wide consistency.

Next steps

- Continue integrating historical and newly collected monitoring data;
- Expand participation of external experts in data provision;
- Finalise data policy agreement;
- Produce the first basin-wide analyses of population and habitat data in a joint scientific publication;
- Contribute to the Joint Danube Survey 5.

SO2 | Foster shared governance and ensure increased stakeholder cooperation and awareness

Objective

Scientific knowledge can only support conservation when it is translated into policy and implemented through effective institutional cooperation. SO2 therefore focuses on strengthening governance, improving coordination among authorities and creating the policy framework needed to support long-term transnational sturgeon monitoring.

Year 1 highlights

Partners started to analyse national legislative frameworks, institutional responsibilities and monitoring arrangements, and these analyses will ultimately support recommendations for improving national legislation and strengthening cross-border coordination.

Ukraine completed expert consultations and prepared a first draft report; Moldova reviewed legislation concerning wild fauna and fisheries, with particular attention to the protection of threatened species; Serbia analysed national legislation alongside macro-regional and international policy frameworks.

Beyond policy analysis, MonStur has actively strengthened cooperation with organisations working on sturgeon conservation throughout the Danube and Black Sea regions.

Collaboration has been established with the ICPDR, Danube Sturgeon Task Force (DSTF), Black Sea Commission, and GFCM. In parallel, a database of more than 40 sturgeon-related projects has been compiled, providing an important knowledge base for further analysis to provide recommendations for better coordination in the future and avoiding duplication of effort.

The database remains a living document, maintained by the DSTF and is available for public access here: https://dstf.info/newsletter-2/

MonStur is also building connections with emerging projects that include sturgeon monitoring, such as SturNet, BLISS and DinoPath. These links aim to foster synergies and avoid duplication of monitoring efforts, while creating opportunities for data generated by the new initiatives to eventually contribute to the MonStur database, strengthening its value as a shared, basin-wide resource beyond the project consortium.

Project visibility has also expanded through active participation in key regional events, including ICPDR Expert Group meetings, EUSDR workshops, bilateral meetings between Romanian and Bulgarian authorities and the World Fish Migration Day Conference in Galați or presentations at DSTF's annual General Assembly. These events have helped position MonStur as the only solution for a coherent monitoring framework, capable of bringing together existing and future sturgeon monitoring data, with the intention of remaining operational beyond the project's lifetime.

Technical spotlight | From science to policy

By examining institutional responsibilities, governance structures and monitoring obligations, MonStur is identifying practical opportunities to strengthen coordination and translate scientific results into policy. The resulting recommendations will support more coordinated sturgeon conservation and contribute to relevant regional policy processes, including future updates of the Danube River Basin Management Plan.

Next steps

- Finalise the comparative policy assessment;
- Develop recommendations for improving national and regional policy frameworks;
- Continue stakeholder engagement across the Danube and Black Sea regions;
- Prepare the Mid-term Conference to held in May 2027 in Romania with dedicated policy dialogue events.

SO3 | Applicable monitoring methods closing knowledge gaps and helping new, targeted conservation measures

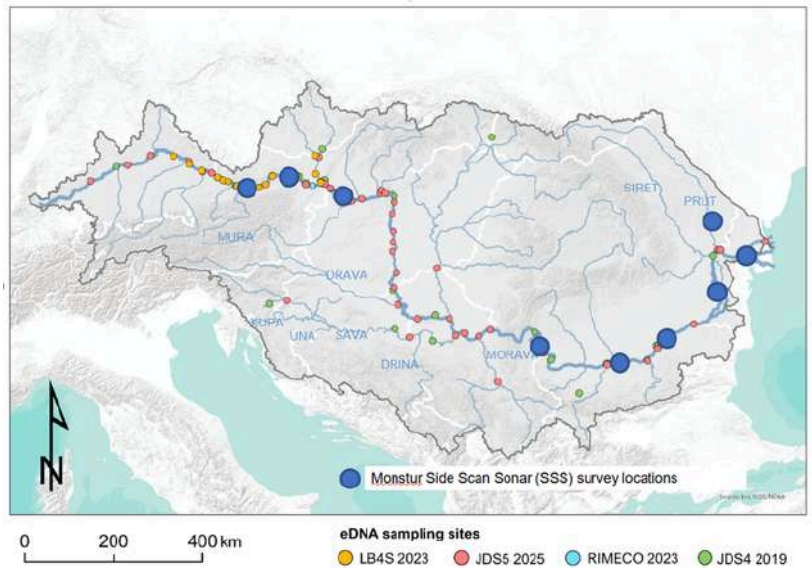
Objective

Many of the Danube's sturgeon habitats remain poorly documented, lacking descriptions of detailed habitat characteristics. SO3 aims to close some of these knowledge gaps by applying standardised monitoring techniques capable of identifying spawning grounds, confirming species presence and improving our understanding of habitats across the river basin.

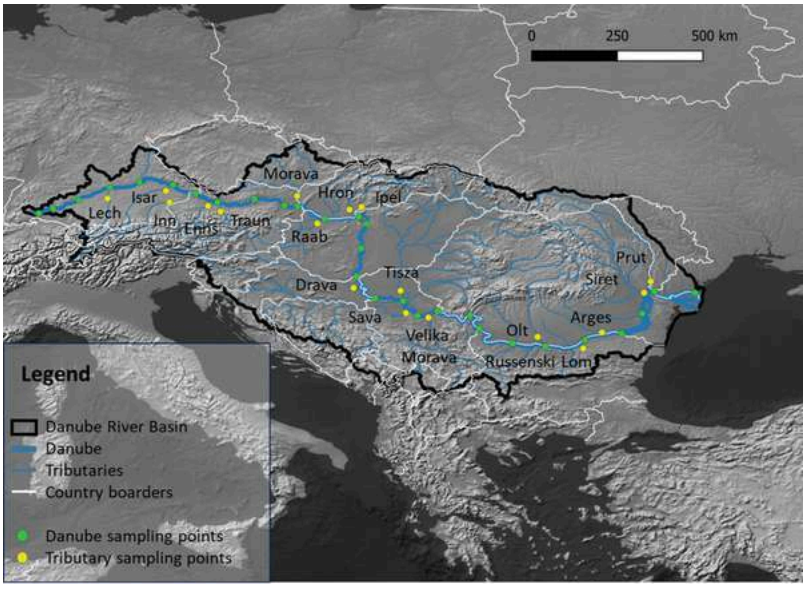
Year 1 highlights

During the first year, MonStur moved from planning to field implementation. Building on the protocols introduced during the Kick-off Workshop, partners launched coordinated surveys across eight countries using complementary monitoring approaches, including side-scan sonar (SSS), environmental DNA (eDNA), and acoustic telemetry. These methods are being applied through harmonised field protocols, ensuring that results are directly comparable across national boundaries.

Side-scan sonar surveys have begun at priority locations throughout the Danube River Basin, including Austria, Hungary, Slovakia, Bulgaria, Romania, Ukraine and Moldova. Depending on local conditions, sites are being surveyed repeatedly over multiple field campaigns to produce bathymetric maps and detailed images of riverbed substrates. Together with data about water flow velocity, these datasets will help identify and characterise potential and known habitats for different life-cycle stages of sturgeon.



Environmental DNA surveys have also delivered the project's first scientific results. Between July and September 2025, partners collected 32 water samples from 16 monitoring sites located in ten tributaries across Croatia, Hungary, Romania and Serbia. Sterlet (*Acipenser ruthenus*) was detected in the Mura, Drava and Sava rivers, while the non-native Siberian sturgeon (*Acipenser baerii*) was identified at two sites. The results will be integrated in the wider eDNA analysis of the JDS5 of ICPDR.



Preparations are also underway for peer-review field visits that will allow partners to observe each other's monitoring activities, exchange practical experience and strengthen technical capacities across the consortium. These exchanges will help ensure that monitoring methodologies remain consistent throughout the project.

visitor\ host	Austria	Slovakia	Hungary	Serbia	Romania	Bulgaria	Ukraine	Moldova	Sum
Austria				*	*	*			3
Slovakia	*		?						2
Hungary					*	*			2
Serbia						*			1
Romania		*							1
Bulgaria				*	*				2
Ukraine					*	*			2
Moldova					*	*			2
Sum	1	1	1	1	5	5	0	0	0

Work has also progressed towards coordinated sturgeon conservation in the Upper and Middle Danube. National stakeholder workshops have been held in Slovakia and Hungary, alongside a joint workshop for Austria and Germany, each bringing together around 30 participants. The process supports the development of a transnational Upper and Middle Danube Sturgeon Action Plan addressing shared conservation priorities across borders.

The research of existing information on sturgeon habitats and infrastructure interventions has started and will provide the foundation for developing the joint recommendations. The next steps include identifying good practices and preparing the recommendations for discussion with relevant stakeholders.

Technical spotlight | Complementary monitoring methods

MonStur combines several innovative monitoring techniques because no single method can answer all conservation questions.

- Side-scan sonar provides detailed information on riverbed morphology;
- Environmental DNA (eDNA) detects the presence of sturgeon species through genetic material released into the water, even when fish are not directly observed. Yet methodological issues have also been detected, showing the limits of this approach for sturgeons and need further investigations;

Acoustic telemetry (only applied in Serbia) tracks the movements and habitat use of tagged individuals, helping researchers understand migration patterns and habitat connectivity.

Next steps

- Continue coordinated monitoring campaigns with side-scan sonar across all participating countries.
- Carry out peer-review visits and technical capacity-building activities.
- Analyse monitoring results through the Joint Monitoring System.
- Develop action plans and recommendations supporting habitat conservation and sustainable infrastructure planning.

Cooperation Across the Danube

The Danube connects ten countries, numerous institutions and diverse monitoring traditions. Protecting migratory fish such as sturgeons therefore requires more than national efforts - it requires coordinated action across the entire river basin.
MonStur in the Danube was designed around this principle. By bringing together researchers, conservation organisations, public authorities and river management institutions, the project is creating a common framework for monitoring sturgeon populations and habitats across national borders. This collaboration extends beyond sharing information: partners jointly develop methodologies, exchange technical expertise, coordinate field activities and contribute to a shared monitoring system that benefits the entire basin.
Throughout the first year, cooperation has been one of the project's greatest achievements, demonstrating how scientific knowledge and institutional collaboration can work together to support long-term conservation.

Building on Year One

The first year of MonStur in the Danube has brought together expertise, data and institutions from across the Danube River Basin, laying the groundwork for a more coordinated approach to sturgeon monitoring and conservation.
As the project moves forward, the work continues, from field monitoring and data integration to scientific exchange, policy cooperation and engagement with the wider sturgeon conservation community.
Thank you to all Associated Strategic Partners, experts and collaborators who have contributed their knowledge and expertise throughout this first year.

Stay connected with MonStur in the Danube to follow project progress, field activities, scientific insights and upcoming milestones.

MonStur in the Danube

MonStur in the Danube Project

Interreg Danube Project Page

This newsletter was supported as part of MonStur in the Danube, an Interreg Danube Region Programme project co-funded by the European Union.