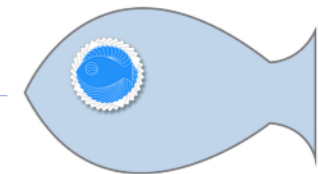




COFASP
ERA-net

Perspectives for the Fisheries,
Aquaculture, Seafood processing
in the EU - *The COFASP Case Studies*



This report presents the methodology and outcomes of the four thematic case studies developed in 2015 in the framework of the COFASP ERANET “Strengthening cooperation in European research on sustainable exploitation of marine resources in the seafood chain”, a project funded by the European Commission within the 7th Framework Programme. Key emerging issues addressing sustainability in the seafood chain have been identified and explored through dedicated workshops, focusing on uptake of research into innovative methods and bringing together different stakeholders. Their results have the potential to be further implemented into follow-up activities and projects as well as part of strategic planning at national, regional and EU level.

This document has been edited by CNR with the contribution of case studies leaders (IFREMER, RCN, ISPRA, RANNIS, MATIS, DTU AQUA, MMM, MEM).

ACRONYMS OF INSTITUTIONS

CNR = National Research Council (IT)
 DTU AQUA = National Institute of aquatic Research (DK)
 IFREMER = French Research Institute for Exploitation of the Sea (FR)
 ISPRA = Istituto Superiore per la Protezione e la Ricerca Ambientale (IT)
 MATIS = Icelandic Food and Biotech R&D institute (IS)
 MEM = Ministry of Rural Affairs (EE)
 MMM = Ministry of Agriculture and Forestry (FI)
 RANNIS = Icelandic Centre for Research (IS)
 RCN = Norwegian Research Council (NO)

REGIONALLY-INTEGRATED AND SPATIALLY-EXPLICIT FISHERIES AND ECOSYSTEM MANAGEMENT (RISE-FEM)

A variety of ecosystem conservation principles and policies now frame the management of fishing activities and so do the spatial planning of different sectorial activities, in addition to classical fishery management. There is a risk that the policies applying on the marine system in different sectors are not coherent from a fisheries point of view.

This case study envisaged how to integrate multiple objectives of different policies into fishery management scenarios. The spatial management of fishing activity has the potential to meet these objectives, on a habitat basis. In the past decade, spatially-explicit management measures have been implemented and spatially-explicit ecosystem models developed. The case study reviewed the state of the art in Regionally-Integrated and Spatially-Explicit Fisheries and Ecosystem Management (RISE-FEM) from both the Northern and the Mediterranean perspective.

To further improve scientific advice on spatial fisheries management in order to meet multiple objectives, three research needs were identified:

- Develop Management Strategy Evaluation (MSE) for multiple-objective and multiple-sector spatial management schemes.
- Improve knowledge on and evaluation of functional habitats.
- Develop spatially-explicit end-to-end models with appropriate complexity for spatial MSE.

Keywords: Integrated Ecosystem Assessment, Marine Spatial Planning, Spatially Explicit Ecosystem Modelling, Ecosystem Approach to Fisheries Management

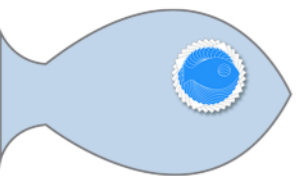
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General overview

The main philosophy behind the case study meeting was to invite expert scientists as speakers, asking them to review the state-of-the-art in their field of expertise as well as to identify gaps and needs for future research. The meeting was subdivided in four sessions, corresponding to the methodological approaches identified as being used in isolation but with the need to reach regionally-integrated and spatially-explicit fisheries and ecosystem management.

- Session 1 = Integrated ecosystem assessment (IEA)
- Session 2 = Marine spatial planning (MSP), with specific focus on fishing effort and human activities allocation
- Session 3 = Spatially explicit ecosystem (end-to-end) modelling

- Session 4 = Governance at the eco-region scale, including Marine Protected Areas (MPAs) and linking different policies (e.g. Common Fisheries Policy (CFP) and Marine Framework Strategy Directive (MSFD)). Two speakers per session were invited in order to cover both Southern and Northern European case study areas. Each invited speaker gave a one-hour keynote speech. The two presentations of each session were followed by a one-hour discussion. These discussions resulted in the identification of global research priorities as the basis for a joint science programme defining common methodological approaches to be developed and applied to specific eco-regions. An additional workshop day was opened to COFASP partners only, in order to build on the workshop reviews and to draft these research priorities.



Interventions and main activities

Session 1 included two presentations: 1) Integrated Ecosystem Assessments in support of the Ecosystem Approach to Fisheries management: Northern case studies - Andrew Kenny (Centre for Environment, Fisheries and Aquaculture - CEFAS, Lowestoft, UK); 2) Methodology and Southern case studies - Small pelagic fish in the Mediterranean: What we can get from what is not directly observed - Marianna Giannoulaki (Hellenic Center for Marine Research - HCMR, Irakleion, Crete, Greece).

Session 2 included the following presentations: 1) Methodology and Southern case studies - Marine Spatial Planning: allocation of fishing effort and other human activities in Southern case studies (Mediterranean) - Fabio Grati (National Research Council - Institute of Marine Sciences, CNR-ISMAR, Ancona, Italy); 2) Methodology and Northern case studies - Mapping fishing activity and impacts to support environmental assessment and management - Simon Jennings (CEFAS, Lowestoft, UK).

Session 3 included two presentations: 1) Methodology and Northern case studies - Spatial end-to-end models to address the effects of management scenarios on ecosystems - Morgane Travers & Marie-Savina Rolland (French Research Institute for Exploitation of the Sea - IFREMER, Boulogne-sur-Mer, France), 2) Methodology and Southern case studies - Cosimo Solidoro (National Institute of Oceanography and Experimental Geophysics - OGS, Trieste, Italy).

Session 4 included the following presentations: 1) Northern case studies - Pierre Petitgas (IFREMER, Nantes, France) on behalf of François Gauthiez (Agence des Aires Marines Protégées, Brest, France); 2) Southern case studies - Fisheries governance in the Mediterranean and Black Sea - Miguel Bernal (General Fisheries Commission for the Mediterranean - Food and Agriculture Organization, GFCM-FAO, United Nations, Rome, Italy).

Projected impacts

The outcomes of the case study can provide direct contribution in setting national/transnational strategies and enabling the delineation of research topics of interest for the COFASP community. Case study conclusions provide a clear overview of the key challenges affecting spatial management of fishing activities to stakeholders and policymakers at regional and European level.

Challenges and opportunities for further implementation

Within the case studies, three research topics were identified as priorities to help develop a framework of spatial approaches to multi-purpose management of fisheries, ecosystems and trans-sector activities.

1. Develop MSE and Multi Environment Experiment (MEE) for multiple-objective and multiple-sector spatial management schemes:

- methods to construct scenarios with multiple objectives (corresponding to multiple ecosystem components including the socio-economic one);
- methods to evaluate trade-offs between multiple objectives, sector and spatial scales;
- methods to test the effectiveness of small-scale measures (e.g. MPAs) at global population/ecosystem/regional scale and, reciprocally, of large-scale measures at small scale.

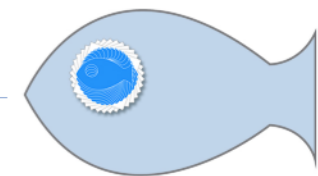
2. Improve knowledge on and evaluation of functional habitats:

- identify functional habitats for fish populations and map them;
- understand and quantify how local functional habitat uses affect global population's productivity and ultimately fishing yield;
- estimate the impacts of fishing on functional habitats and evaluate their status.

3. Develop spatially-explicit end-to-end models with appropriate complexity for spatial MSE:

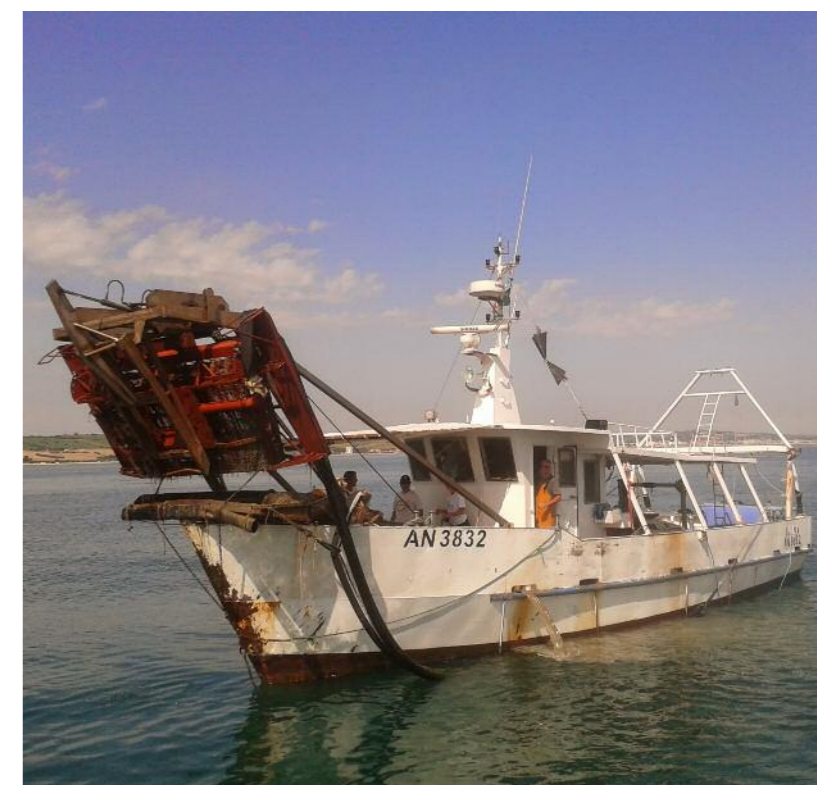
- approaches to adjust model complexity in order to implement multiple objectives MSE (e.g. CFP and MSFD);
- include trade-offs across objectives, sectors and space by dynamically coupling spatially-explicit end-to-end models and spatial management schemes;
- methods to model movements of fishes and fishing boats in link with spatial management measures (e.g. MPA, fishing effort spatial regulation, etc.) as well as human behaviour (socio-economic aspects).

The combination of models and methods may have to be tailored to the different regions of application, as one will not fit them all. These developments should therefore be undertaken in various geographical areas because of varying characteristics.

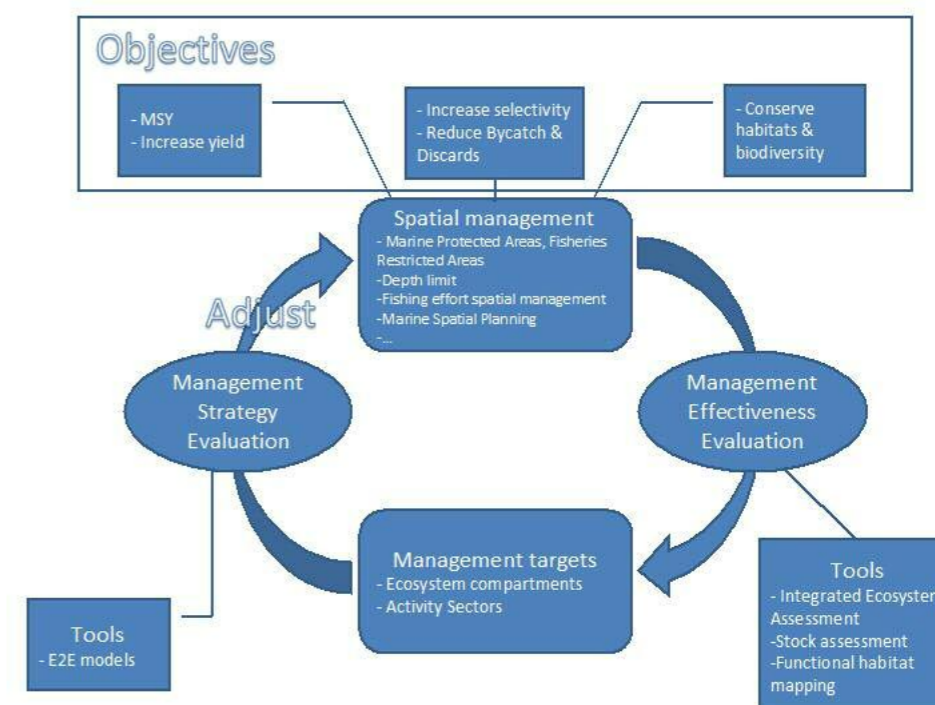


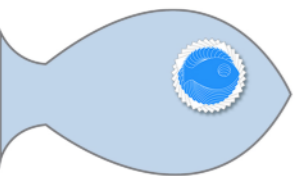
Conclusions

The main innovative aspect in the research priorities identified by this case study lies in developing MSE for ocean management as a whole (i.e. including fisheries but also other sectors and conservation objectives) and making it operational in a spatially-explicit context. In effect, such integrated management will be spatially-explicit. First, this requires to completely rethinking MSE and associated MEE in terms of trade-offs between components (i.e. objectives, sectors and spatial scales) rather than in terms of optimum for each single component, as traditionally done. In this respect, research has been relatively weak and novel developments will be needed for identifying these trade-offs, evaluating them, and accounting for them in management strategy implementation and evaluation. Given the regionalisation and spatialisation of management strategies implied by such trade-offs, habitats are a critical aspect. Most research in the field focused so far on habitat description and mapping. However, accounting for the trade-offs among various ecosystem components or spatial scales impacted or used by different sectors requires understanding the ecological functionality of habitats and how these contribute to diversity and productivity of the ecosystem components. In this respect again most is to be done. Finally, MSE relies strongly on the availability of models including the various components covered by the



strategy evaluated. Although the last decade saw the development of end-to-end models, only a few of them are spatially-explicit and the complexity required to make these tools operational represents the upcoming challenge. Together with movement models of both fish and fishing fleets they represent knowledge gaps and key bottlenecks for progressing the management of ecosystems and maritime activities.





REGIONAL DIFFERENCES IN AQUACULTURE

The objective of the aquaculture case study was to identify similarities and differences that are limiting growth of Mediterranean sea bass/sea bream industry and North-Atlantic salmon industry. It addressed biological life cycle issues, technical and technological issues, market and communication issues and trans-sectorial regulatory factors affecting aquaculture development. The COFASP Aquaculture Case Study brought together industry leaders from a representative (> 30%) fraction of the Mediterranean sea bass and sea bream sector and the global Atlantic salmon production.

Two workshops and visits to farms were organised – for sea bass/sea bream in Gaeta, Italy and for salmon in Frøya, Norway.

The key objectives were to:

- identify and prioritise the key issues and challenges that are impacting aquaculture development in Northern and Southern Europe;
- propose solutions that can be addressed by research;
- generate a greater understanding among funding partners of the needs and challenges in the aquaculture sector between the regions;
- foster North/South R&I co-operation.

Keywords: *Salmon, Sea bass, Sea bream, on-growing, fish farming, R&D*

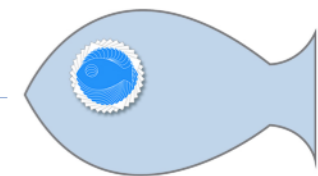
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General overview

The COFASP Aquaculture Case Study brought together industry leaders from companies representing 30-35% of the total production of the Mediterranean sea bass and sea bream sector and close to 60% of the total Norwegian, and more than 30 % of the global Atlantic salmon production. From the Northern region, representatives from leading producers Marine Harvest, Lerøy Seafood Group and SalMar were present, as well as the industry-financed Norwegian Seafood Research Fund (FHF) and industry-scale research facilities ACE/SINTEF. A representative of Fiskaaling, the Aquaculture Research Station of the Faroes, was also present.

From the Southern region, leading producers Selonda, Nireus, Andromeda, P2G, Agroittica Toscana, La Cosa, Valle Cà Zuliani, Tinamenor Group and Teboulba Tunisian Fish were present.

Pan-European/regional representation was also present from FAO, the European Aquaculture Technology and Innovation Platform (EATiP) and the Federation of European Aquaculture Producers (FEAP).



A total of 30 participants representing 10 different Countries convened in the two workshops. The majority of stakeholders attended both workshops.

The case study workshops were moderated and reported by Alistair Lane (European Aquaculture Society - EAS) together with Giovanna Marino and Claudia Greco (Istituto Superiore per la Protezione e la Ricerca Ambientale - ISPRA, Italy) and Kjell Emil Naas and Elin Vikane (Norwegian Research Council - RCN, Norway).

Interventions and main activities

Brainstorming and intensive group work during the first workshop in Rome led to the identification of the key challenges facing aquaculture development in the two regions. The process consisted in the identification of key challenges and initial ranking of challenges for each region with regards to:

- Biological life cycle issues
- Technical issues
- Market & communication issues

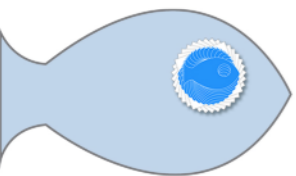
The second workshop held in Frøya, Norway, focused on diving deeper into understanding the key challenges and addressing common priorities and potential solutions that could be provided by research. For each of the common priorities research needs were identified. The



highest ranking common and region-specific challenges were further developed.

The top cross-interest priorities common for both regions, and identified research needs are:

1. Social acceptance/communication
 - Social science on public attitudes towards the aquaculture industry mechanisms that affect social acceptance for aquaculture production
 - Market research on how societal groups perceive the sector and the risks of aquaculture
 - Market analysis and segment targeting at national and European levels



2. Biomass control/estimation

Develop new technologies/tools:

- For real time estimation of total number of fish and size distribution with a good enough accuracy
- To minimize stressful factors imposed to the fish

3. Grow-out technology (offshore cage, automation, etc.)

Develop new grow-out technologies for deep-sea environment that ensures the day-to-day operations as feeding, inspection, removing of dead fish and maintenance:

- Including systems for detection of net integrity, real time remote monitoring of the system, the environment and the fish, early warning systems
- Including systems for automatic feeding systems, non-fouling, grading and harvesting

4. Robustness, juvenile quality

- To understand and control environmental and management stressors and develop automation to reduce stress during handling and management processes (incl. biomass control)
- To improve methods to predict juvenile quality (and smoltification), and develop technology (incl. molecular tools) to recognize and sort out malformation and fish with deviation from target standard
- To use diagnostic tools to improve the understanding of juvenile robustness and methods for disease diagnostics

5. Selective breeding

- Better tools and networks of sea bass/sea bream breeding industry to progress in collaborative selective breeding programs
- Genomic sequencing and the application of genomic information in selection for important traits like, growth, disease resistance, tolerance for vegetable feed ingredients etc.
- Sterile salmon production

6. Monitoring environmental and biological indicators

- Basic scientific knowledge about physiological markers, gene expression (system biology) and “translation” into operational tools that can be used on-farm
- Utilize new/innovative/reliable monitoring and measurement methods to get more knowledge about how fish react to different farming operations and environmental influences and to predict grow cycle
- Develop reliable methods for continuous automatic environmental monitoring (i.e. oxygen, chlorophyll, algae, etc.)

Likewise, research needs for the regional specific challenges and priorities were identified and elaborated.

Projected impacts

The findings resulting from the case study can provide direct input in setting national strategies as well as facilitating the definition of research topics of interest for the COFASP community, while also providing policymakers at regional and European level with a clear overview of the key challenges affecting the sectors from the key production (industry) stakeholders in those sectors.

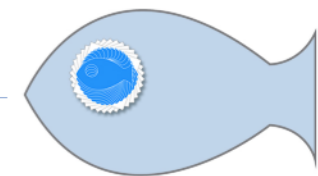
Challenges and opportunities for further implementation

The case study aim was to foster North/South research and innovation cooperation, to identify common and regional strategic priorities for future planning and development. The visits to the P2G and ACE farms in Italy and Norway and the salmon processing facility in Norway provided an excellent opportunity for participants to see operations on-site and reflect on some of the challenges being identified and prioritised. The scale of operation, size of fish, mechanisms for feeding, grading and transfer of fish were immediately evident, and participants were actively discussing these and sharing potential solutions to challenges.

Being a true ‘case study’ was one of the elements that probably proved to be the most interesting and potentially rewarding aspects of the COFASP aquaculture case study. COFASP partners and the national funding agencies will consider these priorities on their Multiannual Aquaculture Strategic National Plan and in future ERA-NET calls to foster collaboration between North and South, to facilitate exchange of knowledge and know-how, and promote the emergence of joint research programs in aquaculture between European regions.

Conclusions

Several initiatives in the last recent years have been carried out to forecast the future of aquaculture at different scales (European, Mediterranean, national) and for different subsectors (cold aquaculture, warm aquaculture, shellfish) and to provide information on main challenges and research needs. Compared to other initiatives, of which most have included a consultation process with several



categories of stakeholders, the COFASP case study provides a specific and detailed insight into core challenges for Atlantic salmon industry and sea bass/sea bream industry from the point of view of aquaculture operators.

Key findings:

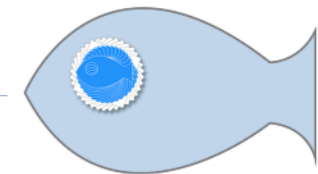
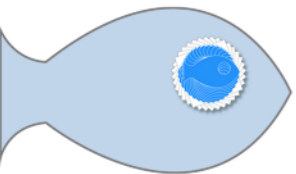
- Key operators of Atlantic salmon industry and sea bass/sea bream industry, representing significant proportions of the aquaculture production in North and South Europe, have identified key priorities for research and governance that are currently limiting aquaculture growth.
- The top cross-interest and common priorities are:
 - social acceptance/communication
 - biomass control/estimation
 - technology innovation
 - monitoring environmental and biological indicators
 - robustness, juvenile quality and selective breeding
- Priorities for the North are sea lice control, low-stress grading systems, welfare, packaging and shelf life.

Priorities for the south are feed research, matching supply with the market, product quality and traceability and disease control.

- These common and regional priorities are further described to provide input coming from salmon and sea bass/sea bream aquaculture operators for future potential research calls from COFASP, national funding agencies and the EU and for policy support.
- Certain priorities are more targeted for individual companies to improve efficiency, while others are more aimed towards groups of companies or sector associations such as “farmers’ organisations”. Finally, others are more suited towards inclusion in research calls as described above.

On-farm visits and discussions provided an excellent opportunity for operators to discuss challenges and potential solutions in an informal way and establish new contacts both within and between the regions.





EUROPEAN SEAFOOD PROCESSING CHALLENGES

The objective of the case study was to identify the European seafood processing industry research needs. The focus was on sustainability, logistics, and optimisation of processes, markets and consumer aspects.

This objective was accomplished through a “stakeholder conversation” a unique opportunity for Funding Agencies and Research Performing Organizations to have a direct dialog with key stakeholders of the European Seafood Processing Industry. The parties discussed and sharpened the outline of future Research and Technological Development (RTD) efforts in order to: maximize impacts for the industry; secure improvement in the performance of the industry through research and innovation; focus the attention of Funding Agencies on issues holding the potential to have a widespread positive impact on the European Seafood Processing Industry.

Keywords: *processing, secure & safe supply, efficiency, product integrity, value creation, health, product development, shelf-life, utilization of low desired species*

Link: <http://cofasp.eu/node/875>

General overview

In the framework of the COFASP project Sub-task 4.2.3 led by the Icelandic Centre for Research (RANNIS and executed by the Icelandic Food and Biotech R&D institute (Matis) on its behalf, a Stakeholder Conversation took place on April 23rd 2015 in Brussels, in connection with the Seafood EXPO. Trans-national associations, with representation from the coasts of Europe, R&D institutes involved in the sector, national key players in notable portion of European Seafood Processing industry were identified, and participated in the workshop.

These included: European Fish Processors Association, Dutch Fish Processors and Traders Federation, Fisheries Iceland, Norwegian Seafood Council (NSC), Marine Ingredients Denmark, EUfishmeal, the French Research Institute for the Exploitation of the Sea, the Belgian Institute for Agricultural and Fisheries Research, Ministry of Cultural, Education and Religious Affairs of Greece, Wageningen University & Research Centre, RANNIS, Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail (ANSES, FR), Danish Agency for Science, Technology and Innovation (DASTI), Danish Technical University (DTU) and Matis.

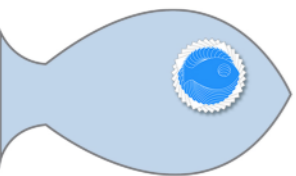
Among the industry stakeholders:

- AIPCE-CEP is composed of the EU Fish Processors and Trader Associations. While AIPCE is the European Fish Processors Association, CEP stands for the European

Federation of National Organisations of Importers and Exporters of Fish. AIPCE-CEP was identified as the key stakeholder in the European Fish and Seafood Processing, representing 3,500 companies in 12 EU countries and 2 additional non-EU neighbourhood countries. It represents 80-85% of European Seafood Processing amounting to 27 billion Euros handled by 120,000 employees and supplying European consumers with 13.7 million tons of seafood. AIPCE was represented by Mr. Guus Pastoor, President.

- The NSC works together with the Norwegian fisheries and aquaculture industry to develop markets for Norwegian seafood. It was identified as key stakeholder since it proved to have succeeded in marketing seafood internationally. In fact opinions of end consumers are important to seafood producers, since their products must meet need/demand of consumers to avoid that the production ends as waste in food value chains and so limit the environmental load thrust upon the world through seafood production. Norwegian Seafood Council was represented by Mr. Terje E. Martinussen, Managing Director.

- Fisheries Iceland was identified since Iceland is the only OECD Country where fishing industry is a net contributor to national economy, in terms of Government Fiscal Transfer, e.g. without subsidies and paying taxes, fees. Fisheries Iceland was represented by Mr. Jens G. Helgason, Chairman.



- *EUfishmeal* is a European nongovernmental organisation representing European fishmeal and fish oil producers. It was identified as pelagic fisheries account for great volumes in European Seafood processing. EUfishmeal was represented by Mrs. Anne M.B. Jespersen, Head of Secretariat and Director of Marine Ingredients Denmark that represent the producers of fishmeal and fish oil in the Kingdom of Denmark.

Interventions and main activities

The key stakeholders presented their views on the need for future RDT for the seafood processing industry, discussing future perspectives with a dialogue with both funding agencies and research bodies.

Projected impacts

The presumption for a viable seafood industry is the exploitation of research efforts aiming at the seafood processing. Stakeholders emphasised importance of such efforts for further growth of the sector. Key issues discussed were:

Secure the Resource

Improving fishing technology - selectivity is very important. The first part of the chain is where most can be saved. Due to data-scarcity in EU, stocks might not be exploited optimally. Therefore, quick scanning methods are needed.

Product integrity

On the product image, there are studies analysing consumer's interest in traceability. First, consumers want healthy food: animal welfare and efficient traceability throughout the chain are relevant issues. There is the continuous necessity to know more about consumer needs and demand.

Water and Energy Efficiency

Longer shelf life is attractive for retailers (since many products are wasted). About logistics, although it is efficient in EU, traceability is still a challenge.

Market/Competition

Sustainable value of seafood is important for the economy. Triple helix of seafood processing sustainability relies on economic, ecological and social foundation: value is the baseline for economic

performance, jobs are baseline for social stability and responsible utilization of limited natural resource is the baseline for ecological sustainability.

Securing supply of safe seafood

As self-sufficiency of EU in terms of seafood is not foreseeable. Increased competition on limited raw material is anticipated. Securing supply for seafood processing is of interest for European processing industry, through increased production and competitiveness.

Efficiency

Europe's answer to increased competition relies partly on increased/maximized/optimized efficiency or efficiency of water and energy usage or efficient logistics within Europe.

Product integrity or traceability

Consumers demand and expect highlighted Product Integrity; DNA based documentation of proof of products is a plus. However, consumers interest in traceability was highly questioned as usage of exposed information on traceability seem to be limited.

Value

Value creation is needed for economic performance of seafood processing and its future growth. Demand for higher value products might challenge food security balance if food processing offers primary harvesters in lower value than producers of new products.

Consumer knowledge on health

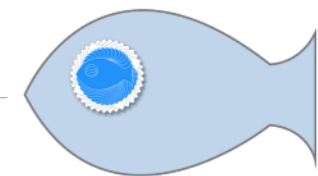
All new additional documentation of health benefits of seafood consumption is seen to be helpful for marketing of seafood, with more thorough and holistic results of clinical trials. Health effect of consumption of cultivated species after feed alteration is of widespread interest.

Product development

Salmon has been leading in terms of innovation and introduction of new products. More activities in relation with other species should be addressed.

Utilization and by-product valorisation

With respect to the raw material, it is needed to better exploit it, as well as to limit environmental impact of the processing, avoiding post-harvest losses and minimizing food waste. Product needs to be developed from previously discarded species wasted material. Discard ban and fight against Illegal Unreported Unregulated



(IUU) Fishing demand better utilization of harvested from the ocean, as well as innovative efforts in product development, presenting discarded but valuable species in an appealing way to the European consumers.

Shelf life

Extension of shelf life of product is always of interest for the food processing industry.

Challenges and opportunities for further implementation

Challenges for the market include increased competitiveness and protection of European interests in the international market. At present, EU market is composed by 35% of EU recourses, while 65% comes from third countries.

Fish consumption grows 0.5%/year, a figure that opens up new opportunities. Additional 1.4 million tons are needed in the next 20 years, which results in higher dependency on external sources. Mainly due to low cost effectiveness, EU is among the few regions where aquaculture is lagging behind the general trend. Moreover, European Fish market is segmented by countries. In this framework, European fish processors anticipate growing competition for resources from other markets (e.g. Africa will have a growing demand). Ensuring resilience and diversity of supply will therefore continue to be a relevant topic in European Seafood processing. Opportunities lie within better use of the fish oil more as food (not primarily as feed). At the same time, to ensure healthy fish (i.e. rich in omega-3) is and will be a fundamental prerequisite. To this end, there is high need for further studies on health effects of seafood consumption. Considering that only few samples of provided data to proof traceability are of high actual usage, consumer interest in traceability could have been overestimated. Anyway, product integrity is of high interest for both consumers and processors.

Conclusions

Future Seafood Processing in Europe relies on ensured supply, improved regulatory environment and a positive image. With constant need of efficiency, and a clear import regime facilitating trade, issues like sustainability, responsibility, safety, and authenticity promote positive

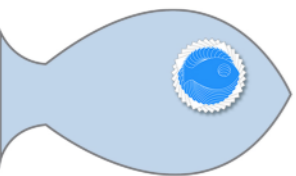
image, while research and innovation efforts can definitely contribute to progress, providing the knowledge and knowhow for industries to improve their performance and to create more value for society.

In particular, research fields identified upon industry demand for seafood processing are:

- Ensure supply
- Relevance of seafood in the bio-economy
- Product integrity
- Shelf life
- Effects of seafood consumption on public health and health benefits
- Product development from pelagic species with better use of oil and proteins.

Control of the production process, ecological and environmental sustainability is necessary but not sufficient alone to ensure the economic sustainability of European seafood processing enterprises. European fisheries and processing face fierce competition in the global marketplace. The key challenge is to maximize the yield of catches while minimize energy consumption and optimize all value chain processes. European seafood often comes from sustainable stocks, is healthy to eat and preliminary studies show that it is associated with comparatively low environmental impact. In an ideal world, this would give these products a competitive advantage and higher price in the market, but currently this is not necessarily the case. Therefore, it is necessary to disseminate relevant value chain improvements information to all stakeholders in an innovative way.





THE EUROPEAN MARITIME FISHERIES FUND COOPERATION

Ten Member States, primarily from the Baltic region, and the European Commission (DG MARE) met for a workshop in Estonia to discuss how to improve the influence of the European Maritime Fisheries Fund (EMFF) through cooperation both at implementation level as well as at project level.

Key objectives were to:

- explore how national EMFF operational programmes link the EMFF under direct management as well as to other research and innovation funding initiatives such as Art.185, ERA-NETs and JPIs, and to policy groups (e.g. the Strategic Working Group on fisheries and aquaculture of the Standing Committee on Agricultural Research, SCAR-Fish).
- map different EMFF relevant financing instruments and their relation to the EMFF.
- discuss how cooperation between Member States can improve and influence the effectiveness of the EMFF
- assess to what level Managing Authorities or national actors are interested in international cooperation activities
- highlight possible risks or problems in cooperation activities
- discuss how existing cooperation initiatives or platforms be utilized.

Keywords: *European Maritime Fisheries Fund, cooperation*

Link: <http://cofasp.eu/node/1179>

General overview

The objective of the COFASP EMFF case study was to explore different ways in which Member States Managing Authorities can work together to create synergies between their policy, implementation of the fund and the financed projects.

The case study workshop brought together Managing Authorities experts from ten Member States (DK, EE, FI, HU, IE, LT, LV, NL, PL, SE) as well four observers from the European Commission (DG MARE) and COFASP ERA-NET.

It was moderated and reported by Timo Halonen (Ministry of Agriculture and Forestry, Finland) together with Juhani Papp (Ministry of Rural Affairs, Estonia).

Interventions and main activities

EMFF is a major financing instrument of the fisheries sector in the years 2014-2020. The total EU budget is 6.4 Billion Euros. The EMFF may support the development of fisheries sector in multiple manners, including direct support to the investments of the fisheries sector,

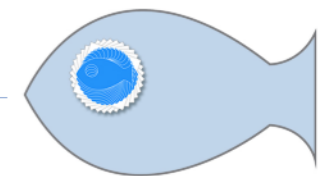
facilitation of innovation, research and environmental projects. Furthermore, the EMFF will finance the implementation of the EU's Common Fisheries Policy (CFP), including data collection and fisheries control.

In particular, the EMFF shall contribute to (among others):

- promote a sustainable and resource efficient fisheries and aquaculture including related processing;
- promote fisheries and aquaculture which are competitive, economically viable, socially and environmentally sustainable;
- support to strengthening technological development, innovation and knowledge transfer;
- enhance the competitiveness and viability of fisheries and aquaculture enterprises.

Since many EMFF objectives are cross-country relevant, it was considered of interest to explore:

- in which way the coordination and collaboration of the implementation of the EMFF can best be facilitated;
- how the implementation of national EMFF operational programmes could/should link to other research and innovation funding multi-national initiatives such as Art.185 (e.g. BONUS), ERA-NETs (e.g. COFASP) and JPIs (e.g. JPI Oceans) as well as policy groups (e.g. SCAR-Fish).



This case study also mapped different relevant financing instruments and their relation to the EMFF.

Though the EMFF is a pan-European fund, it was decided to limit the case study to a pilot focusing on Baltic Sea area.

In this framework, national experts:

- discussed how cooperation between the member states can improve and influence the effectiveness of the EMFF;
- assessed to what level managing authorities or national actors are interested in international cooperation activities;
- highlighted possible risks or problems in cooperation activities;
- discussed how existing cooperation initiatives or platforms are utilized.

Projected impacts

Based on two days discussion the participants concluded that deeper and more efficient cooperation could significantly increase the quality of implementation and lead to better use of public money within the EMFF. It is important to see the EMFF in relation to other activities that are ongoing on a regional or pan-European scale.

It was recognized that improved cooperation would lead to decrease of error rates, increase the dissemination of knowledge and good practices between Member States. It will reduce the time and resources spent to the implementation questions and interpretation issues and may improve the dialogue between the Member States and the Commission.

Challenges and opportunities for further implementation

The case study participants identified very concrete recommendations that could be carried out in order to improve cooperation. As a first step, it is required to continue the dialogue between countries.

Target group and meeting frequency

Cooperation should take place at the expert level of the Managing Authorities as very large part of the issues that Managing Authorities deal with are common and non-political. The group decided to invite Managing Authorities experts from other countries and meet regularly and informally face-to-face in Brussels during

the EMFF meetings as well as annually in other Member States.

Establish a sub group under BALTFISH

The group wish to explore the possibility to establish a sub group under the Baltic Sea Fisheries Forum (BALTFISH) at Managing Authority expert level to discuss concrete cooperation at regional level. In future, other regional fisheries groups might develop a similar Managing Authority sub-group.

Launch a pilot project “EMFF Learning Network” by building an IT tool for Managing Authorities of the EMFF following the example of Agriculture Learning Network.

After reviewing the formal and informal cooperation models used by Member States implementing other EU funds it was decided that a light administrative structure and informal communication would best suit to the EMFF.

Launch a questionnaire to map potential cooperation themes and projects under direct and shared management in order to find joint cooperation needs and to recognize the possible themes and projects of common interest for Member States.

Conclusions

Deeper and more efficient cooperation can increase the quality of implementation and lead to better use of public money within the EMFF. Improved cooperation in practice would lead to decrease of error rates and increase the dissemination of knowledge and good practices between Member States.

Interpretation uncertainties and building the national legal framework have currently high priority. Once the EMFF will be operational in all Member States, there is full potential to develop joint activities and thus support even better the implementation of the Common Fisheries Policy.

