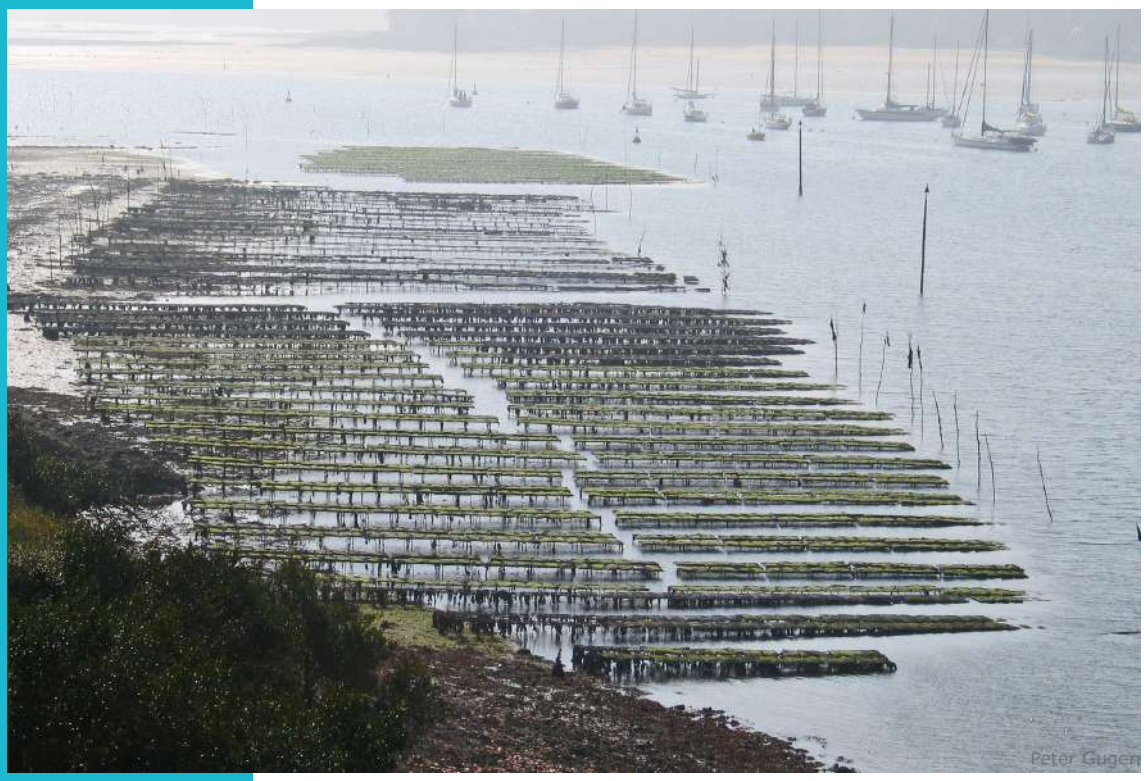
POLICY BRIEF 4

EXTRA-SMEs
Interreg Europe

European Union
European Regional
Development Fund



EXTRA-SMEs PROJECT

AIMS AND OBJECTIVES OF THE PROJECT

EXTRA-SMEs is an Interreg Europe project that aims to foster the competitiveness, extraversion, and internationalisation of rural and coastal SMEs participating in aquaculture value chains.

To that end, the project brings together 8 regions from 7 countries to join forces and exchange experiences on:

- Simplification of administrative procedures.
- Expansion and access to new markets.
- Innovative value-added product solutions.
- Personnel up-skilling.
- Resolution of stakeholders' conflicts of interests.

The partners participating in the project are:

- The Region of Peloponnese in Greece
- The Region of Liguria in Italy
- The Northern Chamber of Commerce in Szcecin (NCC) in Poland
- The Bucharest-Ilfov Regional Development Agency (ADR-BI) in Romania
- The Lapland University of Applied Sciences (LUAS) in Finland
- The University of Patras (UPAT) in Greece
- The Western Development Commission (WDC) in Ireland
- The Public Institution National Regions Development Agency (NRDA) in Lithuania
- The Liguria Cluster for Marine Technologies (DLTM)

POLICY BRIEF OVERVIEW

This policy brief reports on the best practices identified in the context of Activity A1.3 “Improving policies to boost SME competitiveness and extraversion in EU" coastal and rural areas where aquaculture is a driver of the regional economy. The aim of this policy brief is to present exemplary practices identified and highlight the lessons learnt from cases examined.

CATEGORIES OF INTERVENTIONS TO RAISE THE SECTOR'S POTENTIAL

Business innovation strategies

This category Includes business innovation strategies for aquaculture SMEs across the value chain that improve their competitiveness, productivity and promote economic advancement. The main challenges of this category are related, among others, to improving production processes, increasing nutrition value of aquaculture products, developing specific species diets, and health management.

Research and Development

This category comprises cases of R&D investments or projects launched in partnership countries by private actors, to support innovation adoption and advance the sector.

Strategic alliances and synergies

This category highlights the importance of building partnerships with research institutes, civil society organizations, academia, international development organizations and the private sector (businesses across the aquaculture value chain), as the driver in unleashing the innovation potential of sector, and increase performance and competitiveness of individual aquaculture businesses.

Technological innovations

This category is used to evaluate the adaptation to alternative feed sources, disease resistance, feed efficiency, human health and modern nutritional requirements requires, among others, technological innovations across the aquaculture value chain. This category has mostly revolved around technological innovations in the areas of recirculation, reproduction, disease management and feeding.

Capacity building and awareness

Capacity building is a cross cutting theme, considered to be another key driver for sustainable aquaculture development and innovation adoption. This category identified that the development of fully functioning knowledge networks through capacity building and awareness raising activities can have significant impacts on innovation efficiency and effectiveness, in reducing the transaction costs of knowledge diffusion and by encouraging green innovation in areas where market signals are not fully effective.

EXAMPLE OF GOOD PRACTICES ON BUSINESS INNOVATIONS

Partner's Country: Scotland

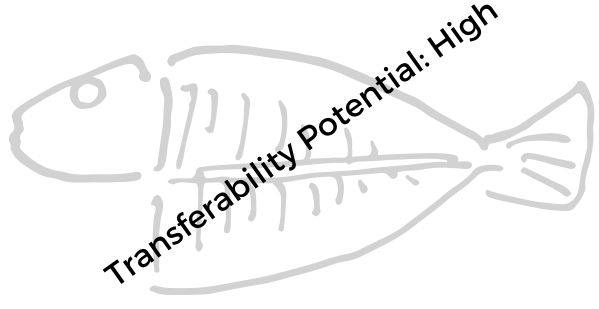
Name of the practice: The Association of Scottish Shellfish Growers (ASSG)

Practice description
The practice under examination is the Code of Practice of 2005. There are numerous codes of good practice relating to shellfish, currently or potentially available to shellfish growers, ranging from national Codex recommendations about best hygiene practice, to environmentally focused proposals for protection of the natural heritage. The ASSG Code of Good Practice applies to regulatory and research outcomes as well as developments in husbandry techniques and advice about optimal management of predators. The Code is available in hard copy and electronic version, with all updates to be supplied as appropriate and required.

Functions
The Code of Practice provides general rules and guidelines (based on the existing relevant legislation) for all the activities of the shellfish aquaculture including the following: establishing a shellfish farm; locational planning; site or equipment modification; site access; navigational safety; visual impact (landscaping); noise and light, odour, marine birds and other wildlife, carrying capacity, introduction of new species and disease, husbandry and harvesting, monitoring for microbiology, biotoxins and other contaminants, use of vessels, vehicles and marine equipment, use and storage of chemicals, fuels and lubricants, construction and equipment standards, waste management, health and safety regulations and policies.

Results
The adoption and implementation of the Scottish Code of Practice has progressively led to considerable results, signifying the positive impact of this strategic alliance. The code has raised public awareness on sustainably aquaculture as it endorses fully sustainable growing practices. In addition this assembly of many local growers has improved their capacity in total to address more effectively occurring issues related to aquaculture, while also to strengthen their contribution to the environmental protection. Furthermore, the scheme under examination has further developed the cooperation between public and private sector, especially in the process of fundraising. The impact on the market have also been positive as the Code has helped Scottish growers to expand their scope and gain access to new markets, increasing that way their productivity and revenues and approaching higher levels in aquaculture innovation.

Further information: http://assg.org.uk/



EXAMPLE OF GOOD PRACTICES ON TECHNOLOGICAL INNOVATIONS

Partner Country Finland

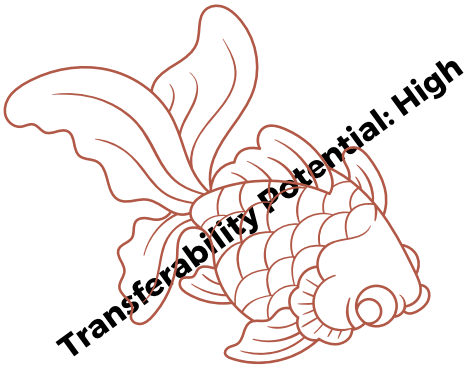
Name of the practice: Recirculation- Fish Farm for food fish production (Finnforel Oy)

Practice description
This is the first full-scale recirculation fish farm in Finland, having employed technological innovations to achieve higher sustainability rates for European aquaculture and expanding. in other markets (e.g. Russia). In terms of production, the practice's annual production is 1.000 – 1.300 tons of rainbow trout, accounting for 10 % of the national production of the rainbow trout. Lastly, the fish farm is situated at the industrial area next to a paper mill, which creates beneficial advantages for both of the companies and creates a small-scale, symbiotic relationship between the two companies as the Saimaan Tuore facility's water is directed to the Stora Enso paper mill's water treatment plant.

Functions
This intervention offers a new environmental friendly and effective industrial fish farming and processing scheme targeting the FORECA sector. The most important aspect for raising healthy fish is to provide clean and oxygen-rich flowing water. Throughout the process, water is filtered, nitrogen compounds are converted into harmless nitrates, carbon dioxide is vented off, the pH levels are regulated, the water is oxygenated and the water temperature is precisely controlled. In terms of environmental impact, the recirculating aquaculture system does not burden the environment.

Results
Since the project is relatively recent, the quantitative outcomes of the new technology adopted as well as the economic and technological viability of the unit will be known within the upcoming years. It is observed though, that so far that the intervention has increased productivity and fostered the innovation adoption, making this company a prime example of eco-friendliness and a model of recirculation aquaculture.

Further information: https://www.bioeconomy.fi/the-fish-of-the-future-grows-ecologically-indoors/



EXAMPLE OF GOOD PRACTICES ON RESEARCH AND DEVELOPMENT

Partner Country: France

Name of the practice: AQUIMER

Description
AQUIMER was founded in 1999 and was nominated for a national Competitiveness Cluster in 2005 by the French government. AQUIMER is an alliance consisting of companies, scientists and training centers implementing R&D and business innovation model in order to increase economic potential from aquaculture development. More specifically, the aim of the AQUIMER cluster is to alter the depletion of seafood resources and cover the increase in food demand always in line with the principles of sustainable development.

Functions
AQUIMER's programmes focus on two themes: 1) Maximizing the available resources and creating new resources based on sustainable development and 2) Changing the fundamentals of the aquatic food industry to promote the emergence of new technological and business approaches.

Results
AQUIMER operates within a wide and intricate network of public and private businesses fostering the adoption of innovative practices and contributing to the resolution of crucial environmental and socioeconomic interests in the national level. It has assisted companies that are involved in the sector of aquaculture to grow through funding and training projects.

Further information: https://www.poleaquimer.com/en/

Transferability Potential: High

EXAMPLE OF GOOD PRACTICES ON CAPACITY BUILDING AND RAISING AWARENESS

Partner Country: Netherlands

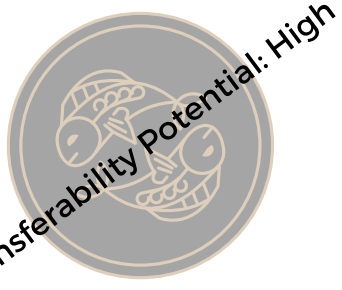
Name of the practice: Aquaculture Stewardship Council - Seabass, Seabream and Meagre Standard

Description
The Aquaculture Stewardship Council is an independent, international non-profit organization that manages the world's leading certification and labelling program for responsible aquaculture. The ASC was founded in 2009 by the WWF (World Wildlife Fund) and IDH (The Sustainable Trade Initiative) to manage the global standards for responsible aquaculture. The main intervention and scopes of ASC practices are to transform aquaculture towards environmental sustainability and social responsibility using efficient market mechanisms that create value across the chain.

Functions
The ASC - Seabass, Seabream and Meagre Standard promotes practices to minimize the environmental and social footprint of commercial aquaculture. To achieve that, a Monitoring and Evaluation (M&E) program has been established to develop a framework for measuring the impacts and positive change the practice have on the environment, conditions for farm workers and on local communities. The functions of the Monitoring and Evaluation (M&E) program system entail the following: 1) Creating an environmental monitoring program, 2) Defining results chains with intended changes and unintended effects and 3) Creating of a data management system.

Results
Concerning benefits of the practice, ASC standards operate within a wide network of private sector food retailers all over the world. These private organizations and partners of ASC work together to fund and moving the aquaculture sector towards environmental and social responsibility.

Further information: https://www.asc-aqua.org/what-we-do/our-standards/farm-standards/sea-bassseabream-meagre/



EXAMPLE OF GOOD PRACTICES ON STRATEGIC ALLIANCES

Partner's Country: Spain

Name of the practice: Mediterranean coastal wetland doñana marshes

Practice description
This intervention is a strategic alliance for the Doñana lagoon, a vast protected coastal marshland in Andalucia, Spain, that implemented a Code of Good Practice, which provides a set of guidelines for environmentally friendly aquaculture oriented to extensive or integrated multi-trophic land-based aquaculture production.

Functions
The scope of the practice is macro-regional, focusing on both Mediterranean and Baltic countries' aquaculture development. The guide promotes the application of a multidisciplinary and participatory ecosystem approach to integrate aquaculture management and nature conservation. Under this outlook, site selection and management of sustainable aquaculture operations takes into consideration the relationships between the activity and its impacts on surrounding wild flora, fauna and habitat, so as to provide information on the state of the ecosystem.

Results
The Code summarizes the most relevant aspects of the operational management of sustainable aquaculture under these principles, and may become a useful tool for future plans to regenerate the disrupted marshland areas and coastal wetlands of Mediterranean shores, where the careful use of natural resources such as water and land can generate substantial economic profits while enhancing a wide range of environmental values.

Further information: UNEP-MAP RAC/SPA, 2012. Best practice guidelines for aquaculture and sustainable management in a Mediterranean coastal wetland: case study of Doñana marshes (Andalucia, Spain). By Medialdea, M. Ed. RAC/SPA, Tunis. 30 pp

LESSONS LEARNT FROM CASES PRESENTED

Technological and Business Innovations

In terms of innovations (in business and technology), the good practices presented in this policy brief highlight the introduction and development of new technological instruments and innovative management systems in business schemes which in turn allow companies to grow significantly, increase fish production and capacity and maximizing their profit. Thus, implementing similar technological innovations in other fish farms could act as a driver for the sector's further development.

Research and Development

In terms of research and development, the case presented in this policy briefs highlights the need for companies or organizations to find new ways to increase the sector's economic impact in line with the principles of sustainable development. This could be facilitated by further research on the ways that current aquaculture techniques can be fine-tuned to maximize their output.

Capacity building and strategic alliances

In terms of capacity building and the formulation of strategic alliances, cases such as the ASSG and the Doñana group, have been formed in order to address sustainability issues in aquaculture through the enforcement of related codes of practice. The successful implementation of these codes of practices could act as a driver for the application of similar codes in other partners' countries to ensure that European aquaculture will function within a unitary framework.

Barrier identified

The need for financial incentives was also highlighted as the most important barrier of the sector. More specifically, the fish farms' projects constitute individual initiatives that could not essentially become possible if the companies involved were not initially resourceful and financially capable to invest in innovative technologies, offshore and inland infrastructures and certifications. Therefore, regional and local public authorities need to be more supportive to aquaculture companies, encouraging them to engage and provide them financial schemes that will facilitate their active involvement in the sustainable development of the sector.

Recommendation for future application

Finally, the use of spatial data could assist in the improvement of activities, such as shipping and offshore energy through early identification systems and improved management. Coupled with the formulation (or expansion) of networks and synergies, this could ensure that all aquaculture activities maximize their benefit and minimize their environmental impact.

PROJECT PARTNERS

Region of Peloponnese (EL)

Liguria Region (IT)

Northern Chamber of Commerce in Szczecin (PL)

Bucharest-Ilfov Regional Development Agency (RO)

Lapland University of Applied Sciences (FL)

University of Patras (EL)

Western Development Commission (IE)

Liguria Cluster for Marine Technologies (IT)

Public institution National Regions Development Agency (LT)

About Us

EXTRA-SMEs is co-funded by INTERREG Europe / European Regional Development Fund (ERDF)

Contact Us

Project email: extrasmes2018@gmail.com
Web: www.interregeurope.eu/extra-smes/

Follow Us

www.facebook.com/IEprojectEXTRASMEs/

https://twitter.com/ExtraSmes

www.linkedin.com/in/extra-smes-project-280329174/

EXTRA-SMEs
Interreg Europe

European Union
European Regional Development Fund