

# EU COVID Impacts and Response

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## A Stakeholder Review

Prepared for the Aquaculture Advisory Council

October 2021

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## Background

The impact that the COVID-19 pandemic has had on the economy is unprecedented in scale and scope. This review was developed and carried out in order to understand the impact of the coronavirus outbreak on aquaculture businesses and review the mitigation measures of selected Member States.

The initial response was to exert control over the aquaculture market: companies started to delay harvest, with a resultant increase in operational costs such as feed, maintenance and fuel. All measures at the farm level became difficult in terms of interpersonal distances.

As a consequence of this, the nurseries / upstream services, had problems with selling juvenile fish for the next stage of the production cycle. This sector had particular problems in selling produce, which affected prices.

Market players targeting the hotel, restaurant, and catering (HoReCa) segment appeared to suffer the most. With loss of export opportunities and no demand from the HoReCa segment, products have been sold in the EU market at lower prices.

The most significant decrease in trade within the EU are for oyster, mussels, seabass and fishmeal.

At the time of writing this report, air freight had still not returned back to normal and still affects distant markets, with the loss of export opportunities. The most significant changes from 2019 to 2020 are value decreases for carp, oyster and freshwater fish due to decreases in volumes exported. Export trade to outside of the EU during this time period increased for seabass and mussels, although it is not clear if this increase will be maintained for year-end 2021.

Market diversity and location have shifted in that new species were available in local markets that were not typically available before the pandemic. Households have consumed more than before pandemic. The total sum of people buying aquaculture products has not shifted significantly, but location has been affected by people travelling south for holidays.

Data collection has been made difficult for authorities to respond appropriately. The smaller enterprises in particular have found it difficult to complete questionnaires with the frequency of pre-pandemic levels. The reaction time for responding to government had to be in days and the Producers Organisations played a key role in relaying to the administration / governance what they needed to know. Despite this, the statistics have been difficult to quantify, with the impact to markets not straight forward, with traditional average calculations not being appropriate. Due to this inherent problem with data collection and analysis, the response and support mechanisms have fallen short.

The Farm to Fork Strategy is at the heart of the European Green Deal aiming to make food systems fair, healthy and environmentally-friendly. The COVID-19 pandemic has underlined the importance of a robust and resilient food system that functions in all circumstances, and is capable of ensuring access to a sufficient supply of affordable food for citizens. In response to this, the European Commission is currently developing a contingency plan and a set of procedures to be followed in times of crisis including a crisis response mechanism, due for publication in Q4 of 2021.

The Commission launched (March 2020) support measures to mitigate the impact of the COVID-19 pandemic. This included a temporary state aid framework and the use of EMFF funding to support aquaculture. However, the implementation of this emergency aid still has not reached many fish farmers in the EU, with some regions not able to access it. In addition, Members States have

introduced various national support schemes but in reality, these have not always been evident on the ground. hold

## Aims and Objectives

The aim of this report is to review impacts of the COVID-19 pandemic on aquaculture farms and response mechanisms. A three-phased approach was taken to gather information:

1. Analysis of data to determine the impact on intra and extra EU trade. Trade in volume and value using data from Eurostat/EUMOFA from 2015 to the latest Eurostat update.
2. Survey of farmers and Producer Organisations (PO's). An on-line questionnaire aimed to assess impacts and identify specific actions taken by market players to adapt to the pandemic.
3. Interviews with representatives of selected Member States (France, Poland, Greece, Denmark and Spain) to determine the use of EMFF funding or other forms of state aid that have been used to mitigate the negative impact on aquaculture farms.

## Methodology - Approach to Gathering Evidence Base

### Phase 1: Baseline Data Collection

Data on trade (volume and value) are available in the EUMOFA database: by species, place of sale, Member State, and partner country. EUMOFA, developed by the European Commission, represents one of the tools of the Market Policy in the framework of the Common Fisheries Policy.

Species for intra- and extra- trade data analysis (value and volume) were selected based on the stakeholders surveyed during Phase 2: rainbow trout, mussels, oyster, seabass and carp were most important. Fishmeal were also analysed. Data from 2015, to the latest data available, were analysed to determine impacts to trade pre- and during the COVID-19 pandemic.

### Phase 2: Stakeholder Engagement – Survey

With the support of the COVID Focal Group, an online survey was created and distributed in four different languages to farmers and Producer Organisations (POs) (Annex 1). The aim of this was to gather information from operators on impacts and how they have responded to the pandemic.

In total there were 82 responses to the survey from 9 different countries. All responses originated from different ITP addresses which therefore ensured there were no duplicate respondents. Two responses were blank and so therefore were invalidated.

### Phase 3: Stakeholder Engagement – Interviews

The appropriate government officials administering state aid in the selected Member States were contacted by email to gather information on financial support, as detailed in Table 1.

Table 1: Member State's studied and the authorities responsible.

Member State	Authority contacted for EMFF funding data	Authority contacted for state aid data
Denmark	Ministeriet for Fødevarer, Landbrug og Fiskeri	Ministry of Industry, Business and Financial Affairs
France	Ministère de l'agriculture (l'aquaculture et à l'économie des pêches)	Conseil régional de Bretagne
Greece	Ministry of Rural Development and Food	<i>Personnel Communication</i> (Yannis Pelekanakis)
Poland	Department of Fisheries in the Ministry of Agriculture and Rural Development	Not appropriate
Spain	Dirección General de Ordenación Pesquera y Acuicultura	Xunta de Galicia

## Research Output

The following documents form the deliverables for this research:

- Deliverable 1 (Word): COVID Impact Report. This is the final report of the review, documenting conclusions and recommendations based on an holistic review of affected Member States.
- Deliverable 2 (Excel): Stakeholder survey responses.

## Conclusions and Recommendations

### General Conclusion

Intra- and extra trade flows within the EU aquaculture sector play an important role in controlling fish consumption, by expanding supply and offering more choice to consumers. Fish can be produced in one country, processed in a second one and then consumed in a third one, or perhaps return to the origin country. The vast majority of those employed in aquaculture are small-scale producers and represents an important source of employment, particularly in remote communities. These combined factors meant that the aquaculture food system was especially vulnerable to the COVID-19 pandemic.

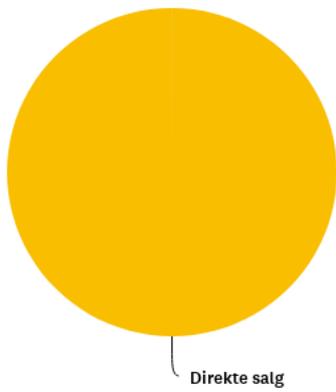
Those fisheries targeting intra-EU trade of high-value species and/ or selling to the HoReCa sector (oyster, seabass and mussels) suffered the most, as their usual market route was locked down. Trade to outside the EU was most favourable for mussels although export and import sales of carp and freshwater fish suffered the most.

### Socioeconomic Impacts

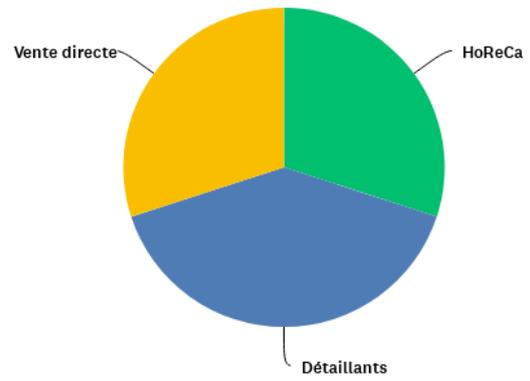
COVID-19's impacts on aquaculture affected both supply and demand which affect a number of socioeconomic variables: sales, production cost, transaction costs including transportation, distribution and COVID measures, commercial margins, access to capital and working conditions.

On the demand side, while supermarkets and fish outlets mostly remained open, the hospitality industry suffered from an unprecedented collapse and, in some cases, it either stopped its purchases altogether or reduced them significantly. Market access and the factors shaping consumers' preferences and behaviour changed accordingly. With the exception of stakeholders surveyed from Denmark and Romania, about one-third from the other countries surveyed were dependent on the HoReCa sector (Figure 1).

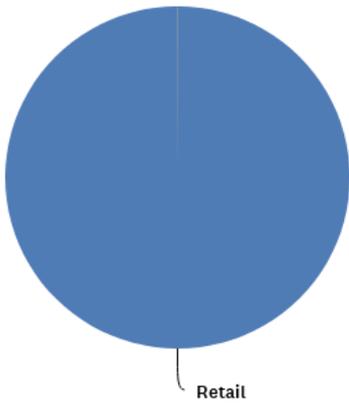
Denmark (n = 4):



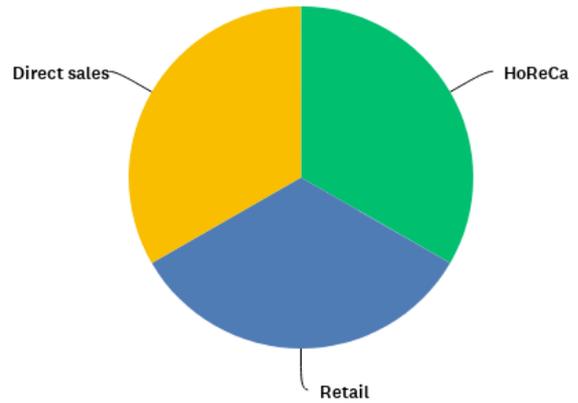
France (n = 10):



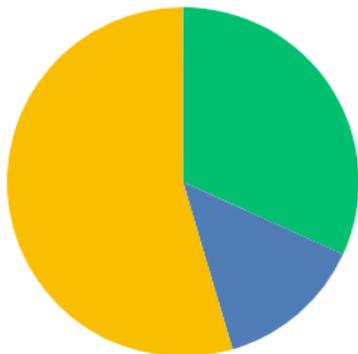
Greece (n = 1):



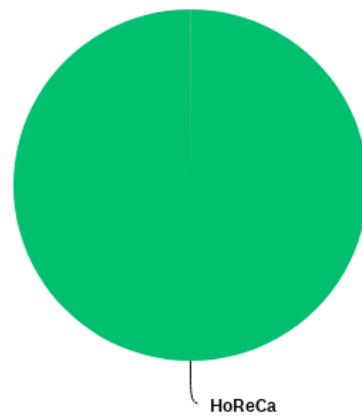
Ireland (n = 6):



Italy (n = 22):

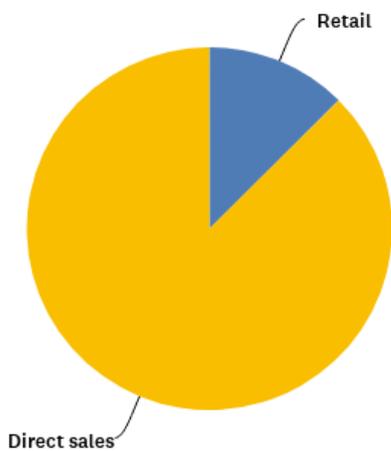


Poland (n = 1):



■ Canale HoReCa 
 ■ Vendita al dettaglio 
 ■ Vendite dirette

Romania (n = 8):



Spain (n = 8):

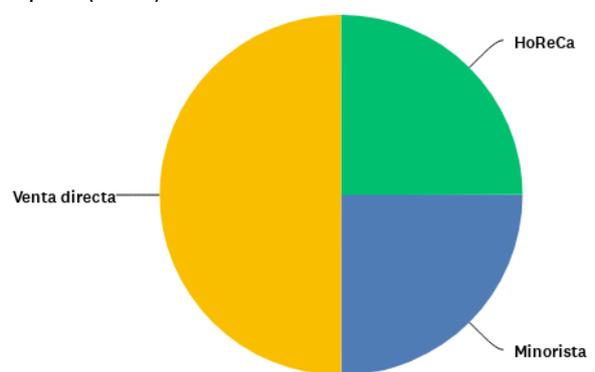


Figure 1: Survey responses on question 4: What is your main outlet? where n = sample size.

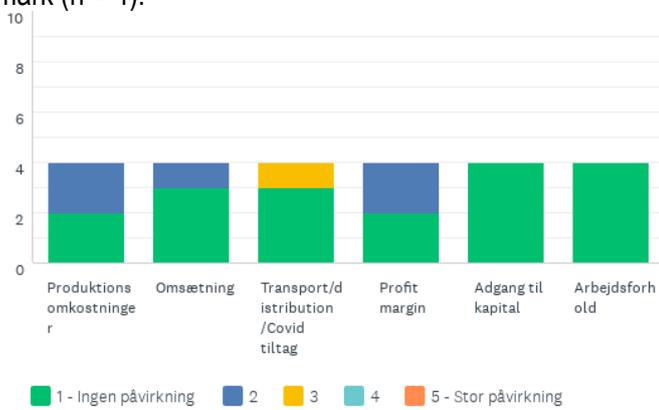
The impact to sales was of greatest importance to all stakeholders surveyed across all countries (Figure 2), whereas the impact to production costs was of least concern.

The impact to working conditions were generally of moderate importance across all countries (Figure 2). Unlike the catch sector, where social distancing affected the ability to work on boats, which in turn affected the supply side, the aquaculture sector was less affected, with farmers generally still able to work together on-site. The processing sector however faced the challenge of establishing safe working conditions among its workers. The processing sectors that produced durable products and targeted the retail segment have performed the best under the pandemic (EUMOFA, 2020).

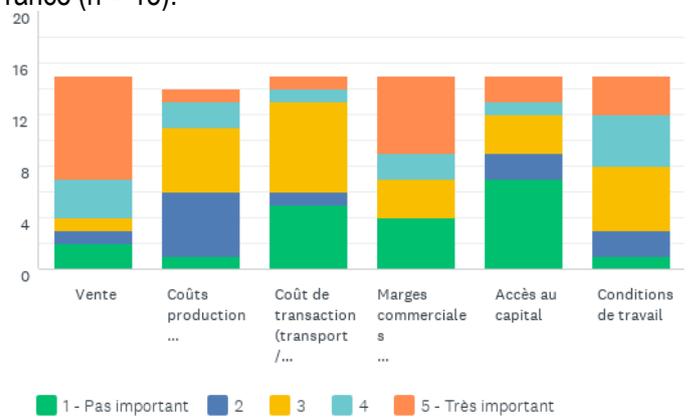
The impact to transaction costs (including transportation, distribution and costs of COVID measures) varied between country – Irish and Spanish stakeholders placed a high importance to this, whereas Danish, Italian, Romanian and French respondents did not rank this of such high impact.

Access to capital was not so important to Danish, French and Spanish stakeholders, but was of high importance to Romanian and Irish respondents.

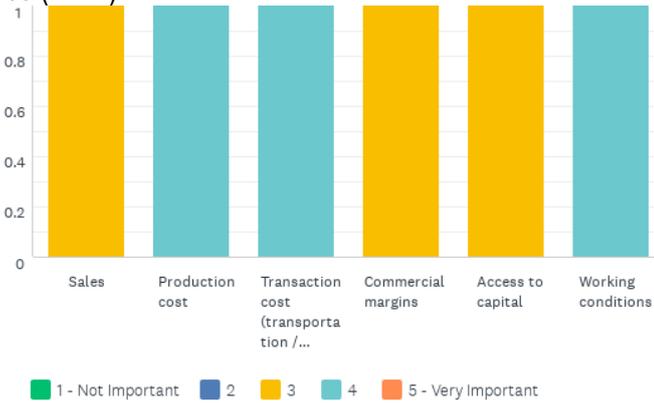
### Denmark (n = 4):



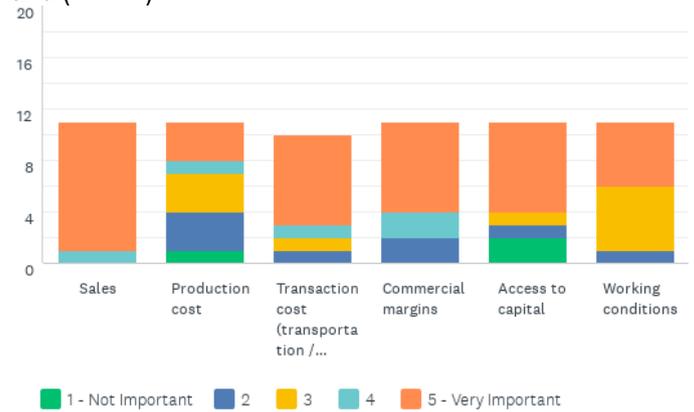
### France (n = 15):



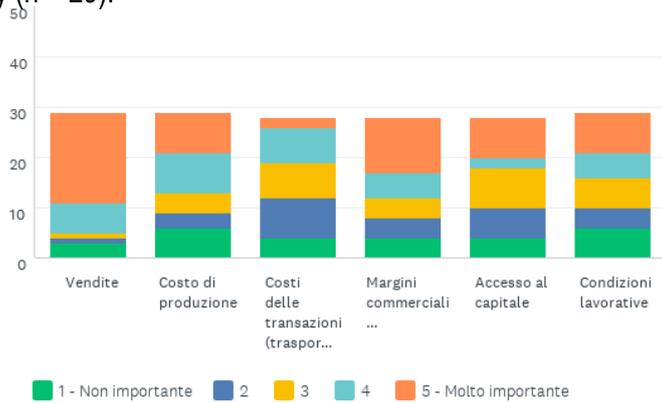
### Greece (n = 1):



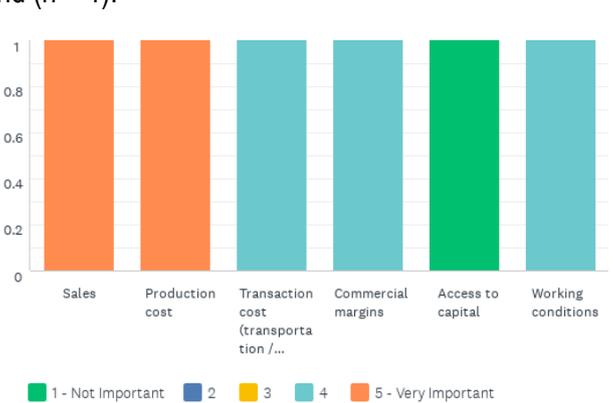
### Ireland (n = 11):



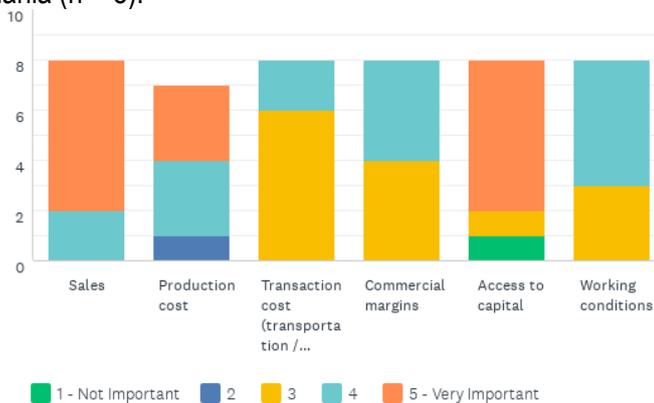
### Italy (n = 29):



### Poland (n = 1):



### Romania (n = 8):



### Spain (n = 9):

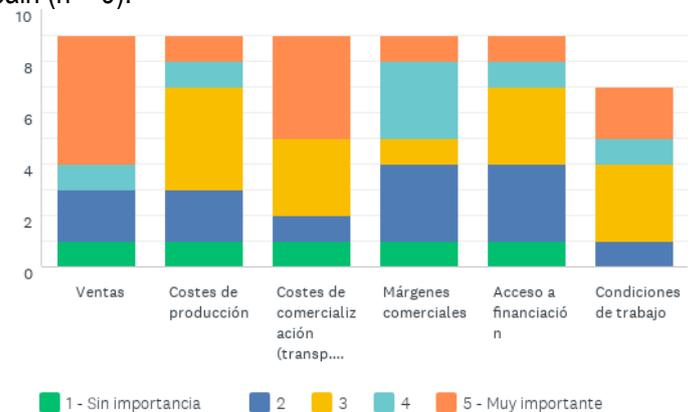


Figure 2: Survey responses on question 6: Reasons of the COVID-19 impact. Indicate if the following reasons have been important in the socioeconomic impact suffered by the aquaculture activity due to the crisis caused by COVID-19? (From 1 meaning not important, to 5 meaning very important), where n = sample size.

## Species-Dependent Impacts

As expected, species importance varied between stakeholders surveyed (Figure 2). Freshwater trout, mussels and oyster were the most common species cultured amongst the respondents (Table 2), followed by carp and seabass. Full details of most important species are presented in Figure 3.

Table 2: Survey response levels for each species.

Country	Abalone	Atlantic Salmon	Carp	Clam	Freshwater Trout	Mussels	Oyster	Pharma	Seabass	Seabream	Sole	Sturgeon
Belgium					1							
Denmark					4							
France	1					1	11					
Greece									1			
Ireland	1	1				3	7					
Italy				1	11	10	1		1	1		1
Poland					2							
Romania			8									
Spain					3			1	2		1	
<b>TOTAL no. of respondents</b>	<b>2</b>	<b>1</b>	<b>8</b>	<b>1</b>	<b>21</b>	<b>14</b>	<b>19</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>1</b>	<b>1</b>

These top five species of stakeholders surveyed were analysed in more detail for economic impacts in terms of sales (volume), prices, financial costs, wages and salaries, feed costs and energy costs (Table 3).

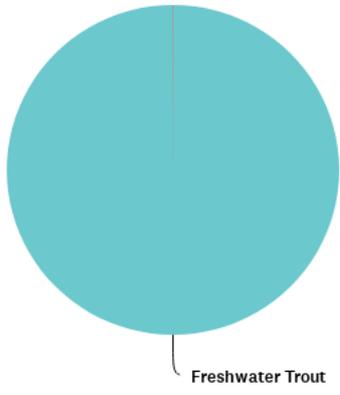
Table 3: Survey responses on question 5: Indicate what % each variable from the list below increased or decreased between 2019 and 2020/21 (top three species only).

	% Sales (volume)	% Prices	% Financial costs	% Wages and salaries	% Feed costs	% Energy costs
Freshwater Trout	-14	-6	10	4	8	7
Mussels	-16	-1	16	10	0	0
Oyster	-31	-18	1	-19	2	-4
Seabass	-23	-4	5	2	5	3
Carp	10	3	10	11	61	9
<b>AVERAGE</b>	<b>-15</b>	<b>-5</b>	<b>8</b>	<b>1</b>	<b>15</b>	<b>3</b>

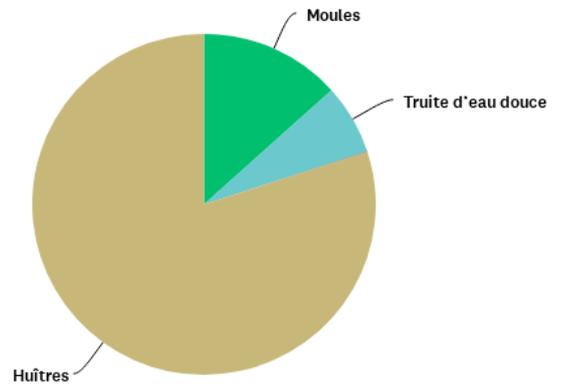
With the exception of carp, stakeholders said volume of sales decreased across all species, on average by 15%. A reduction in sales was greatest for oyster (31%), which was reflected in the decline in wages and salaries by 19%.

Stakeholders responded to say carp costs had increased across all variables questioned in the survey, which corresponds to the increase in sales volume. Freshwater trout costs did not reflect the same increases as carp: sales volume of trout decreased on average by 14% despite cost increase across the other variables.

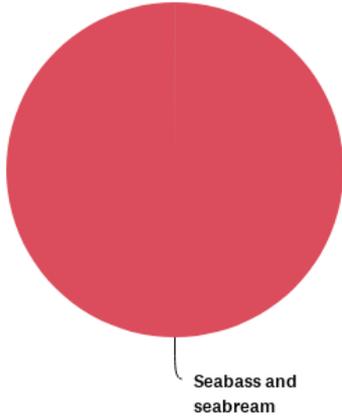
Denmark (n = 4):



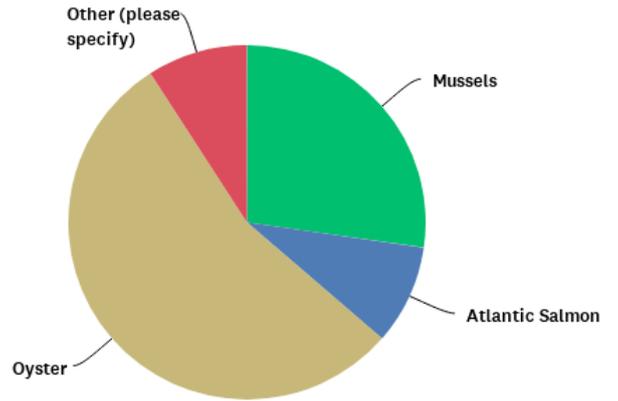
France (n = 15):



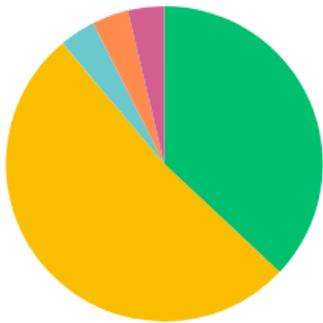
Greece (n = 1):



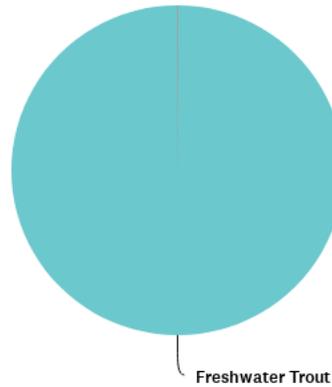
Ireland (n = 11):



Italy (n = 5):

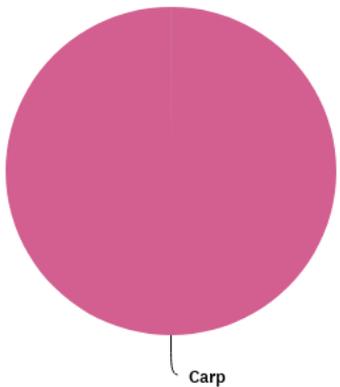


Poland (n = 1):



■ Cozze   
 ■ Salmone atlantico   
 ■ Trota d'acqua dolce  
■ Spigola/Branzino   
 ■ Orata   
 ■ Carpa   
 ■ Ostrica

Romania (n = 8):



Spain (n = 5):

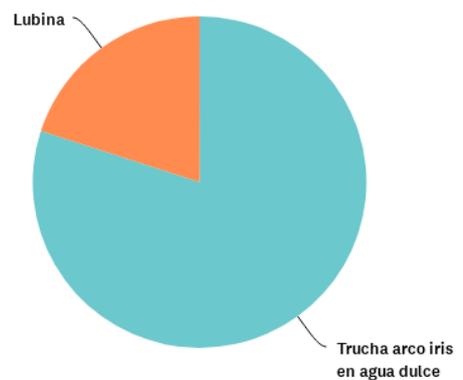


Figure 3: Survey responses on question 3: What is your most important species produced? (n = sample size).

At the current time, there is very limited or no available data for the change in marketing activities, placing the reliance on anecdotal evidence. The response rates from the stakeholder survey were variable: although there were 82 responses to the survey from 9 different countries, sample sizes for analysis by species made it difficult to come to conclusions and there were key gaps for some species (e.g. salmon).

**Recommendation 1:** Any future data collection surveys should request Producer Organisations and associations to select representative farmers in various countries and perform structured interviews.

## Impacts to Trade

Markets for fish and fishery products are varied in terms of location, ranging from domestic to regional (both intraregional and inter-regional) to international markets. Intra-EU trade statistics record the movement of goods between Member States. Extra-EU trade statistics record goods imported and exported by the EU from and to non-EU countries.

### *Intra-EU Export Trade Patterns*

Figure 4 and Figure 5 illustrates the trend in intra-EU export trade value and volume for selected fish species in the last six years (respectively). The most significant changes from 2019 to 2020 are value decreases for mussels and oyster due to decreases in volumes exported.

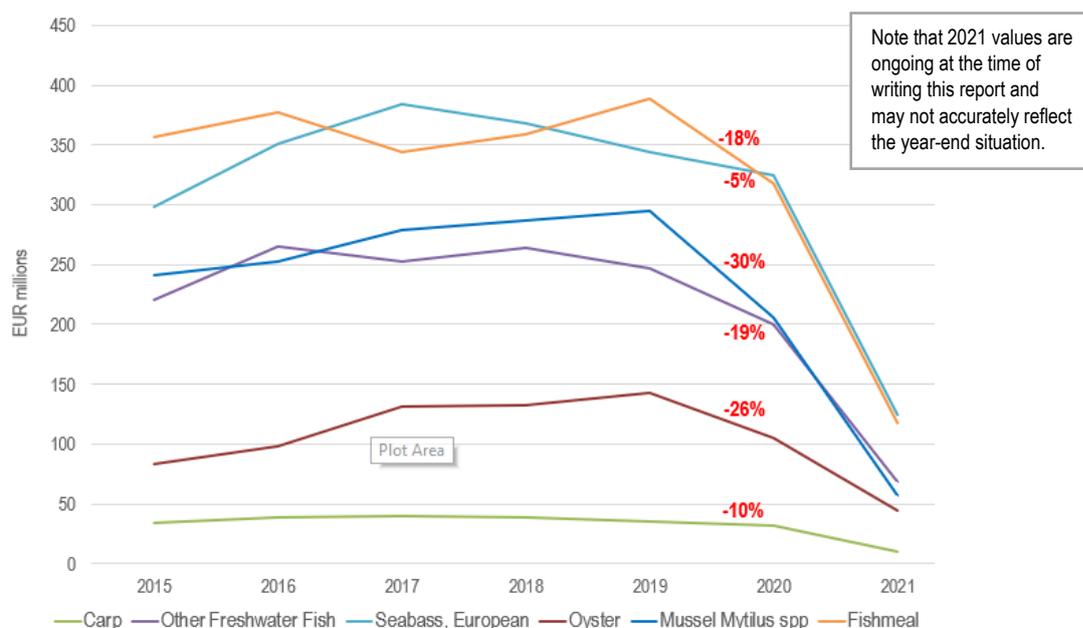


Figure 4: Value (EUR) of intra-EU exports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

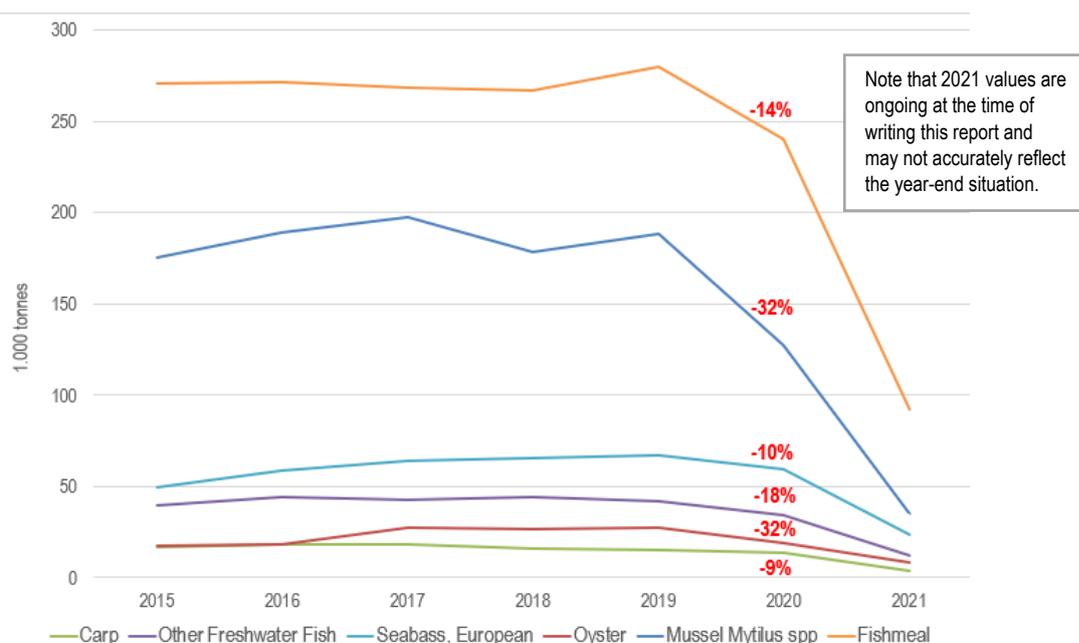


Figure 5: Volume of intra-EU exports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

### Intra-EU Import Trade Patterns

Figure 6 and Figure 7 illustrate the trend in intra-EU import trade value and volume for selected fish species in the last six years (respectively). All products decreased in value from 2019 to 2020: the most significant decreases are for oyster, mussels, seabass and fishmeal.

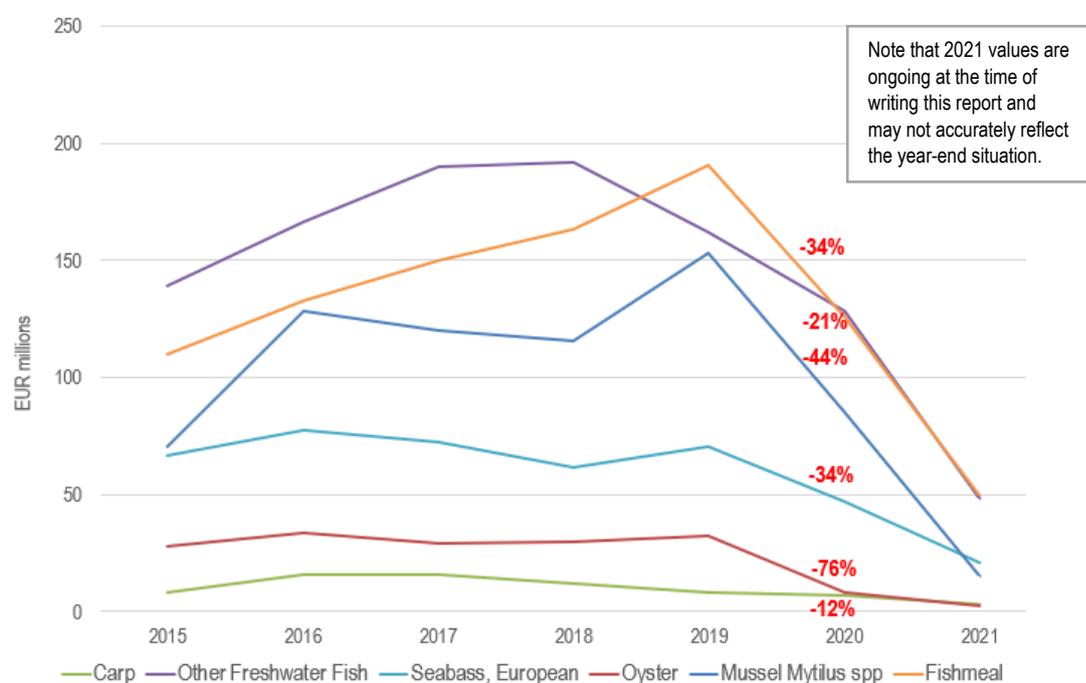


Figure 6: Value (EUR) of intra-EU imports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

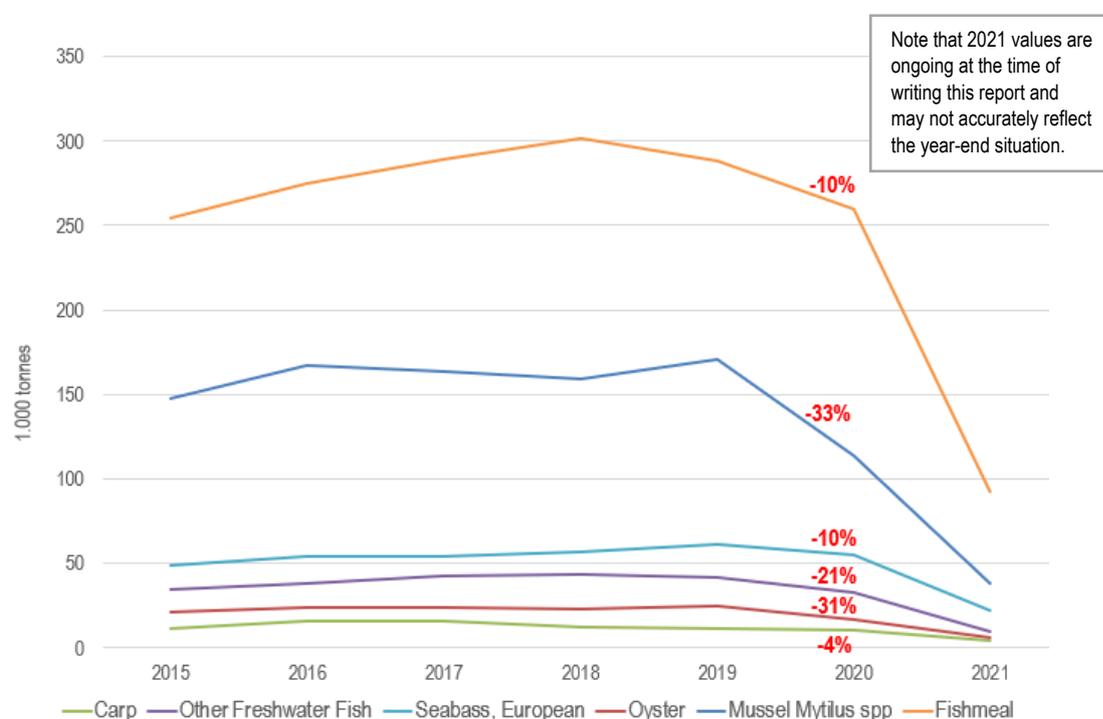


Figure 7: Volume of intra-EU imports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

### Extra-EU Export Trade Patterns

Figure 8 and Figure 9 illustrates the trend in extra-EU export trade value and volume for selected fish species in the last six years (respectively). No extra-EU data exists for fishmeal. The most significant changes from 2019 to 2020 are value decreases for carp, oyster and freshwater fish due to decreases in volumes exported. Export trade to outside of the EU was most favourable for seabass and mussels.

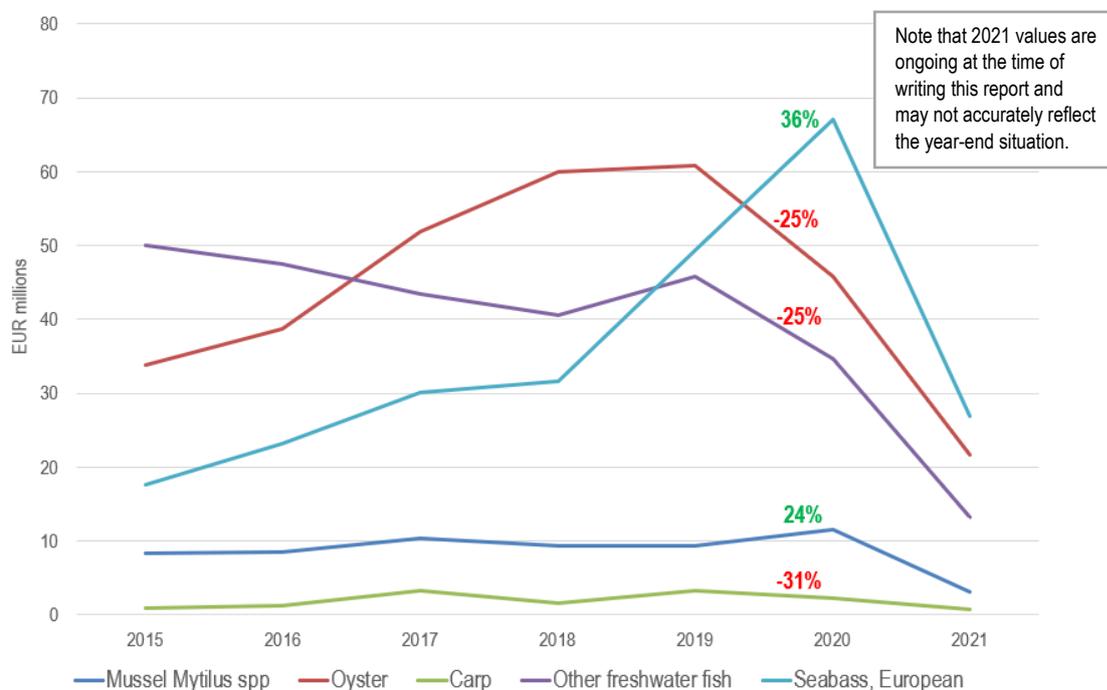


Figure 8: Value (EUR) of extra-EU exports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

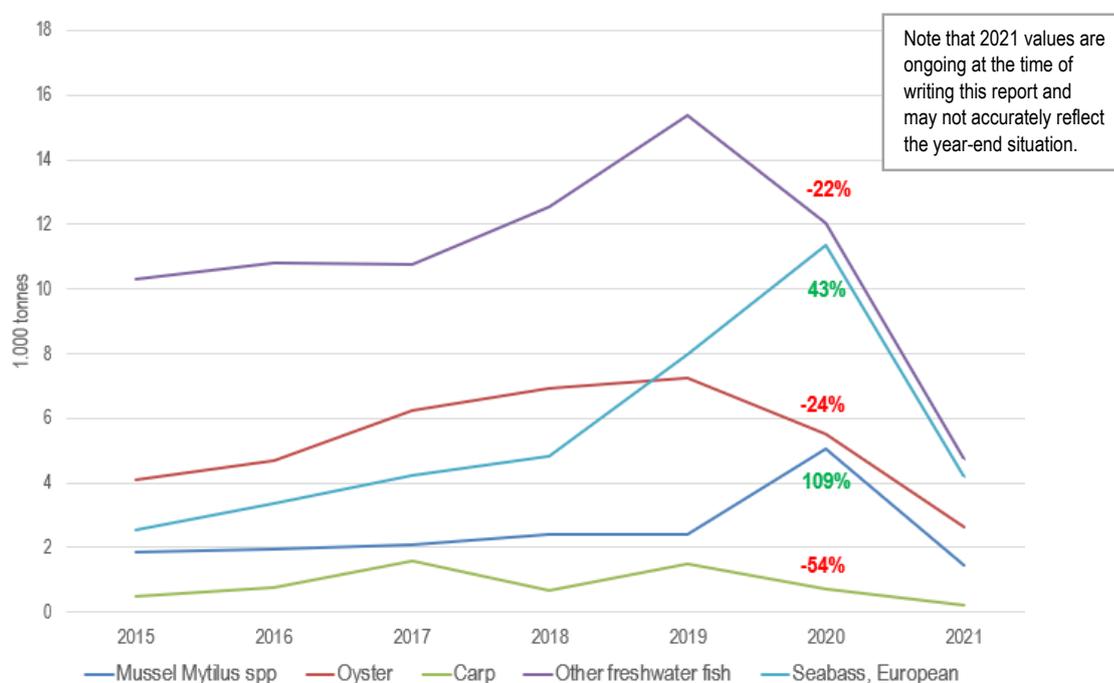


Figure 9: Volume of extra-EU exports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

### Extra-EU Import Trade Patterns

Figure 10 and Figure 11 illustrates the trend in extra-EU import trade value and volume for selected fish species in the last six years (respectively). The most significant changes from 2019 to 2020 are value decreases for carp, freshwater fish and seabass due to decreases in volumes imported. Import trade from outside of the EU was most favourable for mussels and oyster.

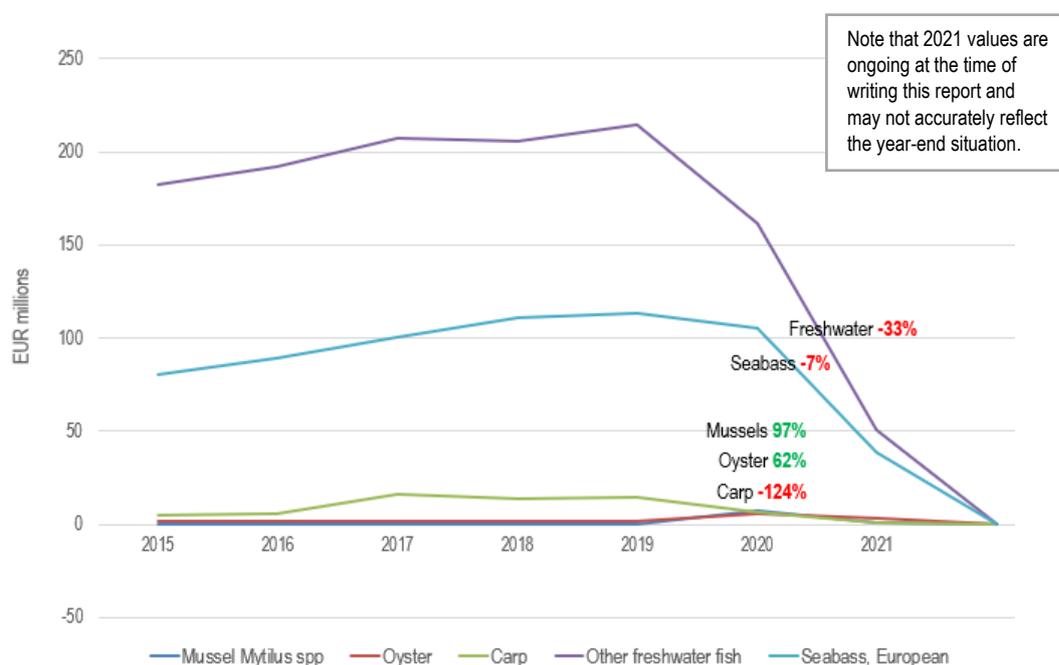


Figure 10: Value (EUR) of extra-EU imports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

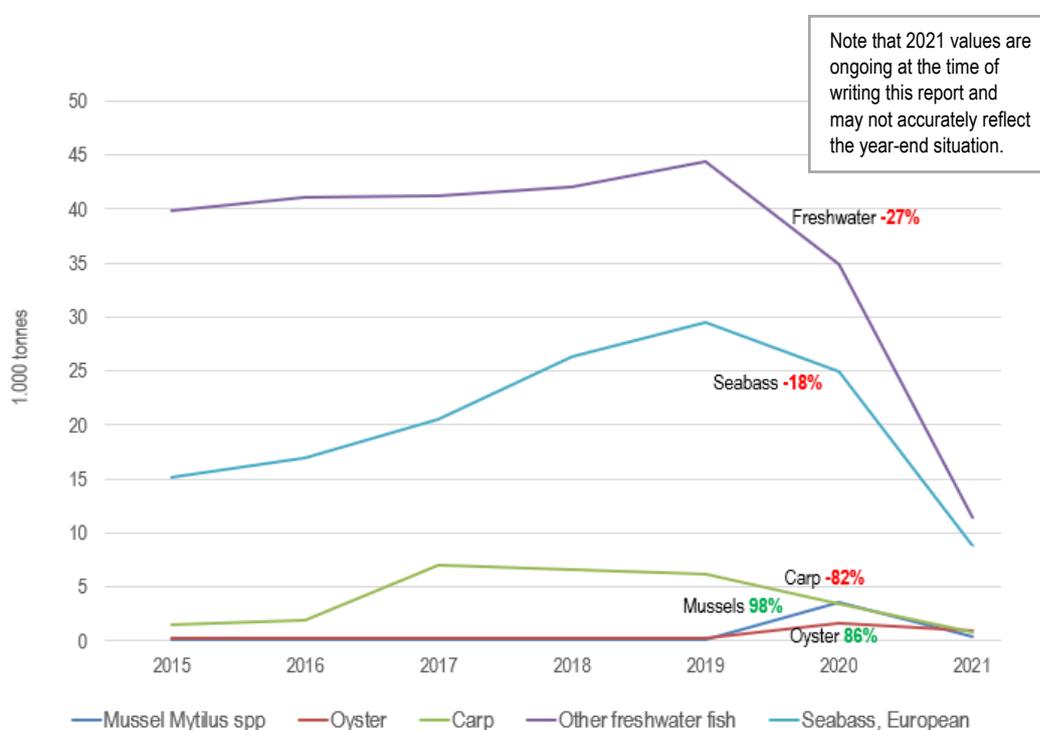


Figure 11: Volume of extra-EU imports of selected commercial species and % variations 2020/2019. Source: EUMOFA elaboration of Eurostat-COMEXT data.

The impact on intra and extra EU-trade is significant and regular monitoring should be carried out in order to form an adaptive response. EUMOFA data is regularly updated but does not necessarily present the full picture.

For the aquaculture sector, information is collected at production system level for the main species cultivated in each of the MS through the Data Collection Framework (DCF). However, data collection through DCF has its limitations (it relies on commercial returns, it is not mandatory for freshwater aquaculture, it comes with a 1-2 year lag, etc). There are clear gaps in publicly available information for aquaculture and real-time data is necessary for making predictions on developments in the sector. This makes the collection of data direct from farmers and PO's and anecdotal evidence a necessity.

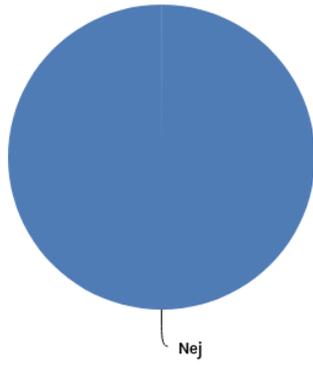
**Recommendation 2:** Substantive improvements to data collection in aquaculture must be supported by DG MARE.

## Long Term Impacts

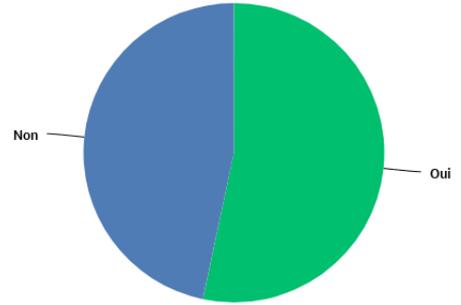
The impacts are far-reaching into the future, with more than 50% of respondents saying they had delayed investment due to the COVID pandemic (Figure 12). Reasons for this were due to having reduced turnover / no predictable income and reserving all available funds in order to survive and secure finances for running costs (salaries, etc.), a general lack of predictability for the future and bureaucracy / difficulty in accessing credit.

**Recommendation 3:** The long-term effects of the COVID-19 pandemic still have to materialise fully, and in order to assess the full impact, effects should be analysed post-pandemic as markets return to pre-pandemic levels.

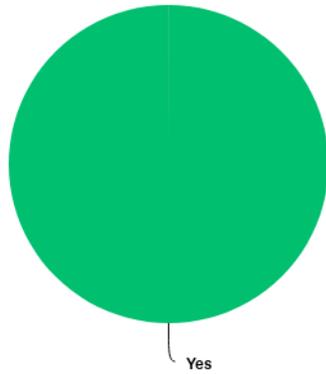
Denmark (n = 4):



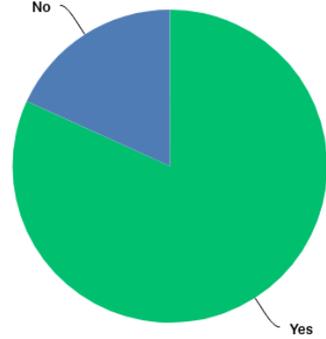
France (n = 15):



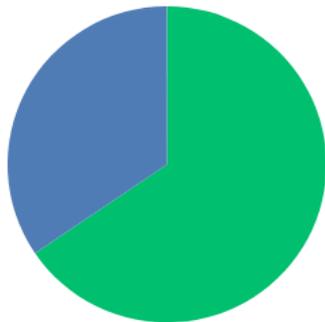
Greece (n = 1):



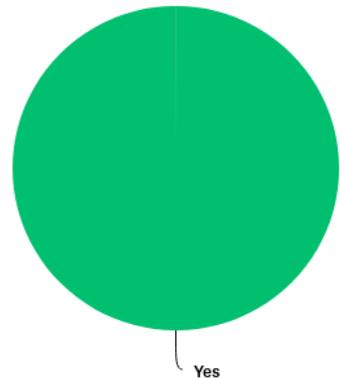
Ireland (n = 11):



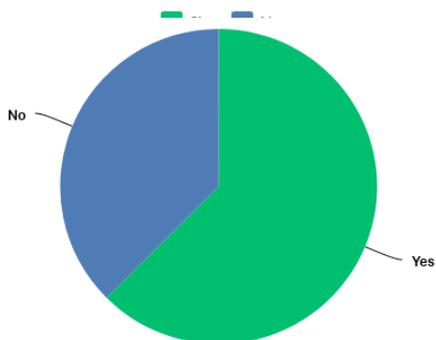
Italy (n = 29):



Poland (n = 1):



Romania (n = 8):



Spain (n = 9):

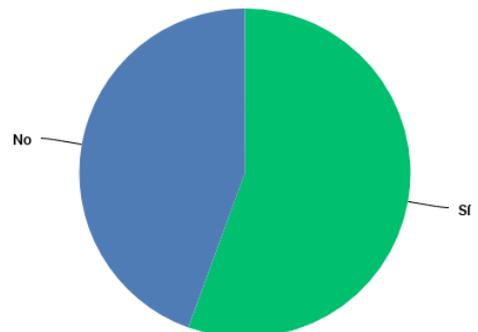


Figure 12: Survey responses on question 7: Has the Covid 19 pandemic caused you to delay planned investment? (n = sample size).

## Adaptation Measures

According to the Global Aquaculture Alliance (GAA) (2020), consumers' budgets are expected to be tight with the increase of unemployment, which might mean constraints, especially in the purchase of high-value species.

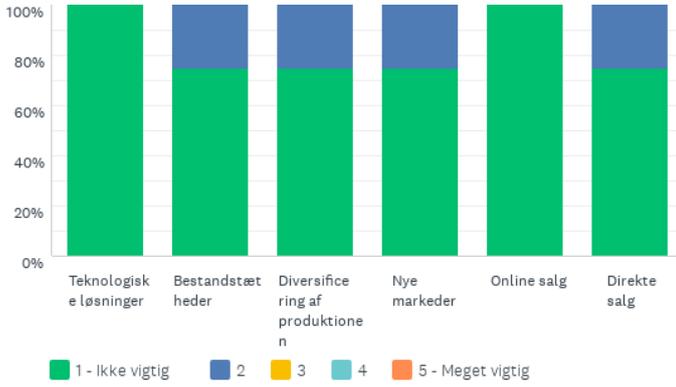
In the struggle to remain in business, marketers globally have adapted, changed their market strategies and started selling to consumers directly – developing direct retail sales through internet ordering and home delivery or aquaculture drive-in (FAO, 2020). This is especially true for those aquaculture farmers who traditionally targeted the hospitality sector and who had the capacity to expand (i.e., larger companies).

Recovery can typically be driven by direct sales to consumers and the shift of some products' routes from usual export markets. Stakeholders were asked to place their importance to adaption measures including: finding technological solutions, stocking strategies, diversification of production, exploiting new markets, and changing sales approach to direct and/or online. There were clear differences between countries (Figure 13), which could be related to culture, but also driven by the market type:

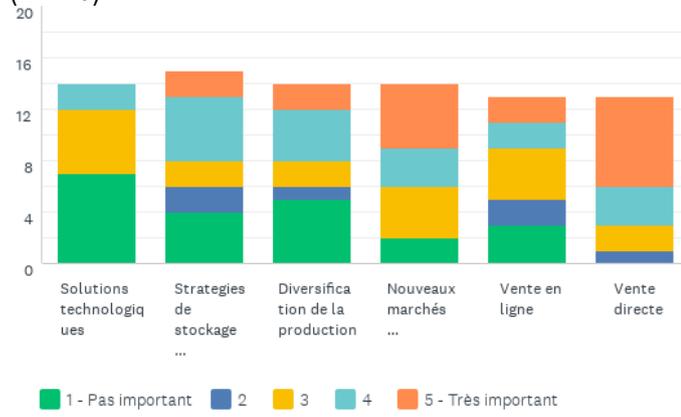
- All stakeholders from Romania believe technological solutions to be very important in adapting to the impacts of the pandemic. Stakeholders from other countries did not place such high importance to technological solutions.
- French stakeholders put most importance to direct sales and exploiting new markets.
- Irish stakeholders placed most importance to stocking strategies, exploiting new markets, and changing sales approach to direct and/or online.
- Over half of Italian stakeholders did not believe changing sales approach to online was important. Direct sales and exploiting new markets were of most importance to those surveyed.
- Spanish stakeholders placed most importance to stocking strategies.

**Recommendation 4:** DG MARE should provide funding to implement promotional campaigns to support local aquaculture products. Funding should also be provided to support technological solutions in sales and marketing local products.

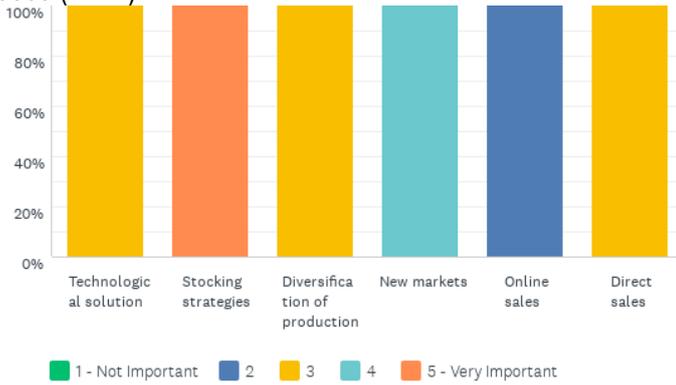
Denmark (n = 4):



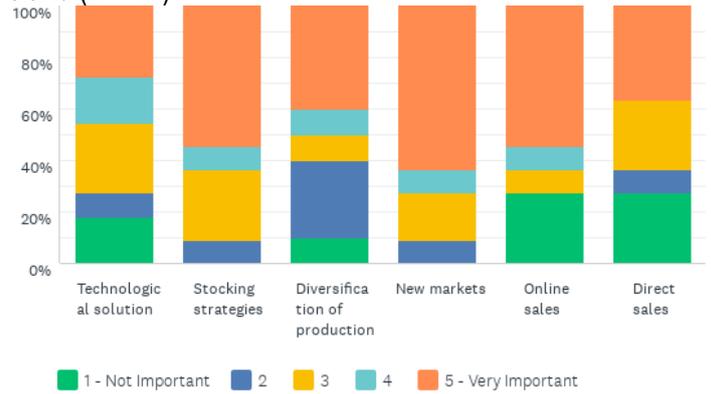
France (n = 15):



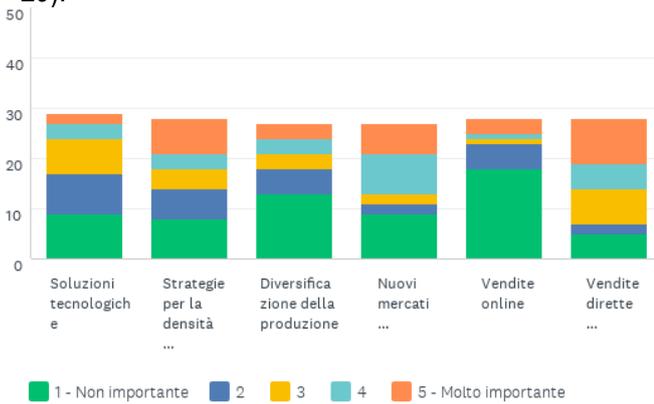
Greece (n = 1):



Ireland (n = 11):



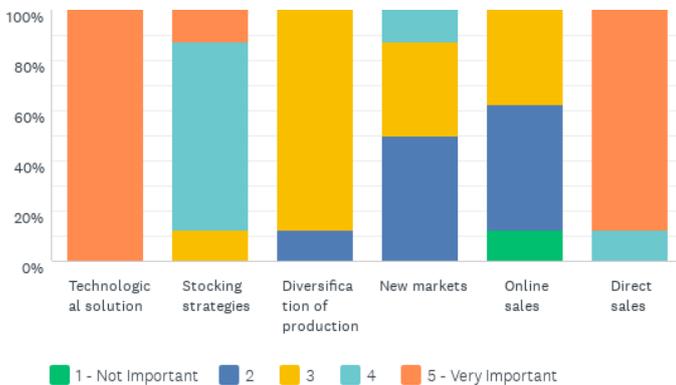
Italy (n = 29):



Poland (n = 1):



Romania (n = 8):



Spain (n = 9):

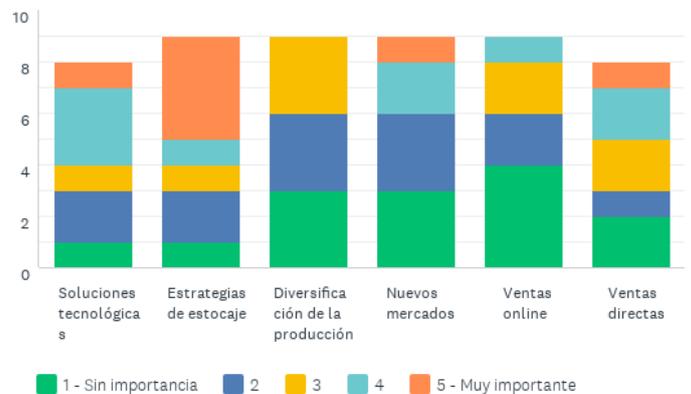


Figure 13: Survey responses to Q8: What adaptation measures has your enterprise implemented to face the crisis caused by COVID-19? And how relevant are these measures for you? (From 1 meaning not important, to 5 meaning very important), where n = sample size.

## Mitigation Measures of Selected Member States

A high-level review of state aid measures was carried out with contact at the country- or region level for Denmark, France, Greece, Poland and Spain. The outcomes of these consultations are provided below. In summary, all the studied Member States (MSs) enacted special protection measures to minimise the impact of COVID-19 on the aquaculture sector. The European Council introduced some flexibility rules for the European Maritime and Fisheries Fund (EMFF) that allowed MSs to use unspent funds and amend operational programmes more easily. This allowed fish farmers, POs and PO associations to cope with the impacts of COVID-19 by, for example, devising new measures for the storage of aquaculture products. It also allowed MSs to take advantage of the flexibility of the EMFF measures.

### *Denmark*

The Ministeriet for Fødevarer, Landbrug og Fiskeri were unable to provide much information, as there have been no such targeted support mechanisms aiming to mitigate the impact of the COVID-19 pandemic specifically for aquaculture. There have been other specific support mechanisms throughout the period, including EMFF, that may have helped aquaculture farms. However, these projects all commenced prior to the pandemic and in general, focussed on investments in capacity or innovation.

There have been more generic national support mechanisms administered by the Ministry of Industry, Business and Financial Affairs. In brief, relevant measures have included a government-funded compensation scheme for salary and fixed costs, postponement of VAT and tax payment for a period and suspension of fees for export health certificates.

### *France - Brittany*

The Brittany Regional Council set up a "Brittany COVID resistance fund" [<https://www.bretagne.bzh/aides/fiches/COVID19-fonds-COVID-resistance/>]. To date, 7 Breton aquaculture companies have benefited from this system, amounting to total aid paid of € 107,000. The Council were unable to say how many applications were filed. There are around 850 aquaculture companies in Brittany, this therefore represents less than 1% of Breton aquaculture companies.

The COVID Resistance fund holds €27.5 million co-financed by various authorities. This fund, managed via the [BpiFrance platform](#), complements other schemes operated by the State, local authorities and their partners. It aims to provide the cash flow essential to the continuation of the beneficiaries' activity, with the objectives being:

- ensure support for economic actors, companies, associations that have a cash flow need
- contribute to the maintenance of sectors whose activity is essential to the vitality of the territories

The funders have collectively decided to extend the COVID Resistance loan until September 30, 2021 and to make some adjustments.

Effective since December 1, 2020, these adaptations have focused on:

- For market associations and businesses only:
  - The maximum amount of the loan is increased from EUR 10 000 to EUR 20 000
  - The maximum number of employees in the structure is increased from 10 to 20
  - The maximum annual turnover increases from 1 to 1.5 million euros
- For all applicants:
  - The beneficiaries of a Loan guaranteed by the State (PGE) are eligible, within the limit of a cumulative amount PGE and Resistance loan of 25% of 2019 turnover.

It is not possible to benefit from a new loan in the context of COVID Resistance if a first loan has already been granted.

The aid granted under this fund takes the form of a zero-interest loan with a duration of 36 months, 18 of which are deferred repayment, without guarantee. This loan can be combined with a State Guaranteed Loan up to a limit of 25% of annual turnover.

The amount of the loan is determined according to the need for cash to cover the essential expenses for the maintenance and resumption of the activity, (excluding the expenses eligible for the State measures of deferral / cancellation of charges).

- For businesses and market associations:
  - Loan amount: from 3,500 to 20,000 euros
  - Cash requirement to cover: more than €3,500 and less than 25% annualized turnover up to a limit of €30,000.
- For non-market associations:
  - Loan amount: from 3,500 to 30,000 euros
  - Cash requirement to cover: more than €3,500 and less than 25% annualized turnover up to a limit of €50,000.

Payments are made to each beneficiary company or association in one go and in full via the platform managed by Bpifrance. Repayment of the amount paid starts 18 months after the loan is granted and is made by monthly maturity.

## *Greece*

The responsible authority for aquaculture production is the Ministry of Rural Development and Food [<http://www.minagric.gr/index.php/en/>]. Greece launched four main business support measures (general guarantee scheme):

1. loan guarantees to businesses through the creation of a Guarantee Fund for working capital loans.
2. interest subsidy for existing SME loans.
3. interest subsidy for new SME working capital loans.
4. repayable advance scheme in the form of grants to SMEs.

Aquaculture and fisheries undertakings have been benefited from the above general scheme in the form of:

1. Selected tax advantages to address urgent liquidity needs
2. repayable advance scheme in the form of grants to SMEs
3. deferral of tax/VAT payments (based on the turnover drop).
4. suspensions of social security contributions for those sectors, regions or for types of companies that are hit the hardest by the outbreak (up to 4 months).
5. Wage subsidies for employees that have suffered most from the outbreak and would otherwise have had to lay off personnel (measure to maintain employment).
6. State guarantees for loans taken by companies to ensure banks keep providing liquidity to the market.
7. 75 days suspension of check payments (subject to conditions, e.g. 50% turnover drop)

Due to the nature of the work, they did not apply other available measures to support employment / economy such as temporary suspension of employment agreements at the employees' request.

Also rent reductions were possible (40% mandatory rent cut for enterprises in emergency (red) or lockdown (grey) zones, belonging to identified business activities that are directly affected by the pandemic (i.e. from April onwards).

## *Poland*

Provision of financial support from EFFM to aquaculture farms affected by the COVID-19 situation was developed in the Department of Fisheries in the Ministry of Agriculture and Rural Development [<https://www.gov.pl/web/agriculture/the-fishery-department>]. The Department of Fisheries provided funding through a payment agency (Agency for Restructuring and Modernization of Agriculture, ARMA).

As at the end of May 2021, the EMFF support transferred to the beneficiaries in aquaculture sector due to the impact of the COVID-19 amounted to PLN 57 901 499.86 (at the rate of 4.48 = EUR 12 924 441.93) and was paid out to 709 beneficiaries via the ARMA. The aid was planned as a one-off aid and there were no planned changes to the rules of granting these payments.

## Spain

The Dirección General de Ordenación Pesquera y Acuicultura (MAPA) provided financial support details from EMFF to mitigate the negative impact of the COVID-19. The information presented in Table 4 is from their FEMP database.

Table 4: EMFF support to aquaculture farmers and PO's in Spain due to COVID-19.

MEASURE	TYPE OF COMPANY	APPROVED FILES	TOTAL APPROVED	FEMP APPROVED	TOTAL PAID	PAID FEMP	TOTAL EU ENVOY	EU EMFF ENVOY
2.1.1. Innovation (Art.47)	Microenterprise	1	95,757	71,818	0	0	0	0
	Not applicable	1	92,995	69,747	66	50	66	50
<b>Total 2.1.1. Innovation (Art.47)</b>		<b>2</b>	<b>188,753</b>	<b>141,564</b>	<b>66</b>	<b>50</b>	<b>66</b>	<b>50</b>
2.4.4. Insurance for aquaculture populations (Art.57)	Not applicable	7	3,162,136	300,000	0	0	0	0
<b>Total 2.4.4. Insurance for aquaculture populations (Art.57)</b>		<b>7</b>	<b>3,162,136</b>	<b>300,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
2.4.5. COVID public health measures (Art.55.1.b)	Median	2	921,656	691,242	921,656	691,242	150,000	112,500
	Microenterprise	5	291,883	218,912	291,883	218,912	291,883	218,912
	Not applicable	7	29,547,642	930,744	72,509	54,382	0	0
	Small	7	528,607	396,456	528,600	396,456	372,773	279,580
<b>Total 2.4.5. COVID public health measures (Art.55.1.b)</b>		<b>21</b>	<b>31,289,789</b>	<b>2,237,354</b>	<b>1,814,648</b>	<b>1,360,992</b>	<b>814,656</b>	<b>610,992</b>
<b>Total 5.1.6. COVID Storage Aid (Art.67)*</b>		<b>10</b>	<b>3,195,376</b>	<b>3,195,376</b>	<b>3,189,677</b>	<b>3,189,677</b>	<b>0</b>	<b>0</b>
5.2.1. Processing of fishery and aquaculture products (Art.69)*	Microenterprise	7	169,424	63,534	135,263	50,723	0	0
<b>Total 5.2.1. Processing of fishery and aquaculture products (Art.69)*</b>		<b>7</b>	<b>169,424</b>	<b>63,534</b>	<b>135,263</b>	<b>50,723</b>	<b>0</b>	<b>0</b>
<b>Grand total</b>		<b>47</b>	<b>38,005,478</b>	<b>5,937,829</b>	<b>5,139,654</b>	<b>4,601,442</b>	<b>814,722</b>	<b>611,041</b>

\* Storage (art. 67) and processing (art. 69) includes the amounts contributed to catch fishing sector and aquaculture combined.

## Funding Support Mechanisms – Stakeholder Opinion

Of the 83 stakeholder responses, 32 had received some form of financial support (equivalent to 38%), either through EMFF or some national programme. The following summary breaks this down by country:

- Denmark - none of the four stakeholders surveyed received any financial support.
- France – five of the fifteen stakeholders received no support. Of those that did receive support, three accessed support from EMFF and eight sourced funding from national programmes.
- Ireland - five of the twelve stakeholders received no support. Of those that did receive support, six support mechanisms came from EMFF and four were sourced from national programmes.
- Italy - seven of the thirty stakeholders had not received any financial support. Of those that did receive support, six were sourced from EMFF (FEAMP) and seventeen sourced from national programmes.
- Poland - the sole respondent did receive EMFF funding.
- Romania - six of the eight stakeholders received no support. Of those that did receive support, one was provided by EMFF and the other was sourced from national programmes.
- Spain – four of the nine stakeholders received no support. Of those that did receive support, three support mechanisms came from EMFF and four were sourced from national programmes.

The aquaculture industry must live with the uncertainties from the COVID-19 pandemic for the foreseeable future. Given the changes occurring, it is important to observe these through regular monitoring to allow an adaptive approach to sustainable aquaculture.

**Recommendation 5:** A follow-up study (like the present one) should be carried out in 2022 and targeted towards certain POs and farmers.

There are differences in enforcement of the EMFF funding provision for COVID-19 support and therefore disparities have arisen within and between Member States in the EU. In Italy for example, there was a call open to all aquaculture companies for a very limited financial support (commensurate with the type and size of the company) on the basis of the principle: "a little help but to everyone" with state funds". Starting from June, on a regional basis and only in some regions, in application of Regulation (EU) 560/2020 with specific reference to art. 55 of the EMFF, some tenders were opened to support the losses in turnover caused by the pandemic.

The stakeholder engagement surveys carried out in this study reflects what happened, and the difference in state aid within and between Member States was also evident. It can be concluded that the financial support mechanisms offered marginal benefits to most farmers.

**Recommendation 6:** DG MARE should develop a more flexible and agile financial support mechanism that reflects the diversity of the EU aquaculture sector. This would best be administered by the Commission to avoid differences observed between Member States.

## Recommendations

1. Any future data collection surveys should request Producer Organisations and associations to select representative farmers in various countries and perform structured interviews.
2. Substantive improvements to data collection in aquaculture must be supported by DG MARE.
3. The long-term effects of the COVID-19 pandemic still have to materialise fully, and in order to assess the full impact, effects should be analysed post-pandemic as markets return to pre-pandemic levels.
4. DG MARE should provide funding to implement promotional campaigns to support local aquaculture products. Funding should also be provided to support technological solutions in sales and marketing local products.
5. A follow-up study (like the present one) should be carried out in 2022 and targeted towards certain POs and farmers.
6. DG MARE should develop a more flexible and agile financial support mechanism that reflects the diversity of the EU aquaculture sector. This would best be administered by the Commission to avoid differences observed between Member States.

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## Annex 1: Surveys to Farmers and PO's

Thank you for your participation!

The coronavirus outbreak has had major impacts on the aquaculture industry. This survey intends to collect information from farmers about the impact of the COVID-19. As such, we would like to invite you to complete the questionnaire below. Your answers will be of great value in identifying the several impacts of COVID-19 on the aquaculture industry.

All information received will be treated in strict compliance with the General Data Protection Regulation (EU Regulation 2016/679) in relation to data protection and privacy. Any data published will be anonymized and will be used only for scientific purposes. Respondents are entitled (at any moment) to access and/or rectify their personal data, as well as to delete their data.

1. I agree to participate

Yes

No

2. Information about you:

Name:

Organization/association/  
enterprise you represent:  
Location (Region):

Country:

Occupation in the  
enterprise:

Contact (E-mail/phone):

3. What is your most important species produced?

Mussels

Atlantic

Salmon

Sea Trout

Freshwater

Trout

Seabass

Seabream

Oyster

Other (please specify)

1. What is your main outlet?

HoReCa

Retail

Direct sales

Other (please specify)

2. Indicate what % each variable from the list below increased or decreased between 2019 and 2020/21 (e.g. "+10%"; "-10%"):

Sales (volume)

Prices

Financial costs

Wages and salaries

Feed costs

Energy costs

3. Reasons of the COVID-19 impact. Indicate if the following reasons have been important in the socioeconomic impact suffered by the aquaculture activity due to the crisis caused by COVID- 19? (From 1 meaning not important, to 5 meaning very important):

	Not Important			Very Important	
Sales	<input type="checkbox"/>				
Production cost	<input type="checkbox"/>				
Transaction cost (transportation / distribution / Covid measures)	<input type="checkbox"/>				
Commercial margins	<input type="checkbox"/>				
Access to capital	<input type="checkbox"/>				
Working conditions	<input type="checkbox"/>				
Other (please specify)	<input type="text"/>				

1. Has the Covid 19 pandemic caused you to delay planned investment?

Yes

No

If yes, why?

2. Adaptation measures. What adaptation measures has your enterprise implemented to face the crisis caused by COVID-19? And how relevant are these measures for you? (From 1 meaning not important, to 5 meaning very important):

	Not Important				Very Important
Technological solution	<input type="radio"/>				
Stocking strategies	<input type="radio"/>				
Diversification of production	<input type="radio"/>				
New markets	<input type="radio"/>				
Online sales	<input type="radio"/>				
Direct sales	<input type="radio"/>				

Other (please specify)

3. Have you received financial support from the European, national or regional authorities to deal with the COVID-19 impacts

Yes, from the EMFF (European Maritime and Fisheries Fund):

Yes, from SURE:

Yes, from national schemes:

Yes, from regional schemes:

No, no financial support was received: