

The Fish-X project: Supporting EU small-scale fisheries going digital

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29 June 2023

The implementation of innovative data management and data collection tools will help support the sustainable development of EU fisheries; learn how the Fish-X project will support this digital transition of small-scale fisheries

The Farm-to-Fork Strategy and the Common Fisheries Policy, aligned with the European Green Deal, aim to ensure sustainable and healthy fisheries. Within these frameworks, advancing digitalisation can enable more sustainable management.

Small-scale fisheries (SSF) play a crucial role in the EU fisheries sector, accounting for approx. 75% of the active fishing vessels and approx. 48% of employment ([Lopes, 2022](#)). Implementing digital tools designed for SSF holds the promise of tackling some of the most pressing challenges. Hence, data obtained from SSF vessels through digital tools like electronic logbooks and vessel monitoring systems can enhance safety at sea, improve compliance, promote sustainable and transparent practices, as well as increase visibility and economic returns for fishers.

The importance of sustainable fishing is emphasised by Šime Barić, a small-scale fisher from Croatia: “It’s not rocket science; I want fishing to become sustainable because I’m not only looking that I’m able to fish during my lifetime, I want my kids to be able to fish after I’m gone. New technologies offer a glimmer of hope for the future of fishing, but true progress towards long-term sustainability requires not just innovation but also a commitment to responsible management and conservation practices that protect the health of our seas for generations to come.”

The successful implementation of digital tools to empower SSF depends on collaborative action and co-management. This requires incentivising fishers to collect and share data and enabling key stakeholders (e.g., maritime authorities) to access and utilise this information.

The Fish-X Platform: Digitally monitoring sustainable fishing

Focusing on SSF, the EU co-funded project [Fish-X](#) (06/22-05/25) will identify opportunities and bottlenecks in the digitalisation of EU fisheries. Further, the [consortium](#) will develop the framework for an open, secure and interoperable digital platform integrating three main elements that will be designed following the [Gaia-X](#) framework to ensure data sovereignty and security: i) the Fish-X Dataspace, ii) the Insight Platform, and iii) the Traceability Platform.

- **The Fish-X Dataspace** will facilitate effective access to fisheries data from SSF vessels. Following a consultative approach, stakeholders like fishers, control and monitoring authorities, institutions, and industry will be enabled to share and receive data, thus eliminating data silos and deciding on data accessibility for third-party consumers. The goal is to prioritise fishers in the seafood supply chain, promote transparency, and foster accurate data exchange.
- **The Insight Platform** will serve as the user interface of the Fish-X Dataspace while complementing national monitoring systems for fisheries administration and previous efforts (research projects etc.). In addition, a dedicated portal with some free data and simple maps related to fishing activities, such as fish stock status, level of exploitation, and responsible practices, will be made publicly accessible.
- **The Traceability Platform** will enable transparent and comprehensive mapping of a seafood product from harvest to sale. Utilising blockchain technology, documented data will remain accurate, safe, and unalterable. In addition, a traceability app will allow consumers to scan a product to access the documented information, thus enabling informed purchasing decisions and improved economic returns for responsible fishers.

It is important to note that Fish-X will not replace existing monitoring and control systems but rather propose a complementary option for the collection, AI-supported analysis and sharing of fisheries data, able to cover the high numbers of SSF vessels within the EU.

Continuous information gathering

The development of the Fish-X Platform will be accompanied by continuous stakeholder engagement and event series (e.g., webinars and expert working groups) to gather relevant insights regarding the requirements, needs and barriers for the digital transition of fisheries. Additional information will be generated by conducting three practical use cases testing the three platform components, one each on the Atlantic, Mediterranean, Baltic and/or Northern Sea coast. Within these use cases, digital technologies (e.g., tracking, digital logbooks, fishing effort analysis) will be applied to validate scalable approaches to improve the sustainability of fisheries, the digital skills in this industry and the existing control and inspection mechanisms, as well as to reduce IUU fishing.

EU fisheries roadmap for digitalisation

Gathered insights will also be used to develop a strategic roadmap that provides solution-oriented recommendations for a just digital transition. In December 2022, the Fish- X consortium published its preliminary EU Fisheries Roadmap for Digitalisation 2030, which maps out required actions for the four identified key areas: i) governance and policy, ii) data collection and traceability, iii) digital infrastructure and equipment, and iv) EU fisheries skills, behaviours and practices. The final roadmap, to be published in spring 2025, will be a targeted effort by maritime authorities, EU fisheries and communities to harness existing and emerging knowledge, tools and practices for the sector's

sustainable development. In addition, it will propose the necessary steps for effectively engaging EU fisheries and relevant stakeholders in the digital transformation process by 2030.

What does the future hold for the sustainability of the fishery industry?

EU policies and regulations, as well as practices in the fisheries industry clearly show that digitalisation is crucial for the effective and sustainable management of fisheries. Some of the most impactful benefits are improved data management, multi-stakeholder cooperation, and enhanced monitoring, control, and traceability.

The Fish-X project is vital in the EU roadmap 2030 for the digital transition of EU fisheries and the Farm-To-Fork Strategy by prioritising fishers within the seafood supply chain.

The Fish-X consortium actively collaborates with relevant stakeholders to address these key challenges:

- Electronic catch reporting and control using reliable and cost-efficient tools designed for SSF;
- Demonstration of the added value of these electronic tools for fishers, especially for SSF (traceability, safety, access to environmental data, access to certification); and
- Engagement with key sectors (i.e., public, private, science, and civil society) to take advantage of more accessible fisheries and seafood datasets.

You can support the project as a promotional partner and/or by sharing your insights and best practices to empower EU SSF in its digital transition towards a more sustainable future.

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