

Sustainable Finance for Sustainable Agriculture and Fisheries

2015 - 2019

The purpose of SUFISA was to identify sustainable practices and policies in the agricultural, fish and food sectors that support the sustainability of primary producers in a context of multi-dimensional policy requirements, market uncertainties and globalisation.



This project has received funds from the EU's Horizon 2020 research and innovation programme under Grant Agreement No 635577. Any and all information in this booklet reflect the view(s) of the respective author(s) and not necessarily those of the Research Executive Agency.

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01

An introduction to SUFISA

A well-functioning European food system is the key to delivering food and nutrition security for all Europeans. Currently, this system faces many economic, environmental and social challenges as well as opportunities following socio-economic and technological developments. However, these are not equally distributed throughout the EU. Hence, future policies toward healthy and resilient systems need to acknowledge and consider this diversity. Knowledge of that diversity is currently limited and dispersed. In particular some sectors, regions and specific driving forces have not been extensively studied and the interfaces among them have been insufficiently analysed. The purpose of SUFISA was to expand this knowledge base by identifying sustainable practices and policies in the agricultural and fish sectors able to support the sustainability of primary producers in a context of multi-dimensional policy requirements, market uncertainties and globalisation.

Ambition of SUFISA

- To integrate scattered knowledge and new insights into a **coherent understanding** of how various conditions influence strategies and performances of primary producers.
- To confront academic theory with stakeholder practice and develop **transdisciplinary applicable solutions** that correspond to stakeholders' perception and acceptance of solutions.
- To improve the **robustness** of solutions by debating them jointly with stakeholders.
- To identify insights, impacts and solutions, not only in a **diversity** of contexts, such as commodity sectors and regions, but also for different types of farmers and fishers.

“ *SUFISA gave a voice to farmers and an opportunity to openly discuss their challenges with researchers and policy makers.*

(José Muñoz-Rojas, University of Évora)

Methodological approach

To achieve these goals **region-specific commodity cases** covering **22 regions in 11 countries** (Belgium, Denmark, France, Germany, Greece, Italy, Latvia, Poland, Portugal, Serbia and the UK) were studied. Within each region, a key commodity was selected for study from one of **seven commodity groups**: arable, dairy, fruits, meat, fisheries, aquaculture and wine/olives (other). For each case, data discussing regulatory conditions and the **strategies emerging to manage regulatory and market issues**, as well as issues related to the **performance and the future sustainability** of producer enterprises and the sector generally were collected. To this end, a **variety of methods** was used:

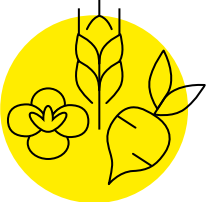
- **Media analysis.** The purpose of media analysis was to cover the different positions and approaches across the countries involved, as debated in the media, with regard to the SUFISA focus: the sustainability of primary producers in a context of multi-dimensional policy requirements, market imperfections and globalisation.
- **Desk research, stakeholder interviews.** All partners conducted desk-based analysis of market conditions and regulations for case regions and commodities. This was supplemented with 10-15 expert interviews per case study region.
- **Focus groups and participatory stakeholder workshop.** Up to 2-3 focus group discussions with producers and farm management advisors, regulators and finance experts, as well as food chain actors, were conducted per region. Additionally, a participatory stakeholder workshop was organised per region.
- **Producer survey.** A total of 2,299 producers from 11 EU Member States and eight different commodity groups were interviewed using a common questionnaire. The producer survey collected primary data on supply chain arrangements.

- **Condition-Strategy-Performance (CSP) Inventory** (*one per commodity*). Data in national reports were used to populate a CSP inventory for each of the commodity groups studied.

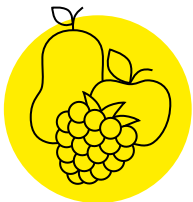
Theoretical approach

In order to generalise **regional contexts** and to investigate the nature and complexity of **market imperfections, policy requirements** and their implications for the **sustainability and resilience** of specific commodity sectors and regions across Europe, SUFISA used a framework that related producers' **Conditions, Strategies and Performances (CSP)**. SUFISA explored sector-specific and farm-specific factors (**Conditions**) that producers have to cope with. Moreover, it explored actions that allow producers to respond to and to manage these factors. Furthermore, SUFISA identified the **Strategies** of the producers and the perceived outcomes (**Performances**). A key factor influencing and mediating producer strategies and performances, is the way commodities are sold to supply chain actors, such as processing firms, traders or retailers. These selling conditions are embedded in **Institutional Arrangements (IAs)**, that is, the rules and agreements that govern exchange relationships. IAs can be both formal (contract, law) and informal (trust, reputation), and can consist of both private (buyer requirements) and public (policies) elements. SUFISA compared IAs across sectors and regions looking for principles that enable sustainable practices and that support the sustainability of primary producers.

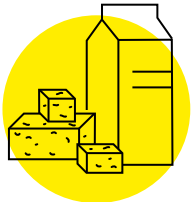
Map of selected case studies



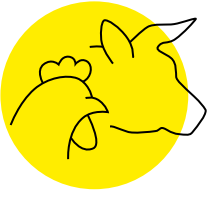
Arable crops



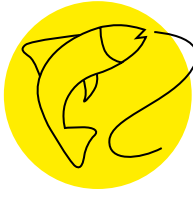
Fruit



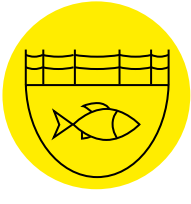
Dairy



Meat



Fisheries



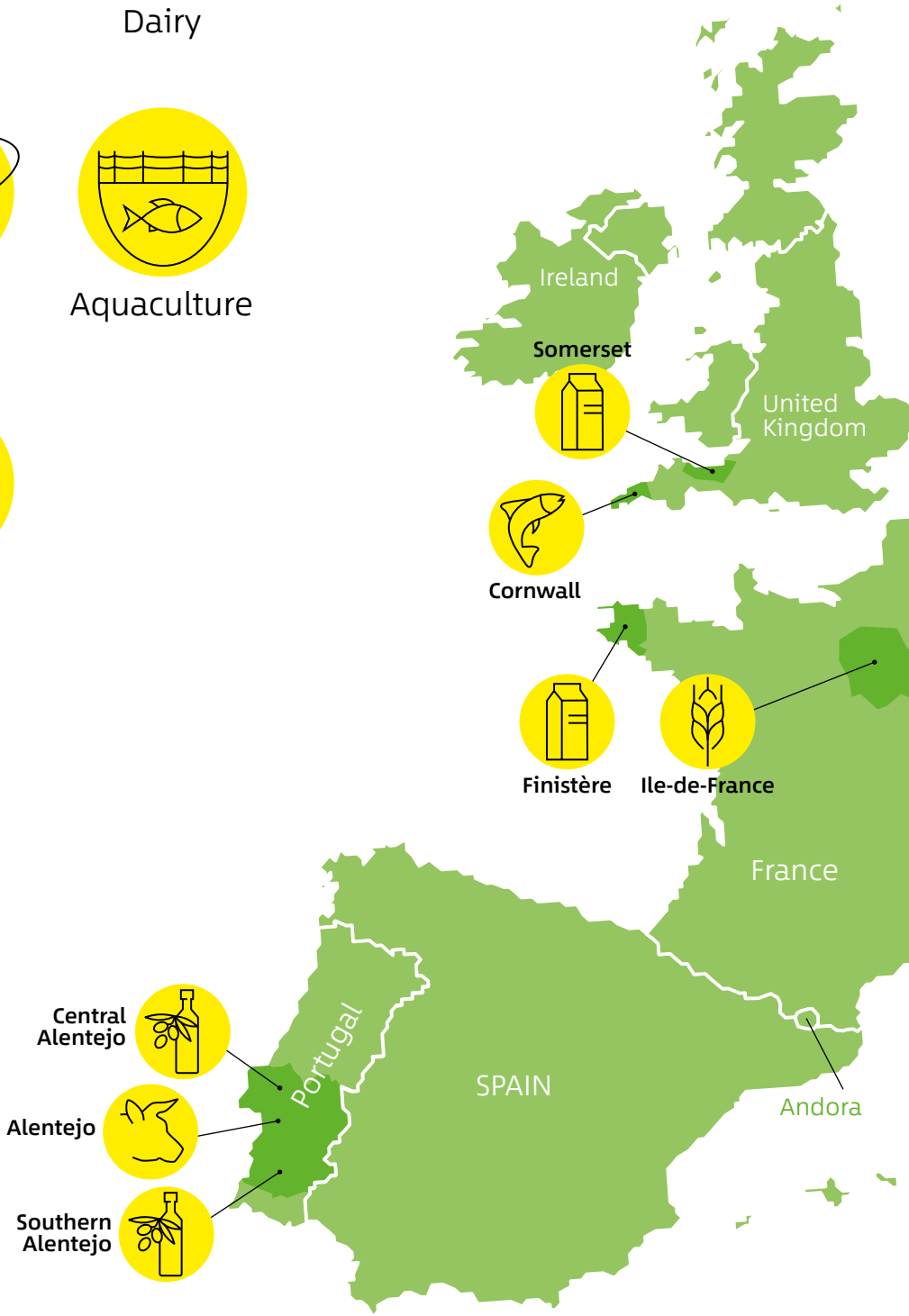
Aquaculture

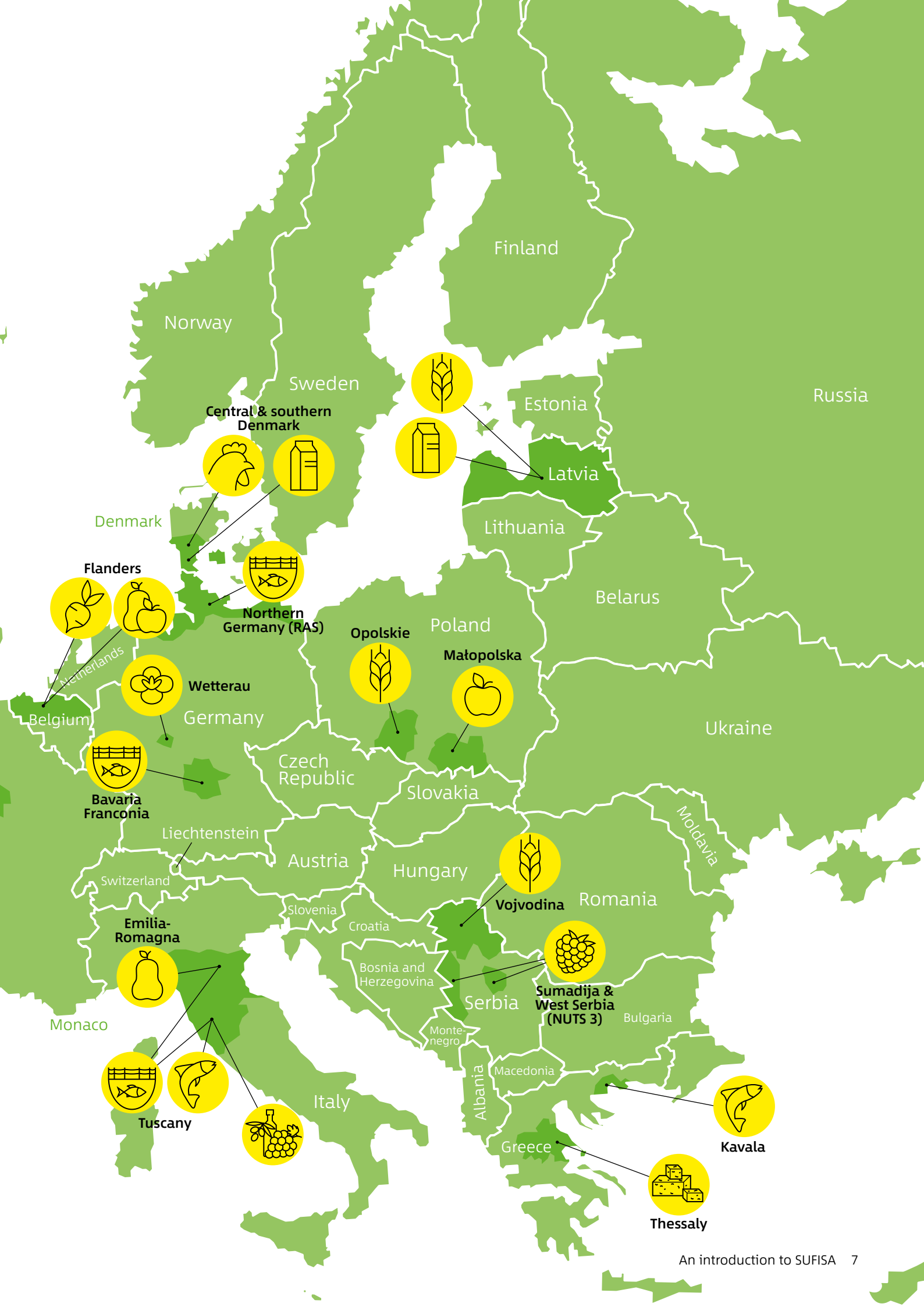


Wine



Olives





Norway

Finland

Russia

Sweden

Central & southern Denmark

Estonia

Latvia

Denmark

Lithuania

Flanders

Northern Germany (RAS)

Opolskie

Poland

Małopolska

Belarus

Wetterau

Germany

Ukraine

Belgium

Czech Republic

Slovakia

Bavaria Franconia

Liechtenstein

Austria

Hungary

Vojvodina

Romania

Emilia-Romagna

Slovenia

Croatia

Bosnia and Herzegovina

Serbia

Sumadija & West Serbia (NUTS 3)

Bulgaria

Monaco

Tuscany

Italy

Albania

Macedonia

Greece

Kavala

Thessaly

02

Theoretical framework

SUFISA's theoretical framework posits that the performance first and foremost critically depends on the capacity to develop adequate strategies to respond to changing conditions. These strategies entail production strategies taken by individual producers on the one hand and marketing strategies governed by institutional arrangements on the other. Both production and marketing strategies influence each other, and both types of strategies are influenced by policy.

Focus group discussions, participatory workshops and in-depth interviews revealed the importance of IAs to producers' performances. Therefore, SUFISA focusses on IAs as important strategies aiming at improving producers' position in supply chains. IAs feature three components: horizontal cooperation between producers, vertical coordination along the supply chain, and public intervention.

“ *SUFISA case studies are essential as they grasp the diversity of needs across the various agricultural subsectors.*

(Marco Conteiro, Greenpeace)

Horizontal cooperation

Horizontal cooperation mainly takes the form of associations of members sharing common interests. Producers may want to bargain collectively with input sellers or output buyers. As buyers tend to have market power due to increasing market concentration, sellers act collectively to reduce the number of their voices and hence increase

their bargaining power. Producers may also decide to join a producer organisation to share common resources and thus to save on costs. They may also collectively manage risks through common insurance mechanisms. Horizontal cooperation does not only have advantages. Indeed, when producers cooperate, they do so at the expense of some decision-making power. Profits are sometimes (partially) shared and may thus reduce the incentive to provide effort and invest in complementary sustainable practices that are not required within the coordinated group. Moreover, democratic systems might limit the capacity of adaptation to market changes because of the difficulty to coordinate.

Vertical coordination

Vertical coordination is the means by which products move through the supply chain from producers to consumers. It is usually characterised by a rise in contracting, greater product differentiation and the increased importance of supply chain relationships. It usually materialises into written legally binding multilateral commitments (contracts). For many years now, production and marketing contracts have been set in all segments or parts of the supply chain, from producers, to processors and then retailers, so that actions are gradually more predictable and decided before they have taken place. Hence, actors tend to coordinate. In order to optimise production processes and costs, actors also gradually specialise more. Tasks tend to be harmonised or outsourced. This leads to very specific types of contracts in order to organise strategic alliances, joint ventures or franchising practices, among others.

Conditions

farmers and fishers face operate at different levels – global, national, regional, local firm, individual.

Producers might have to react to:

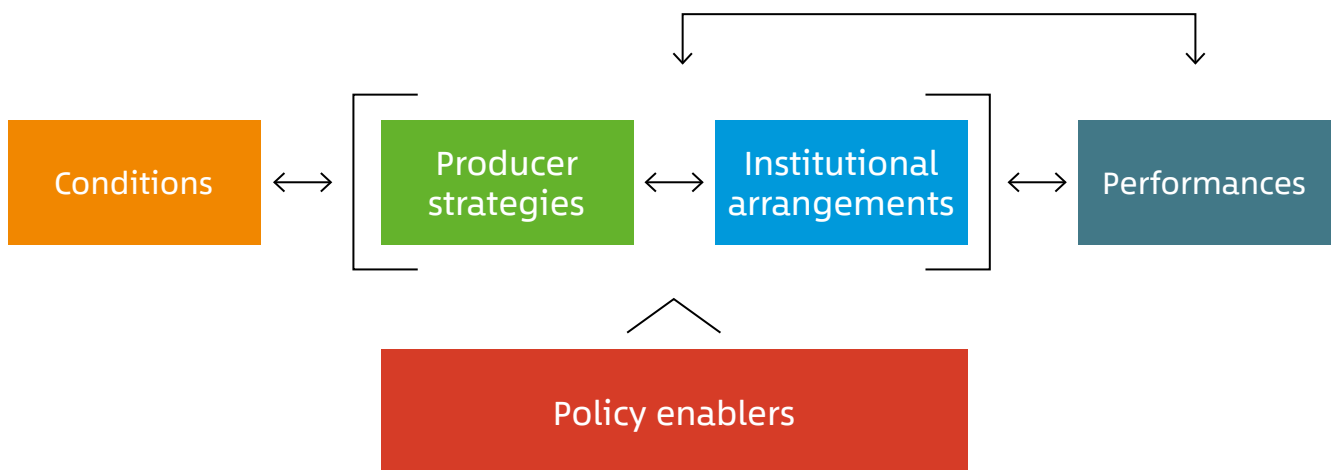
- Demand / diets
- Trade rules
- Food chain
- Available technology
- Environmental conditions

Performances

of the agricultural and fisheries sectors are very much driven by their ability to adapt and transform, but also the need to create economic value.

The most common intended performance outcomes are:

- Enhanced farm / business resilience
- Greater financial stability
- Greater profitability



Strategies

producers follow are multi-level and can be on-farm and off-farm in orientation. Primary producers have control over production strategies and can deploy them at their own will. On the contrary, in the case of marketing strategies, farmers and fishers are only a part of the activities ensuring that the strategy works and thus they have less control over them.

Production strategies
producers might engage in are:

- Intensification and specialisation
- Extensification and downsizing
- Reducing the production costs

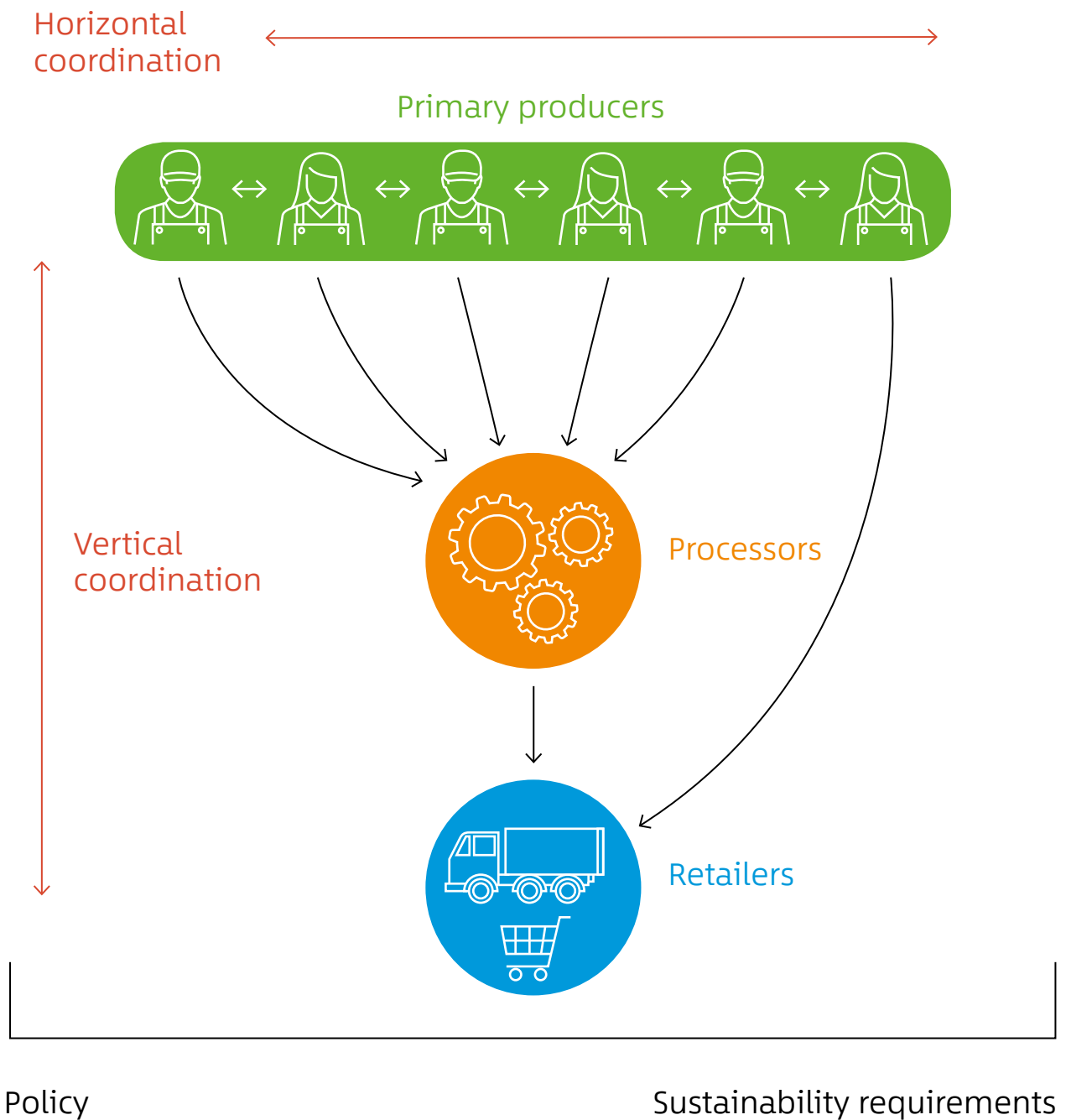
Marketing strategies
producers might be a part of are:

- Cooperatives and producer organisations
- Quality standards and certification
- Market segmentation

Public intervention

Public intervention may take many forms. It relates in the first place to the regulatory framework governing the various private IAs, such as contract law, competition law, the EU's Common Market Organisation, etc. Governments may also organise certain labels and certification schemes (origin,

organic). Additionally, the collection and dissemination of market information enhancing market transparency can be organised by government agencies. However, public intervention also entails enforcing a wide set of requirements on producers and supply chain actors, related to labour conditions, environmental impact, food safety, animal welfare, etc.



03

Conditions faced by farmers and fishers

The data gathered for the cases studied illuminate key regulatory, market and socio-economic conditions affecting the commodity sectors. A key finding is that market conditions are more important than regulatory and policy conditions in affecting and shaping the farming and fishing systems.

Although market issues dominate, they do not operate in isolation from either regulatory issues or the socio-economic context.

Not only can market issues be triggered by changes in regulations, but market adjustments can take over the empty spaces left by deregulation, therefore helping to self-regulate the supply chain. While common conditions affect all, or at least most of the analysed sectors and regions, a list of unique conditions affecting just some of the sectors could be identified. Furthermore, even common conditions can have diverse effects across the compared cases.



Market conditions

Low price levels, coupled with price and output volatility, is the most frequently stated condition amongst producers. Competition is particularly strong in the sectors with strong links to international markets – with an increasing competition and cheaper imports. In these sectors, farm income is increasingly determined by global markets and their associated uncertainty. Likewise, global demands are increasingly dictating product qualities. In most cases **producers lack a united voice.** Concentration at the processing and retail level often leads to

Example:

Danish poultry and Portuguese beef

*In Denmark there are around 400 **poultry meat producers**, with the Central Denmark Region having one of the highest concentrations of poultry meat producers in the country. Furthermore, the only two major slaughterhouses are located within the region. The production is organised under an **industrial agricultural production model**, with fairly large-scale and modern production facilities. Danish slaughterhouses have **specialised in the production of fresh poultry products**. Additionally, the Danish poultry industry is part of a **globalised value chain**, which implies that the cut-up chickens are **sold at the market where the value is highest**. The poultry value chain is composed of very few and specialised actors on both supply and processing side and they are primarily private companies. This means that there is virtually **no competition between the actors**. Because of this, **farmers have little influence** on how the value chain is assembled and also few options for negotiating prices. This configuration of the value chain also means that production standards and qualities are strongly coordinated. Regulatory conditions are a key factor in poultry production, in particular regulation to manage diseases in birds; salmonella and bird flu.*

*This is all in sheer contrast with beef production in the Alentejo, Portugal, which is focussed on **extensive production** within a **multi-functional silvo-pastoral land-use system**, the Montado. The Montado is acknowledged for its high level of **sustainability and socio-ecological resilience**.*

Further, the Montado is also considered as **heritage**, thus being wider than a mere production system. Extensive beef in Portugal has only recently become an **exportable commodity** with the prospects open by new infrastructures in the region playing a major role in the development of **new markets**. In this context, distance and demand for certain standards and practices favour Portuguese commodities. The advantage of Portuguese produce rests mainly on **PDO** (Protected Designation of Origin - European Union scheme of geographical indication). Regulation has played a relevant role in the maintenance and sustainability of the extensive traditional land-use systems that, per-se, are not financially viable under current management strategies and production models. **CAP and EU-led subsidies** have proved essential. Producers are **dependent on external services and institutions** to cope with the whole supply chain, which is mainly dominated by big national retailers. This has determined a low market power of Montado producers. Because of this, the prices paid to the producers have been remaining low.

asymmetric power relations and **asymmetric price transmission** within supply chains. Most producers are 'price takers', especially when they are selling to global chains, at the mercy of the market. **Low prices** can also be associated with the **oversupply** of products, **lack of demand in the domestic market**, and, in case of high-quality products, **consumers might lack the knowledge of the product**. **Production costs** are increasing in almost all the case studies, especially variable costs such as agro-chemicals, energy/fuel and transport, but also fixed costs.



Regulatory conditions

Issues linked to the Common Agricultural Policy (CAP) and the Common Fisheries Policy (CFP) are the most commonly referenced regulatory and policy conditions. The CAP is important in terms of providing **subsidies**, setting **environmental requirements**, addressing **animal welfare and animal health** issues, defining quality and outlining **marketing standards**. There is also a less direct link between pan-European policies and producers' experiences. For example, in Serbia's attempts to fully access the EU common market the CAP has been critical to determining the Serbian agricultural policy. Subsidies paid to producers have had the effect of **increasing land values** all across the EU. Yet the political decision by the EU in 2012 to impose an **embargo on selling agricultural products to Russia** has also had a significant impact on a number of sectors. Producers are concerned that the CAP and CFP, in setting overarching standards and policies, sometimes fail to account for local level specificities. In this context, producers' ability to influence policy emerges as an opportunity that helps to respond to regulatory and market conditions.



Socio-economic conditions

The cases studied also exhibited social processes that either have deepened or softened the role of the conditions identified. For example, since the **financial crisis** of 2007/2008 the **access to finance and capital** has been constrained for many producers. Agriculture is now considered 'high risk'. It is also clear that in many of the case studies there is a constant process of **land concentration**, resulting in an increasing number of larger farms with a decreasing number of farms in total. Land prices are rising, often limiting land purchases to existing producers looking to expand. These trends are also adversely impacting **succession** and **generation renewal through** young or new entrants. This and the out-migration of qualified labour is linked to **rural depopulation**, and consequently to a **lack of suitably qualified labour**. **Technology and innovation** are also important issues and in some case studies a process of modernisation is under way.

“ *Research such as SUFISA is crucial for developing the Common Agricultural Policy. Especially the work on institutional arrangements is inspiring.*

(Felix Mittermayer, European Parliament)



| CONDITIONS / SECTORS | Arable | Dairy | Fruits | Meat | Fisheries | Aqua-culture |
|----------------------------|--------|-------|--------|------|-----------|--------------|
| Price levels / volatility | 37 | 28 | 8 | 2 | 12 | 8 |
| Market access | 15 | 16 | 26 | 3 | 15 | 56 |
| Factor access | 15 | 17 | 13 | 2 | 21 | 24 |
| Regulation and policy | 7 | 8 | 18 | 3 | 23 | - |
| Demand | 4 | 12 | 23 | 5 | 12 | 4 |
| Ecological / environmental | 13 | 6 | 3 | 2 | 15 | 4 |
| Socio-demographic | 8 | 7 | 3 | 3 | 3 | 4 |
| Technological | 1 | 6 | 8 | - | - | - |

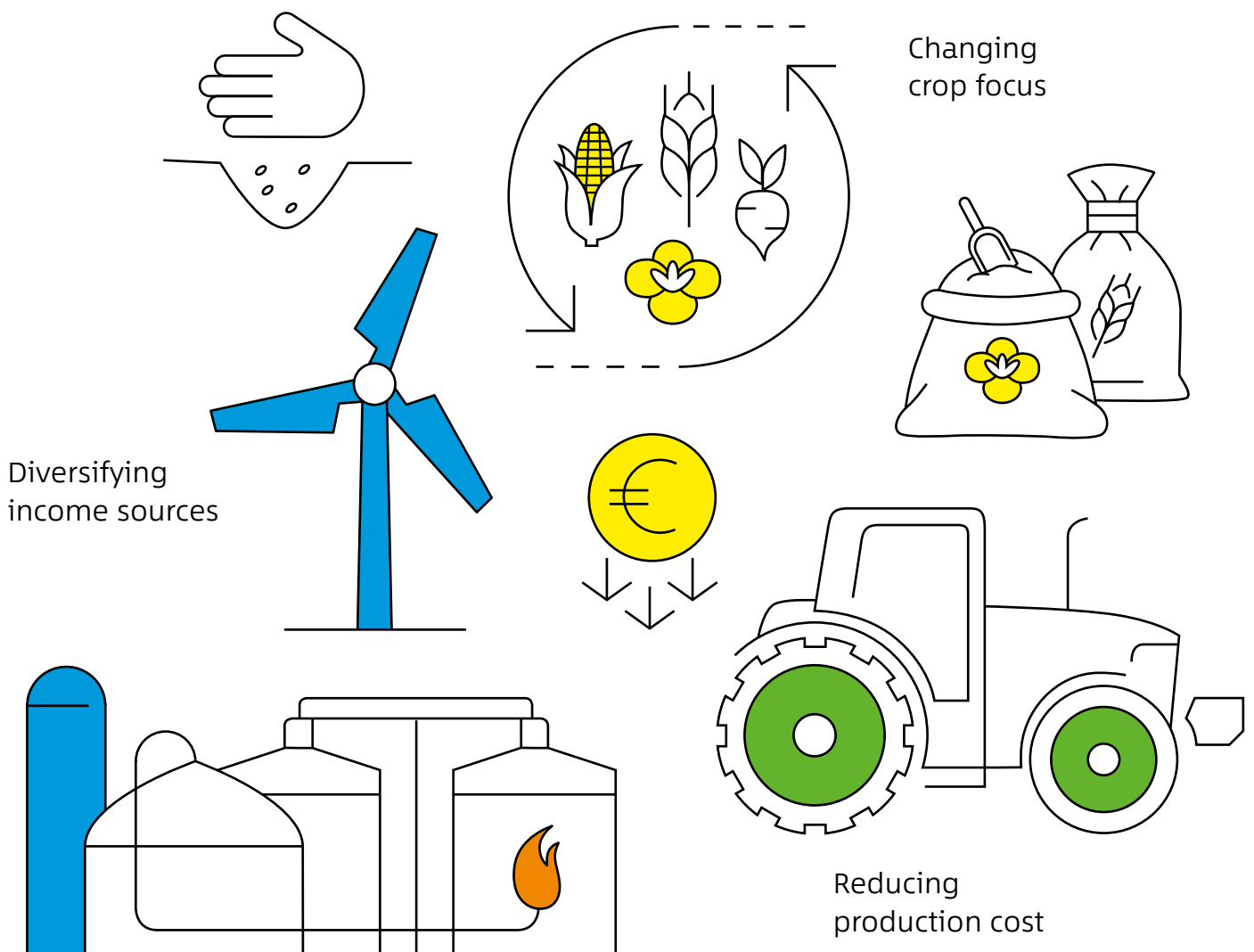
Table 1. Key conditions affecting each sector. Numbers reflect occurrence of conditions in case studies. Source: Maye et al. (2018). SUFISA Deliverable 2.3 - WP 2: Comparative Report. Available in: <https://www.sufisa.eu/publications/>

04

Production strategies

The most intuitive manner for producers to deal with the conditions they are facing is to deploy individual strategies - strategies that producers have full control over, require little bargaining and that rely only on resources that are already at the disposal

of the individual producer. The case studies illustrated that producers use a rich spectrum of individual strategies, such as (1) reducing production costs, (2) intensification, specialisation and upscaling, (3) extensification, downsizing or even abandonment of their

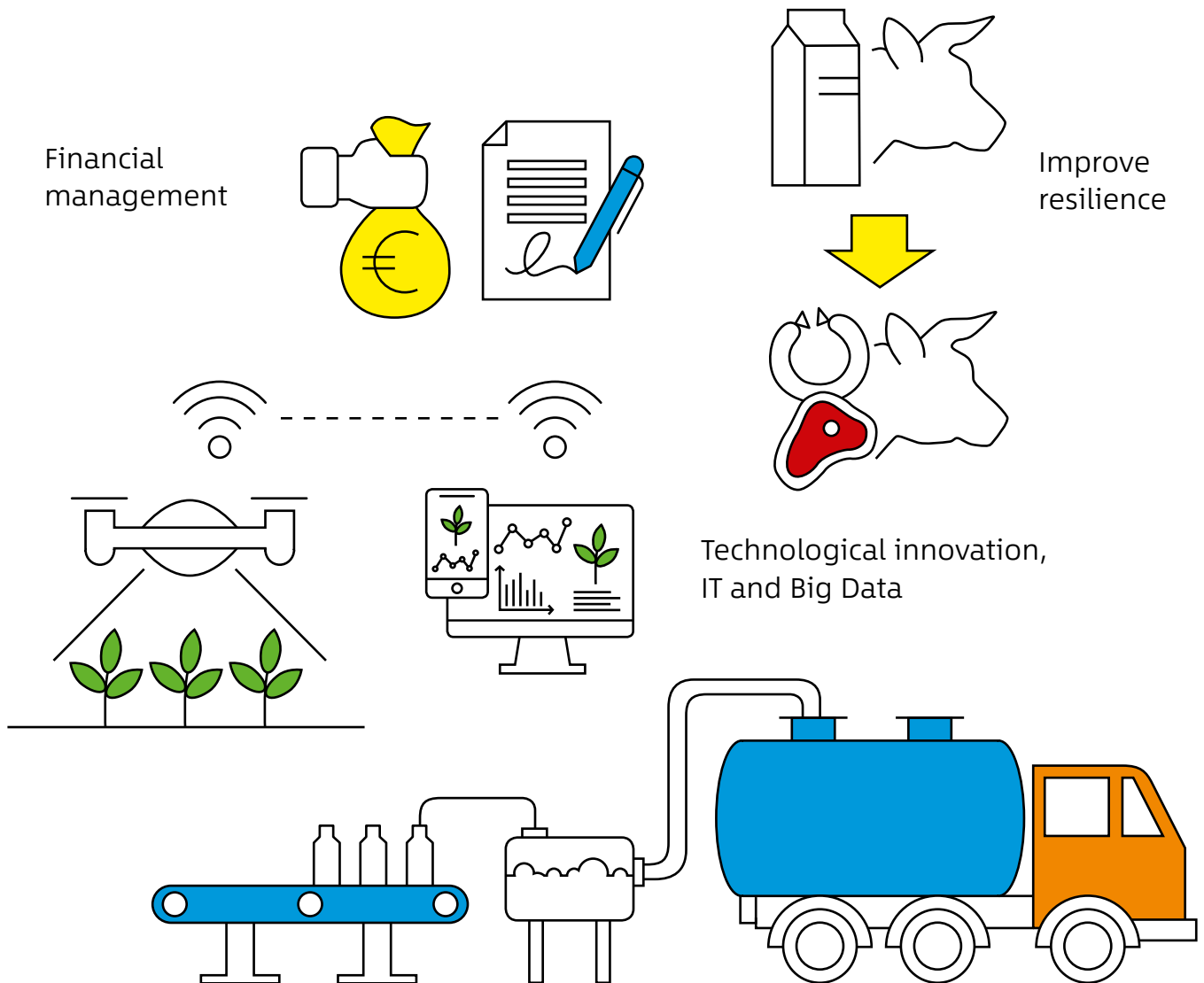


farms, (4) financial management, including working capital and loans, and (5) other strategies that may be region or sector specific. These strategies are discussed in detail below.

Reducing production costs

Reducing production costs is one of the dominant farm level strategies across the studied commodities: producers **cut down costs and investments**, and **introduce new management strategies**, etc. The strategy is particularly evident in the case of dairy farming. Given the impact of the globally low milk price, which is often below the cost of production for farmers and can also be

highly volatile, this is unsurprising. In the case of South Denmark in particular, where dairy farmers are heavily indebted, farmers aim to decrease the cost of production by increasing efficiency and cutting costs. This is also the case in France (Finistère) and the UK (Somerset) where farmers are trying to reduce the key cost components including herd replacement costs, feed and forage costs, labour costs and power/machinery costs. Polish apple producers in the Małopolska region are one more example of this strategy - they have abandoned more traditional (and expensive) methods to reduce costs and are also opting to hire Ukrainian workers as an alternative to more expensive Polish labour. Unfortunately, most



Reducing production costs

of the Ukrainian farm workers do not have job contracts and are working in the 'grey zone', thus effectively creating a whole new set of challenges to resolve. This strategy has been observed all across cases and often creates new challenges for producers in the long-run.

“ *Given the uncertainty in the agricultural sector, it is hard for farmers to persuade their children to stay in agriculture.*
(George Vlahos, Agricultural University of Athens)

Intensification, specialisation and upscaling

Much like efforts to reduce production costs, intensification, specialisation and upscaling were extensification, downsizing or even abandonment of their farms particularly evident in dairy farming where low and volatile milk prices exerted intense pressure on producers. At the aggregate level this strategy has resulted in **significant structural change**. However, some evidence of efforts to upscale and intensify production could be observed in most SUFISA cases: amongst producers in the case of Belgium for sugar beet, in the case of wine in Tuscany, and among cereal farmers in Ile-de-France. Despite their extensive nature, both Montado beef producers and small olive oil producers in Central and Southern Alentejo are intensifying as well. In the case of the Montado, between 1999 and 2009 a 2.76% increase in the number of heads of beef was officially recorded. This is in contrast with the number of producers, which for the same period of time decreased by almost 10%, thus indicating a gradual concentration of the property and production. Whilst intensification in the Montado has been promoted as '**sustainable intensification**', there are concerns that such intensification is shifting the character, **resilience and sustainability** of the whole Montado system.

Extensification, downsizing or even abandonment of farms

Efforts to strengthen resilience were common to all producers. However, the challenges the dairy sector has faced suggest that dairy farmers are under high pressure to develop farm level strategies to improve their resilience. In the Finistère district of France, pasture-based, extensive systems account for 10-30% of all farms in the region and are deliberately adopted as a medium- to long-term strategy that frees them from the need for heavy investment over this period. The French dairy case study suggests that the **success of both strategies are reliant on farmers'** embeddedness in social, political and territorial dynamics. **Abandonment of the farming business** is the ultimate and last resort; this is evident in Latvia, Denmark and in the UK, for example, where some dairy farmers are heavily indebted and are unable to continue. In the UK and in Latvia, a common strategy is to move away from dairy farming into another type of farming (typically beef cattle). The economic crisis, particularly in Italy and Greece, has also exerted pressure on fishers. In Kavala and neighbouring ports, Greek fishers have agreed to reduce landings to just one a day and to no longer fish on Saturdays.

Financial management, including working capital and loans

Financial management is a prominent yet little discussed strategy. Danish dairy farmers have a significant income problem, with around 35% of farmers operating in high **debt and a deficit** on their annual account. Another financial management strategy deployed shows the case of small fishers in Greece. In this case, family owned fishing businesses are typically unable to get a loan from the bank, so all vessels are under **co-ownership** (with a dealer) which is a viable strategy for those struggling to raise capital. **Insurance instruments** were more associated with arable farms than any other type.

Other strategies

Technological innovation is a strategy particularly evident in arable crop cases and intensive olive oil production. This reflects the fact that arable farming lends itself to certain types of technology. Across the cases there are numerous examples of how producers use technologies to improve their performance. In the Belgian sugar beet case, technological innovation is seen as the main strategy; in Serbia the use of IT and 'Big Data' is helping arable farmers to increase quantities produced; many Latvian wheat farmers have also been able to invest in machinery, owing to EU funding. Technologies have enabled producers to improve their competitiveness, to be more effective and to develop more sophisticated ways in how they interact with the supply chain.

Across the case studies producers tried to improve their situation by being flexible in marketing. For example, fishers in Greece shifted to selling directly from vessels to achieve best prices where they could. Many inshore fishers in the UK also demonstrated **flexibility in marketing**; selling catches directly to London-based restaurants and developing personal relationships with head chefs. In fruit, producers demonstrated significant flexibility in terms of their production and marketing strategies.

Although not as prevalent as other strategies, where **diversification of income** sources was occurring, it had become vitally important to the producers undertaking it. The main rationale is to **reduce vulnerability** by no longer relying on one production activity. This was a common strategy amongst Belgian sugar beet producers and in the carp aquaculture case. Diversification into tourism was a particularly important strategy in the case of Italian fishing where pesca-tourism is seen as a central opportunity to help ensure the ongoing viability of small-scale fishers' livelihoods.

Example:

Dairy sector

*The dairy cluster in SUFISA examined four dairy case studies from **Latvia, Denmark, France** and the **UK**, and a feta cheese case study from **Greece**. Across the five studied cases a **farm-level and value chain structural change** can be observed. There is a clear pattern of intensification and concentration of dairy farming. The context for all five case studies is a period of 'crisis', in some cases specific to milk but also, especially in Denmark, Greece and the UK, linked to wider financial and political issues.*

***The low milk price** is the existential threat from the farmers' perspective but market conditions are context-specific. Dairy farmers are also concerned by market changes that had meant markets had become much more volatile. Since 2015, when the milk quotas were abolished, the price for dairy has been fluctuating significantly. Along with opportunities for expansion and intensification of production, the abolition of quota has created production and marketing issues that dairy farmers have to tackle. There is consensus for greater stability and predictability of milk prices to enable businesses to properly budget and manage their farms. The structure of the retail sector and the asymmetric power relations between dairy farmers and downstream actors is also problematic, with vulnerability now linked to the development of the retail sector and the world market. In this period subsidies have become a lifeline, particularly for smaller farms and/or farms exposed to global market fluctuations.*

*A number of **farm level** and **collective** strategies have emerged as a response to challenges. Farmers described various coping mechanisms that they implemented to help manage poor milk prices; particularly **costs of production-related strategies**. Farmers across the case studies are pursuing opposite strategies: reducing production costs, internal re-organisation, de-intensification, exit farming, succession planning, diversification of income sources, adding value, organic production, contractualisation. There are also reoccurring collective-level strategies that potentially help dairy farmers to manage market volatility. The collective strategies include: farmer cooperatives, producer organisations, machinery rings, collective learning, political mobilisation/lobbying.*

05

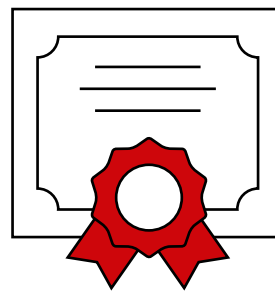
Private institutional arrangements

Private institutional arrangements involve a combination of horizontal cooperation and vertical coordination and as such can be an important structuring factor in supply chain

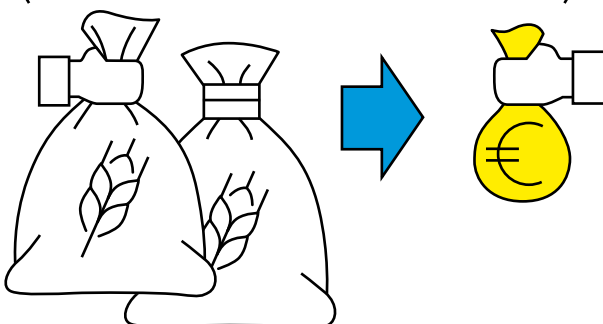
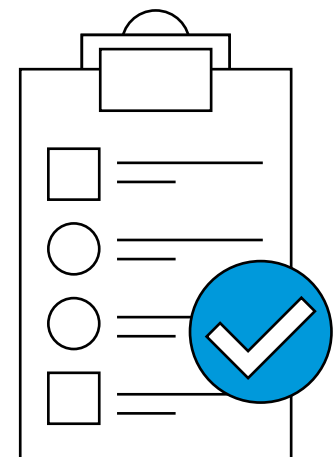
arrangements dominating in a particular sector. Overall, cases illustrate that private IAs are associated with high expectations, new possibilities, hopes, hesitation and, in some



Contracts and vertical coordination



Quality standards and certification



Cooperatives and producer organisations

cases, even with scepticism and disappointment. Among the key private IAs, the following should be mentioned: (1) cooperatives and producer organisations; (2) contractualisation; (3) quality standards and certification. These are described below.

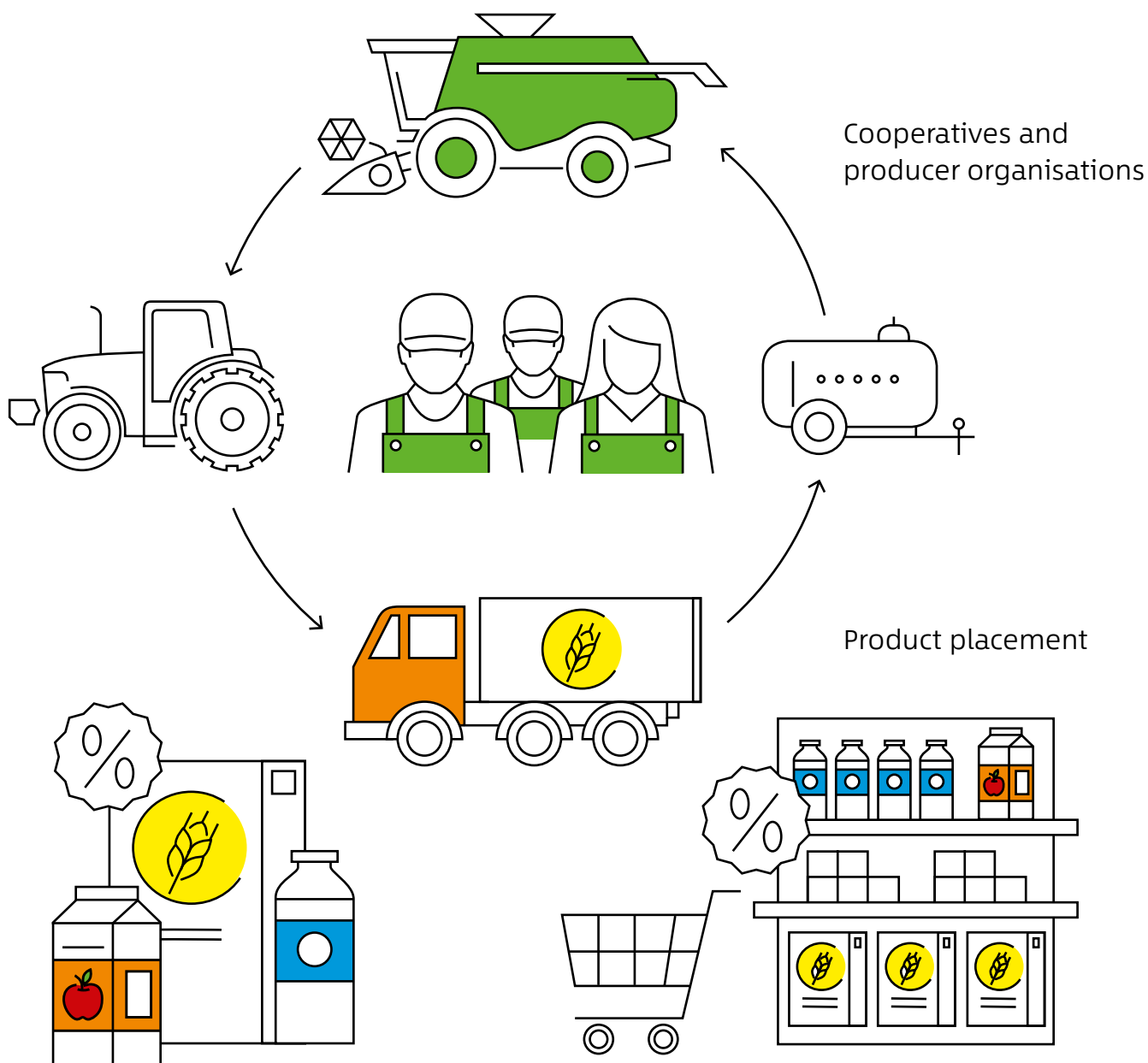
Cooperatives and producer organisations

Cooperatives and producer organisations are an instrument that can increase producers' market power and can be used to stabilise producers' income. The SUFISA data illustrate that this is not unequivocally occurring and there are **contextual factors** to consider. For instance, there is a **culture of cooperation**

Example: Arable crops

Arable crops were studied in six case studies - **sugar beet** production in **Belgium**, **cereal farming** in **Ile-de-France**, **oilseed rape** in Wetteraukreis region (**Germany**), and **wheat** in Opolskie Voivodship (**Poland**), Vojvodina (**Serbia**), and **Latvia**.

The complexity of and inability to predict the global market, alongside **prolonged periods of low prices** for arable products, are common and difficult conditions faced by arable farmers across the case studies. Similarly common was the **impact of input price increases and cost of production increases**, which are failing to be mirrored in the price of the final product. The competition between food and fuel uses for arable



products emerges across many of the case study contexts; allowing some farmers to diversify into the production of energy crops. On the other hand, land allocated to 'energy production' and to other purposes is increasing the cost of land. There is some concern as to whether the emphasis on economic viability of the strategies developed to overcome the challenges has (or will) come at the cost of environmental and social sustainability. Several individual strategies are crucial for farmers – such as intensification, technological innovation, financial management, etc. However, it is also evident that all analysed cases have strong reliance on collective strategies. The cases illustrate that the sectors are well coordinated (vertically and/or horizontally); sales are mostly to bulk commodity markets; markets are susceptible to price volatility. Wheat producers in France and rapeseed producers in Germany sell mostly via cooperatives. Arrangements in the Belgian sugar beet case are horizontally and vertically coordinated, with farmers selling via one sales channel. In Poland producer groups provide farmers with better bargaining position in relation to both the retailers of means of production and the purchasers of their product (namely wheat).

Besides this, a number of cases analysed in SUFISA have proven to be well connected to policymakers. Using farmers' organisations, the representatives of the sectors have been lobbying their interests vis a vis policymakers in order to defend their collective interests.

in some regions and sectors; in contrast, cooperation is more difficult to achieve in other cases because of a **distrust in cooperation** and / or **it is not the traditional mode of supply chain organisation** e.g., fisheries in Greece and the UK; wheat in Serbia and Poland; poultry in Denmark; apples in Poland; raspberries in Serbia.

Examples of and debates about promising cooperation were identified all across SUFISA commodity clusters. In the **fruit sector, producer organisations** have a strong presence, particularly in terms of marketing producer output and matching production with demand. For example, **Opera** is an organisation that involves exclusively Italian fruit growers specialised in the cultivation of pears. It represents more than 1,000 pear fruit growers, with the support of agronomists and technicians. The aim is to aggregate diverse existing groups and to concentrate production and thereby improve both quality and negotiation power.

A number of promising examples of collective action have been identified in the **arable crops cluster** e.g., strengthening the sugar beet syndicate via the Farmers' Union was seen as an effective response to generate additional income in Belgium; the 'protein plan' in France is a collective action that incentivises increased protein content and as a consequence enables farmers to compete with Black Sea and Eastern European producers. The emergence of farm cooperatives in Latvian grain markets meant that grain prices have become more transparent. In Poland, producer groups provided wheat farmers with a better bargaining position.

There are also examples of failed cooperation. Often the scepticism in cooperation is related to the expansion of some cooperatives – large cooperatives can ensure a high bargaining power, yet can lose sight of producers' interests. In France **small dairy cooperatives have been squeezed out** by larger cooperatives. Farmers expressed the view that cooperatives were becoming bigger and bigger, with **farmers feeling they have no control** anymore over cooperative

governance. In Belgium, increasingly fruit growers' trust in cooperatives has diminished. In France, there is a feeling amongst many farmers that due to the merger of cooperatives, there are effectively only two very large cooperatives remaining and that the voices of individual producers are being lost. Similarly, in the case of pear production in Italy, farmers feel that cooperative arrangements constrain management decisions at the farm level. In Greece, producers viewed cooperatives as part of a **clientelist system that had created corruption** and led to the detachment of producers from cooperatives.

Contractualisation

Contracts are an important instrument of supply chain governance enhancing vertical coordination. SUFISA case studies illustrate that contracts have been used to structure markets and particularly to ensure the quality of delivered produce. For example, commodity sectors that reduced intervention measures are using **production contracts** as instruments of self-regulation to manage production volumes on markets. Sugar beet marketing in Belgium is an example of this, being regulated by inter-professional agreements between the refinery and the producer organisation. Contracts also often require specific standards of production. In the wheat case in France, for example, direct supply contracts have been created between cooperatives and processors whereby specifications can be clearly demanded. Production contracts are particularly noted in the **dairy** cluster as an instrument for farmers and processors to adopt to market conditions.

Further, an emerging interest in other / new ways how contracts can be used was identified in the case studies: in the UK processors use A and B pricing - an approach designed to discourage overproduction beyond the agreed volume. Other pricing mechanisms were also noted: cost of production plus; formulaic or basket pricing (where dairy farmers are offered one price for their milk for a period). Most of the contract examples relate to the bulk commodity market, but there are

a few examples where contracts are used for speciality products e.g., aquaculture producers selling to restaurants in Germany. Another strategic issue is the use of **market data and futures contracts (i.e. hedging)**. This was evident in the UK dairy sector. The futures market allows both buyers and sellers to lock in a price for the future and spread the risk between the seller and buyer.

“ *People often forget that profitability is part of sustainability in agriculture. I highly appreciate that the SUFISA research takes this into account.*

(Valerie Vercammen, NAREDI)

Quality standards and certification

Quality standards and certification are employed in different ways. For instance, organic certification is important, particularly in the dairy sector. Organic dairy products represent a significant share of UK dairy markets, and their production is strongly linked to small family farms. The development of organic dairy is connected in part to policy support, but is also significant as a mode of on-farm diversification.

Labels of origin have helped to differentiate products, as noted in the case of pears in Emilia-Romagna (PGI), wine and marine aquaculture ('Made in Tuscany'), carp in Bavaria (PGI label) and Montado beef. In Bavaria, cooperatives nowadays aim to enhance producers' conditions for the sustainable use of ponds. Cooperatives are responsible for the representation of their members' interests in all areas of concern. In this case, local pond cooperatives helped to define standards and support registration of e.g., Protected Geographical Indication (PGI). Voluntary standards are important as a strategy to help producers access new international markets. Standards are also used to improve sustainability e.g., sugar beet in Belgium, or aquaculture in Italy.

06

Public intervention

Production strategies and private institutional arrangements are tools that producers apply to react to the conditions they face. However, producers are not the only actors reacting to conditions. Policymakers do so too. Public intervention is one more aspect of IAs. Using the power allocated to them, policymakers introduce regulations shaping the processes taking place within the supply chain. Across the sectors there were recurring themes characterising interaction between policymakers, producers and analysed commodity sectors. The recurring themes were: (1) lobbying, (2) training, advice and investment in research and development (R&D), (3) subsidies, and (4) developing new markets. These themes are described in detail below.

“ *In the context of global food security, there is a need and opportunity to further develop Europe’s aquaculture sector.*

(Carl-Christian Schmidt, member SUFISA expert board)

Lobbying

Access to those in power to influence decisions - **lobbying** - is mentioned in a number of cases. In the French wheat case, producers were identified as developing collective strategies that included lobbying policymakers in order to defend their interests. Over the years, cereal farmers have developed privileged access to policymakers, in particular in Île-de-France, as they are geographically close to Ministries and administration centres. Some of the farmers’ organisations

located in the region are more than 50 years old and have a well-established position in all political negotiations that concern agriculture. On the other hand, there are also concerns that some sectors are not given enough priority. The **fragmentation** of several analysed sectors has created problems to access and influence decision makers. Polish fruit farmers from the case study region also claimed that policymakers are favouring producers from the area around Warsaw (region that is geographically closer to them). In several case studies producers claimed that policymakers are only listening to interests of the largest and most influential farmers. A similar observation was made by German fish farmers as well as by fishers who claimed that often it is the large-scale fisheries’ voices that are heard. Partly as a response to this, there are calls made in a number of the case studies for greater **transparency and participation** in the policy making process.

Training, advice and investment in research and development

This includes improvements to infrastructure, **improving educational standards** in rural areas, enabling high quality production (including organic production), providing support for insurance, credit support, developing a public warehouse system (for the wheat producers in Serbia), increased investment in technical and advisory services, and the development of new varieties. In the Belgian apple and pear case study, the focus is on **developing new cultivars** in order to respond to **changing consumer tastes**. In the Italian fruit case, study stakeholders call for more R&D money to develop new pesticides to counter emerging

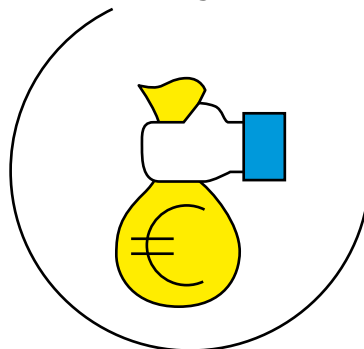
Developing new markets

Government support for the development of markets has been identified in a number of the cases as being important.



Subsidies

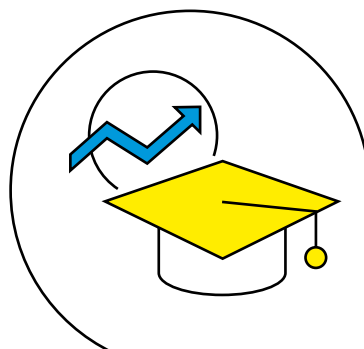
The importance of subsidies varies between the sectors studied. In some cases, subsidies received might be crucial for farm survival.



Lobbying

Access to those in power aiming to influence decisions. Lobbying is mentioned in a number of cases.

For example, the French wheat producers have a very strong lobby.



Training, advice and investment in research and development

This includes improvements to infrastructure, improving educational standards in rural areas, enabling high quality production (including organic production), providing support for insurance, credit support, developing a public warehouse system (for wheat producers in Serbia), increased investment in technical and advisory services, and the development of new varieties.

Example:

Small-scale fisheries

The **small-scale fisheries** have been studied in three cases - a satellite case study on the fishery sector in Tuscany (**Italy**); purse seine and small-scale fishers operating in Kavala and its neighbouring ports in **Greece**; and the Cornwall **inshore fisheries** sector in **the UK**.

The small-scale fishing fleets of the EU are enormously **diverse and heterogeneous**. In terms of the overall economy they make a **small contribution**, yet can be of significance at the local level to the **social fabric of the communities** involved. This is in terms of directly creating jobs, but also in terms of their **cultural importance** and **contribution to tourism**. As with all fisheries in the EU, small-scale fisheries are regulated through the **Common Fisheries Policy** (CFP). This is determined centrally in Brussels and, although administered at a member state level, there is a strong feeling amongst small-scale fishers that the **CFP is insufficiently transparent** in its processes and that 'one size does not fit all'. There are also concerns that it mainly involves technical measures, with an inadequate regard for the social context and that the specific needs of small-scale fishers are often disregarded, with their 'voice' not being sufficiently heard when policy is developed. Small-scale fishers would like to see more bottom-up policies that allow for greater flexibility and place-specific relevance.

Most small-scale fishers are **price takers**, often reliant on the prices received at auctions. However, due to the scale of their catches, it is becoming ever more important that they **add value** to their catch in order to remain economically viable. This requires greater **entrepreneurialism** amongst fishers, as well as cooperation. In Italy, only a small percentage of registered sales are sold direct to the end consumer, with the main outlet being wholesalers. In Greece, small-scale fishers try to sell their produce directly, with the larger boats selling through auction markets. In the UK, with a poorly developed culture of eating fish, 80% of sales are exported, mainly to the EU. In the UK, the majority of fish are sold at harbour markets. Furthermore, small-scale fisheries tend to be highly fragmented, something that is exacerbated by the highly individualistic and innately competitive attitude of most fishers. However, there are also some positive examples of cooperation starting to happen, both vertically and horizontally; e.g., through the use of digital technology (smart phones and tablets), whereby fishers are able to inform potential buyers of their day's catch as they are returning to harbour.

threats. Recirculation Aquaculture Systems in Germany have received notable support in order to enhance the sector's development, not least in terms of minimising its environmental impact. In France, growing concerns about competition from Black Sea wheat producers in terms of protein content, has led to the development of a 'protein plan' that is intended to increase the competitiveness of French wheat growers in this case study area. Sponsored by the public authority and the inter-branch organisation it aims to increase the protein content of French wheat to improve its position on the export markets and limit the risk of competition in the domestic market, in a context where the demand for high protein wheat is steadily increasing.

Subsidies

The importance of subsidies varies between the sectors studied. In some cases, subsidies received might be crucial for farm survival. This is most obvious in the case of the Montado meat system in Portugal, where commonly up to 60% of the total net farm income is from **CAP subsidies**. This leads to concerns about how the sector would cope if subsidies were to be reduced. Regarding sugar beet production in Belgium, the minimum price of sugar beet (set by the EC) has been reducing since 2006, and the termination of the quota system in 2017 threatens this further. The amount of direct subsidy support received is contentious in some contexts, in that it has a distorting effect on land prices. There is also a concern that it should not be necessary to provide producers with **subsidies** in order to guarantee their continuation in farming. In the French wheat case, producers are expecting a gradual reduction of subsidies received. **Subsidies** are particularly important in Latvia, Poland (as a result of access to the EU) and Serbia in anticipation of joining the EU. Wider government support for the development of the agricultural sectors in these countries has been mentioned above, but grants have also been critical to the development of on-farm infrastructure in Serbia, for example, and the setting up of producer groups in Poland.

Funding through the European Maritime and Fisheries Fund has been important in terms of developing aquaculture in both Italy and Germany, made available through the EU because one of the aims of the CFP is to boost aquaculture across the EU. **Foreign direct investment** (by investors from Spain), coupled with governmental water and irrigation policies, have also been central to the development of intensive olive oil production in Portugal.

Developing new markets

Government support for the **development of markets** has been identified in a number of the cases as being important. In the German oilseed rape case study, farmers aim for the development of a regional marketing strategy. In Latvia, there has been support for the development of a **local dairy brand**, linked with strategies intended to contribute to **territorial strategies**. In both the UK and Italy there is strong support for the development of fish markets. Key to this is giving the fish a 'story', linking it to the place where it has been caught. In Cornwall there is support for fishers to better access the large tourist market, while at the same time the **tourist offer** is enhanced by vibrant fishing communities. In the Montado meat case in Portugal, there is also recognition that it should be supported as a **regional asset** for sustainable development, notwithstanding that the market price currently achieved generally fails to recognise this. EU geographical indications (e.g., PDO and PGI) are important in providing support for **territorial and regional development**. In the Tuscany wine case, the PDO status has been very important in helping to establish a **strong identity** in international markets.

Developing new markets, both nationally and internationally, is particularly highlighted in the fruit case studies. Raspberry production is the most important fruit sector in Serbia, contributing a high share of the total agricultural export from Serbia and accounting for 21% of the entire world production of raspberries. Currently, most of the crop is exported in frozen form, but much higher

prices could be achieved for fresh raspberries. A government led project enabling business projects identified the berry sector as a rare source of steady income for growers and the processing industry in western Serbia, where the berry industry is a driving force for agriculture and regional economic growth. SUFISA supported the development of the Fresh Berry Fruit Value Chain in Serbia. Assistance was given to improve planting material – nursery development, through linking local nurseries with international breeders and licensees, and support for the testing of new varieties. Likewise, in Italy, it is recognised that many of the older varieties are no longer favoured by consumers and that more needs to be done to make Italian fruit more attractive to, and recognisable by, Italian consumers. The need to better **inform consumers** about what is produced in their own country was echoed in a number of the case studies.

“ *Especially farmers appreciated our engagement with the sector's issues. They were happy to express their concerns to a new party without vested interests in the sector.*
(Eewoud Lievens, KU Leuven)

07

Conclusions

The results of SUFISA are based on qualitative and quantitative analysis of 22 case-studies in Europe, and their comparison. We found that cases and sectors represent a large range of conditions and subsequent strategies and performances. Still, systematic observations emerged. First, market conditions are more important than regulatory and policy conditions in affecting and shaping the farming and fishing systems. Second, the historical political context, in particular the level of government intervention, both at the level of the country and the sector, shape producers' discourse, concerns and expectations. This translates into a higher difficulty to adapt to new market structures and supply chains. Third, increasing productivity through intensification and upscaling remain the two dominant future strategies, leaving little room to more sustainable or innovative farming activities and marketing strategies. Fourth, we also observed a sequential list of strategies across countries whereby producers would first be rather non-organised, then willing to cooperate within producer organisations and then better coordinate within more elaborated organisational forms such as clubs or vertical integration.

Market conditions in general, and prices that are dropping and highly volatile in particular, have been highlighted as important condition influencing producers' livelihoods in all cases. However, there is an important difference between producers that historically enjoyed relatively strong government intervention versus those that did not. The EU intervened in markets in the arable, wine, olive, dairy and livestock sectors through minimum price support, import tariffs and in some cases production quota. Farmers in

these sectors and in the old EU-15 Member States still enjoy direct payments under the current CAP, but they face a new reality of unregulated markets. Producers in other sectors, including fishers, and in new Member States have never enjoyed such interventions and also do not receive the same level of direct payments, if at all. They are used to the forces of competition and volatility. Other differences in conditions relate to differences in countries' socio-economic and political situation. Institutional stability greatly differs between countries, and is particularly an important factor in the UK (Brexit), Portugal and Greece (financial crisis) and Serbia. Access to credit and capital is generally more difficult since the 2007/08 financial crisis, although not cited as being crucial in all cases (e.g., not in Belgium).

These differences need to be related to producers' room to manoeuvre or the lack thereof. While upscaling and intensification are dominant production strategies across cases and countries, marketing strategies strongly differ. To be economically resilient it requires the absence of rigidities, that is, the ability to adjust output levels and a product mix following price changes. Rigidities may exist both in the short and the long term. Short-term rigidity relates to high product perishability and thus storability, while long-term rigidity relates to high degrees of specialisation and long production cycles. Hence, producers' demand for IAs tends to increase with increasing rigidity. More specifically, arable farmers experience relatively limited rigidities as their produce tends to be storable and they can adjust their plans annually. Specialised livestock and dairy farmers, however, produce highly perishable

products and cannot adjust their plan due to high degree of specialisation, leading to high rigidity and thus high demand for vertical coordination. Fruit and vegetable producers take an intermediate position. As a result, increasing vertical coordination can be observed in dairy and livestock sectors (e.g., UK dairy case, Denmark dairy and poultry case), while vertical coordination is less prominent and more difficult to organise in arable sectors (e.g., arable crops in Germany). An important barrier to increased vertical coordination is the lack of trust and solidarity along supply chains.

Vertical coordination can also be done by forward integration into processing and wholesaling, which is then organised through cooperatives to capture economies of scale. This can be observed in the dairy sector (e.g., French and Danish dairy cases), the wine sector (wine case in Italy) and the fruit sector (e.g., Belgian and Italian fruit cases), sectors in which there is a strong cooperative tradition. Particularly in Northern countries — including Belgium and France, but excluding the UK, this tradition has led to very large cooperatives, leading to internal tensions as a result of producer heterogeneity (e.g., Belgian fruit case) or clientelism (e.g., Greek feta case). Cooperatives and producer organisations are more difficult to organise in Eastern European countries, which is mainly due to the distrust in collective arrangements since the reform to a market economy in the 1990s (e.g., Latvian dairy case, Polish wheat case).

In conclusion, farmers and fishers across Europe are increasingly subject to market and regulatory forces, but in very different socio-economic conditions. Individual production strategies are not sufficient to deal with these conditions yet need to be embedded in supportive institutional arrangements. Ideally, IAs imply a combination of three elements - vertical coordination, horizontal cooperation and public intervention - that mutually reinforce each other. In practice, barriers exist in the development of these elements as well as between them, leading to tensions rather than synergies.

“ *SUFISA research clearly demonstrates that we need to work even more together in the future to remain a competitive and sustainable farming sector in Europe.*

(Žaklina Stojanović, University of Belgrade)

These barriers are a result of lack of trust and solidarity but also of opportunistic behaviour of some supply chain actors and lack of competences related to marketing and distribution, particularly at the producer level. While legislation on unfair trading practices is tackling opportunistic behaviour, more needs to be done to successfully design IAs that integrate vertical coordination, horizontal cooperation and public intervention in a synergetic, inclusive and efficient way.

08

Further reading

To learn more or to access SUFISA project deliverables, visit the project website <https://www.sufisa.eu/>.

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Imprint

Responsible SUFISA Booklet

Eberswalde university for sustainable development (HNEE)

Unit: Policy and Markets in the Agri-Food Sector

Prof Dr Anna Maria Häring

Dr Susanne von Münchhausen

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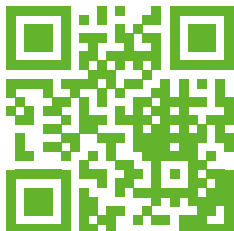
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<https://www.sufisa.eu/>



Design

WERNERWERKE GbR, Berlin

Photo credit

pixabay (cover)

Print

www.drukarniabeltrani.pl



This project has received funds from the EU's Horizon 2020 research and innovation programme under Grant Agreement No 635577. Any and all information in this booklet reflect the view(s) of the respective author(s) and not necessarily those of the Research Executive Agency.

