

Innovative blockchain traceability technology and stakeholders' engagement strategy for **boosting sustainable seafood visibility**, *social acceptance* and consumption in Europe.

THE PROJECT

Environmental and food safety policies in the European Union aim to ensure more sustainable, inclusive, safe and healthy seafood production and consumption in Europe. A number of challenges continues to impede the achievement of the desired level of transparency and traceability of seafood products as the European seafood markets can still be characterized with a high level of unsustainable fishing and farming practices.

Sea2See project's main goal is to make actors with sustainable seafood practices more visible to consumers in order to give them a competitive advantage.

KEY CHALLENGES



- Insufficient information about seafood products: species, origin, fishing gear, feed, welfare issues, production methods and parameters such as water quality, processing and transportation. Most seafood products have a more complex history than what their legal origin displays. Transparency is mission possible with digitization
- Unsustainable practices such as the use of unselective gear with high by-catch and discards, undersized fish and invertebrates catch, illegal and unregulated fishing, fraud unaccountability;
- Lack of digitalization and tailored software tools for seafood products traceability. Seafood traceability requires innovative and cost-efficient approaches. The main challenge of linking clearly sustainability and traceability of EU seafood lies in the ability for real-time assessment of sustainability indicators across value chain actors.

OBJECTIVES

Sea2See's main goal is to build consumer trust and acceptance of sustainably fished or farmed seafood in Europe. This will be achieved with two types of action:

- Development and demonstration of an innovative end-to-end blockchain based traceability platform used throughout the seafood value chain;
- Implementation of societal and sectoral strategies for co-creation, communication and awareness raising about the benefits of sustainably fished or farmed nutritious seafood.

Sea2See will significantly increase the consumption potential since the consumers, in part, will be engaged through participatory strategies showing how web-based and digital tools can provide trustworthy traceability information. The objectives are as follows:

- Develop a co-creation approach to sustainable seafood transparency and traceability
- Leverage a set of awareness raising and educational practices to increase sustainable consumption
- Develop a blockchain based deployment model for seafood industry-specific traceability data collection
- Demonstrate the feasibility and advantages of the Sea2See blockchain network model
- Develop a standardized Life Cycle Assessment framework for identifying and the major sources of environmental impact

EXPECTED RESULTS



Traceability blockchain based platform and tools deployment: Web app accessing real-time shared data for each value chain actor and value chain data collection tool for professional end-users.



Data flow funnel to commit all processes from capturing aquaculture production data to storing transformed data in blockchain, and development of software for data management inside the deployed cloud architecture.



Auditable consumer engagement tools, such as consumer app connected via QR-code to shared life-cycle data on the end-consumer product, with integration of consumer feedback collection visualized and analyzed through a web app.



Value Chain Stakeholders Engagement Strategy – a co-creation methodology tailored to the specific geographical seafood sites as well as each specific group from the value chain – from fishermen and aquaculture producers to seafood retailers, distributors and policy makers.



Tools and customized campaigns for sustainable seafood consumption – QR codes linking to MOOC, Youtube, virtual sustainable seafood cookbook, etc.



LCA and environmental impact assessment - Life Cycle Sustainability Assessment complemented by guidelines for replication, scalability and knowledge transfer.



Demonstrators Toolkit – case studies with lessons learned to be created as datasets of generated by the project data, such as pilot sites' "log Books", cloud data sets and other.

KEY INFORMATION



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