



Nordic Council
of Ministers

NORDIC FISHERIES AT A CROSSROAD



Nordic fisheries at a crossroad

*Johan Hultman, Filippa Säwe, Pekka Salmi, Jesper Manniche,
Emil Bæk Holland and Jeppe Høst*

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Summary

This report explores how Nordic small-scale fisheries can develop to promote value creation and specialization. To explore that question, we look at the historical development of the Nordic fisheries and outline the current challenges, especially for the small-scale and coastal fleets. Small-scale fishers are confronted with increasing investments in order to develop and across the Nordic countries this has led to a decline of small-scale fisheries. We therefore assert that much of the Nordic small-scale fishers and coastal communities will have to look for other development strategies in which the focus is increasingly on value instead of volume. The question is how this can be achieved. By looking at recent developments among small-scale but land-based food producers we suggest that specialisation and dedication will be the central development strategies. The central notion is to break away from the price-competitive globalised fish markets and develop new products or distribution models. The main obstacle identified through the case studies is a significant gap between the fishers trapped in a conventional production world and the “innovative” ambitions of entrepreneurs and policy actors. The material presented in this report suggests that substantive and coordinated efforts are needed in order to bridge the gap between conventional logics and the new development logics centred around increasing the value of catches. It is not enough to just look at the producers and expect that they will reform decades of development in the food system. There is a need for coordinated changes in both the supply and demand side as well as among all the intermediaries between them. The vision should be to develop viable and composite markets for high quality and specialty fish products through dedication and specialization. Markets that go beyond the local and reach supermarkets and consumers on a national and international scale.

1. Introduction

In this report, we explore the potentials of a *differentiated approach* to the development of Nordic fisheries. By this we mean an approach that cater to different development logics, and which sets new development goals especially for the small and coastal fishing fleets. The new development goals should be seen as an addition to the already existing development strategies, where focus is on efficiency, volume and standardization. Instead, this report explores approaches focusing on cross-sectorial innovation, distinct product qualities and specialization.

1.1 Exploring a differentiated approach

This report explores if and how Nordic small-scale fisheries can be developed to promote value creation and specialization. What will be the main principles of this development? What are the necessary preconditions for such a development? What can the policy side do? And what can the business side do? These are the guiding questions for this report. We seek to answer these questions through looking at experiences in the land-based food sector and through case studies of three coastal areas in Finland, Sweden and Denmark. Methodologically, we have sought to go in-depth with our case areas. Therefore, instead of gathering numerous inspirational best practices, we explore the obstacles and (sparse) connections between business activities and local policy drivers. Through the case studies, we explore the actual experiences with the differentiated development approach. However, in the following chapter we ask the fundamental question why stakeholders in Nordic countries should look for a differentiated approach to the development of Nordic fisheries.

To answer that question, we look at the historical development of the Nordic fisheries and outline the current challenges, especially for the small-scale and coastal fleets. With the introduction of individual and transferable quotas and similar market-based fisheries management systems, small-scale fishers are confronted with increasing investments in order to develop. Across the Nordic countries this has led to a decline of small-scale fisheries with former fishing villages losing their previously so iconic industry. Most Nordic countries do have specific management instruments in place to protect or promote small-scale fisheries, but even with these safeguards in place, the current situation does not provide a very promising future. There is little room for volume-based expansion in the current regimes. We therefore assert that much of the Nordic small-scale fishers and coastal communities will have to look for other development strategies in which the focus is increasingly on value instead of volume. The question is how this can be achieved.

In the third chapter, we turn to the recent developments among small-scale land-based food producers to review how this development has been conceived and conceptualised on land. Despite the differences, we assert that the strategies of dedication and specialization characterising the land-based producers are promising for small-scale fishers as well. The central notion is to break away from the price-competitive globalised fish markets and develop new products or distribution models. There are many ways to do this and the chapter outlines the main principles.

On the policy side, the land-based development has been supported by cross-sectorial and area-based development policies, among these most notably the LEADER method and EU Local Action Groups. In the fourth chapter, we therefore review the principles of this policy approach before turning to a discussion of policy-driven innovation in the case studies. The main obstacle identified is a significant gap between the fishers trapped in a conventional production world and the “innovative” ambitions of policy actors. The case studies also give suggestions for how to overcome this gap by pointing at the organisational capacity as vital. In the successful case studies, the policy agencies have had to take upon them a larger leadership role than anticipated.

In the fifth chapter, we turn to the business side to assess how innovation and development is tackled along the lines of specialization and dedication in the three case study areas. This reveals that entrepreneurial activities are ongoing, but there are also substantial challenges in overcoming the gap between conventional production and new development strategies. The gap does not only regard the producer side, but also the consumer basis and appropriate distribution systems will have to be developed in order for a new and viable seafood system to emerge.

In policy, as well as in business, the current situation is strongly influenced by “productivist” strategies of the 20th century, which successfully (at least temporarily) integrated even the most remote communities and their fishers in the global agri-food system and international fish markets. The case studies suggest that the fishing sector and its management are still strongly embedded in this development logic, and that this explains some of the difficulties we observe for the sector to engage with value-oriented specialization.

However, despite the many obstacles, Nordic small-scale fisheries also have strong social and cultural attributes that can be reconfigured into new development strategies. In order to do this, it is important to acknowledge the different potentials and development paths of Nordic fisheries in the current foods system.

1.2 The way forward

The material presented in this report suggests that substantive and coordinated efforts are needed in order to bridge the gap between conventional logics and the new development logics centred around increasing the value of catches. It is not enough to just look at the producers and expect that they will reform decades of development in the food system. There is a need for coordinated changes in both the supply and demand side as well as among all the intermediaries between them. The vision should

be to develop viable and composite markets for high quality and specialty fish products through dedication and specialization. Markets that go beyond the local and reach supermarkets and consumers on a national and international scale.

When discussing the different development strategies, the difficult but crucial question is in which way individuals, businesses, local communities as well as the whole society benefit the most from the available fish resources. Small-scale fisheries clearly have both political and public support but are currently in a critical situation. With this report, we would like to pose the question *how shall Nordic fisheries develop in the future?*

Currently, the development and management are based on *economies of scale* and centred around volume and efficiency. However, if small-scale fisheries can develop to a position where they create high value of their catches and at the same time contribute to improving quality of life in remote areas we see this as a beneficial way of shaping future Nordic small-scale fisheries. In order to achieve such development, we believe the territorial, area-based development approach would be the most useful policy instrument to support individual entrepreneurship.

The findings in this report is based on case studies in the three Nordic EU countries, Denmark, Sweden and Finland, and will of course have different relevance in the different Nordic countries and communities. However, despite the geographic and demographic differences across the Nordic countries, we hope that the principles and experiences presented in this report can serve as an important inspiration for policy makers, community entrepreneurs, fishers and other stakeholders who wish to engage in a differentiated approach to Nordic fisheries.

2. Nordic small-scale fisheries at a crossroad

The chapter explores the past and current situation for small-scale fisheries as well as the logics applied to support growth and development. The 20th century saw both a substantial growth in the Nordic fishing sectors but also the introduction of advanced quota management. However, while the biological governance of the marine resources improved, the economic performance worsened. Often quota management resulted in rigid and ill performing fishing sectors. Market-based fisheries management systems were conceived to alter this situation. It is evident from the Nordic and the global experiences that while market-based fisheries management produces the desired economic reform of the sector, it does not in its present form produce viable conditions for small-scale fisheries.

2.1 Introduction

This report is occupied with the future development of Nordic small-scale, near-shore and coastal fisheries, which are currently challenged by intense international price competition, technological developments and market-based management models. Moreover, the coastal fisheries are threatened by changing environmental conditions, including increasing populations of seals and cormorants.

It is impossible to offer a single definition of *coastal*, *near-shore* or *small-scale fisheries* that will work across the Nordic countries. Even within a country that can be difficult. Furthermore, often different terminologies in the Nordic countries offer more confusion than clarity. In one country, the term “coastal fisheries” might mean small, but commercial fisheries, while in others it can refer to recreational fisheries. In Norway for example, “coastal vessels” are used to describe vessels up to 28 meters long, much longer than in the other countries. To avoid these associations, we will pragmatically use the term small-scale fisheries. Even though there is no common Nordic distinction between small and large-scale fisheries, the dualism is present in all Nordic countries in different manners. By using small-scale, we do not wish however to suggest any inferiority of small in contrast to large-scale fishers. We believe, as a starting point, that small-scale fisheries can be a viable present-day livelihood practiced with modern equipment and technology, but we also assert that it will be more and more difficult to do so in the current production system and with the resources limited by individual and transferable quota systems. With limited resources available, there is a need to focus on increasing the value of the catch.

In technical management, differences in fishing fleets are most often defined by vessels' length in meters, complimented with gear types, gross tonnage, trip length or geographical restrictions. In addition to these technical definitions, there are a range of commonalities across the Nordic countries that characterize the differences between small and large-scale fisheries, and which are relevant for understanding the current development.

2.2 Small-scale fisheries in the Nordic countries

While vessel size is the primary technical management criterion, a range of other features that characterize small-scale fisheries should be highlighted. These characteristics form the starting point for the future development. Considering the great differences in geography and demography, there are many exceptions and deviations, but in general the Nordic small-scale fisheries are characterized by a certain fishing pattern and ownership structure. In contrast to large-scale fisheries, small-scale fisheries are most often owner-operated and characterized by shorter fishing trips often confined to the same fishing grounds. Instead of *high mobility* in moving between catch areas, small-scale fishers have been based on *high flexibility* and knowledge of their local fishing grounds. In addition, small-scale fisheries are often labour intensive in contrast to the increasingly capital and technology intensive large-scale fisheries. For the operators of small-scale fishing units, the independence and the way of life is highly valued. Therefore, in situations where quota distribution is managed through markets, it makes little sense to engage with investors to expand the quota portfolio if the consequence is loss of independence.

In short, small-scale fisheries can be generalised as:

- *Fishing patterns*: Restricted in mobility – but high flexibility in shifting between target species and gear types according to seasons;
- *Business model*: Often owner-operated and labour-intensive;
- *Culture and identity*: Appraisal of independence and collaboration between fishermen.

Until recently, and with the exception of Finland, large parts of the Nordic fisheries used to be organised along these lines. Looking back at the 20th century, owner-operated vessels with small crews were able to operate efficiently and over large distances in most Nordic regions. Often, crew members were recruited locally, and the fishers were known as a hard-working and entrepreneurial social class (Sønvisen, Johnsen, & Vik, 2011). Even large-scale distant fisheries could be organised in this way. An exception to this has been the coastal fisheries in Finland and some Swedish areas in the Baltic Sea, where private rights and lack of state support have resulted in a different development path.

However, for the Nordic countries in general, in the latter half of the 20th century catches increased in both volume and in the number of species targeted. Growth and expansion was based on the free and equal access to the fish as well as the active support of the state. Fishing provided jobs and formed the basis for the value creation in remote communities that balanced the otherwise one-sided economic development of urbanisation. Based on this, the owner-operated fisheries were often protected by legislation (i.e. ownership of fishing vessels were legally limited to active fishers) and actively supported by the state through tax exemptions or lucrative state loans. This coincided with the technological development that brought nylon, advanced navigation systems and fish finding equipment to the vessels. The consequence in many cases was the resource pressure and overcapacity we associate with fisheries management today. Thus, fisheries management often finds itself in a paradoxical situation where the overall societal concern is on limiting the total catch, while the logic of business development still relies on expansion in volume, operational range and species.

Figure 1: The Nordic fisheries are very diverse given the geographic, marine and social differences ranging from open-sea fishing in the North-Atlantic to winter seining like the above in Finland



Photo: Pekka Salmi.

2.3 Concern for the marine resources and coming of the quota

From the late 1960s and onwards, marine biologists began to raise concern for declining fish stocks. While technological development had increased the efficiency and outtake of the ocean, scientific modelling of fish populations was advancing and soon became the starting point for national and international fisheries management (Karlisdóttir, 2005). Science and international politics displaced the existing relations between government and producer organisations as estimating and controlling the output

became the prime objectives for national management. Historically, however, Nordic fisheries were not totally unregulated. A range of technical management measures were used when needed (mesh size, closed areas, temporary banning of gear types, minimum sizes, etc.), with the main purpose of guarding the resource from damaging fishing techniques and unfair competition. Based on the new science-based models, however, a new management tool was proposed as a supplement to the increasingly insufficient technical regulation of fisheries. This new management phenomenon was *fish quotas*; upper limits to the outtake of fish resources. With this measure came a distribution problem: Who was entitled to the resource, and by which principle should it be distributed between operators?

While the existing technical regulation was concerned with equal access and fair competition between operators (mainly by regulating gear, i.e. input), the quota was initially concerned with the biological well-being of fish stocks (output). In response to the growing fishing capacity and efficiency, it was necessary to introduce an upper limit on the catches. However, while the biological governance of the marine resources improved, the economic performance worsened. In many cases, the increased competition for the remaining “quota” installed an incentive for volume-based operation and indirectly punished operators who were quality-oriented or otherwise “slow”. Large vessels that could go out in rough winter weather or travel farther and faster gained an advantage over “quality-oriented” passive gear and small-scale fishers unable to fish in windy weathers. This dynamic has been called Olympic fisheries, and the consequences were depletion of both prices and overall economic performance. To solve these conflicts, fisheries managers could turn to detailed regulation, for example by regulation of access in weekly shares and according to vessel sizes and activity. These solutions imitated the previous social structure but in a rigid and bureaucratic way. The complicated management of the limited resources generated new conflicts between gear types, vessel sizes, mobilities and regions and paved the way for yet another management innovation: *quota distribution based on market mechanisms*.

2.4 Nordic experiences with market-based fisheries management

It is against this background of unsuccessful quota management that the first Nordic experiments with transferable individual quotas and quota markets should be understood. Based on their historical catch, vessels were granted an individual and transferable quota share. With this right at their disposal, the vessel owner would be guaranteed a certain share of the fluctuating annual national quotas. In order to increase catches, the vessel owner would have to buy or lease more quota from other operators. This distribution system was therefore primarily conceived as an instrument to eliminate the overcapacity by letting operators use their financial capabilities to settle the distribution of quotas. In this way, the state would be less involved in regulating access and market mechanisms would replace both the unpopular scrapping schemes as well as the unpopular state regulation of access. Today, the Nordic

countries all have introduced quota markets to solve the difficult distribution of limited fishing opportunities, although with different scopes and in very different manners.

In a global context, Iceland was pioneering when individual and transferable quotas were introduced in the herring fisheries in 1979. In 1984, a comprehensive programme for demersal fisheries followed, and in 1990 the system was mainstreamed to include further species and reformed due to economic objectives. In 1990, Greenland reformed their shrimp fisheries with the introduction of Individual Transferable Quotas (ITQs) in the offshore shrimp fishery, and in 1997 the near-shore fishery followed. In 2012, a market-based scheme for halibut was introduced. In Norway, after a severe cod crisis in the late 1980s, vessel quotas were introduced and in practice quota trade began through trade of vessel licenses. The Norwegian quota system was later refined into an advanced and quite segmented structural quota system using market mechanisms, but in rather regulated ways.

The early experience indicates that introducing individual (non-transferable) quotas gradually leads to quota trade either through pressure from the sector or through the de facto trade of licenses and vessels. With the main development logic being expansion in volume, individual quotas will only be a short-sighted solution as operators will soon seek ways to increase their individual resource share. The most obvious way to do this is through acquiring shares from others, which leads to a sectorial pressure for transferability. However, there are many ways to introduce transferability. In moderate models, quotas can only be acquired as a bundle of quota rights bought together with a vessel that must subsequently be scrapped. In more progressive models, quotas can be fully divisible and sold forth and back between operators in any size wanted. There are many variants in between.

In the mid-1990s, the Faroe Islands introduced a system of transferable fishing days at sea. It is a system similar to quota markets but based on the input (fishing effort measured in number of days at sea). Based on the characteristics of the Faroese fleet at the time, the system was designed so transferability was limited to certain groups. Starting in 2003, Denmark introduced transferable quotas primarily with economic objectives. First, ITQs were introduced as an experiment (later made permanent in 2007) in the pelagic fisheries, while in 2007 a comprehensive market-based scheme was introduced in the demersal fisheries. In 2009, Sweden introduced individual and transferable quotas in the large-scale pelagic fisheries. Recently, individual quotas with annual leasing have been introduced in the demersal fisheries. In 2017, Finland joined as the last Nordic country and introduced individual quotas in the herring and salmon fisheries.

In all of these countries, quota markets have been contested and opposed by large groups of fishers, and the implications have been subject to public debate. The quota markets have mainly been introduced to improve the economic performance of the fishing sectors and have been largely successful in pushing an economic rationalisation of the fishing sectors. As we will argue below, the introduction of market mechanisms in the distribution of fishing rights have also changed the economic and social base, and therefore also the very basic conditions for development in the sector. It is a policy change that has favoured volume-based large-scale production in new company

structures and that has been supported by societal demands to have profitable fishing sectors. The development has led to advanced technological innovations and development along the lines of economies-of-scale, but has also resulted in challenges to small-scale fisheries (Viðarsson *et al.*, 2018).

2.5 Quota markets and small-scale fisheries.

Growth in the fishing sector has been following a “productivist” development path centred around economies-of-scale. At a closer look, the historical growth and expansion of owner operated fishers in the 20th century was based on the equal and free access to the sea. Innovation was on-going and concerned with improving gear and fishing techniques. Many inventions and practical fine tunings of gear used to have their origin in the industry rather than in the research centres and university departments of today. As described above, the sparse technical management first regulated a competitive growth, but later the application of fish quotas introduced an upper limit to catches. This happened without any change in the development strategy. While some quota systems (i.e. size and activity dependent quota rations) imitated the social structure of owner-operated fisheries – but without any real room for development – the introduction of market mechanisms in the quota distribution has changed the basic conditions for operation and growth in the Nordic fishing sectors.

Firstly, expansion and growth are increasingly a question of investing in quota. This means that the fishing sector has been opened up for investors and fishing companies, which are thriving in the new conditions, but nevertheless contrasting the pre-existing social characteristics (Høst, 2015). Secondly, the allocation of quotas to the vessel owners have changed the basic social relations between owners and other fishers. There is now an owner of the resource, who increasingly makes the majority of the necessary investments. This is sometimes only a subtle change that only materialises when the quota is sold. Increasingly, there is an employer-employee relationship in the sector substituting the former share-organised fishing crews. It also means that future generations of fishers enter the sector with fundamentally different conditions. They will have to invest in quotas to become owner-operators.

The dualistic relationship between small and large-scale fisheries, which was formerly governed by technical regulations equal for all and the open competition on the sea, are now shaped by the financial powers of operators. The result has been an economic reform not only in numbers but also in the types of operators. Companies with access to investor capital are accumulating quotas and the number of owner-operated businesses are decreasing. Across the Nordic countries, the introduction of market-based management has been accompanied or followed by concerns for the balance between large and small-scale fisheries. Public and political interest in keeping the diversity of the fleet and the resource ownership spread out, go together with media stories on “quota kings”, “quota tenants” and concentration of wealth. At the same time, market-based quota distribution has by large improved the profitability for the remaining operators, and has therefore been widely promoted. There is however,

an increasing segmentation between small and large-scale fisheries in both size and social structure. In the competition for the limited quota shares large-scale operators are generally acquiring quota from small and medium sized operators, so much that a serious public concern for the future of small-scale fisheries and communities have been raised. Fisheries policies in most Nordic countries therefore include instruments to protect small-scale fisheries. In the following section, we will review how the dualism between small and large-scale fisheries is handled in the Nordic countries in the actual design of market-based fisheries management and quota systems.

2.6 Safeguards and quota systems

A look at the Nordic countries reveal that all countries have detailed regulation that distinguishes between small and large-scale fisheries. In general, these regulations are concerned with a division of quotas between the “segments”, geography, gear and regional distribution. Most countries have so-called safeguards that are implemented to protect small-scale fisheries from the effects of market-based fisheries management. Measured in employment most Nordic fisheries are on a downward and long-lasting trend. This is true especially for the small-scale fisheries, despite the safeguards and management measures to protect them.

In Greenland, the main instrument is a geographical division reserving the waters from the shore and three nautical miles out for coastal vessels less than 120 gross tonnage. Inside this near-shore area most species are managed under an open and common quota system. Notable exceptions are shrimp and the Greenland halibut fishery north of 68°50'N which was recently reformed and allocated as individual and transferable quotas. In the process vessels under 6 meters were exempted, but the “under 6” group was simultaneously closed to newcomers. For the shrimp fishery, which is managed through individual and transferable quotas, the offshore and near-shore division means that slightly different rules are applied to the two segments. The differences are mainly about maximum ownership of quota (33% in offshore and 10% in near-shore) and that a landing obligation is applied to the near-shore shrimp fisheries. A challenging operational environment, high investments costs for newcomers and low prices characterise the Greenlandic small-scale fisheries, which is however extremely important as a source of regional employment and value creation. The Greenlandic small-scale fleet is characterised by its complex nature, consisting of approximately 300 small- and medium-sized vessels (<120 GT) and almost 1,500 small dinghies. The vessels form the basis for both full time employment, part-time and recreational fisheries but also for a range of different practices mixing hunting, agriculture with seasonal fisheries. It is estimated that 2,000 people are employed in the coastal sector (out of 3,500 in total) (Viðarsson *et al.*, 2018). For the two most profitable fisheries, shrimp and Greenlandic halibut, the current development is a further concentration of transferable rights along the lines of economies-of-scale (Viðarsson *et al.*, 2018).

The Faroese regulation is currently under reform and will undergo substantial changes. Since the mid-1990s the fisheries have been managed under a system of transferable “days at sea”. The system applies a thorough segmentation of the fleet in six groups according to size and gear, with restrictions on trade between the groups. Another key feature in the Faroese management is that it is based on geographic gear restrictions, either seasonal or permanent. In this way, the medium-scale and small-scale fisheries have privileged access to certain catch areas. The segmentation and geographical privileges means that Faroese small-scale fisheries are formally protected, even though small-scale fisheries are still reported to be in decline. Recent studies estimate a very low employment in small-scale (coastal) fisheries at around 39–72 people (Viðarsson *et al.*, 2018). With the recent reform, 8.5% of total quotas will be reserved for “development” purposes.

In Iceland, a comprehensive system of individual and transferable quotas has been in place since the 1980s and the main objective has been to obtain economic efficiency. The system has been expanded over the years to include more and more species and size groups, which are therefore governed under one market-based system, known as the “larger” ITQ system. In 2016, around 150 coastal vessels reported catches in this system. An addition for coastal fishers is the jig and line system, which is a market-based system in itself. The jig and line system allows for vessels with a maximum of 15 meters in length or 30 gross tonnage in size. In 2016, 600 vessels reported catches in the jig and line system, which is also witnessing a concentration of rights. In 2017, the ten largest rights holders, all vertically integrated seafood companies, held 37% of the total jig and line quota (Viðarsson *et al.*, 2018). In response to lengthy debates about fairness of the initial allocations and the subsequent closure of access for newcomers, a new quota system, the strandveiðar, was introduced in 2009. Even though it is only a summer fishery it is a new entrance point to fisheries and allows operators a range of daily catches in the summer months (Chambers, Helgadóttir, & Carothers, 2017). In 2016, almost 600 vessels took part in the new coastal fishery.

Inspired by Iceland, the Danish introduction of market-based quota allocation was strongly motivated by economic objectives. Since 2003, pelagic fisheries have been managed through individual and transferable quotas and have quickly developed into a distinct large-scale fishery with very few operators. In the more composite demersal fisheries, transferable vessel quotas were introduced in 2007 and have also allowed for a wide-ranging economic restructuring. However, there has been a continuous and rising concern that the decline of small-scale fisheries was too rapid and drastic. Since 2000 the number of vessels has decreased by 60% (Viðarsson *et al.*, 2018). The initial and optional “coastal fishery safeguard” that awarded small-scale fishers with extra quota portions and limited the sale of quotas to other coastal vessels for a three-year period has recently been supplemented with new instruments. Firstly, a similar scheme, but with extra allocations for passive gear users, has been introduced. Secondly, to guard small-scale fisheries, a new and more permanent instrument has been introduced. Operators must permanently tie their quota to the scheme meaning they cannot sell to other operators not in the scheme. In return, they will receive substantial extra quota allocations. As these operators can

only sell their quota to other operators in this segment, the main objective of the instrument is to guard the small-scale fisheries in a long-term perspective and to improve the economic situation of the small-scale fishermen. Out of the approximately 1,200 full time fishermen in Denmark, around 200 is working on vessels in the coastal safeguard system (Viðarsson *et al.*, 2018).

Norway introduced vessel quotas in the early 1990s for the demersal fisheries North of 62°N. These are distributed in “quota factors” in seven groups according to vessel size and with restrictions put on trade between the groups. The group segmentation is the main tool to handle the coexistence of different types and sizes of vessels. In addition, geographical restrictions mean that quota factors can only be traded inside either a Northern or a Southern area. A quota factor gives access to a range of species and can only be transferred as a whole together with the vessel. The segmentation of the overall quota into seven groups means that some restructuring can occur, but only in limited ways. Since coastal vessels in Norway are obliged to have the owner on board, a substantial part of the Norwegian small-scale fleet consists of one-man operations. The majority of these are located in the Northern part of the country. The last ten years the number of coastal vessels has decreased by 18% and since 1995 by 60% (Viðarsson *et al.*, 2018). It is estimated that around 5,000 people have small-scale fishing as their main source of income.

Figure 2: Swedish small-scale vessel fishing in Öresund. The Swedish small-scale fisheries are mainly concentrated in and around the Baltic Sea



Photo: SEA-U.

In Sweden there is currently around 400 commercial small-scale vessels and around 1200 fishers in total (Viðarsson *et al.*, 2018). Over the last 20 years the number of Swedish fishers has declined by one third and in the small-scale fleet even more so (Viðarsson *et al.*, 2018). Sweden introduced individual and transferable quotas in the

pelagic fisheries in 2009. This system was complimented with an open group for small-scale pelagic fishers limited to passive gear and trawlers below 12 meters. In this way, the Swedish authorities tried to balance an efficient large-scale fleet (managed through transferable quotas) with the characteristics of the small-scale fleet (managed through an open group). In 2017, individual quotas were implemented in the demersal fisheries. The individual quotas were not transferable, except through annual leasing and in this case also supplemented with an open group for the smallest operators. The main objective with the open group was to counterbalance an ongoing regional concentration in the Western part of the country.

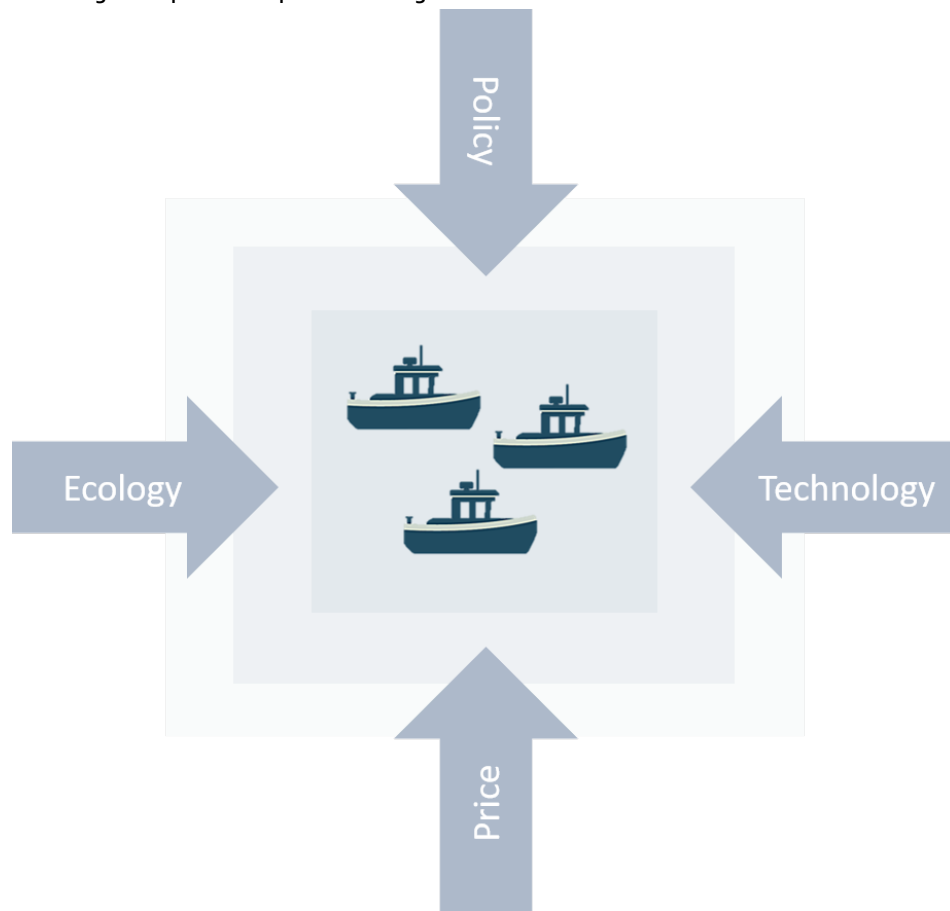
In Finland, small-scale fisheries are characterised by a large number of part-time fishers, while the quota system affects the most professional ones. Finland has a relatively large inland fishery with an employment of 400 people (with 70% being full time). In the commercial sea fisheries another 2,000 people are employed whereof 78% are engaged on a part time basis. For a great part of coastal fishers, fishing is operated on a family basis with pluri-active households sometimes involved in the processing of the catch. Technically, small and large-scale fisheries are distinguished based on gear. Thus, the open sea trawling for Baltic herring and sprat is considered large-scale, while coastal fishing with gill nets, trap-nets and other passive gear is considered small-scale – and is characterised by its seasonal nature. In 2017, Finland introduced market-based quota management, which encompassed the whole large-scale fisheries and part of the small-scale fisheries, namely open sea trawling and trap net fishing for herring and salmon fisheries. The overall quotas are distributed to these different fisheries that each form a closed quota market. The individual and transferable use rights are valid for five years and can be prolonged. The state therefore retains the right to abolish the system on a five-year basis.

2.7 Conclusions

A substantial part of the development in fishing capacity in the 20th century was based on owner-operated units competing in a setting of free and equal access. Growth was conceived as increases in volumes and species. In many cases this development led to the introduction of rigid and technocratic quota management systems, without room for development. Different variants of market-based fisheries management have subsequently been introduced as instruments to facilitate economic and structural reforms in the Nordic fishing sectors. Quota investments have allowed for expansion and growth, but have also resulted in challenges for small-scale fisheries seeking alternatives to massive quota investments. Balancing small and large-scale fisheries have become increasingly difficult. As mentioned, a look at the Nordic countries reveals that all countries have instruments in place that aim at governing the dual existence of small and large-scale fisheries. These are both related to the differing interests in the resource use, but increasingly also in regards to the implications of transferable quota systems. The primary objectives differ from country to country, but all countries do have some kind of segmentation between small- and large-scale fisheries. Notably, in

Denmark and Iceland, which can be described as the two most progressive market-based quota systems, new instruments have been introduced to ease negative effects of the existing systems. The main instruments that are in use to handle the dynamics of market-based fisheries management are *market segmentation* and *supplementing (non market-based) quota systems*. Market segmentation means that buying and selling of quotas are limited to take place inside defined groups. Groups can be defined based on size, gear or geography, but also trip length and ownership structures. Supplementing quota instruments compliment the main market-based system with for example a common access group, which is more in line with the former characteristics of small-scale fisheries.

Figure 3: With increasing pressure from several sides, small-scale fishers are trapped inside a box narrowing their operational space decreasing the number of fishers



It is evident from the Nordic and the global experiences that while market-based fisheries management produces the desired economic reform of the sector profitability, it does not in its present form produce viable conditions for small-scale fisheries. Without being the sole driver, market-based fisheries management is in general connected to a change in the social landscape of the fisheries, which goes along with a development that increasingly demands large investments in order to remain

competitive. Fishing companies with investor capital can engage in this development by acquiring quota from other operators and by expanding their vessels to obtain further economies-of-scale. At the same time, the owner-operated fishers that remain active, become the small-holders of the sea, and increasingly pursue other strategies or pluri-activity. These alternative strategies include leasing, which is less demanding in terms of upfront investments, but entails paying others for access, or turning to those species that demand hard manual labour or are not yet under strict quota management. Even with safeguarding policy instruments in place and with the use of leasing or other alternative strategies, we can still question if there is any room for development and innovation for small-scale fishers.

There is of course the possibility to buy further quota, but this is very limited due to both supply (the competitive quota markets) and demand side (willingness to invest). The point is that with market-based fisheries management the internal fleet dynamics are altered. The former competition on sea have been supplanted by a competition on quota markets. In consequence, we assert a near future where the logics of productivist development and economies-of-scale are not applicable any longer to small-scale fisheries. Engaging heavily in the quota markets is against their nature of seeking financial independence from banks and investors, and at the same time price competition, technological advances, ecological changes and policy requirements are narrowing the operational space of small-scale fishers. The Nordic small-scale fisheries are generally in decline and severely challenged. If the volume cannot be expanded there is, in other words, a need to look for other ways to increase the value of the catch.

To conclude, with pressure from several sides the small-scale fishers of Nordic countries are trapped inside a narrowing operational space. But how can small-scale fishers break out of this box? In the next chapter, we will investigate how land-based food producers in recent decades have managed to respond to similar pressures by engaging in innovative strategies.

3. Recent development within the land-based food sector

The chapter explores how land-based food producers have responded to price and market pressures by engaging in innovative market strategies. The chapter first reviews some of the main characteristics of the current food system and then discusses some of the reactions against this model. Through looking at different “worlds of production” the chapter points towards innovative specialization and new consumer-producer relations as the most promising development paths for Nordic small-scale fisheries.

3.1 Introduction

In the last decades, markets for foods and drinks in Nordic countries have experienced radical changes. From markets almost exclusively dominated by standardized products provided through an economy-of-scale model of farming, processing and retailing, markets today have become supplemented with a variety of new (or a revival of pre-industrial) types of premium-priced, specialized products supplied by small-scale producers, distributors and network organizations. Due to multiple factors such as higher standards of living, public concerns for food safety and lacking transparency of global food supply chains, consumers (as well as producers) increasingly have felt unsatisfied with the supplies of homogenized “food from nowhere” and started demanding “food from somewhere”, i.e. food items with identity and qualities related to, for instance, the geographical origin of production, the producer as a person, health or environmental effects, animal welfare, social justice etc.

Although the market shares of these new types of specialized food products are still relatively marginal¹ and although the processes of standardization, rationalization and concentration continue in major parts of the food economy, the entry of new innovative small-scale producers have had a profound impact on the conditions for market competition. Even the largest multinational corporations have been forced into diversification strategies aiming at innovating specialized products to supplement their generally standardized product portfolio (Manniche, 2010). For example, the large Danish brewery, Carlsberg, recently opened a high-quality micro-brewery and visitor centre, Jacobsen Brewhouse, in order to regain the market shares lost on the domestic market to the many micro-breweries emerging in Denmark.

¹ It is difficult to quantify the market shares of “specialized” or “specialty” foods, as these are not terms used by public statistical bureaus. However, one main type of specialty food is “organic”, which according to the Danish Agriculture & Food Council stands for 9.8% of total food retail sales in Denmark 2016 (<http://lf.dk/viden-om/oekologi/markedet>). See also Halkier *et al.* (2016) for a comparative analysis of the emergence of specialty foods in Denmark, Norway and Sweden, and Manniche & Sæther (2017) for discussions about the possible transition of food systems in the Nordic countries.

A vibrant outdoor meal is set on a rustic wooden table. In the center, a bottle of Hallegard Small Batch Brewery beer stands next to a tall glass filled with beer and a thick head of foam. To the left, a small jar of green sauce sits next to a halved hard-boiled egg. A wooden cutting board is laden with an assortment of food: slices of cured meat, a wedge of cheese, roasted vegetables, and a small dish of yellow sauce. To the right of the board, several slices of rustic bread are stacked. In the background, a bright blue plastic chair is visible against a backdrop of green foliage and purple flowers. The scene is bathed in bright sunlight, creating a warm and inviting atmosphere.

Surely, there are examples from the nearshore fisheries in the Nordic countries of entrepreneurial initiatives in line with the recent trends in land-based food systems and of which some will be described as “business cases” later in this report. Yet, the fishing sector seems to lack behind land-based food sectors regarding the swiftness and progression of innovation and transition, probably due to both natural, economic, cultural and policy constraints.

In this chapter, we shall briefly describe the ongoing restructuring of food economies and markets and discuss the main opportunities and constraints of Nordic small-scale fisheries to imitate this development. There are currently many elaborated theoretical concepts and approaches with which to describe and analyse the new food trends. Here, we will focus on extracting experiences and possible inspiration from the land-based food development regarding opportunities for businesses and entire supply chains for developing “quality” based activities by breaking with the economic-of-scale (quantity) principles of mainstream food production. With this purpose, concepts about how food businesses and networks define and work with quality is central, and this report applies a *quality convention* perspective, allowing investigation of the shared values and practices, the relationships and forms of interaction characterizing different actors.

In the first section of the chapter, however, we shall introduce the idea that land-based and sea-based food systems, despite their many differences, commonly operate within a troublesome “productivist” regime, characterized by economy-of-scale principles, technological rationalization, price competition and concentration of economic powers. Solutions to the present critical situation for the fishing sector in general and the nearshore fishery in particular may involve breaking with the economic and institutional logics of this system.

3.2 The troublesome productivist food model

The international food research is extensive and varied and includes fields like agro-economics, rural sociology, human geography, political science and consumer culture studies. Across various disciplines and theoretical approaches, scholars have provided many explanations to the re-emergence of small-scale niche productions of specialized types of food as well as to the continuous employment decline within standardized production systems. Commonly, the trends are seen as responses to a number of serious problems related to the “productivist” food regime, which achieved a dominant position in the decades following World War II supported by regulatory schemes of national welfare states and international trade organizations such as WTO and EU (Goodman 2000; Flynn *et al.* 2003; Murdoch 2006; Marsden 2006; Morgan and Murdoch 2000).

According to Green and Foster (2005), this productivist food regime is characterized by production of raw materials by use of industrial agricultural practices that exploit advanced breeding techniques and major inputs of chemical fertilisers and pesticides. It is transport-intensive, requires high-energy processing based on Fordist production technologies and organisational principles, it relies on modern retailing systems and demands high-tech kitchens at the consumers’ end of the value chain. More specifically, problems related to this food regime are:

- Negative environmental effects of intensive farming methods, including use of large amounts of chemicals and fossil energy;

- Continuous standardization, up-scaling, technological rationalization and globalization of food systems causing decline of local economies and jobs, hazardous, repetitive working tasks, erosion of rural culinary cultures and craft knowledge;
- Concentration of power in supply chains in the hands of multinational processing industries and retailers connected to the increasingly globalised commodity flows;
- General mistrust in the safety of food amongst consumers due to lacking transparency of global supply chains and incidents of serious food diseases such as BSE ("mad cow disease") and Avian flu;
- Widespread obesity problems related to consumption of "unhealthy", industrially processed food.

Not all of these problems for mainstream agriculture and food processing are relevant for the fish sector. However, resemblances are difficult to overlook. First of all, like the agricultural development since World War II, the development within fisheries can be described as a "modernization project" of technological mechanization and standardization, upscaling, organizational optimization, internationalization of supply chains and concentration of ownerships. Moreover, both in agriculture and fishing the application of still more intensive production methods has reached a level where the accumulated impact on nature seems to be negative. Although this portrait is still forcefully disputed by the protagonists in both sectors, it increasingly is perceived as the truth among (urban) citizens and consumers. And, as the main imperative in market economies goes "customer is king", also politicians increasingly get this conviction. On top of this, the introduction of individual and transferable quotas has enabled a significant concentration of fishing rights and wealth partly by disabling former resource competition on sea and introducing new economies-of-scale through quota acquisition. The regional distribution and local benefits of fishing activities therefore is a recurring theme in Nordic societies, where the lucrative fishing rights has been concentrated on fewer and company-organised fishing operations. There is a persistent tension between the national economic contributions from fishing and the local community benefits to employment and regional identity. Because of the societal origin of the quota systems, this balance is unavoidably a political question.

The point to make here is that the present challenges to the Nordic fisheries sectors are not simply about finding and implementing a model for fair access of fishermen to limited natural resources, but a complex one of changing an entire regime of productivist economic, cultural and regulative practices and logics, including fishermen's own, in order to adapt to growing pressures from declining natural resources, new consumer demands, and political discourses regarding topics such as sustainability, rural employment, health, animal welfare, food aesthetics etc.

As there are hardly no prospects in the near future for a rising resource base, following economy-of-scale principles is in the long run not applicable as a universal business strategy in Nordic fisheries. Accordingly, alternative economic principles

where value-creation does not rely on the volumes, but on the qualities of production, has to be applied in the fish sector. In other words, the parameter with which to evaluate the economic potentials of fish resources has to be changed from volume of kilograms to the qualities of each kilogram. In the next sections, we will explore the quality aspect further.

3.3 The “quality turn” and conventions of quality

An important notion in the agro-food research regarding how to understand the ongoing market restructuring processes is the “quality turn” (Goodman 2003; Harvey *et al.* 2004). The quality turn describes the shift in quality factors that are demanded by consumers and targeted by producers such as on one side (low) price, standardization and uniformity or on the other exclusive, special and composite dimensions of products such as “organic” and “fair-trade”.

In order to explain and describe such processes of diversification on food markets, several agro-food scholars² have also applied *convention theory*, i.e. models to explain the social construction of the “conventions of quality” that define the functioning of markets for goods and services. Convention theory emphasizes the fact that the functioning and governing principles of any market – even markets for highly standardized and homogenized products – are defined by a set of conventions, constructed and justified through broader social and cultural discourses and practices. Some of these conventions regard the specific product qualities that producers supply and customers demand and are perceived as important for the transaction.

Among the many qualities emphasized by the emerging “alternative” food sector are “local” and geographical origin of products, which have led researchers to speak about a possible *re-territorialisation* of the food economy (Watts *et al.* 2005; Ploeg and Renting 2004; Winter 2003). EU’s certification schemes for protection of products with distinct geographical origin (the PDO and PGI certificates schemes) exemplify this trend, although they have been mostly adopted in Southern Europe with its stronger and more regionalized culinary heritage than in Northern Europe (Parrott *et al.* 2002; Marsden *et al.* 2000; Ilbery *et al.* 2005).

The opportunity for increasing the value of fish by emphasizing their specific geographical origin in product innovations, marketing and storytelling seems to be an obvious strategy to pursue, which would take advantage of consumers’ growing demands for products with a distinct identity. Yet, it is not a simple change to make.

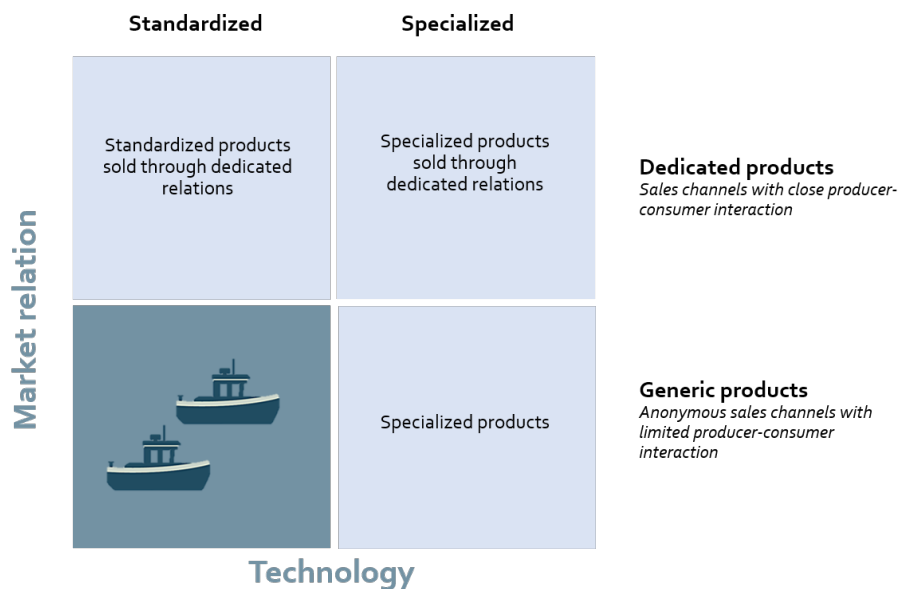
² See e.g. Murdoch & Miele (1999 and 2004); Murdoch *et al.* (2000); Morgan *et al.* (2006); Ilbery & Kneafsey (2000); Amilien *et al.* (2007); Lindkvist & Sánchez (2008); Stræte (2008).

3.4 The Worlds of Production model

Among the many existing theoretical approaches, the *Worlds of Production* (WOP) model of Storper and Salais (1997) has especially been applied within agro-food studies in order to describe the implications of operating on the basis of alternative quality conventions. In short, the model outlines four different “production worlds” or action frameworks that companies can operate in, which are characterized by varying conditions for competition and use of technology, labour and knowledge.

In a business development perspective, which is in focus here, the model is useful because it clarifies the coexistence and varying logics of very different forms of production and markets, which also may be highly relevant for *differentiated policy approaches*. The model is particularly useful when applied in a dynamic perspective, as it not only indicates four possible production worlds for companies, but also indicate different directions and opportunities for how companies can develop and differentiate themselves from their competitors. The four production values are formed by crossing two key dimensions of companies’ activities: Technology and Market Relations (see Figure 5).

Figure 5: The Four Worlds of Production



Note: By combining “market relation” and “technology” four markets can be differentiated. These markets have different conditions and capacities. Nordic fisheries, including most small-scale fisheries, have in the recent decades been driven by economies-of-scale targeting generic and standardized markets. This market can absorb the great volumes but are also characterised by an intense price competition. In order to switch small-scale fisheries towards more specialised and dedicated markets new skills, investments and mindsets will have to be developed.

Source: Storper and Salais, 1997.

3.5 Specialization or standardization

The first dimension (Technology) distinguishes whether the products and production methods are *standardized* or *specialized*. Standardized does not mean “low quality” as often implied in public debates. Rather, it means that the qualities of a product can be described by the use of industry standards or established conventions and that they meet the basic demands and requirements of customers regarding the particular product category (e.g. salmon). In markets for standard goods, there are relatively many producers (i.e. competitors) – or, alternatively, in monopoly-like circumstances, few very large and market-dominant companies (e.g. cod processing dominated by few large companies).

In contrast, specialized products are provided through special technical methods and aim at less widespread demands of certain restricted customer groups. This could be, for example, *organic* salmon, which is not just any kind of salmon, but salmon with certain additional, technically documentable product qualities defined as organic. In today’s markets of heavily industrialized catching, processing, distribution and retailing of fish, specialized also may describe the traditional (but no longer widely applied) fishing methods used by small-scale fisheries and providing/preserving certain additional qualities to the catches.

The difference between standardized and specialized is also applicable to fish service sectors. For instance, there are restaurants, caterers and wholesalers based on well-known standard menus, products and raw materials that appeal to a wide customer segment, and other restaurants (and supply systems), which rely on a special gastronomic profile (e.g. “New Nordic Food”) that appeal to a smaller audience.

In markets for standard goods, the price is a decisive factor in competition, and profits, value creation, and innovations usually relate to changes of the volumes of production or to the efficiency and rationalization of work processes, technologies and organizational structures. In contrast, in markets for specialty goods, competition and value creation are less about the price and more about the technical specifications of products. Users/consumers of specialized products are specialists, experts or connoisseurs, and this places special demands on producers’ technology and labour in order to satisfy the demands. Instead of price, competition can be organised around principles of product innovation (bringing new types of products to the market) or the authenticity of products (producing the most authentic version of the desired quality). In other words, where the standardized business model is concerned with high volume but low margin, the specialised business model is engaged with high margins and low volumes.

Combination of standardized production aiming at mainstream customers and specialized niche products marketed for certain customer groups is of course also an option for businesses in the fish sector. For instance, large aquaculture companies may produce both conventional and organic fish products. However, this option implies operating in two different consumer markets with differing implications for technology, supply chains, regulative frameworks etc.

The specialization strategy of differentiating products from their standardized cousins by providing them with certain tangible or intangible qualities and features (organic, artisanal methods, geographical origin, etc.) has been highly influential in the food sector. For instance, as mentioned above, beer markets in Nordic countries have changed in recent years due to the many new micro-breweries producing specialized types of beers, rather than the standard types of lager beer, which totally dominated the markets until recently. In 2017, for example, Denmark saw over 1,600 new beer products and 30 new breweries.

3.6 Producer-consumer relations

The second dimension of the model (The market relationship) is not about qualities of the product itself or the applied production technologies but regards the relationship between the company and the market/customer (how the product is sold). This market dimension distinguishes between two fundamentally different situations. In one situation, all customers get (largely) the same product and the production is organized as a form of “stock production”, where customers choose from a predetermined portfolio of products. In the second situation, the product is customized to the individual customer and it is produced based on a prior understanding of a narrower customer base specifying the requirements for the product. In the former case, products/services are *generic*, in the second case they are *dedicated*.

Generic products (whether standardized or specialized) are targeted all potential customers with a particular demand. The production of generic products and services can be planned and implemented based on the expected demands. Markets for generic goods and services are anonymous spot markets (e.g. fish auctions) in which producers and customers (often represented by various intermediaries and without knowing much about each other) meet and enter into a trade. Dialogue between the producer and the customer is not decisive for the decision on a transaction because the necessary information about what the customer can expect from the product (e.g. standardized salmon or specialized organic salmon) is available on the market, for example through labels or certification schemes. The majority of Nordic fisheries are organized as this type of generic stock production in which products are not adapted to the needs of specific groups of customers but aims at providing certain volumes of certain species with certain qualities in accordance with industry standards.

In contrast, *dedicated* products are tailored to the specific needs of specific groups (or individual customers) and are produced on the basis of an understanding of a customer and according to their wishes and specifications. While fishers and fish processors selling their products via wholesalers and retailers usually operate as generic producers, fish restaurants and catering activities are typically dedicated activities. Also, fishers selling their catch directly to consumers fall into the category of dedicated activities, since every sale depends on a dialogue with an individual customer. In such dedicated businesses, the activities of fishers, restaurants, retail shops and others are crucial value-creating elements. They may be added through storytelling or

personalized ways of servicing the individual customer, which far exceed the value added through the act of catching the fish at sea.

Dedication as a strategy has been highly influential within the alternative food sector. The changes of food markets have not only concerned innovation of tangible qualities embedded in the physical products (specialization), but also innovations regarding the ways and channels through which foods and drinks are marketed and sold. The emergence of diverse forms of direct sales of foods, such as farm shops, food market stalls and local food events, illustrate this trend. For a farmer or a food manufacturer (or a fisherman or fish processing company), the dedication strategy involves a break with a role as solely a “producer”, who is anonymous to the consumer, sells through often contractual relationships with a few wholesale or manufacturing companies and has only limited interaction with consumers and other downstream actors. While use, consumption and marketing of products are not important business concerns for farmers or processors producing standardized-generic bulk products, the face-to-face (or electronically intermediated) meetings and dialogue with customers and consumers are crucial activities for producers with dedicated sales channels. They serve to build trust, narratives and common understandings between the parties, which allow for and justify higher sales prices.

3.7 Conclusions

Combining the two dimensions gives four different “production worlds”, each characterized by a particular set of basic conditions for competitiveness, labour and technology utilization, organization and innovation. As such, the model identifies the new directions of innovation in the food sector during recent decades, i.e. specialization and dedication. Both involve a shift from the economies-of-scale and standardization principles that prevail within the dominating food model, i.e. the “Industrial World” of standardized-generic foods and drinks. The question is if this is a viable shift for Nordic small-scale fisheries.

Dedication as a strategy demands a need for close interaction and shared preferences between producers and consumers, which to some extent reduces the opportunities for upscaling of production and sales across longer geographical distances as this easily compromises the distinct symbolic qualities connected to small-scale production. On the other hand, this makes dedication a realistic development strategy for small-scale fishers as the distinct qualities of the small production unit fit well with the need for close interaction and dedicated consumer-producer relationships. Given these advantages, it is possible to imagine dedication as an economic niche for small-scale fishers, but it also requires a transformation of the existing practices and the acquisition of new skills.

In contrast, specialization entails a better potential for upscaling the new production. As specialization mainly concerns qualities directly embedded in the physical products, this innovation strategy allows for sales via generic channels to larger and geographically dispersed customers. This could be exemplified by the

recent developments within the organic food sector in which farming activities increasingly are up-scaled and products sold through the conventional distribution channels of supermarkets, rather than small farm shops or artisanal shops that previously dominated the distribution and sale of organic products. Use of certification schemes for organic food or EU's certificates schemes for protection of products with geographical origin (the PDO and PGI) are often applied ways of documenting and displaying certain qualities to consumers (as is actually the case in Finnish lake fisheries, i.e. the kalakukko). This distinguishes the products (or distribution and sales systems) from their mainstream cousins, and this option probably could be transferred to the fish sector.

As the dominating mode of production within the fish sector belongs to the world of standardized-generic products, and which leaves little room for development of small-scale fisheries, the two strategies of specialization and dedication appear highly relevant to facilitating a differentiated development approach in Nordic small-scale fisheries. However, this will not be an easy task as the new directions will also mean new investments, habits, rhythms, organization, challenges and, not least, a new mind set.

Figure 6: Examples of differentiated small-scale fisheries activities



Note: Given the cultural and social characteristics the potentials for Nordic small-scale fisheries to engage in specialization and dedication are certainly there, but will demand new skills, habits, practices, distribution networks and mindsets.

This is not to say, however, that the knowledge and diversified practices of catching and handling fish have become obsolete in economic terms and that fishers in order to survive in business have to change their identity and appearance from tough, hard-working hunters on the sea to soft-handed marketers and eloquent storytellers in suit and tie. On the contrary, the point to underline is that there are new and unexploited economic potentials connected to the identity and knowledge aspects of traditional small-scale fishery. Maybe small-scale fishers cannot sustain their practices as fulltime,

scale-orientated fishers, but they may be able to uphold important, attractive parts of these practices by making them discernible for consumers and the public at large through storytelling. On contemporary consumer markets, where authenticity and memorable experiences are at the heart of what is searched and paid for (Pine and Gilmore, 2007), fishery and the dangerous, adventurous undersea environments in which it is practiced far from the comfortable environment of consumers, indeed hold promising narrative potentials. These potentials need to be taken into consideration in the future business models and unfolded by the fishing sector.

4. Policy-driven territorial innovation

The chapter reviews the development policy frameworks, which are in place and could support the partial transition of standardized and volume-oriented fisheries towards a more quality and service-oriented approach. First, the chapter explores the principles of so-called territorial development and the LEADER method, which is implemented in the three case countries by “Fisheries Local Action Groups”. After that, the chapter looks at the actual experiences from the three case studies with policy-driven innovation. Finally, based on the three areas, we will discuss the potentials, limitations and challenges for territorial development instruments in developing Nordic fisheries. The experiences point to a significant gap between development policies and the actual producer situation. Therefore, a coordinated effort to bridge producers, distributors and consumers are needed to spark a differentiated development.

4.1 Fisheries Local Action Groups

In the previous chapter we examined what can be termed a break with the dominant “productivist” food model and the emergence of new types of small-scale food productions. In a wider geographical context this type of development has been framed by the OECD as “the new rural paradigm”. In the EU, this break has been politically supported by the LEADER programme for rural development and diversification, facilitating the formation of so-called Local Action Groups (LAG). Since the initial launching in 1991, the LEADER program has represented a break with traditional sector support to conventional agriculture and agro-food systems and has launched new types of territorial approaches to diversification of rural economies. This has been based on new principles for how to organize and implement policy initiatives through bottom-up and networking activities involving broader parts of local communities. From the programming period 2007–2013, the LEADER programme was adopted as a new third pillar in the EU Common Agricultural Policy (CAP) in order to supplement the strong sectoral approach in previous CAP program periods with new territorial approaches to rural development. In 2007, the European Maritime and Fisheries Fund also introduced a similar policy framework through the establishment of “Fisheries Local Action Groups”, responsible for supporting development, innovation and renewal in local fisheries-dependent economies.

LEADER projects are supported financially by Local Action Groups (LAGs), a group consisting of public, civil and private partners from the designated geographical area, but executed by individual entrepreneurs and organisations. Since its initial launching

in 1991, the LEADER programme has been developed through different programme periods and was expanded to coastal areas in the recent programme period from 2007 to 2013. In the current programme period (2014–2020) this development has been continued. Currently, the LEADER programme is promoted as Community Led Local Development (CLLD),³ but the notion of FLAGS and LAGs continues at the operational level. Even though the LEADER method is developed inside the EU, the ideas and organizational models are applicable to other geographical contexts.

4.1.1 *The principles*

Community Led Local Development describes an area-based and bottom-up approach that places the coastal community in the fisheries-dependent areas at the centre of attention.⁴ The projects are chosen and prioritized by a group (FLAG) of local people representing different sectors, who oversee both the design and implementation of a local development strategy for the area. Through their local knowledge and embeddedness and based on the development strategy, projects are prioritised and supported with funds from the European Maritime and Fisheries Fund. The actual projects are most often led and designed by local entrepreneurs and organisations, often in a network or with an innovative approach. There is also a demand for co-financing projects, which can come from private companies, civil society organisations, or through other public sources (e.g. municipalities).

The key principles are innovation, networks, area-based strategies and cross-sectorial cooperation. The focus on enhancing capacities for innovation might be seen as a response to the problems related to path-dependency and lock-ins resulting from former strategies. Networks are central to developing social capital, knowledge exchange and processual competences and also relates to the cross-sectorial ambitions. Projects should link local resources, whether cultural, social or natural to the productive sectors in innovative ways. “Area-based” means that the local territory and community is the basis of project ideas, strategies and decisions. It is an empowerment of the local. However, the local takes place inside a rather rigid administrative structure most often governed by regional or state authorities. Rather than bottom-up, LEADER initiatives and FLAGS could therefore be termed “joint-up” development approaches.

4.1.2 *Goals and conflicts of interests*

The CLLD (or FLAG), and thereby the local development strategies should contribute to the goals of the Europe 2020 strategy for reducing poverty and promoting social inclusion, but otherwise reflect local priorities. More specifically, the local development strategies and the FLAGS shall maximise the participation of the fishing and aquaculture sectors in the sustainable development of the coastal areas. The aim of the

³ <http://clareppn.ie/wp-content/uploads/2016/09/BIM-FLAGS-Developing-Fisheries-Local-Action-Groups-INT-01-14-2016.pdf>

⁴ https://ec.europa.eu/fisheries/cfp/emff/clld_en

local strategies is described in article 6 of the EMFF as “Increasing employment and territorial cohesion by pursuing the following specific objective: the promotion of economic growth, social inclusion and job creation, and providing support to employability and labour mobility in coastal and inland communities which depend on fishing and aquaculture, including the diversification of activities within fisheries and into other sectors of maritime economy”.⁵

The area-based development perspective is a supplement to the prevailing sectorial development strategies and should be seen as an alternative way to create economic activities in contexts where economies-of-scale are hard to obtain. The principles described above are tools to activate territorial, place-bound human, cultural and natural resources in innovative ways. There are, however, areas where conflicts of interest can arise between the two development logics. Fish quota, for instance, is a limited resource and the administrative design of the quota system will most likely promote one economic form over the other. Moreover, management design resulting in e.g. fishing stops can hinder the integration into tourism and the local service economy. The individual quota, which allows the operator to plan and execute his fishery over the year, is a positive incentive in this regard. Conflicts can also arise over use of facilities and public investments in infrastructure. In combination with a market-based quota management, in which fishing rights can change hands and place over night, the innovative work and investments of community entrepreneurs can quickly turn out useless. This is one of the inherent contradictions between market-based and area-based development.

At a structural level, the conventional economic development instruments lead to a centralisation of investments, while the territorial development strategies are smaller and more diffused. Though they can be co-existing and often contribute to a more robust and two-stringed development, there are conflicting interests to be observed. These can be expressed in the internal struggles between ministerial departments and in the actual balance of support to the sectorial and territorial development programmes. It should be noted here that even though FLAGS and LAGs are supported by the EU structural funds, it is only a small percentage of these funds that are channelled through this instrument. The actual balance between LEADER and other instruments differs from country to country. In the land-based food sectors, ideological conflicts have also been recurrent as the production methods of standardized products often play a part in the counter-narratives of specialised small-scale production.

When discussing the two development strategies, the difficult but crucial question is in which way individuals, businesses and the local community as a whole benefit the most from the available fish resources. If small-scale fisheries can be developed to create a high value of their catch and contribute to improving quality of life in remote areas at the same time, then it might be a reasonable way to shape future Nordic small-scale fisheries. But there is another just as difficult and acute question. Given the current regulations and market trends, the question is if Nordic small-scale fisheries can

⁵ <http://eur-lex.europa.eu/eli/reg/2014/508/2017-10-07>

survive as a net contributor to society *without* realizing innovations and an increase in the value of the catch. In order to achieve such development, we believe that the territorial approach is the most useful policy instrument to support individual entrepreneurship.

The experiences presented above, however, suggest that there can be mutual benefits when large-scale products gain from the popularity and brand value of new niche products. Similarly, small-scale producers can link up to existing distribution channels and food safety standards. Co-ordination and alignment of local strategies is therefore important.

4.1.3 *FLAGS in the Nordic countries*

Local areas in all countries of the EU have the possibility to seek funding for a FLAG by making an Expression of Interest to the EMFF, a procedure which is technically organised through the national governments. To get funding, they need to meet a set of mandatory criteria including size and population of area, importance of the fishing and aquaculture sector, character of the area etc. At the moment, 20 countries in the EU have implemented the CLLD and have thereby decided to allocate a percentage of the EU and national budgets to be managed by FLAGS.⁶ Both Finland, Sweden and Denmark have several FLAGS in the coastal areas and at river- and lakesides, but the national strategies and networks differ in the three countries.

In the current programme period, Finland has increased its number of FLAGS from 8 to 10,⁷ managing different parts of the coastal areas and the areas around rivers and lakes. New objectives and challenges will be emphasized in Finland's programme, including an increased emphasis on innovation across sectoral boundaries, creating new ways of doing business and, at the same time, ensuring the sustainable use of natural resources. Thus, in Finland, more emphasis is put on diversification than in the previous programme period.

In Sweden, 13 FLAGS are established.⁸ Some of the main objectives in the period 2014–2020 are to increase the competitiveness of small and medium-sized enterprises, the protection of the environment and promotion of employment. The CLLD actors in Sweden are supported through The Swedish National Rural Network. The network also contains a thematic group going beyond the FLAGS and bringing together the fishermen's and Aquaculture organisation, the nature protection association and regional authorities.

In the period 2007–2013, Denmark had 16 FLAGS working to diversify fishing activities, harbours and businesses in the direction of tourist and leisure business.⁹ In the period 2014–2020 the budget allocation for the FLAGS was decreased, and the total number of FLAGS was reduced to 10.

⁶ https://webgate.ec.europa.eu/fpfis/cms/farnet2/on-the-ground/country-factsheets_en?page=1

⁷ https://webgate.ec.europa.eu/fpfis/cms/farnet2/on-the-ground/country-factsheets/finnish-clld-programme_en

⁸ https://webgate.ec.europa.eu/fpfis/cms/farnet2/on-the-ground/country-factsheets/swedish-clld-programme_en

⁹ https://webgate.ec.europa.eu/fpfis/cms/farnet2/on-the-ground/country-factsheets/danish-clld-programme_en

Even though the three countries all have implemented the EU CLLD strategies, there are a range of differences between the countries. One notable difference is the Swedish integration of several structural funds into the LEADER initiative, which means that a number of LAGs draw on funds from all four structural funds (Agricultural, Fisheries, Regional and Social). Accordingly, these groups must address different objectives in their strategies and project selections. Working with all four funds creates opportunities for a coherent area and synergies through project coordination, but also may create obstacles in terms of integrating and aligning partly contradictory policy objectives and measures.

4.2 Nordic Fisheries and the leader method

In the following, we will turn to the case studies and the concrete ways the LEADER initiative is conceived and implemented in the three localities. The official goals expressed by the three FLAGs are both ambitious and abstract. In the Swedish case, for example, projects must be smart, inclusive and sustainable. Sustainability encompasses both economic, environmental and social sustainability, whereas smart means that projects are guided towards processes and situations in which learning and competence development are facilitated. The latter goal refers to common EU goals to stimulate knowledge, innovation, education and a digital society. In Finland, for example, the vision for the studied area (Bothnian Sea and Lake Pyhäjärvi FLAG) is that it forms a multifunctional, viable, sustainable and economically strong fishery area, which produces high quality local fish. In Denmark, the overall vision of the Bornholm FLAG strategy 2014–2020¹⁰ is “a green sustainable island that due to a strong local economy, cultural identity and attraction power encourages innovative business opportunities and social inclusion”. In this way, the goals and strategy of the FLAG is aligned with the wider growth framework for the island under the header “Bright green island”.

At a more detailed level, goals for all three areas include sustaining and developing fisheries as a strong part of the regional livelihood structures, both at the production and consumption side. This includes creating added value and harbour related business activities, increasing local consumption of local catch, improving the image of local fishers and promoting investments and network. As the three cases reveal, the overall goals are rather abstract, but at the same time they give some directions for the strategic development of local fisheries and value chains. It is, however, in the actual projects that the strategy is converted to economic and social development (cf. the three case studies attached to this report).

¹⁰ See <http://www.lag-bornholm.dk/~media/Foundry/Sites/lag-bornholm/Files/udviklingsstrategi%20for%20den%20integrede%20FLAG-Bornholm%20-%20maj%202016.ashx>

4.2.1 *Identifying the gap*

The main, common challenge for the three studied areas have been to get fishers to take leadership in creating and promoting actual projects under the FLAG strategies. There is, in the three cases, a clear gap between the intentions in the articulated policies and the support it meets in the primary sector. The reasons for this are manifold and relate to both business and policy. In Finland, fishers express that the best help for them would be to reduce interventions from the outside in order for them to regain their freedom and flexibility. This expression is valid for a majority of fishers in the case areas. They are interested in improving the conditions for their existing practice more than venturing into a new one. At the same time, many fishers regard the bureaucracy as too heavy. In the previous programme period, Finnish FLAGs could channel support to individual fishers for more tangible gear investments, which is not allowed in the current programme period. The new period is more focussed on diversification and the more immaterial aspects of the transition. As a result, fishers are therefore less convinced about the usefulness of the FLAG.

In the Swedish case, fishers even question the implicit premise that they need to innovate and to develop. Again, they are keen to improve the situation, but not to change their practices. In the Danish case, the local producer organisation has abstained from the role as project manager for the existing FLAG project aiming at improving and developing local fisheries. Decreasing organisational capacity and lack of belief in future possibilities are currently characterising the sector. Instead, the local organisation of farmers has taken over.

It is important not to misunderstand the producer scepticism as just an absence of capacity, skills and desire for innovation. Rather, the point is that the fishers are fully capable of driving innovation, but this is done “inside the box”. In other words, innovation has historically been applied to improve efficiency and volume. New gear has been developed and working processes have been fine-tuned to fit the surroundings, markets and local contexts. Typically, former initiatives that have aimed at specialization have been discouraged by fish buyers and the price competition as well as consumer habits. Direct sales have been considered to be a business field for part-timers only. Thus, from a position inside this box, the barriers to enter a territorial, cross-sector diversification-paradigm are rather high.

This fact needs to be acknowledged by the territorial policy promoters who often appear to hold positions and views, which are not in line with the starting point of producers. In addition, the administrative burdens for applying for support through the FLAG are too high and the actual financial support too drawn-out considering the short time perspective needed for investments to pay off.

The incentives have for years been promoting volume over specialization and quality. The introduction of individual quotas is an important first step in changing the primary incentives away from volume and efficiency, but the switch to other strategies is not an easy one. On the producer side, this is due to the mind-set, the existing investments in boat and gear and the sectorial layout. In the following section, we will explore how this gap has been bridged by the policy side in the three case studies.

4.2.2 *Bridging the paradigmatic gap*

Based on the three case studies, it seems indeed that the FLAGs have taken on a larger responsibility as driver for the territorial innovation. In the Danish case, the Bornholm FLAG has played an instrumental role in articulating the projects and also in assisting the project management. Thus, the FLAG has created an open project design with several sub-deliveries that target specialization and dedication. In fact, some of the people who were involved in the development of innovative land-based small-scale food production are also involved in the current fishery projects. However, a substantial breakthrough in the relation to the fishers, and in the accomplishment of innovative activities, still needs to be made.

In the Swedish case, the FLAG organisation acknowledged after a year that people in the fisheries sector probably lacked time and organisational capacity to develop projects and apply for funds. The FLAG changed its approach and carried out a SWOT analysis. Based on this analysis, they formulated a number of projects and took the role as project responsible, which is uncharacteristic in regard to the LEADER principles (see above). However, it worked and the projects were developed in close cooperation with the fishers. As a result, the projects are closer to the actual needs of fishers and less ambitious in terms of “territorial innovation”. The project proposals developed were concerned with:

- A mapping of the most valuable fishing places in Öresund;
- The potential for development in different established fisheries, but also in hitherto non-commercial species;
- To propose management plans for seal and cormorant in cooperation with other countries along the Baltic Sea coast;
- To develop fishing patterns and methods that do not affect the porpoise stock;
- To make plans for turning Öresund into a UNESCO biosphere area.

Considering the success with small-scale food innovation in the region, the amount of tourism and the location in the Greater Copenhagen area, these projects are surprisingly close to development “inside the box”, as they are mainly concerned with developing fisheries for new species and the management of the resource. This might be a fruitful specialization for the existing small-scale fisheries, but can hardly be considered innovative as compared to the land-based food development. However, these projects might be the entry point for the FLAG to gain attention and support from the potential partners in the sector. In this way, it could be the first step that sparks the entrepreneurial spirit to engage with new strategies. It might also be a starting point that serves to build the network and social capital forming the basis for future developments. In this light, they are innovative enough to qualify for support via the FLAG *and* conventional enough to gain acceptance among the active fishers.

4.3 Conclusions

Based on the remarkable development among small-scale and speciality producers in the land-based food sectors, this chapter has reviewed the status and challenges of territorial development policies in the maritime and fisheries sectors. We outlined the main LEADER principles, which are concerned with cross-sectorial innovation and area-based development strategies. The main goal is to create employment, diversify the economy, and improve the liveability of coastal areas.

Territorial development is mainly a complementary instrument to the conventional development of economies-of-scale and cost-saving efficiency. However, conflicts of interest between the two development logics can easily occur. This is especially true due to the volume-based growth being strongly embedded in the fisheries sector and management. However, in a larger perspective, it is possible to have the two logics as co-existing and to obtain synergies between them. In this regard, it should be further evaluated how the FLAGS can draw on the experiences from the land-based food development.

In the three case areas, territorial development was implemented through the EU instrument Community Led Local Development. Under this programme, the three areas have organised so-called Fisheries Local Action Groups (FLAGS), which can draw on funds from the European Maritime and Fisheries Fund and support local innovative projects. Looking at the three FLAGS, it is clear that the main challenge has been to bridge the gap between conventional producers, trapped in a volume and efficiency path, and the abstract goals and visions of the territorial development strategies. It would be wrong to consider the fishers in question as unable to innovate. Rather, the point is that their mind-set is centred on innovation inside the volume-based and cost-saving development path. There is a significant gap between the FLAG ambitions and that of the producers, as the territorial, cross-sector development model encompasses innovations that will divert the producers from their previous development path.

The gap described above resembles earlier experience in the land-based food sector. However, the perishable nature of fish products, the complexity of fishing activities and the rigid regulative framework managing fisheries may imply that the gap is even wider and more difficult to bridge. This might indicate that a larger, coordinated and joint effort has to be introduced in order to stimulate changes on both the supply and demand side. Hence, it is important to include both the demand and supply side in the development projects, although this will complicate the initiatives. Community Supported Fisheries (see the Swedish case study) is an example of a project that embraces both supply and demand.

In the Danish case, the FLAG decided to take a more active role in driving the first projects. However, representatives from the sector who will engage in projects and take the risk of diverting their practice still need to be found. In Sweden, the FLAG was faced with similar difficulties. After a year, it was decided to carry out a SWOT analysis and develop relevant projects for the sector on this basis. A learning point therefore is that the first projects can work as a bridge between the actual situation of fishers and the new potential developments. In other words, it might be necessary to support projects that are closer to the conventional development logic in order to gain support and build social capital in the local areas.

5. Business-driven innovation

The chapter discusses the business-driven initiatives in the case studies from Sweden, Finland and Denmark. The business initiatives reveal that the pre-existing development logics strongly have influenced not only the mind-set and investments made in the sector, but also the shape of the distribution systems. However, the business cases also give rise to optimism. Dedication and specialization seem to be possible development strategies for small-scale fishers. But dedication also means that fishers and their family members become more than fishers; they will have to communicate and document their practices and change their way of doing fisheries. The business cases also indicate that the way forward for small-scale fishers might be to specialise into products that strongly add (like herring marinades) to the former main product, i.e. the fresh catch.

5.1 Business initiatives

In this chapter, we shall summarize and discuss the findings of the business-driven initiatives. The initiatives are concerned with:

- Community Supported Fisheries (Sweden);
- Household based processing and marketing (Finland);
- Product innovation and direct sales (Denmark).

The business cases take place in the specific Fisheries Local Action Group (FLAG) areas, which were explored in the previous chapter. However, not all cases of business initiatives analysed here have been supported by the local FLAG. As described in more detail in the previous chapter, the FLAGs as a regulatory system has a *territorial* perspective aiming at encouraging cross-sector, bottom-up, entrepreneurial initiatives in the eligible territory as prescribed by the EU LEADER method. This is in contrast with the EU's Common Fisheries Policy (CFP) with its fundamentally sectorial perspective. Whilst the overall political objectives of CFP are to secure efficiency of markets and agents and preserve natural resources, the overall goal of the funding available through the FLAGs is to realize business innovations and create new production, distribution and marketing systems in the targeted rural and maritime areas. In other words, with the establishment of FLAGs as responsible for developing (small-scale) fisheries, the overall goal concerns innovation and transformation rather than cumulative advancement, and it exceeds the strict sectorial border of fishing itself.

Many fishers have difficulties in appreciating and comprehending the rationale behind this new transformational cross-sector agenda described above. This is

especially clear in the Swedish case study, where fishers confronted with the agenda of innovation stated basic questions such as “What is supposed to be created?” and “What is it that you want to make a problem out of?”. It is, however, not surprising that fishers, after decades of development along a trajectory of standardized-generic fishing, cannot see alternatives and have their own understanding of what “the problems” are.

Probably due to such economic, technological and mental lock-ins, the level of innovative activities realised on the entrepreneurial initiative of fishers in the three studied FLAG areas generally seems low and often reliant on support from the local FLAG development strategy. Accordingly, among the studied areas, entrepreneurial bottom-up initiatives of developing new forms of fishery are not many and not easily realized. Yet, examples exist, which basically follow the directions of specialization and dedication, although these notions are not used explicitly as guidelines by the involved actors.

5.1.1 Finland

In Finland, the fishing regime has historically left room for not only productivist, economies-of-scale orientated development models but also for other forms of (integrated) fishing, processing and sale. One finds a type of near-shore fishery in which major parts of the entire value chain is located in the fisher’s household. Activities of fishers are not restricted to the actual catching, but also involves traditions of processing such as marinating. Marketing and selling the products are also integral parts of what it means to be a fishing household, including organization of road-side stands, markets and events. Moreover, consumers are familiar with the products as well as how and where to buy them. For the fishing household, fishing is often one of several income streams. This offers the household resilience towards seasonal changes and shocks, such as variations in catch. The scale of the fisheries is necessarily small as crafting and the artisanal nature of the products set limits to the amounts produced.

In this Finnish context, fishing is thus not only to catch. It is also a matter of collaborating internally in the household, of marinating, crafting, packaging and developing new specialty products, as well as meeting and talking to customers at markets and events. Fishing is thus a highly diverse practice here, exploiting both specialization and dedication strategies, and with clear resemblances to the new types of businesses emerging within the land-based food sector. Although rooted in culture and tradition, this integrated fishing practice at the same time, paradoxically, seems in compliance with the demands of modern urban consumers.

5.1.2 Sweden

In Malmö, Sweden, the new Community Supported Fishery (CSF) scheme, Öresundsfisk, provides a contrast to the near-shore fishery of Finland. Though they share the characteristic that fishers and consumers meet face-to-face, the organisation of the value chain is quite different. In Malmö, fishers have and see *fishing* as their sole income and engagement.

Yet, the CSF still alters fishing practices; we learn that freshness becomes a key quality parameter to achieve, and the fish have to be carefully selected and fileted. In addition, the fisher has direct contact with subscribers (customers), when they come to pick up the fish. Keeping the customer happy, as well as satisfying subscribers' concerns for the marine environment, thus become necessary aspects of this fishing practice. In return, the fisher is paid a remarkably higher price per kilogram of fileted fish.

The case serves as an excellent example of the potentials for adding value through altering the value chain relations (dedication) and subsequently adapting the fishing practice and the qualities of products (specialization). It is also noteworthy that this initiative is created on the basis of a relatively small variety in available fish species. Despite mainly consisting of cod, plaice and flounder, customers remain loyal to the product and scheme with low dropouts reported. This shows that even small alterations in fishing practices can result in significant value added if integrated into the marketing and organisation of the value chain.

5.1.3 Denmark

In the cases on Bornholm, Denmark, the situation and context is different yet again. The previously very successful fishery and fish processing sector, which historically and successfully followed a development path based on scale, efficiency and prices, is locked into a situation where yesterday's technologies, business models, supply chains, regulations and institutional frameworks are no longer likely to sustain a viable fishing industry based on small-scale fishing practices and local processing. Since the boom in the 1980s, most of the local processing have closed and fish landings are now transported by ferry and truck to Poland. New knowledge, skills, capacities and capital are thus required in order to define and realise new paths for making local fisheries competitive.

On Bornholm, the FLAG strategy and the suggested development activities seem to build heavily on the experiences gained from the success in land-based foods. Furthermore, the fact that the agricultural consultancy association, *Bornholm Landbrug*, now takes responsibility for encouraging small-scale innovations in the fishery sector outside its own auspices shows that Bornholm economically, politically and institutionally has changed during the last decades and today can provide a type of innovation support to the fishery sector that was not to the same degree available for land-based entrepreneurs, when they started their development activities 20–30 years ago.

The near-shore fishery on Bornholm generally does not involve selling directly to consumers nor creating and producing/processing specialty products, but a few initiatives have attempted to change this. The two investigated business initiatives concern specialization and dedication respectively, although the actors behind them do not refer explicitly to these headings. The changing of the producer-consumer relationship, i.e. dedication, has been shown to be a successful strategy for one fisher, who sells his own catch directly to consumers, but also supplements his offerings with fish imported to Bornholm. Besides selling directly from his homeport, three days a week he takes a van and sells in towns nearby. Also here, the producer stresses the importance of quality. Consumers must encounter a superior product in quality and

freshness each time. Part of this is obtained through an online system through which customers get a text message (SMS) about when and where the fisher will land fish, and thus when and where to pick it up directly at the boat. In addition to this system, the fisher increasingly bases his information sharing on a Facebook page. In this way, new and cheaply available technologies like social media can be used to support the producer-consumer relation and to uphold dedication.

Another business initiative has been to create a closer link between local crafting, processing and the fish landed on the island, i.e. specialization. A processing and restaurant company (Fiskeværkstedet Nexöø) is attempting, among a variety of development initiatives, to make fish species of lower value (e.g. sprat) into viable products through new methods of preparation. But such products need to fit into local practices also at the consuming end of the value chain, as in the Finnish case, and are therefore hard to make into a new income strategy. As the company is busy with their core activity, the restaurant and catering services, they have not been able or sufficiently urged to pursue the project further.

5.2 Main findings

Throughout the report, we have explored different development logics and argued for the potentials of dedication and specialization. We were also aware that there might be substantial obstacles for this development to kick off. Looking across the three case studies, the material reveals interesting points ranging from the importance of national and historical contexts to the actual experience with new producer-consumer relations and specialization of products. In the sections below, we will elaborate these central findings and discuss how experience from the three case studies point into the future innovation in the Nordic small-scale fisheries.

5.2.1 Path dependency

First of all, the case studies underline that local fisheries are embedded in specific historical contexts. The case studies show that as much as fisheries have evolved into more uniform practices in the Nordic countries, they are also heavily affected by different *national* historical, geographical and cultural conditions. This is particularly true for diverse near-shore fisheries. In our case studies, we see significant variation in the practices, techniques, fish species, ways of processing and selling fish, as well as in the efforts and directions of innovation.

But there are also strong signs of path dependency. The existing development logics have strongly influenced not only the mind-set and investments made in the sector, but also the shape of the distribution systems. This has consequences for the way innovation and development is conceived and can be implemented. After years of following such a strategy and mind-set, it is increasingly difficult to divert into other economic strategies. Thus, we can observe the effect of so-called path-dependency.

Compared to Sweden and Finland, the fishers on Bornholm seem to be in a more severe lock-in. In the other end of the spectrum, the Finnish small-scale fishing sector has not been characterised by the same degree of industrialisation, upscaling, and division of labour as the Danish fish sector. This is partly due to the size and seasonal character of many Finnish fisheries and the complicated coastal access regime. Because of this, fishers have resorted to other economic activities when economic hardship hit the fishing industry. Earlier fishing was often combined with small-scale agriculture. Today this means that fishers in the Finnish, and to some extent Swedish case areas, have maintained some degree of plurality of economic activities, which have rendered them more resilient than the fishers on Bornholm. Thus, in regard to specialization and dedication, the Finnish small-scale fishers appear as frontrunners, due to the fact that less effort has been put historically into developing Finnish small-scale fisheries in line of the standardized and generic logics. However, the Finnish small-scale fisheries are also struggling with price competition, diminishing catches, rigid regulation, changing weather and in recent years also seals and cormorants.

5.2.2 *Dedication and changing producer-consumer relations*

One important aspect identified in the market-technology model applied in this study (see chapter 3) is the possibility to change the relation between producers and consumers. In the model this is termed *dedication* and signifies how a closer relation between producers and consumers is central to creation of value and to differentiation on the market. The relation can draw on and take advantage from varying factors, such as trust and product uniqueness, but often the intrinsic values of exchanging a few words or knowing the origin of the product are emphasized by consumers as the premium values (Amilien *et al.*, 2007). These qualities are hard to find in the conventional fish sector and illustrate the complementarity of the different food systems. But it also means that fishers and their family members following this strategy become more than fishers; they will have to communicate and document their practices. In a way, they themselves become part of the product and have to accept and perform this role.

In the three case studies, the dedicated producer-consumer relation is also evident but at different stages. The household-based Finnish fishers already had a practice that entailed contacts with consumers locally and at the many fish marketing events. These events in larger cities can have as much as 200,000 visitors. Therefore, the Finnish concern was on improving sales and the image of local fish. In Sweden, the business initiative was decidedly concerned with introducing a new producer-consumer relation. Through signing up for a weekly delivery of fresh catch, the consumers dedicate themselves to the producers. On Bornholm, a commercial fisher has been able to divert all his sales to local consumers. The model of buying a van to sell fish in various locations on the island has its limits as the Bornholm consumer market would not allow many fishers to pursue this strategy. Yet, the promising element of this case is the change of the producer-consumer relation and the fact that consumers meet the fisher face-to-face, like the described cases from Finland and Sweden. This is a small step in the direction of a fishery on the island in which it matters that fish is caught and landed

locally. So far, and in contrast with development of local foods on land, fish has remained largely without local characteristics. A closer connection between local fishers and the fish consumed is one step towards this.

Figure 7: In Finland, the herring catches are processed and marinated within the household and sold for example at herring markets in larger cities attracting up to 200,000 visitors



Note: Consumers are both interested in the traditional, local and household specific marinades as well as the annual innovations in new marinades.

5.2.3 *Specialization and product innovation*

In addition to dedication, the business initiatives also are examples of specialization, where the product is specialized through use of different catching methods or processing technologies. Like the strategy of dedication, the main step to take for the fisher is the one from being solely a producer to one also involving product innovation, processing, sale and market communication – or at least to engage with partners doing this. This is certainly a very difficult step for most fishers as it clashes with the widespread identity as independent fishers concerned with catching fish at sea. In the Finnish households, this role was often taken by the wives. Nevertheless, as there seems to be no way back to the “golden days” of volume-based fisheries, many fishers have no choice in taking the step towards product innovation, sale and marketing if they want to stay in business at sea. If fishers are to succeed in this transition, they need to acknowledge that the economic value of their products relates less and less to the process of catching of marine raw material itself, but increasingly relies on the services, processing, knowledge and storytelling around it. New skills and mind-sets will be needed to succeed in this transition.

For small-scale fishers, the main task is to differentiate the product from other standardized fish products in order to gain a higher price. This “difference” could simply

be the catching method, for instance by re-introducing old and labour-intensive fishing methods. However, also this business strategy would need to be communicated and accepted on the customer and consumer side.

In general, there is currently little consumer awareness of catching methods and their traditions, but, as the experience from land-based food productions reveals, this can change over time. Looking at the cases it is notable that in the Finnish case study, there is a strong consumer interest in the herring marinades. These household specialty products are cherished both at festivals for their traditional qualities *and* for the annual innovations and refinements. In the context of product specialization (and partly of customer dedication) the marinades have qualities that raw fish products do not have. In marketing, marinades can better hold both the tangible and immaterial, narrative qualities of the locality and the individual household. If this is true, the way forward for small-scale fishers might be to specialise into products that strongly add to the former main product, i.e. the fresh catch.

Another option for specialization and differentiation of products connect to the possibilities of enhancing the “local” dimension of fish catches or fishing methods. As described in chapter 3, in the successful land-based food productions that have emerged in recent decades, the geographical origin of products (although not always easily defined) has been an often-emphasized quality factor providing products with a distinct identity and justifying premium prices. While the geographical varieties of fish resources undoubtedly are smaller than land-based food resources, it would be a mistake to overlook the actual varieties regarding fish species, fishing methods, and fish recipes as well as the qualities of the local conditions for fishing. In terms of storytelling, local hardship and ingenuity to overcome it is not to be under-estimated for its dramatic value and potential for creating awareness among consumers about the origin of the fish they eat.

As of now, there appears to be very little focus on the origin of fish consumed, which is in stark contrast to land-based foods often advertised as “local produce” and having designated shelves in supermarkets. To change these conditions for production and marketing of fish products is surely a long-term process, but important stepping stones are already laid by pioneering food producers and distributors – not least in terms of simply documenting the existence of demands, market potentials and profit opportunities related to small-scale, quality niche productions.

5.2.4 *Learning from land*

Especially the cases from Denmark and Sweden take place in areas that have been experiencing a renewal of small-scale specialty food production. So much that it is considered a major part in both tourism and the regional brand. The point of departure for the entrepreneurs behind this development was similar to the one fishers face today in terms of markets predominated by standardized and generic productions.

Throughout their long, unsecure, but pioneering phase of developing specialized products and technologies and dedicated sales channels,¹¹ these companies have collected crucial entrepreneurial experiences that are adaptable and transferable to fish-based productions. They possess knowledge about central features of the transition, e.g. regarding how to run small, high-quality businesses, how to cooperate with “competitors”, how to develop new products and estimate their market potential and how to reach and communicate with consumers. These companies may serve as an inspiration for the business side. However, in a larger international perspective the hands-on knowledge and experiences from the recent decades of business and market restructuring within land-based food systems should be better collected, adapted and distributed among policy and industry actors within the fish sector in order to facilitate the transition of fishing practices. In many instances, there is no need to reinvent the wheel.

¹¹ See e.g. Manniche *et al.* (2009) for an analysis of the 20–25 year long process of developing productions and framework conditions for “Bornholm food”.

6. Conclusions

The chapter concludes on the main findings in the report. The critical situation of small-scale fisheries and the gaps that have been identified in this report, suggest that a larger and coordinated effort is needed. New development paths for the producers should include both the supply and demand side and should aim pragmatically at bridging the gap between the conventional production methods and the new strategies of differentiated development. There is no single business model that can recreate viable small-scale fishing sectors in the Nordic countries. In order to do this, there is a need to find a range of business models as well as to develop these in scale and scope. The vision should be to develop viable and composite markets for high quality and specialty fish products – markets that go beyond the local and reach consumers on a national and international scale.

6.1 A differentiated approach

This report has examined the potential for a *differentiated approach* to fisheries management. By this, we mean an approach that caters to different development logics, and which sets new development goals especially for the small-scale and coastal fishing fleets. Through experience from development in the land-based food sector and through case studies in three coastal areas, we have explored obstacles and opportunities for area based, cross-sector development, and pointed to some potential directions for innovative development in Nordic fisheries through *specialization* and *dedication*.

In the second chapter, we explored the historical development and nature of Nordic small-scale fisheries. Across the Nordic countries, fisheries have been characterised by a range of socio-economic traits, which ensured a high degree of flexibility and resilience, and which formed the basis for a substantial growth in the 20th century. However, it was also a social organisation that was tied to the central tenets of the fisheries management based on an equal and free access to the resources. This ensured a competitive but also uncontrolled growth along the lines of standardized products to generic markets. In the 20th century, small-scale fisheries grew big, so to speak, increasing catches, applying new technologies and reaching new species and catch areas. The uncontrolled growth led to the introduction of fish quotas in the second half of the 20th century. Thus, while fisheries management became concerned with controlling overall catches, the applied growth model and development logic remained centred around volume and efficiency. In many cases, this led to an unsustainable situation with negative economic performance and overcapacity.

Market-based distribution of quotas (such as Individual Transferable Quotas) was conceived as the answer to this situation. Introduced first in Iceland and subsequently in the other Nordic countries, market-based quota allocation systems now form the basis for the management and development of the most important Nordic fisheries. However, the new market-based systems have also supported a transformation of the sector and a greater division between small and large-scale fisheries. While company-structured fishing operations are thriving in the new conditions, the share-based fishers of the past are struggling to survive. The transferable quotas mean substantial investments for those small-scale fishers and new entrants who wish to expand their quota holdings. While most Nordic countries have management instruments in place that are designed to safeguard and promote small-scale fisheries, there is a general downward trend in Nordic small-scale fisheries under market-based fisheries management. With downscaling, leasing or specialization in labour-intensive species, small-scale fishers are becoming the small-holders of the sea. With no realistic options to increase their catches, they are increasingly trapped inside a box, where regulation, investments in technology, ecological changes and price-competition are narrowing down their operational space. The existing safeguards and management instruments in place to protect small-scale fisheries do not provide a very promising development path.

Instead, to find a way out of the box we suggested looking at the recent developments among small-scale producers in the land-based food sectors. In the third chapter, we therefore explored the experiences of land-based small-scale producers who have managed successfully in the last decades to break away from the volume and efficiency focused development logics. New relations have been established between producers, restaurants, shops and consumers. Where the food system a few decades ago was characterised exclusively by standardization and generic markets, the food system today has been supplemented with specialized producers and dedicated market segments relying on close relations between producers and consumers. Inspired by international food research on restructuring of food markets, we identified *specialization* and *dedication* as the two main principles driving the business innovations, and the LEADER method and territorial development approach applied by the EU's Local Action Groups (LAGs) as the main policy instruments, which have supported this development.

In the fourth chapter, we took a closer look at the principles of the territorial development strategies, before turning to the actual experiences with policy driven innovation in the three case studies centred around the newly established Fishery Local Action Groups (FLAG). The principles for support through the FLAGs are concerned with networks, innovation, area-based development and cross-sectorial innovation. By applying these methods, territorial development is designed to activate human, social, cultural and natural resources in new ways in situations where economies-of-scale are hard to uphold. Looking at the three case studies, it is apparent that the main challenge has been to bridge the gap between conventional producers, trapped in a volume and efficiency-oriented development path, and the still rather abstract goals and visions of territorially orientated FLAG development

strategies. Fishers see regulations and seals as their main obstacles and would appreciate any help to get rid of these. Following new paths towards specialization and dedication will involve profound changes for the fishers, and this has to be acknowledged as well at the policy side. Both mind-set and investments have to be redirected and for many, this will not be attractive without support.

Because of the significant gap, the organisations involved in policy driven innovation have, in two of the cases, taken the lead in identifying and implementing the first projects. The projects have been more aligned with needs of the fishers than with transferring of the innovative experiences in the land-based food sector. However, by this pragmatic approach, the first steps have been taken towards a differentiated approach, and the first networks have been created between fishers and community entrepreneurs. The material also suggests that it is important to include the demand side in the development efforts and not only target the producer side. To realise the new development path for the producers, there is also a need for developing the consumer market basis and appropriate distribution and marketing systems.

The business-driven innovations explored in the fifth chapter reveal that there are certainly ways to apply specialization and dedication as strategies for developing Nordic fisheries, but also that these strategies have their limitations here and now. In the cases, the initiatives are driven by individuals or form only a minor part of the activities for a group of fishers. While these initiatives do function as vital experiments in the diversification efforts, they cannot sustain a vibrant segment of small-scale fishers. In order to do this, there is a need to find a range of business models as well as to develop these in scale and scope.

6.2 Future development of Nordic small-scale fisheries

The critical situation of small-scale fisheries, and the gaps that have been identified in this report, suggest that a larger and coordinated effort is needed. First of all, the overall logic for developing small-scale fisheries focusing on volume, efficiency and market standards needs to be supplemented with a logic aiming at value-creation through adding certain “qualities” to products, distinguishing them from mainstream, price-competitive fish products. Such a differentiation strategy could be based on developing new tangible product qualities of the available fish resource, for instance through more careful fishing methods.

However, in the diversification away from the price-competitive standardized fish market, intangible product qualities and narrative aspects, for instance relating to public debates and consumer concerns for sustainability and healthy food, will be highly important strategy elements as well. Although still to be taken into consideration and unfolded by the fishing sector at large, there definitely are narrative potentials connected to the personal knowledge and diversified practices of fishers of catching and handling fish. It may be, in the near future, that small-scale fishers cannot sustain their practices as fulltime, scale-orientated fishers, but they may be able to uphold important, attractive parts of these practices by making them discernible for

consumers and the public at large through storytelling. Further, the development instruments should include both the supply and demand side and should aim at bridging the gap between the conventional production methods and the new strategies of differentiated development. This will involve a wide array of focus areas including building social capital, creating new consumer habits, changing production methods and adapting regulative systems to the new needs. In addition to the Fisheries Local Action Groups, Nordic countries should therefore consider additional instruments and programmes to trigger entrepreneurial activity and support the transition from the existing productivist paradigm to specialised and dedicated development paths.

The case studies in this report indicate that substantial business development efforts are needed in order to sustain vibrant small-scale fisheries in Nordic countries. As seen in the recent land-based food development, the local scale indeed can form a feasible market basis for some small-scale producers. However, in the longer run it is important that business models and mind-sets are not confined to the local scale. The vision should be to develop viable and composite markets for high quality and specialty fish products – markets that go beyond the local and reach consumers on a national and international scale. Dedication and specialization form two promising ways to realise this vision.

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Sammendrag

Rapporten udforsker, hvordan nordisk kystfiskeri kan udvikles mod et højere fokus på værdiskabelse og specialisering af produkter. For at belyse det spørgsmål ser vi på den historiske udvikling af det nordiske fiskeri og sammenhængen med de nuværende udfordringer. Kystfiskeriet står over for store udfordringer med stigende investeringer i fartøj, redskaber og kvoter og på tværs af Norden er kystfiskeriet i tilbagegang. Vores udgangspunkt er derfor, at det nordiske kystfiskeri må se efter andre udviklingsveje end volumen og effektiviseringer. Spørgsmålet er, hvordan dette kan opnås. Rapporten ser på hvordan landbaserede producenter tidligere har stået overfor lignende udfordringer og vurderer derudfra, at specialisering og dedikation er velegnede som udviklingsstrategier. Det centrale omdrejningspunkt er et brud med skala- og priskonkurrencen fra de konventionelle markeder og i stedet et fokus på nye produkter og distributionsmodeller. Hovedudfordringen er den afstand, der er mellem fiskerne i deres nuværende praksis og de innovative ambitioner hos entreprenører og policy-aktører. Rapporten peger på, at en substantiel og koordineret samt policy-drevet indsats er nødvendig for at få de konventionelle og de innovative forretningstanker til at mødes. Det er ikke nok at forvente, at fiskerne efter årtiers udvikling i et bestemt udviklingsspor pludselig kan skifte strategi og forretningsmodel. Der er derfor brug for en koordineret indsats både på udbud- og efterspørgselssiden samt i de forskellige led der binder dem sammen. Visionen bør være et levende og mangfoldigt marked for kvalitetsrettede fiskeprodukter baseret på specialisering og nye værdiskabende relationer mellem producenter og forbrugere. Markeder som rækker længere end det lokale og som når supermarkeder og forbrugere på en national og international skala.

Annex – Case studies

Sweden: Leader activities and community supported fishery

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The chapter is concerned with fisheries development in the Southern part of Sweden. The case first describes the overall goals and methods of the local LEADER initiative. These goals include social, environmental and economic sustainability as well as optimising fishing for citizens' needs and distributing knowledge within fishing. The case shows some of the difficulties of innovation, partly because fishers find it difficult to relate to the LAG and its vision. Secondly, the case turns to the concept of Community Supported Fisheries (CSF). The case describes how this idea is currently being put into practice in Skåne with the innovation project Öresundsfisk, which was originally set up by SEA-U Marine Science Centre in Malmö, an economic association partly funded by the City of Malmö. The chapter describes some of the challenges with CSF such as logistics and mobilizing funding.

Introduction

The following case description was compiled from document studies of the LEADER strategy and website, and from communication with *The Swedish Board of Agriculture* and the *Skåne County Administrative Board*. Particular focus was given to how "innovation" was articulated and communicated in the documents. The business case – the community supported fishery Öresundsfisk – was analysed from semi-structured interviews with the initiating NGO and one of the active fishers. Notes were taken during the interviews, and particular attention was given to potential and barriers for further development.

The Leader area and Local Action Group (LAG) examined in this case, "Leader nordvästra Skåne med Öresund", comprises ten municipalities, a number of lakes, rivers and a long coastline. The strategy aims to develop the area according to the Leader method, which means cooperation between different actors, local support and an explicit bottom-up approach.

The Leader area is one of eight (out of a total of 48 areas) in Sweden that works with four funds: The European Agricultural Fund for Rural Development, European Sea and Fisheries Fund, the European Regional Development Fund and the European Social Fund. The strategy for Leader Southwestern Skåne with Öresund follows the four funds' foci. Through the multi-fund opportunity, the local action group (LAG) works

with finding methods that aim to reduce the uneven distribution of wealth, which, to some extent, characterizes Northwestern Skåne.

The overall aim is a long term, well anchored and sustainable development driven by those who are living and working in the area. The strategy is based on the vision “Northwestern Skåne including Öresund, the self-sufficient region” and work with the five overall objectives and the related fields of action:

- Strengthening local markets;
- Attractive living;
- Competence maintenance;
- A vital environment;
- Enable and encourage learning.

The LAG is responsible for implementing the strategy and includes representatives from the various sectors of the municipalities concerned. Directly under the LAG is the rural secretariat, which is responsible for the practical activities, including information management, finance and outreach work. A working group of experts and practitioners is tied to each of the four funds. In the case of the structural fisheries fund (ESSF), this group consists of professional fishers, representatives from the County Administrative Board and a project leader. The funding 2014–2020 from the ESSF is MSEK 8.2 (approximately EUR 820,000).

Swedish fisheries in Öresund are almost exclusively local, small-scale and coastal. This provides good possibilities and incentives for sustainable development. The yield from Öresund is among the highest in Swedish fisheries, and fish stocks are healthy. Because of the narrow belt and the extensive traffic, trawling was banned in 1931. One result is an extensive recreational fishery, which targets fishers from Northern Europe. The fishery in Öresund is shared between Sweden and Denmark. In the Leader context this creates both extraordinary opportunities and needs for transnational cooperation. A number of coordinated initiatives has been established outside of the Leader framework, and these are regarded as good starting points for future ESSF-funded projects.

Cooperation and innovation

The strategy focuses on needs and potential for development. It is assumed that the area already has a strong geographical brand associated with food and beverages tourism and entrepreneurship. Skåne is considered one of the most popular destinations in Sweden. It is also pointed out that innovative forces are strong concerning added-value in food chains and biogas production. Particularly great potential for synergies is said to exist in fisheries, agriculture and tourism due to vital traditions, professional knowledge and a variety of local products. These businesses are most often small-scale, located outside urban conglomerations and along the coast. Cooperation is seen as the key feature of further innovation and development.

The strategy highlights the importance of constructive cooperation and competence development, for example between schools and local businesses, to foster inclusive and innovative thinking. Through broad partnerships across sectors, enabling multi-fund synergies, the strategy outlines ways to test innovative solutions for smart, inclusive and sustainable growth. In a rather vague way, the strategy for Leader Northwestern Skåne with Öresund aims to facilitate processes that might lead to innovative projects. In this context, innovation should be broadly understood to mean new products, new processes, new organizations, new meeting places and new markets.

The four funds can finance different projects with a common goal. The greatest geographical asset is said to be the unique cultural landscape with a network of small communities, railroads and an active countryside. The closeness to both cities and nature makes the area a “rurban” alternative to the strong urban trend in Sweden and the rest of Europe.

General goals

All funded projects must reach across three general goals. These are expressed as *sustainable, inclusive* and *smart*. The sustainable goal includes ecological, economic and social sustainability. Economic sustainability implies a plan for long-term management of human and material resources, agricultural land, and the marine environment. Social sustainability means the development of a society that takes care of individual’s social health. The inclusive goal states that conditions for development are optimized for each citizen’s needs. The smart goal guides projects towards processes and situations where learning and competence development are facilitated. The latter goal refers to common EU goals to stimulate knowledge, innovation, education and a digital society.

If these three general goals are included, a project proposal is subjected to a grading by the LAG board according to a number of criteria. These include feasibility and viability after the project funding period. Based on the grading, the LAG will prioritise, select and provide partial funding for projects.

The creation of a policy-adapted fisheries project

About a year into the program period, the LAG discovered that fishers had difficulties in delivering their own project proposals. The reasons, it was assumed, included lack of time and organization among fishers. In order to overcome these barriers, the LAG representative responsible for the ESSF together with the County Administrative Board made a comprehensive SWOT analysis to map potentials and constraints for the development of coastal fisheries in Öresund. Based on the SWOT analysis, the LAG then convened a number of meetings with fishers to collectively create fundable projects.

In the course of these meetings, a number of perspectives were articulated. Some fishers did not understand why they should be innovative and what it was that was supposed to be created. Typical questions were “for whom is fishing unprofitable?”,

“what is supposed to be created?”, “what is it that you want to make a problem out of?” and “if you want to sell your fish to restaurants, just do it. It is not that hard”.

Another fisher did however problematize the context: “People want to see the fish. This has value in itself. Restaurants need guarantees of supply, and this we cannot give them. The catch varies from day to day, and besides, restaurants want greater variety. Fishing stops make continuity in such a business relation impossible”. Here, the fisher referred to how fisheries regulations are experienced as ad hoc, often arriving from central management authorities at short notice and thus difficult to foresee. Fishing stops also occur when the quota for a species is reached, often prohibiting fishers to target other species if the gear in question is expected to catch the species for which the quota is reached.

There is a suggestion from a fishing tour boat skipper that “[...] a small-scale coastal fishery combined with world-class recreational fishing is a winning concept for Öresund, with an explicit tourism focus.” He continues by pointing out the potential to arrange packaged tours for international fishing tourists and that tour boat fishing has developed from having customers with a focus on their own food supply to having customers that seek unique experiences. One thing that all fishers could agree upon was a scepticism towards biologists and the data and logic they use when proposing that cormorants do not affect coastal fisheries since they only eat small fish.

Eventually a number of project proposals emerged. The crucial driver in articulating the projects was that they became driven and “owned” by the LAG. In a sense, this is not wholly in accordance with the LEADER principle of bottom-up initiatives. However, the fishers were continuously informed and consulted during the development process, and their input secured the relevance of the final proposal. A LAG owned project does not demand as much time from the fishers and other external participants. The LAG decided to collect them under an umbrella project run by the person responsible for the ESSF. The general goal of the project was to contribute in practice to the development of a profitable and sustainable coastal fishery that does not threaten the marine environment in Öresund. A specific goal for the umbrella project was to create arenas for knowledge sharing. Different kinds of knowledge are needed to create the greatest possible societal value. Today, neither professional fishers nor recreational ones feel that their hands-on knowledge and world-view is valued in the management of fish stocks. Therefore, biologists were also associated with a number of sub-projects. The vision was, by 2020, to have created an open dialogue and consensus between authorities and practitioners concerning how to manage a coastal fishery in a geographical area with a multitude of ecological values.

Once articulated, the umbrella project was funded by the ESSF in 2017. Sub-projects include:

- A mapping of the most valuable fishing grounds in Öresund;
- The potential for development in different established fisheries, but also in hitherto non-commercial species;

- To propose management plans for seal and cormorant in cooperation with other countries along Baltic Sea coast;
- Develop fishing patterns and methods that do not affect the porpoise stock;
- To make plans for turning Öresund into a Unesco biosphere area.

The challenge, for this policy-driven umbrella of projects that include the sustainable, inclusive and smart goals, is to combine economic and environmental interests, get different stakeholders to communicate and create the greatest possible societal benefits. One already established project – not presently LAG funded but in the process of being associated with the Leader strategy – is *Öresundsfisk*. This is Sweden's only community supported fishery, based in Malmö. It is a business model aimed at the greatest societal benefits from economic, social and ecological perspectives.

In the following we will, firstly, introduce the concept of Community Supported Fisheries (CSF). It outlines the ideas behind CSF as a business model, and how it was first put into place in the United States. Secondly, we describe how this idea is currently being put into practice in Skåne with the innovation project *Öresundsfisk*, which was originally set up by SEA-U Marine Science Centre in Malmö, an economic association partly funded by the City of Malmö. The case study describes some of the challenges with CSF such as logistics and mobilizing funding. In return, however, consumers receive a dedicated product that is said to have a high quality.

Community Supported Fisheries

As a response to a global crisis in coastal fisheries due to declining fish stocks, micro-management regulation, concentration of ownership of and/or access to the fish resource, a general trend towards profitability through quantitative fishing patterns, subsequent competition from cheap international imports and rising operational costs, various alternative business models for coastal fisheries are emerging worldwide. In different ways, these emerging initiatives combine multiple market and non-market benefit for individual fishers and networks/cooperatives of fishers. One such business model is Community Supported Fisheries (CSF). It aims to link fishers directly with consumers such as households, restaurants and municipalities through market repositioning and new social networks. CSF schemes have evolved mainly in the USA and Canada from 2007 and onwards, but is now gaining ground in other parts of the world. CSF in itself does not represent a homogenous economic model, specific structure or kind of organization. It does however stand for a common food sovereignty and producer philosophy engaging the consumer in the sustainability, traceability and genealogy of fish (Bolton *et al.*, 2016).

CSF are at its core a social endeavour where fishers and consumers share the economic risk of sustaining coastal fisheries with its absolute dependence on external factors such as weather and oscillations in amount and diversity of the catch. The consumer pre-pays the fisher for a share of the fisher's catch for a certain, defined season. Ideally, the business model ensures that the fisher gets a higher price for the catch, a stable income and a higher chance of political support for his/her fishing

practices. The consumer gains access to high-quality fish, new kinds of fish, and – through direct interaction with the fisher – benefits from the social and intellectual stimuli of learning about the conditions of food production (Brinson *et al.*, 2011).

Although there is great diversity in how CSF are organized, there is a common philosophy behind active initiatives (a great majority of which are located in the USA) (Bolton *et al.*, 2016, p 24). This philosophy includes the establishment of direct connections between fishers and seafood consumers; creating local markets for local catches, thereby greatly decreasing food miles (on average in the USA from 8,812 km to 65 km, McClenachan *et al.*, 2014); raising consumer awareness about fisheries and seafood; promoting of underutilized species; and paying fishers a higher price per catch unit.

CSF can also be understood as a response to the UN development goals by promoting sustainable fishing patterns and practices, strengthening community coherence, its inherent education for sustainability, the ways in which CSF reduce the ecological/carbon footprint of fisheries, and its example of how issues of food security and food sovereignty can be illuminated. Consequently, CSF has been articulated as an “institutional starter” for how the resilience of social-ecological systems can be enhanced (Stoll *et al.*, 2015). It is argued that CSF can counteract disturbances and traumas to coastal fisheries due to low and wildly fluctuating prices, adverse public perceptions of professional fisheries, unequal power relations between different categories of fishers, and between fishers and wholesalers/fish dealers. Stoll *et al.* (2015) describes how the CSF business model connects economic profitability with social and ecological sustainability in a causal chain of bonding mechanisms:

1. Economic incentives lead to participation;
2. Participation leads to cooperation;
3. Cooperation creates bonding capital through information management;
4. Communication creates bridging capital through engagement with outsiders;
5. Social capital fosters opportunity to increase resilience.

The literature suggests a number of ways in which CSF strengthen the viability of coastal fisheries, allowing fishers to develop their fisheries by repositioning themselves in the seafood value-chain through the creation of local markets. But there are also a number of challenges and constraints. Bolton *et al.* (2016) demonstrate a number of these in the North American context. Most prominent are increased workload due to marketing and branding activities and meeting consumer demands with an unpredictable supply of products. Other constraints include coordinating logistics within the CSF, processing and cold-storing the catch, educating consumers, and complying with regulations and securing necessary permits.

A Swedish CSF: Öresundsfisk

The only CSF in Sweden, and indeed one of the few in Northern Europe, is located in Malmö. Geographically it is included in the Leader area Northwestern Scania with Öresund. It was not initially funded by the Leader area but is an independent initiative. However, for the present period 2016–2020 the CSF will connect with the LAG and seek funding for further development.

The initiative came from SEA-U Marine Science Centre in Malmö, an economic association publicly procured by the city of Malmö. It is funded in part by the city, and in part by externally funded projects and consulting assignments. All profits are reinvested in the association. They wanted to include local coastal fisheries in their agenda and decided upon the CSF business model with inspiration from both the concept of community supported agriculture and CSFs in the USA. They realized that fishers themselves were unlikely to be able to mobilize the initial resources in terms of capital, time and knowledge, so SEA-U took on the role as institutional starter. Since SEA-U is primarily staffed by marine biologists this has proved to be of added-value to the business model, since marine biological competence is regarded among the public as a sustainability guarantee. The basic idea was to increase local sales of locally caught fish, and to increase the economic value of the catch for coastal fishers. The brand “Öresundsfisk” was created and this brand is owned by the economic association “Öresund från båt till bord” (“Öresund from boat to table”) managed by professional fishers. The brand criteria are articulated based on quality, traceability and sustainability. SEA-U applied to become first-hand receiver and sorted out regulations concerning direct sales, a responsibility later assumed by the economic association “Öresund från båt till bord”. According to SEA-U, the regulatory framework was complex. One initial barrier was how to interpret the regulation stating that each delivery from a fishing vessel destined for private consumption can be 30 kilograms maximum unless one becomes registered as a first-hand receiver. After communication with central authorities, it was decided that this regulation in the context of CSF did not mean 30 kilograms total per deliverance, but 30 kilograms per customer per deliverance.

Today five fishers are included in the economic association, but only two are active in delivering catch to the CSF. These two cooperate and coordinate their deliveries to a total of 54 subscribers. Before each season shares in their catches are publicly offered, and consumers can choose between deliveries each or every second week. A season stretches over approximately 12 weeks, with added weeks in case weather or other circumstances causes non-delivery during the regular season. The fishers fillet and package the fish themselves in 800 gram portions. For flat fish, these are delivered whole and packaged in sets of four. For delivery each week during a season, the subscriber pays SEK 1,680 which corresponds to SEK 175 per kilogram filleted fish. The usual wholesaler price for mixed dead and live caught whole cod is around SEK 10 to the fisher. The fishers transport the fish to a central pick-up location, provided for free by the city authorities, where there is a fridge and a small freezer. During a 90 minute period each Thursday subscribers pick up the fish from the fishers. This personal meeting between producers and consumers is highly valued by the subscribers, emphasizing the importance of social capital for

emerging local markets. The usual catch is cod, plaice and flounder. Sometimes other species, for example turbot, is included, and extra-ordinary catch such as this is fairly distributed among subscribers over a season. Few subscribers leave the scheme once in, since they find it difficult to lower their food standard.

According to participating fishers, the major barrier for developing the CSF is not found in technical regulations. They could deliver more if the freezing facilities were expanded and if the turn-around became large enough to hire a dedicated filleter. The time-factor also figures in the logistical complexities. The fish is caught with nets where a certain share of the catch consists of fish that have died, but only live caught fish is used for the CSF business model. Fish caught alive has a markedly higher quality than drowned fish. The nets can without problems be harvested four hours earlier to increase the amount of live fish. However, the present scale of operations and lacking freezing capacity mean that the maximum amount of live fish that the system can handle is already delivered. Also, since the catch is irregular both in composition and amount, expanded freezing capacity is necessary to enable institutions such as schools and hospitals to participate in the CSF scheme. There are plans to expand the concept by starting a restaurant supported fishery branch, although the problems relating to steady supply, boat-to-kitchen logistics and possibilities for commercial subscribers to plan a few days ahead remains to be worked out.

It seems that the system with two fishers and 54 subscribers is a system with equilibrium under present conditions. No one involved see any principal barriers to further expansion, but initial investments in freezing and filleting capacity need to be made. The marketing apparatus also needs to be improved and professionalized in order to create an influx of new subscribers.

However, during meetings with fishers, a structural and more general problem for developing local markets emerged: the distribution system in Skåne with only one large-scale first-hand receiver. This creates a sort of monopoly where coastal fishers might feel obliged to deliver their whole catch to this actor. The diversification of sales channels then becomes difficult. According to some Öresund fishers, this is the major obstacle in the long run for developing new local markets for professional fishers in coastal fisheries.

Finland: Innovation and direct marketing as a viable household strategy in coastal fisheries

Pekka Salmi, Natural Resources Institute Finland (Luke).

The chapter describes a Fisheries Local Action Group (FLAG) in Finland and how it aims to innovate fisheries in its region. Previously, the FLAG's approach to innovation has been to approve the infrastructure and facilities for the fishermen, but increasingly the FLAG is concerned with diversification. After discussing the strategies and difficulties in facilitating innovation in the small-scale fisheries, the case turns to the actual business activities and

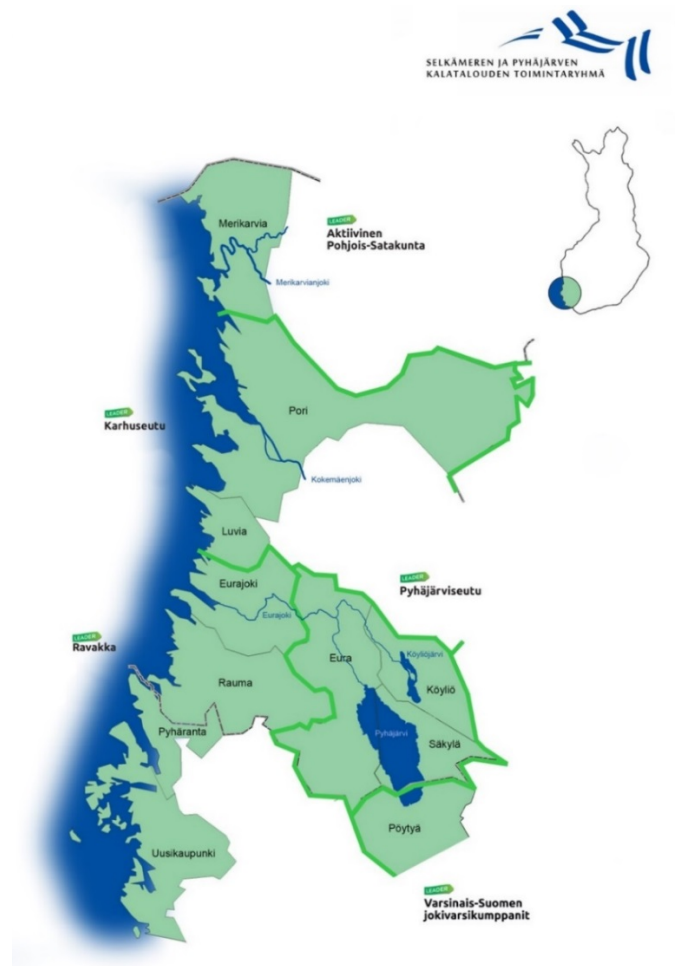
their organisation. The business case is an example of direct marketing and the potentials for fisher households to specialise their products and reach lucrative urban markets.

Introduction

This case studies bottom-up development and innovation within one coastal Fisheries Local Action Group (FLAG) in Finland. The current and former strategy and the range of approved projects by the selected FLAG will be used as material, supplemented with an interview with the FLAG-activator.

The FLAG Bothnian Sea and Lake Pyhäjärvi is located in the south-western Finland (see figure). This region covers 11 municipalities with a total of 182,000 inhabitants. The coastal areas and the Lake Pyhäjärvi are important areas for commercial fisheries and fish farming. For instance, about 50% of the Finnish Baltic herring catch, 500,000 signal crayfish are captured and about 1 million kilogram rainbow trout is farmed annually in the region. The value of the catch is approximately EUR 10 million.

Figure 8: The location of the FLAG Bothnian Sea and Lake Pyhäjärvi for the program period 2014–2020



Source: FLAG Bothnian Sea and Lake Pyhäjärvi.

In Finnish fisheries, a large share of the landings is caught by large open sea herring trawlers. However, most of the fishers operating in the FLAG area can be classified as small-scale coastal fishers. In 2011, there were a total of 346 fishers in the area – 94 of which were occupied as full-time fishermen. This means that more than 70% of the fishers in the region are part-timers. The coastal fishers use gillnets and trap nets for harvesting Baltic herring, perch, European whitefish, Baltic salmon and several other species.

There are six official fishing harbours on the FLAG region's coast line and two in the Lake Pyhäjärvi. Two of the official coastal fishing harbours are located in the municipality of Merikarvia, one in Pori, one in Rauma and two in Uusikaupunki. Fishers also use other landing sites, including their own jetties. The main fish buyers for the coastal catches are located in cities of Pori and Uusikaupunki. Pyhämaa, which is located in Uusikaupunki, and Merikarvia are communities with a strong tradition of fisher families processing their catches and selling the products either directly to consumers, retail shops or wholesalers.

Despite the vivid economic activities in the regional capture fisheries, the capture fisheries' relative importance has substantially decreased in the long run. Coastal areas are increasingly being used for other purposes than harvesting fish for consumption, e.g. recreation, tourism, industrial activities and nature conservation. Recreational fishing is a popular hobby for the Finns. Fishing tourism has been a growing activity especially in River Merikarvia in the North of the FLAG region, and some entrepreneurs also organize fishing trips to the coastal sea areas.

Vision and goals

In the FLAG's vision for 2020 the Bothnian Sea and Lake Pyhäjärvi forms a multifunctional, viable, sustainably developed and strong fishery area, which produces high quality local fish:

"The appreciation, availability and use of local fish have increased. Fisheries provide a broad range of job opportunities and the resources are used in an ecologically, socially and economically sustainable way. Fisheries provide high-quality local food and employment for the locals."

Goals include sustaining and developing fisheries as a strong part of the regional livelihood structure. The FLAG encourages all stakeholders to experiment, innovate, collaborate and take the environment in consideration. They see a need to support learning, transmission of knowledge and pragmatic application of local and scientific knowledge and to increase the attractiveness of the fishing livelihood. The development program sets five sub-targets:

- Rise of processing and usage of the primary production of fish:
 - 7% increase in the part of the catch used for human consumption.
- Improvement of the image of the local fisheries among the wider public and enhancing the consumers' usage of local fish:

- Fishermen's sales should increase 15%.
- Improvement of the infrastructure and means of production:
 - Investments should increase by 15%.
- Increase in the knowledge and networking of the operators in the area:
 - 2–4 networks should be developed.
- Increase in fish-related tourism:
 - 3 new entrepreneurs supported.

Changes between FLAG periods

In this section, this former FLAG period and its policies are described in order to understand the changes that the FLAG, and the region it covers, have undergone. This former FLAG period was valid from 2008 till 2015 (although the official European Maritime and Fisheries Fund Operational Programme lasted from 2007 to 2014). During the period 2008–2015, the FLAG *Fishing park of Vakka-Suomi* only covered the rather homogeneous archipelago areas. In the present *Bothnian Sea and Lake Pyhäjärvi FLAG*, the spatial dimensions have been widened to include also northern parts of the Bothnian Sea, including the Lake Pyhäjärvi, which substantially has increased the diversity of the area. The formerly relevant target species, like the Baltic herring, pikeperch, perch and European whitefish, have been supplemented by Baltic salmon in the northern coast and by vendace and signal crayfish in the Lake Pyhäjärvi.

Lake Pyhäjärvi in Säkylä is especially famous for its winter seine fishing for vendace (figure 9). Winter seining is no longer practiced in coastal areas, partly due to the shortened ice cover periods in winter. The number of winter seining teams has decreased, but at the same time fishing techniques in the open water, marketing strategies and target species have become more versatile. In the past, innovation was typically made in the context of coastal fisheries and then imported to the lakes, but presently this has reversed. Fishers in Lake Pyhäjärvi have, for instance, successfully exported frozen smelt to France. They also process large quantities of other lake and coastal fish species. These products are distributed widely in Southern Finland.

Figure 9: Winter seine fishing for vendace in Lake Pyhäjärvi



Photo: Pekka Salmi.

Especially in the coastal archipelago, the fishers have had problems getting licenses for large enough areas, which is due to the system of private ownership of coastal waters. The same private water owning system applies to Lake Pyhäjärvi, but there the commercial fishers' access rights are organized within the whole lake, and the commercial fisheries interests have typically been prioritized.

The spatial widening of the FLAG towards northern coastal areas has increased the relevance of Baltic salmon fisheries, particularly in Merikarvia. This also means that the FLAG is now confronted with the seal- and cormorant-induced losses, which pose the biggest threat to coastal fishing in general. The former FLAG contained an important location for traditional household-based processing of Baltic herring in the village Pyhämaa (Fig. 3). In the present FLAG, this is now accompanied with another for herring processing in the village Merikarvia. These two villages are famous for small-scale processing: the fishing households have made marinated herring and other processed fish products for decades. Members of the fishing families in Pyhämaa and Merikarvia are active in selling their products, especially during autumn in various fish marketing events. Some of them also produce marinades to be sold in shops.

Figure 10: Processing of Baltic herring in Pyhämaa in 1993



Photo: Pekka Salmi.

In the present FLAG period, fishing tourism is more emphasized than in the former one. The former FLAG funded many small investments for individual fishers, e.g. for buying fish pumps, quad cars and motors for boats. In the present FLAG period, this type of investment subsidies is no longer allowed to be funded by FLAGs. The fishers can, however, still apply for this kind of funding from the fisheries authorities.

Due to the change in the role of the FLAG from a funder of equipment towards a funder of development projects, the usefulness of the FLAG is not clear in the eyes of commercial fishermen anymore. The present FLAG has experienced problems in getting good and relevant applications for developing the sector. A strategic aim is to increase the added value of the captured fish with an emphasis towards specialized and dedicated products. This is important not only in commercial fishing, but also in the fish-based tourism, which can include fishing but also enjoying local fish meals and listening to local fishing stories.

Characteristics of completed projects

In the following, we will compare and describe the projects selected and funded through the FLAG programme and fisheries funds.

Program period 2008–2015

Projects funded by the FLAG during the former program in 2008–2015 can be categorized in four main themes: commercial fishing, improvement of prerequisites for

operation, fishing tourism and sustainable use of fish stocks. A total of 37 projects were related to *commercial fishing* with total costs amounting to EUR 560,000. The FLAG funding was about EUR 400,000. The funding supported either development initiatives or small-scale investments for the fishers, such as buying fish pumps, quad cars and motors for boats. A total of 24 fisher related investments were subsidized. New equipment for fishing harbours was also purchased.

Development projects improved fishing gear, and other equipment needed for the fishing livelihood, and various commercial fishing related research was also funded. Two of the projects aimed at improving Baltic herring fisheries by studying opportunities to build freeze storage to be used co-operatively by trap net fishers, and to develop a herring product for retail shops and restaurants. New products and marketing channels were also developed for sculpin, which is normally not a targeted fish species in commercial fisheries. Fishing gear and fishers' know-how in fishing technology was developed in four projects.

A total of 13 projects, amounting to EUR 344,000, improved the general *prerequisites for operation* in fisheries. The FLAG funding was EUR 264,000. These projects supported education and networking by, for instance, participation in seminars, "information cruises" for commercial fishers and fishing trade fairs, and developing the fisheries know-how. Furthermore, a contest of Baltic herring recipes in a local summer fair and a small fish marketing event were arranged. One aim of funding the projects was to make the commercial fishers and their everyday life better known for the public, for instance by presenting the local fishers and their work on the Internet. Moreover, one project supported commercial fishers, together with fishing tourism entrepreneurs, in getting fishing licenses to privately-owned water areas.

The total cost of the seven *fishing tourism* projects was EUR 149,000. The FLAG funded EUR 128,000 for, e.g., making a plan for building networks and making a plan for developing fishing tourism. Seven projects were funded in the theme *sustainable use of fish stocks*, amounting to EUR 149,000. The FLAG funded EUR 128,000, which aimed at revitalizing the fish stocks, enhancing the targeted hunting of problem-causing grey seals and studying how the fish stocks were impacted by the cormorant.

Various Fishing Regions, which are intermediary level management organizations, fisheries advisory organizations and networks have been responsible for carrying out the projects. Often the FLAG-funded projects form one part of a larger initiative. In addition to the individual projects, an activator was introduced, who was responsible for providing local supporter for the fishing livelihood, e.g. by helping the fishers to fill in applications for subsidies.

Program period 2014–2020

By September 2017, the second programme period had supported a total of 18 projects. Two projects deal with the target of *increasing fish processing and the level of using fish in primary production* with an emphasis on developing Baltic herring and smelt products. Six projects fall in the category of *improving the fishery infrastructure and means of production*. Four of the projects support development of fishing harbours in the area. One project studies opportunities for passive hunting of grey seals. The FLAG has also

decided to take part in a Baltic Sea-wide collaborative project,¹² which contributes to mitigating commercial fishers' problems caused by seals and cormorants.

The FLAG has decided to fund five projects in order to *improve the image of local fisheries in the eye of the wider public and consumers' usage of locally produced fish* that includes, for instance, spreading information about fish use to school children. Three projects aim to *increase in the knowledge and networking of the operators in the area*. These include training and networking for commercial fishers and building of a network for fish fingerling producers. Two projects support the *increase in fish-related tourism*.

It is too early to make far reaching conclusions about the projects in the present programme period. However, taking the former period into consideration as well, it can be concluded that the subjects of the projects are quite varied, reflecting multiple challenges of coastal fisheries in the FLAG region. The development of new fish products answers to the need for moving from standardized to specialized products. In addition, new projects support a change towards dedicated products and direct marketing to the consumers.

Best practice examples

Regarding Lake Pyhäjärvi, a project has introduced a quality brand for the signal crayfish. The idea is that the consumer should be able to distinguish between the higher quality crayfishes, which are supplied by professional fishers, and other products. Another project has started to study how to use the side flows in fish processing in order to utilize the whole fish.

Innovation of a smelt trap net, currently important fishing gear in the Archipelago Sea, was a result of an unsuccessful FLAG project aiming to take away large numbers of smelt that caused problems in pikeperch fisheries. As a consequence, it was found out that there was demand for smelt and one fisher developed a suitable type of trap net for the purpose.

Breeding of European whitefish fingerlings for one summer is an innovation that has been funded by the FLAG. Commercial fishers participate in catching the spawning fish in the river and later take care of the fish cages held in coastal waters. The stocked fish grow in the same water area to which they will be released, which has been proved as a successful strategy. The whitefish stocks are improved, and fishers receive additional income.

Main barriers for reaching the goals and making innovations

Since Finland joined the EU in 1995, the fisheries governance system has been strongly affected by the EU's Common Fisheries Policy (CFP). Ever since 1995, there has been an inherent contradiction between the needs of the coastal fisheries and the alignment to the CFP. The coastal fisheries would need a boost for securing the livelihood over time, while the CFP aims at reducing the fishing capacity. Fishers consider the best way to boost their livelihood and attract younger generations to the occupation would be to

¹² See further <http://www.sepra.fi/esko/balticfisheries>

reduce the interventions from outside their sphere so that fishers could regain their freedom and flexibility.

Many fishers regard the bureaucracy too heavy, and for this reason, some do not apply for subsidies anymore. Besides the increased regulation of fishing activities, the highest barriers for coastal fishing are the damages caused by the seals and cormorants. The fishers feel helpless and express that the authorities, research sector and other fisheries have not sufficiently helped with this problem.

The high barriers easily discourage young persons from starting as fishers. Moreover, in order to recruit young fishermen, investments are required, but subsidies are only scantily available for newcomers. New fishers will also need to acquire a sufficient quota in herring and salmon fisheries, which is a recent addition to the row of challenges when starting the profession.

The individual transferrable quota system was initiated in 2017 regarding trawl and trap net fishing for Baltic herring, trawling for sprat and Baltic salmon fisheries. Coastal fisheries are affected by the quota system in salmon fisheries and herring trap fisheries. The main aim of initiating the quota system was to improve fishers' opportunities to allocate fishing activities in a way that would improve their ability to respond to the demand for fish. Consequently, this should improve the producer prices of fish and profitability of the livelihood.

Among the Finnish consumers, there is a substantial demand for fish captured in the coastal waters. The strategy of processing high value products, together with marketing these products directly to the consumers, enables a continuation of the livelihood for many coastal fishing families. People seem to be willing to pay for talking to the producer as buying the product becomes a part of the "food experience" (Fig. 4). A recent addition to the marketing strategies, and a growing future opportunity, is the use of social media for making contact to consumers, who want to buy fish products directly from the fisher. There is also a potential to increase the importance of coastal fish in restaurants. Due to the seasonality and uncertainty of coastal fishing, close co-operation between fishers is required for securing steady enough supply to the restaurants.

Figure 11: Customer service in the Turku fish marketing event in 2016



Photo: Pekka Salmi.

Fishers have often been disappointed by the lack of support from people outside fishing to overcome the animal-related and societal challenges. The FLAG system is an exception to this rule and a totally different approach from any previous attempts. Although many fishers are not certain about its usefulness (especially now that direct investments in fishing businesses are not possible), FLAGs create important bottom-up activities that can turn the downward trend of coastal fisheries up again.

In the FLAG Bothnian Sea and Lake Pyhäjärvi, coastal fisheries can absorb new innovations from lake fisheries. Networking in local and regional levels gives a larger voice to coastal fisheries. The new collaborative international Baltic Sea project, which aims at mitigating the seal and cormorant problems, is a promising initiative as it aims to show the magnitude of the issues from a wider perspective and it will, hopefully, also create enough international pressure to find solutions that often cannot be found on a national level.

Direct marketing, household production and marinated herring

This case study illuminates how Finnish coastal households have developed new practices and innovations in order to cope with the changing circumstances. These practices and innovations are related, in particular, to differentiation of household strategies and development of fishing technology. In spite of a decrease in the long run, a total of 2000 fisher households still operate along the Finnish Baltic coast.

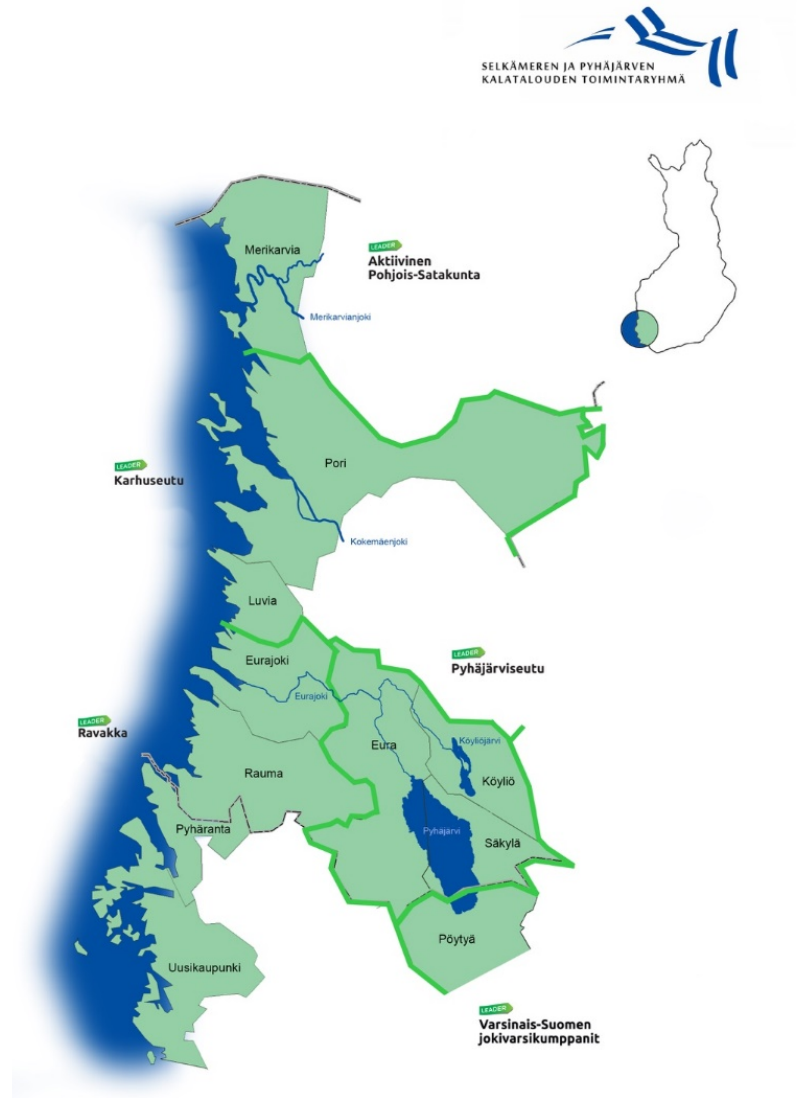
These fishers are usually self-employed, use relatively small boats for operating in the nearby waters and land the catch to their own jetty (Salmi and Mellanoura 2017). According to the official registers, approximately 9% of the coastal fishers are women. In the Finnish Baltic Sea fisheries, small-scale coastal fishers form a majority with over 90% of the total employment, while the open sea fishers, using large trawlers for catching Baltic herring (*Clupea harengus membras*) and sprat (*Sprattus sprattus*), land the largest volumes.

Combining fisheries with other income sources, pluriactivity, has been a common strategy for reaching sufficient living conditions for the household. Especially small-scale agriculture was traditionally linked with fishing activities, while today, the combinations are more varied, including wage working in the public sector (Salmi 2005). Despite changes in the economic bases, the traditional life-mode features of fishing are still widely appreciated.

Another type of diversification happens within fisheries when the entrepreneurs seek new ways for using the family labour, fishing vessels, gear and catch. The case study presented here focuses on diversification from bulk production towards self-processed value-added products that are often marketed directly to consumers. The analysis utilizes a categorization presented in Chapter 3 that defines four dimensions of varying technology and market relations. In this perspective, despite its many variations, coastal fish production can most often be characterized as generic and standardized. From a historical starting point, however, there is a growing endeavour towards specialization and dedication. The Finnish case study can be used for exploring in which ways, and under which conditions, coastal fisheries can look at specialization and dedication as potential business models.

The material presented here is collected in Merikarvia, a coastal municipality with a long fishing tradition. Merikarvia is located along the coast of the Bothnian Sea, Western Finland, and belongs to geographical area of the FLAG Bothnian Sea and Lake Pyhäjärvi (see Fig. 5). In many ways, Merikarvia is an example of general trends in Finnish fisheries policies and development. Most of the Finnish fishing households have diversified their strategies in order to cope with economic constraints related to the seasonal availability of fish, fluctuations of fish stocks and producer prices, fishing restrictions and harms caused by seals and cormorants.

Figure 12: The study site Merikarvia is located in the northern part of the FLAG Bothnian Sea and Lake Pyhäjärvi



The Merikarvia fisheries presented here illustrate a case of multiple innovative practices in relation to the producer-consumer interaction and specialization in technology. It highlights how fishing activities can be used as a base for a modern family-based enterprise. The case explores the household dynamics that are central to this type of production, and how both specialization and dedication are used to differentiate and distribute the product. Firstly, the historical background of the consumer-oriented strategies, the fishermen's life-mode and cultural aspects of the community shall be described. Secondly, the report focuses on the market relations, institutions, potentials and main changes for the producers. Finally, the report focuses on the role of local and regional policy actors in supporting the innovations.

Life-modes, innovation and coastal fisheries

Fishing for Baltic herring is at the centre in the history of Merikarvia. Historically, gillnets have been the major method for catching herring, but also trap nets were introduced more than 100 years ago. Social ties were strong in this local community, although also tensions and hierarchy marked the relations – in particular between professional fishers and the land owners (Salmi and Salmi 2009). Tensions were visible, for instance, when starting the use of trap nets in herring fisheries. The land owners possessed the rights to fish in suitable sites for trap net fishing close to the shore, which irritated the majority of fishers, who were landless. A distinctive life-mode feature of these landless fishers in the early 20th century was in their “working man’s values” (Salmi and Salmi 2009). These ideas of work, modest living requirements and equality in the community have prevailed until today among the fishers in Merikarvia.

Due to their values and life-mode, adoption of new innovations has not been very popular among fishers with the working man’s identity. New gear, for instance, was only tested by a small number of fishers who did not belong to this group of fishers who considered themselves as workers (Salmi and Salmi 2009). The innovation-oriented fishers possessed more entrepreneurial spirit, aiming at expanding their firms, and had more social relations with the land owner group. In the 1960s, fishing for European whitefish (*Coregonus lavaretus*) became important along with development of local drift net fisheries in Merikarvia (Salmi 2010). These seasonal fisheries were initiated and operated typically by fishers with the working man’s identity – and even by factory workers during their leisure time – as it did not necessitate big investments and the distance to the fishing waters was short. This distinctive whitefish fishing culture came to an end in 2008 when drift net fishing was forbidden in the Baltic Sea. This prohibition, which was a consequence of an EU directive motivated by porpoise conservation, also prevents a revival of drift net fishing for Baltic herring (Salmi 2010).

Fishing for Baltic salmon (*Salmo salar* L.) became important in the mid-20th century at the time of crisis in the Baltic herring fisheries. In the 1980s, the coastal salmon fishers were first to experience fishing restrictions by the Government: time limits for trap net fishing were set in order to protect the species (Salmi and Salmi 2005). In addition to the time limits, an individual transferable quota (ITQ) system was also introduced in 2017 to the salmon fisheries. Individual transferable quota systems have recently been implemented in Finland also regarding trawl and trap net fishing for the Baltic herring and trawling for sprat.

New strategies and consumer-oriented innovation

With more than 300 commercial fishermen, the early 20th century was the period with the highest number of commercial fishermen in Merikarvia (Salmi 2010). By contrast, there were only 145 commercial fishermen in Merikarvia in 1950 (Salmi and Salmi 2010). In 2014, there were only 14 commercial fishers in the community (unpublished demographic material of Fisheries statistic division in Luke). During the last 100 years economic, societal and environmental circumstances have, thus, changed fast. The fishing culture and its related life-mode in Merikarvia is, however, still strong. The fishing tradition, stories and social ties are highly valued and also used in local tourism

promotion. Some commercial fishers have changed their strategy to tourism based on the fishing culture and local nature. They arrange trips to the islands for enjoying the natural amenities, fishing, stories and fish meals. Recently, active locals also created a dictionary of local words used for describing fishing activities, gears, vehicles and natural phenomena. Old fishing grounds are marked on a map with their names and characterizations. Stories about the local fisheries' history have also been documented and published on the Internet. These actions are examples of creative collaboration through social networks and the living appreciation of local sea-based history.

Current challenges

In the present Finnish coastal fisheries, grey seals and cormorants are commonly regarded as the main threat of the livelihood (Salmi and Salmi 2017). Seals and cormorants swim or dive into fishing nets, where they eat fish, damage fishing gear and scare away the fish. The room for local action to prevent the damages is limited due to the conservation statuses of these species, but in the case of seals, development of gear technology has somewhat mitigated the problem.

Figure 13: A fisher examining a push-up type trap net for salmon



Photo: Pekka Salmi.

The household strategy, which emphasizes fish processing and direct marketing, is not a new one, but the multiple constraints in coastal fishing have increased its importance. Complexities caused by the seals and cormorants and, for instance, increased fishing restrictions have increased the pressure to add to the value of the catch. One of the strategies have been to engage in processing of marinated herring. This consumer-oriented strategy rests on long traditions in the salting of Baltic herring. A century ago, fishers in the Merikarvia region salted at least one quarter of their landings (Salmi 2010). In addition, several factories started to produce salted herring, and wooden pots for the

production. In the beginning of the 1920s, the local salting industry seasonally employed more than 200 villagers and purchased 1.58 million kilograms of herring annually, either fresh or salted, from the fisher families (Salmi 2010). In the late 20th century, the fish processing industry died along with diminished demand for salted herring.

In the past, fishers mostly sold fresh and salted herring directly to consumers in the nearby population centres (Salmi 2010). The Merikarvia fishers also travelled to the fish marketing events held in major cities like Turku, Salo, Helsinki, Vaasa and Pori for selling their self-produced salted herring. This tradition started in the 1890s and is important for many fishers and customers, who want to eat fisher-made artisanal products. In Turku, there was a long period in the 20th century without dedicated fish marketing events, but the tradition was revived in 1979 and has become very popular. About 500 fish marketing events are organized annually in Finland (Moisio and Tuuri 2016). Some of these are named as Baltic herring marketing events, the largest being held in Helsinki (lasting 7 days, 200,000 visitors) and Turku (4 days, 80,000 visitors). In the latest Turku herring event, fishers occupied 23 out of a total 154 selling stands.

The fishers most often sell self-made marinated herring products of many types; the recipes are “family secrets”. This innovation was made in the 1980s when the demand for salted herring and traditional spicy herring decreased. Other types of processed fish and “archipelago products” are also supplied to the customers. A competition for the best marinated herring product is typically arranged as an exciting part of a fish marketing event. The winning products are quickly sold out.

Diversified household strategies in Merikarvia

This chapter describes the present strategies for production, processing and marketing in two fisher households, which we call A and B. Family A dwells in the centre of the municipality while family B lives outside Merikarvia. The husband of B originates from Merikarvia and fishes for salmon in the same waters as his father used to. Household A targets mostly Baltic herring and Baltic salmon with trap nets. Fish capture as well as the investments for the gear are operated by the husband in co-operation with another commercial fisher on a 50–50 basis. Because of the problems with grey seals, they use the seal-safe push-up trap nets. The two fishers have collaboratively adapted the technology of the push-up trap net, which was originally designed for salmon fishing, for the capture of Baltic herring.

At the beginning of the year, the main task for the husband the household A is construction and preparation of fishing gear. At this time, the wife processes and sells small volumes of Baltic herring products to consumers in an outdoor market of the neighbouring municipality. The raw material is bought from open sea trawlers because herring cannot be captured by coastal fishers in winter. The high season for fishing starts in April, when the ice cover has melted, and lasts until August. Herring landings are mostly sold to wholesale buyers, whereas about 50% of the salmon is bought directly by the consumers at home and in the fishing harbour. During summer fishing season the wife processes most of their own catch and continues selling the products

to her regular customers at nearby market places as well as to a local retail shop and two restaurants. Customers also buy fish products from the home of household A.

The high season for processed fish products comes in autumn when the husband in household A, their children and the wife's sister take part in processing and marketing tasks in 20 fish market events. It is essential to keep to the high quality and good assortment of the products. Household A produces up to 10 different flavours of marinades. The most popular recipes are used year after year, but also new innovations are made annually. Preservatives are not used due to the customers' preferences. Consequently, the family can only start making the products two weeks before selling. Customers in the fish marketing events also increasingly prefer the use of skinless herring filets. The husband in household A also captures perch, European whitefish and river lamprey, which are also processed for the autumn marketing events. In those events they sell – apart from marinades – a variety of smoked, fried and fileted fish products, sea buckthorn juice pressed from wild bushes by the fisher and the so-called archipelago bread baked by the wife.

The income of household A consists of 24% from capturing Baltic salmon, 52% from rearing and processing of rainbow trout, and 24% from marketing processed Baltic herring and other products in fish marketing events. The husband has obtained his skills and resources in salmon fishing from his father, and likewise the fish farming activities were started already in the 1970s by the wife's father, who in addition to fish farming also fished for salmon.

Household B

The beginning of the year for household B is partly similar to A: the main task for the husband is in the construction and preparation of fishing gear. Gutting, processing and selling of rainbow trout is important work around the year. The work load in the rainbow trout business increases in spring, and the husband of household B starts the salmon trap net fishing in May. His father helps in setting out the gear. Until 2017, the season for trap net fisheries for Baltic salmon lasted only one month due to the annual regulation determining legal starting dates for the Finnish coastal salmon fisheries, but after adoption of the individual quota system the season grew to 2–3 months, although a fisher can use only one trap net before the official starting date.

Rainbow trout production is hampered by the seals and cormorants, but not as much as in the case of capture fisheries. Also, the cold conditions and ice in winter cause occasional problems. The most important product for household B is cold smoked rainbow trout, which is marketed to nearby provinces. The quality of the vacuum packed cold smoked filet is very high due to the freshness of the fish and the wood quality used in smoke production. The filets are marketed to retail shops widely around Western Finland. The entrepreneurs have also started to develop rearing of European whitefish. This species has high demand and long consuming traditions along the coast, but the supply has been restricted, e.g. due to the drift net fishing ban in the Baltic Sea.

Half of the salmon landings by the husband of household B is sold as filleted, smoked or unprocessed to consumers in their home harbour or in outdoor market places and to restaurants. The other half goes to a regular local buyer. In the autumn

period, the wife and husband travel to 10 fish marketing events, and also to the most important Baltic herring marketing events in Helsinki and Turku. The assortment is quite similar to that of the family A: Baltic herring marinades, salted herring, fried river lamprey and sea buckthorn juice. The family mostly buy trawled and fileted Baltic herring for the products. The material for salted herring, which is not fileted, is partly fished by the family using gillnets.

Like household A, household B does not use preservatives in their herring marinades. They make seven different products, five of which are made of skinless filets. They constantly develop new products and take part in the competitions for “the best marinade” in the events. According to the husband of household A, success in the competition may increase sales by 10–20%. The wife of household A explained that they select new flavours by letting friends and relatives taste two or three new versions and decide which is the best one.

Turku Baltic herring marketing event in October 2017

Both household A and B participated in the Turku herring marketing event in 2017. The wife of household A was responsible for the selling of fish for the whole four days. Her sister assisted her in the first two days and thereafter the husband assisted in the shop. Both the wife and husband of household B served customers during the four days. Household A supplied nine different flavours of marinated herring (Fig. 7) and household B had six. Household A had also brought a new flavour to the event, but neither A or B reached top three positions in the competitions. The marinated herring are packed in small plastic cans. The price for one is EUR 6, but when the customer buys at least three cans, the unit price is EUR 5.

Figure 14: The product assortment of household A



Photo: Pekka Salmi.

In addition to marinated Baltic herring, both fisher families sold salted herring, fried river lamprey, sea buckthorn juice and archipelago bread. Shortly before arriving to Turku, the husband of household A had smoked European whitefish, Baltic herring and rainbow trout for adding the product assortment. Household B sold cold smoked and raw spiced rainbow trout fillets. Most of the herring used in the marinades had been bought from a fish processor, who provides skinless fillets of trawled herring. The raw material for the smoked products, however, is usually self-caught or self-reared. The importance of sea buckthorn juice in fishers' income generation has decreased since the 1980s and 1990s. Presently, there is higher competition by those who sell juice taken from farmed sea buckthorn.

Marketing and consumer dedication

Decoration of the selling counter and its surroundings is important, and offering free tasting of the products is a good strategy for getting the customer's attention. People like to chat with the producer, but there is normally not enough time for longer stories. Still, the experience of exchanging few words about e.g. every-day problems and the origin of the fish or the fisher, obviously adds the value of the physical product for many customers. The husband of household B has considered travelling to the Helsinki herring event by boat because customers buying fish from a fisher in a boat is an even more special and original experience for the customer. Supply for the products in an open-air event is highly dependent on the weather. In 2017, the weather in the Turku Baltic herring event was dry and mostly sunny, which resulted in very good sales. The assortment of household A and B became heavily reduced already during the third day of the event.

The impacts of fisheries and environmental policies and regional development

Fishing households A and B are affected by national environmental and fisheries policies, especially with respect to the conservation of Baltic salmon and seal and cormorant populations. Lately, the situation in the cormorant-fisheries conflict has, at least temporarily, been mitigated in the Merikarvia region as a result of successful harassing actions in a large colony to the north of the village. Problems caused by the grey seals have become even heavier and innovations for mitigating the impact are available only in trap net fisheries, as mentioned earlier.

For household A, the predation by the seals poses problems in producing perch filets to be sold in the fish marketing events. The gillnetting season for perch starts in August, but is shortly thereafter interrupted when the seals arrive to the fishing grounds. The grey seal is a game species and a small fraction of the population – mainly those who utilize fishing gear as a “feeding place” – are killed annually. Shooting of the seal is difficult and motivation for hunting has been reduced as a consequence of a decision by the EU to prohibit selling seal products. Subsidies for investments in the seal-safe “push-up” trap nets have been a positive achievement by the fisheries policy and is important for the fishers, due to the high costs of building this gear. In addition, both of the studied fishing enterprises have received payments aimed at compensating the losses caused by the seals and cormorants. The allocated sums are, however, decreasing.

Figure 15: Boats in the Merikarvia fishing harbour



Photo: Pekka Salmi.

The public fishing harbour at the centre of Merikarvia (Fig. 8) is important especially for household A. It is the place where the fisher and his fishing partner land most of the catch. The equipment of the harbour includes ice machines and a winch, which the fishers use for lifting the catch to the truck. Also, the husband of household B uses the ice machine and processing and storing facilities in the harbour. The harbour is managed by the municipality and was lately renovated with funding by the EU Fisheries Fund. The fishers are not very familiar with the activities of the Fisheries Local Action Group (FLAG) of Bothnian Sea and Lake Pyhäjärvi. They have, however, participated in commercial fishing seminars, partly funded by the FLAG, and consider those as useful.

From the fisher's perspective the amount of "paper work", e.g. the obligatory filling of the daily landings to log books, has become heavier. Also, the buyer of the fish has to make declarations of every lot of the fish he purchases from the fisher. Thus, collecting diverse small landings from coastal fishers has become increasingly cumbersome, when compared with the alternative of ordering large amount of Norwegian salmon smoothly from one dealer. This is one reason for the dominating supply of imported fish in Finnish retail shops.

The system of transferable use rights was launched in 2016 for the management of Finnish Baltic herring fisheries, and it is also being applied to Baltic salmon fisheries in 2017. The consequences of using this management instrument for coastal fisheries are not fully visible yet, but for household A the new system has already had implications. The husband of household A and his fishing partner had recently expanded their trap

net herring fisheries and the amount of gear. Because the quota was defined on the basis of fishing history in 2011–2015, the allocated quota was far too small for the present need. The solution was that the wife in household A made an application for becoming a “new” registered commercial fisher and received a quota too. Their fishing business can survive by this manoeuvre, but it increases the bureaucracy for the household.

Discussion: Diversified household strategies as innovations

The strategies of the studied fisher households rest on local tradition and coastal fishing culture. Innovations are related to finding suitable strategies and technical solutions for coping with the various challenges of the occupation, largely caused by environmental legislation and fisheries policies that constraint the fisher’s practices. On the other hand, fisheries policies also support the livelihood with an aim of slowing down the decline rather than reviving coastal fisheries. The harbour services, investment subsidies and compensation payments have formed the most important types of public support.

Stemming from the long history in fisheries in Merikarvia, the local community supports coastal fishing and innovation-making by the fishers and their household members in many ways, and uses fishing culture as an element in tourism as well. Innovations are rarely policy-driven, but the coming years will show whether the local FLAG takes a role in activating new strategies and fisheries innovations. Moreover, a program for fisheries innovations has been initiated in 2017, funded by the European Maritime and Fisheries Fund.

The studied cases show how coastal fishing activities can be used as a base for a modern family-based enterprise. The popularity of fish marketing events and appreciation of local fish products have provided a basis for fisher households in forming alternative added-value strategies that aim at further specialization and dedication. In the studied households, both specialization and dedication were used to differentiate and distribute the product. The households applied three or all of the four technology and market relations (see chapter 3 during the year, depending on the season. The conventional selling of landings as a whole to a buyer forms the most typical model in Baltic herring and Baltic salmon fisheries, while salmon is also sold unprocessed directly to consumers in the harbour. During the fish marketing events in autumn, fishers sell self-processed dedicated products to the customers. In addition, fisher-made products are being sold in grocery shops.

Quality of the products is essential for fisher families that focus on fish processing and direct marketing. Consumers appreciate not only the originality of the product and freshness of the fish, but also the experience of buying the product from the producer. As a consequence of direct contacts to the customers, the fisher families adjust their products to the recent trends. For instance, the fishers have not added preservatives in their herring products, although they would add storage life and the time available for processing. In the future, social media networks may strengthen and widen the contacts between fishers and consumers beyond the current emphasis on fish marketing events in the autumn.

Denmark: Taking the first steps

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The chapter draws on experiences from the Danish island, Bornholm, and the local Fishery Local Action Group (FLAG). The policy case shows that the Bornholm FLAG draws on the recent experiences from the specialised agricultural sector on Bornholm. Drawing on these experiences, the FLAG supports business plans that either offer the consumer experiences, narratives and a unique product, or business plans that mobilise dedicated distribution channels. Finally, this case study describes two innovation activities. One is a local fish processing, retailing and restaurant business on Bornholm, called *The Fish Workshops (Fiskeværkstederne)*, which aims at creating dedicated and specialised products with added value by selling in their own restaurants. The second is a fisher who has switched to direct sales, distributing all of his catches locally and by the use of a fish truck.

Introduction

The island of Bornholm has around 40,000 inhabitants and forms a single municipality. However, Bornholm is given certain responsibilities otherwise assigned to the regional authorities in Denmark. For instance, like the five regions in Denmark, Bornholm has its own *Growth Forum*, responsible for, among other things, policies and strategies for business development and administration of EU structural funds. Moreover, the island has a Local Action Group, which also is approved as a Fishery Local Action Group by the Danish Business Authority.

Historically, fishing, fish processing and fishery services formed an important economic sector on Bornholm. In fact, in “the golden days” in the 1980s the fishing sector employed several thousand people and the harbour in Nexø at the east coast of Bornholm was one of the main centres in the Baltic Sea for landings and provision of fishing related services (e.g. repair of vehicles, trawls and motors). Since then, the catches and the employment has declined drastically. In 2016, only 110 persons received their income through fishing and only 123 were employed with fish processing (Hedetoft, 2017).

Like the fishing industry in the rest of Denmark, the Bornholm fishery was intensive, scale-orientated and based on a few species (mainly cod and earlier also herring). The landed fish was mainly supplied on contractual terms to fish processing companies on Bornholm (in particular the large company, Espersen A/S) and here processed into semi-fabricated frozen fish blocks for further processing elsewhere. Moreover, like in other parts of Denmark, there were, and still are, substantial landings of sprats and sand eels, which are not used for human consumption, but processed into animal fodder products. In fact, measured in volumes, the major part of landings on Bornholm in 2016 (20,052 tons or 82% [Hedetoft, 2017]) are caught by fishers from

other parts of Denmark and used for non-human purposes by a local mink fodder company called Fishpro. Thus, the Bornholm fishing sector is characterized by a relatively small local value-added of the landed fish resources.

In recent years, the Bornholm fishery has seen a drastic decline in the number of vessels and the value of the landed fish. According to Hedetoft (2017), there are 64 fishing vessels left on Bornholm in 2016, which are owned by a full-time fisher. Out of these 64 vessels, only 10 vessels are larger than 10 meters. A total of DKK 61 million (approx. EUR 8.2 million) worth of fish were landed, out of which 44% were for human consumption, and hereof 92% relate to cod. Just in the years since 2010, the value of landed fish for consumption has more than halved. In contrast, the value of fish used for non-human food products, i.e. production of animal fodder, has slightly increased (Hedetoft, 2017).

Today, it is only a small part of the fish landed on Bornholm that is locally processed – not to say consumed. The majority of landed fish is sold to purchasers from large processing industries outside the island. Similarly, some Bornholm fishing vessels fish and land their fish at other locations because they are able to get higher prices there. Thus, the local value added of the (declining) landed fish resources is very limited.

All in all, the smaller vessels fishing in the Baltic Sea and landing on Bornholm are generally under pressure. Besides the heavily reduced available quotas, the Baltic Sea cod is considered a product with lower quality and thus priced around 30% of codfish from the North Sea. A growing population of seals is considered among fishermen as a main reason for the declining volume and quality of the Baltic cod. Hence, it is expected that if the Bornholm fishers do not find alternative sources of income to the codfish – or more profitable ways of selling it – they will cease operating within a relatively short timeframe.

A possible basis of inspiration for the process of identifying new paths for the Bornholm fishery sector is the changes in the recent 20–30 years within the land-based food sector on Bornholm (Manniche, 2013), reflecting more general trends in Nordic and other western countries in recent decades (Manniche and Sæther 2017). Alongside the dominating scale- and price-competing production and distribution model of agriculture and food processing industries, new productions of specialized, premium-priced food, beverage and confectionary products have emerged, supported by – among others – the Bornholm LAG (Manniche 2013). A considerable market basis for these new niche productions is provided by the large number of tourists that visit Bornholm every summer. The following part will describe the local Growth Forum and the Bornholm FLAG, which are the main policy actors pushing for increased added value through a more specialised fish production.

Actors and policy frameworks for innovation in the Bornholm fishery sector

The need for ending the critical decline of the fishing sector is acknowledged by local politicians and a variety of development actors, such as the municipality of Bornholm and the Bornholm Growth Forum. Agriculture and food processing, especially the emerging sector of small-scale producers of specialty foods and drinks, is one of the priorities in the Growth Forum's regional business development strategy of 2015,¹³ which is approved and supported by the municipality as well as the Danish government.

The fish sector is not explicitly targeted by the Growth Forum 2015 strategy. Yet, as part of considerations regarding how to potentially support the sector in the future, the Growth Forum ordered a report in spring 2017 (Hedetoft, 2017), which analyses the problems, barriers and possible opportunities for fish-based activities on Bornholm. So far, however, the Growth Forum has not launched any concrete initiatives specifically targeting the fish sector, but a few fishery-related companies (mainly larger manufacturers) have received economic support from EU structural funds via the Growth Forum.

The Bornholm Local Action Group (LAG) is another policy actor that is important in terms of support to innovation in the Bornholm fishing sector. Like other EU LAGs, the Bornholm LAG is based on the LEADER method, which is based on bottom-up, cross sectorial and territorial development. This approach thereby contrasts the sector- and cluster-orientated support schemes of the state regulated Growth Forum governance system. The Bornholm LAG is also approved as a Fishery LAG (FLAG) for the period 2014–2020 and is thus a so-called “integrated action group”, meaning it draws its financial resources from two structural funds. Accordingly, the task of renewing the Bornholm fish sector is an integrated element of the general development efforts of LAG-Bornholm, and thereby potentially gains synergy and inspiration from broader groups of actors not related to fisheries.

Only few of the remaining local fishermen are proactive and have taken initiatives on their own – or together – for developing new types of fisheries or new sales and distribution channels. According to Hedetoft (2017), a main obstacle mentioned by local fishermen and fish processing, distributing, retailing and catering companies is the problem of providing the needed volume and regularity of fish supply. Moreover, the local fishermen's association, *Bornholms & Christiansøs Fiskeriforening*, has resigned from the role as the formal applicant and coordinator of a large development project for the Bornholm fish sector (*see further later*) because of their limited administrative resources for this kind of action. The role as coordinator has been taken over by the local association for agriculture, *Bornholms Landbrug*.

The limited bottom-up entrepreneurial initiatives of fishermen and the resignation from the coordinator role by the local fishermen association may reflect the depth of the obstacles of changing production models, market relations, practices etc. The conventional farming and food processing industries on Bornholm, including their strong organizations such as *Bornholm Landbrug*, were for many years rather reluctant and sceptical regarding the viability of the new trends within land-based food, taking-

¹³ See <https://www.brk.dk/Erhverv/Vaekstforum/Strategi/Documents/Erhvervsudviklingsstrategi,%202015-2020.pdf>

off in the 1990s (Manniche, 2013). The fact that *Bornholms Landbrug* now takes responsibility for encouraging small-scale innovations in the fishery sector outside its own auspices, shows that Bornholm economically, politically and institutionally has changed during the last decades and, today, can provide a type of innovation support to the fishery sector that was not to the same degree available for land-based entrepreneurs, when they started their development activities 20 years ago.

General aims and measures of the Bornholm FLAG

The initial formal approval and establishment of the Bornholm FLAG (as well as other Danish FLAGs) for operation in the EU funding period 2014–2020 was delayed due to administrative obstacles at the national level. Therefore, the formally required “development strategy” – which implied identifying goals, priorities, measures and budgets for allocation of financial support to fish innovation – was only approved by May 2016. Thus, the Bornholm FLAG has only been active for a short period and its strategy has not yet been fully implemented. This section describes the overall visions and objectives of the Bornholm FLAG.

The overall vision of the Bornholm FLAG strategy 2014–2020¹⁴ is “a green sustainable island that due to a strong local economy, cultural identity and attraction power encourages innovative business opportunities and social inclusion” (LAG Bornholm, 2016a, p.9, translated from Danish by the authors). This vision clearly connects to the overall branding and development strategy of Bornholm, Bright Green Island,¹⁵ supported by the municipality. It encourages transition to renewable energy sources and sustainable development in general. Accordingly, as said before, innovation in the fishery sector is integral to, and gains synergy from, broader Bornholm development strategies, also aiming at actors and sectors not related to fishery (see LAG Bornholm 2016b).

The Bornholm LAG strategy is focused on support to projects within or across four “lighthouses”. Out of these, the three first aims at job creation while the last aims at enhancing social cohesion, cultural activities, and migration to the island. The four focus areas are:

1. The bioeconomy (e.g. use of bio mass for energy, resource governance, and local food);
2. The experience economy (such as potentials within outdoor tourism, a varied event culture, arts & craft businesses etc.);
3. The maritime economy (e.g. value added of locally caught fish, business activities related to harbours, offshore etc.);
4. Culture, identity and meeting places.

¹⁴ See <http://www.lag-bornholm.dk/~media/Foundry/Sites/lag-bornholm/Files/udviklingsstrategi%20for%20den%20integrerede%20FLAG-Bornholm%20-%20maj%202016.ashx>

¹⁵ See <http://www.brightgreenisland.dk/Sider/default.aspx>

Needless to say, the fish sector mainly relates to the third field of the maritime economy, which also encompasses the important and growing activities of diverse maritime services related to shipping, cruise tourism, services to offshore activities etc., especially associated with the harbour in the main town, Rønne (see LAG Bornholm 2016b).

The budget for the present period 2014–2020, available for applications for support to fisheries and other maritime activities, annually amounts to only DKK 1.4 million (EUR 186,000), so the possibilities for supporting fish innovations this way are certainly limited. The following section will describe the first initiative that has been supported by the Bornholm FLAG, which aims at creating specialised and dedicated fish products.

Fish-related development activities

By January 2018, the Bornholm FLAG had only approved one fishery-related project application, submitted and coordinated by *Bornholms Landbrug* and titled *Bornholmske Kystfiskere* (Bornholm Coastal Fishers).¹⁶ The project period is February 2017 to February 2019, and it has as its overall goal to increase the local economic value-added of landed fish through considering the entire value chain for fish from fishery to sale, cooking and consumption.

The project also aims at enhancing the local population's interest in fish and fishing as well as the value of the Bornholm fishery (including recreational and sports angling) as an asset for marketing of the Bornholm tourism industry. The tourism development and marketing organization on Bornholm, *Destination Bornholm*, already markets and brands the tourism related potentials of recreational angling on Bornholm – Bornholm is recognized as one of the best locations in Europe for angling of wild trout – and inform via their website and social medias about local angling events, fishing gear shops, articles written by anglers, etc. Furthermore, every spring Bornholm organizes one of the biggest fishing competitions (salmon) in Northern Europe, *Bornholm Trolling Master*, which is a huge annual event attracting participants from Finland, Sweden, Norway, the Baltic countries, Germany etc. Finally, a few hostels and camping sites have specialized in angling tourism and a handful of fishing guides supply services along the Bornholm coasts to smaller groups of visiting anglers. Since the best angling opportunities are outside the normal tourism season, such activities constitute an important element in the overall goal of prolonging the tourism season.

More specifically, the project *Bornholm Coastal Fishers* aims at improving the economic conditions for the coastal fishery on Bornholm through two different but interrelated development paths, which directly translate into the two strategies of “dedication” and “specialization”:

¹⁶ See <http://www.bornholmslandbrug.dk/om-os/projekter/projekt-kystfiskeri/>

- Development and optimization of direct sales channels;
- Development of new innovative products and storytelling on the basis of locally caught fish through cooperation of fishermen, chefs, retailers, and processing industries.

The project application outlines and motivates the relevance of seven concrete “work packages” or types of activities, each belonging to one of the two mentioned paths. However, the participants, plans and budgets for realizing these individual activities are not specified so the seven work packages should rather be seen as headlines for *possible* activities to be discussed and explored during the project period.

Five of the working packages are grouped under the path of “development and optimization of direct sales channels” (i.e. dedication), while the remaining two (including the general activity of “communication of results”) are grouped under the path of “development of new innovative products and storytelling” (i.e. specialization). However, several of the mentioned activities seem to combine the two strategies of developing new products and new sales channels and market/customer relations. Moreover, working package 4 seems to concern path 2 rather than path 1, where it is located.

The seven working packages are:

Path 1: Development and optimization of direct sales channels:

- Working Package 1 – Increase the number of fishers involved in Havfriskfisk.dk and the like;
- Working Package 2 – Get to know your fisher;
- Working Package 3 – Community-Supported Fishery;
- Working Package 4 – Development of fish recipes and menus through workshops;
- Working Package 5 – Make the good story and events good business.

Path 2: Development of new innovative products and storytelling:

- Working Package 6 – Development of innovative fish products;
- Working Package 7 – Communication.

As mentioned, the two main development paths outlined in the application directly translate to the strategies of “dedication” and “specialization” respectively, although these concepts are not explicitly used in the project description. Generally, the suggested concrete project activities, as well as the analyses motivating the project application, seem to build heavily on the experiences gained from this successful development process in land-based foods, in which similar core strategies have been employed by different groups of producers (as described in Manniche 2013). Given that the project application was written by many people that had been engaged with

specialised agricultural production on Bornholm, it is not surprising the application drew on experiences from the specialised agricultural sector on Bornholm.

On 5 December 2017, Bornholms Landbrug held a project meeting for local fishers, where the varying activities and the interests of realizing them were discussed. According to Elisabeth Falk, consultant in *Bornholms Landbrug*, several fishers at the meeting expressed their interest (during the discussing of working package 1) in supplying fish to a local fisher and fish retailer attached to the online-based, direct sale system *Havfriskfisk.dk*. This direct sale system for fresh fish was originally started on Bornholm but is today part of a nation-wide organization (see further below).

Both the before-mentioned consultant of Bornholm Landbrug and the coordinator of the Bornholm FLAG told us in interviews that it is very difficult to engage the local fishers and fish-based businesses in innovative activities, and that drive and entrepreneurship is needed from actors external to the fish sector. This indeed also characterised the initial phases of the land-based food development, which largely was put on the agenda by entrepreneurs starting food productions without any previous professional experiences for this.

Nevertheless, it is the assessment of our interviewees that a long-term and open-ended development process has now started and that this process will gain further momentum in the near future due to the framework of activities set by the project *Bornholm Coastal Fishers*.

The Fish Workshops (Fiskeværkstederne)

This business case is concerned with the opportunity for new products that achieve added value of fish species previously considered to be of low economic value. The Baltic Sea contains a number of species, which fetch low prices when sold to the local buyer on Bornholm, but value may be added through crafty processing and the gradual (re-)development of a local identity of such fish and crafting. The seasonality of some of these species may indeed be a contributing factor to added value if integrated into storytelling and crafting of the products. This idea for re-establishing the viability and resilience of local fisheries on Bornholm lends from the successes of land-based local, artisanal, and craft-based foods on the island. In order to assess the opportunities for fisheries to take advantage of, mimic and perhaps even contribute to this land-based success, we have interviewed a local fish processing company about previous and current opportunities and challenges, as well as key differences between the developments on land and at sea.

Nexø and B's fish workshops

The company consists of two fish restaurants, a retail shop and a processing plant creating products for retail sale through salting, fileting, spicing etc. The restaurants are located in the two former fishing towns, Svaneke and Nexø. The company employs seven full-time equivalents out of which four are fixed positions, while the remainder is centred on the summer months, which is the peak season for tourism on the island. As

the director of the company explains, they are developing value added local products. However, the profitable side of the business is the two restaurants, not the processing of fish, and making a functioning business out of the fish that are available on Bornholm is difficult. The company have been attempting this for four years since its start. The products created in processing are sold in the restaurants and through distribution channels to the supermarkets on the island as well as local hotels and restaurants, including the local brewery.

The company produces three types of pickled herring, which are traditional Bornholm delicacies, but the fish has to be imported, mainly due to the smaller sizes and lower fat concentration in Baltic herring compared to herrings from the North or Atlantic Seas, and more recently, also due to lacking supplies of Baltic herring. Herring is considered a local delicacy and is the main ingredient of a regional dish, *Søl over Gudhjem*, which Bornholm is known for. However, the need for the herring to be imported means that this serves mostly as an inspiration for how a dish with local ties can create opportunities for added value. At the same time, the herring is a telling example of how the availability of fish is either too limited or of too low quality compared to the fishing grounds of Western Denmark. The challenge, then, is to make use of some of the fish species, which are available, and ensure that local sales and crafting make them profitable.

The Fish Workshops have made a number of experiments, e.g. with flounder, but have not yet pursued this further. Scale is an important aspect of assessing profitability and engaging in activities for the processing company. At a workshop for fishing-related stakeholders on Bornholm, the company served tasters of fish commonly considered trash fish in order to spark enthusiasm for new products. When asked what it would take to make these products a basis for a local fishery, the director responded that marketing and external funding is needed in order to make it a success. A LAG-funded project has been carried out at the initiation of the company, but they found it difficult to take advantage of the opportunity due to bureaucratic difficulties. The project was in part focused on creating a box scheme, but the attempt was unsuccessful. The availability of fish was too low, and the investments in e.g. cooling were too high to make it viable.

Discussion

Despite the innovative efforts at creating new gourmet products from what was previously considered trash fish, there does appear to be a tendency to look towards Western Denmark and its larger availability of high quality fish with some pessimism. The seasonality of some fish species, such as plaice and flounder, in the Baltic is seen as a barrier.

While this is undoubtedly a real condition of Bornholm's fisheries, we find that it may also lead to overlooking the qualities of exactly these difficult, local conditions. In terms of storytelling, local hardship is not to be underestimated for its dramatic value and the potential for creating customer awareness around the origin of the fish they eat. As of now, there appears to be very little focus on the origin of fish consumed by

both inhabitants and tourists on Bornholm, which is in stark contrast to land-based foods. These are heavily advertised as Bornholm produced and often have designated shelves in supermarkets.

As the director of the Fish Workshops makes very clear, it is unlikely that large scale cod fisheries will return to Bornholm. At the same time, marketing products that attempt to achieve higher prices through processing not only require the capacity to invest and experiment, but also a larger transformation of the role of fisheries in Bornholm as a local community for inhabitants and as a food destination for tourists. This may entail a focus on *which* fish species are available and *when*.

It also appears, when looking at the successful development of land-based foods, that the conditions of scarce resources and seasonality are not to be done away with through importing in times of low supply or freezing and storing when out of season. Rather, these conditions can potentially be included as value-adding factors, and conditions for the continuation of fisheries on Bornholm insofar as they enable storytelling.

Counterintuitively, this may mean that it is time to address the missing link in the success story of herring on Bornholm: the fact that it is imported. When the most advertised craft and specialty fish on the island has to be imported, it is difficult indeed to see a specialty market for locally landed fish. Yet, the contrast to imported fish may be just what locally landed fish need as a key qualifier and value-adding component.

Direct sales, internet and self-marketing

With direct sales, the producer is actively involved in the sale and marketing of his or her product. In principle, the catch is sold not through fish buyers or the auction, but directly to the consumers, often at the harbour or on nearby locations. Direct sales can be used as a supplement, where portions are sold locally to the consumers and the remaining part is distributed through an auction or fish buyer. Seen from the operator side, it is a way to capture a larger share of the value created. Fishers surely know the prices they are paid at the auction and the prices consumers pay in the supermarket. By selling directly to the consumer, the fisher can easily double their kilogram prices, while the consumer can save money and have the freshest fish available.

In addition to the proper legal status and hygienic standards, there are a number of implicit prerequisites that have to be in place for direct sales to be viable strategy. Firstly, there has to be a large enough number of consumers who are without their own access to fresh fish, either through recreational fishing or through other fish shops. In places where the local population is largely involved in fishing directly or for instance through family relations, direct sales seems to be a less viable strategy. In other cases, with an urban agglomeration nearby or with a seasonal influx of tourists, there are enough consumers for a fisher to sell *all of the catch* through direct sales.

Secondly, it is also hard to imagine a situation with a large number of fishers in the same harbour in which all are involved in direct sales. Direct sale is therefore essentially a niche strategy, but nonetheless capable of supporting coastal livelihoods. Similarly, direct sale is probably most suitable for an operation with one or two persons involved.

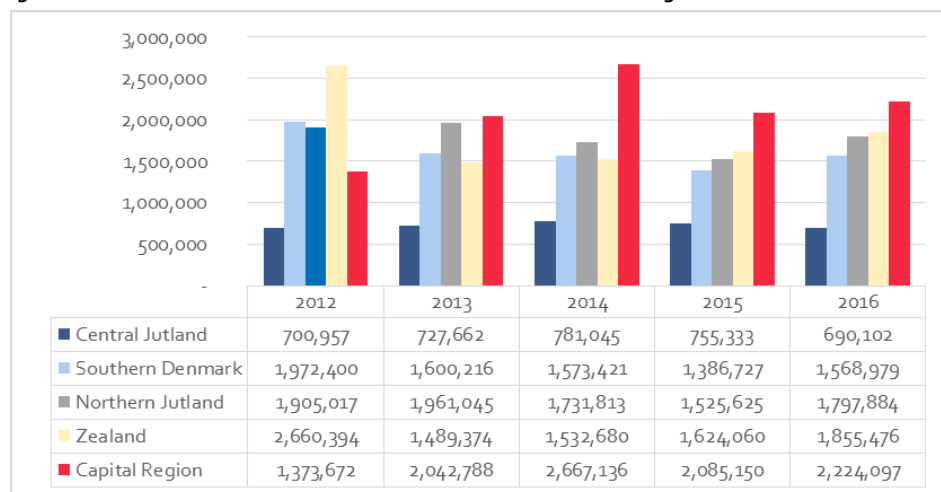
However, the innovative use of internet and social media means an increased potential for direct sales, and this can promote new forms of cooperation among fishers to organize and share direct sales channels.

Thirdly, for the consumer, direct sales means access to fresh fish at reasonable prices. But there are also other values created. The interaction and relation that is developed between producer and consumer represent an added value for the consumers. Also, producers report that they enjoy the immediate feedback and interactions with consumers. For some consumers supporting a local producer or an alternative to global food networks can be meaningful in itself. Other added values can be the environmental dimension or the “storytelling” quality, i.e. the knowledge that the fish was caught in this or that bay by that specific fisher. In the following sections we will turn to Denmark and look at some of the characteristics of direct sales in order to examine its magnitude and discuss its potentials.

Characteristics of direct sales in Denmark – volume and potentials

Direct sales are not new in the Danish context. What is new is the application of internet technologies and the interest that commercial fishers are showing in it. Direct sales have earlier been widely used by part-time fishers and often carried out “below the radar”. As explained above after the introduction of market-based fisheries management, small-scale fishers have shown increased interest in direct sales as a way to improve prices and resilience. The official statistics indicate that direct sales have been stable around DKK 8 million annually in the last five years. The numbers should be interpreted cautiously since direct sales can be registered differently if the fisher is engaged in other ways of selling and therefore is registered as a proper fish buyer as well. The statistics therefore are biased towards those operations where direct sale is mainly a supplement.

Figure 16: Distribution of income from “direct sales” in the five Danish regions in DKK



The geographic layout of regions in Denmark (three of them have coastlines on two sides) makes it difficult to conclude on the exact distribution of direct sales. However, the numbers indicate that direct sales are employed in all regions with a slight concentration in the Eastern part of the country. This matches well with the opposite concentration and centralization of large-scale fisheries in the North-Western part of Denmark.

If we take a look at the Capital Region (Hovedstaden), which is where Bornholm is administratively situated, and the Region of Zealand (Region Sjælland), the geographically neighbouring region, then we can see that the direct sales are made up of wide range of species. This supports the impression that direct sales traditionally have been a niche strategy. A range of species (like eel and Baltic prawns) are not easily subject to large-scale fisheries and demand local knowledge and the flexibility of the small unit and gear. However, the main commercial species (i.e. cod and plaice) are also important in the direct sales. sales in two regions.

Figure 17: The composition of direct sales in the Capital Region of Denmark

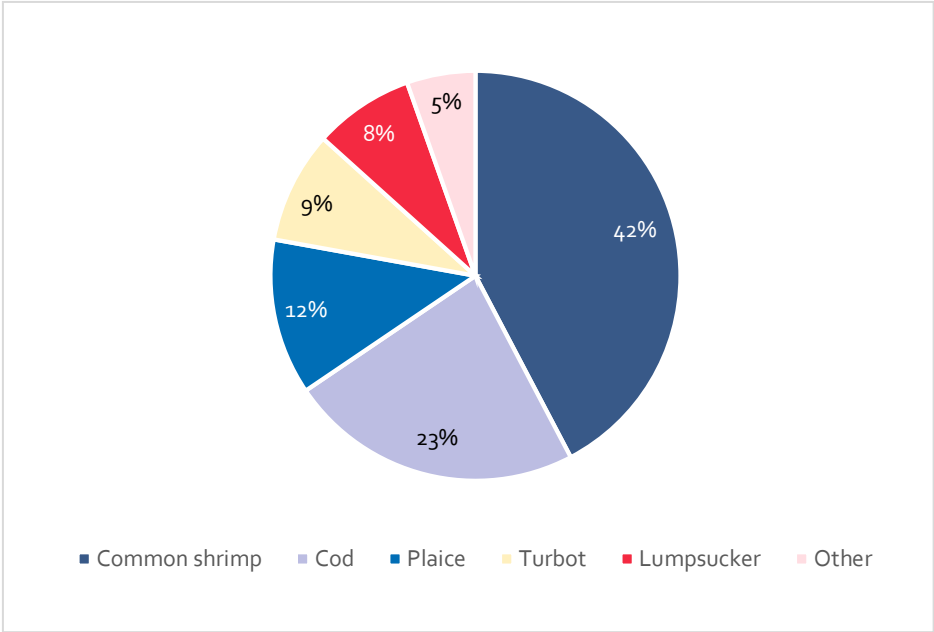
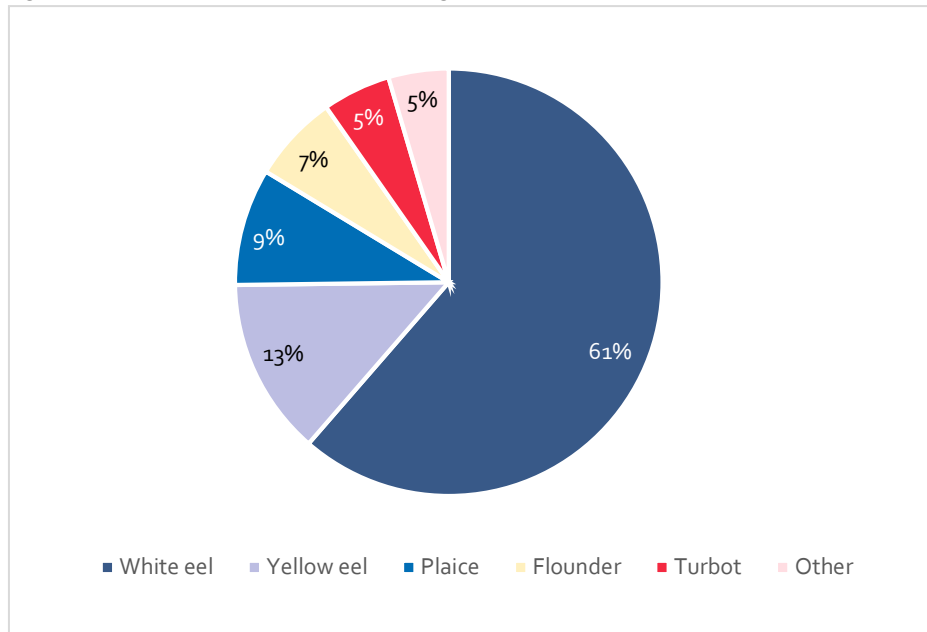


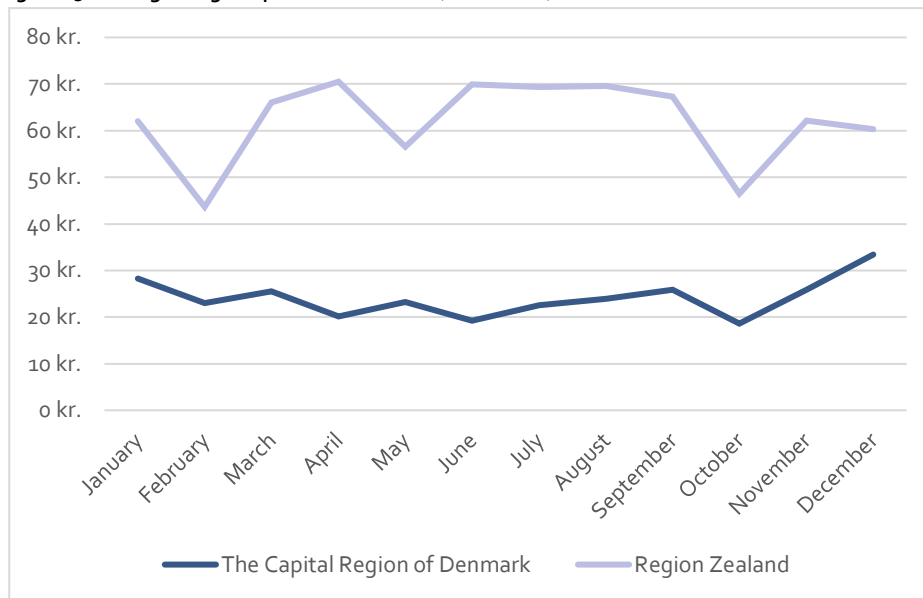
Figure 18: The composition of direct sales in Region Zealand



The main species in an economic understanding is shrimp (*fjordrejer*), cod, eel plaice and other flatfish. Besides cod and plaice, these are species that are often difficult to catch in great volumes. We can also see that direct sales varies in quantity, value and species over the year. This is of course related to the natural seasonality, availability as well as the regulation of the maritime resources. There are, therefore, some periods, where the potential for direct sales is higher than others. Again, this is related to the natural seasonality, but also coupled with tourist seasons as well as annual feasts.

Regulative instruments can also influence the potential if, for example, a certain fishery is closed during the summer and tourist season. For the operator, the seasonality represents both a challenge and a potential. On one hand, it is a challenge to meet the consumer demands and provide the constant supply that supermarket can offer in whitefish cuts and salmon fillets. On the other hand, the seasonality is also a resource for differentiation from the supermarkets and a base for storytelling and added value.

Figure 19: Average kilogram prices for cod 2016 (direct sales)



Note: Incomes from direct sales vary over the year.

The available statistics show that the kilogram prices received by the fisher through direct sales is manifold the auction prices. Whereas cod kilogram prices for the Baltic Sea fluctuated around DKK 6–8 per kilogram, direct sale prices were fluctuating around DKK 20–50. As we will illustrate below, this price difference can be crucial for the survival for a locally based fisher. However, the annual fluctuations also reveal that direct sales are not detached from market fluctuations.

The operator perspective

Seen from the fisher's perspective, direct sales represent a way to gain a higher price per kilogram of catch. However, it also involves a range of new tasks and behaviour. It is a move from a practice where fish were delivered at the quay to a practice where the fisher is increasingly involved in the further sale and marketing of the produce. This means some very concrete changes to the everyday routines and work day of the fishers. As mentioned, direct sales can be employed as a very limited and seasonal supplement to the traditional way of selling to the auction but can also be applied as a distinct practice.

As the following case illustrates, direct sales are clearly used to increase the resilience and to improve the income from a limited quota and catch. The fisher, who operates alone, has recently invested in a van to use as a base for selling in other towns nearby. He has been fishing with gillnets from his own boat in 15 years. With the investment in the van, he is now 100% self-contained in his marketing. In other words, he is no longer dependent on the fish buyer and auction prices, but sells all his catches himself. In fact, he has started buying fish to widen the supply for the consumers. To

supplement his own catches of mainly cod and flounder, he purchases smoked salmon and herring fillets from the fish buyer. While returning from the fishing grounds he is busy filleting and packaging into half kilogram batches. He charges DKK 100 per kilogram filet, bringing the whole fish kilogram price to DKK 30–40. Monday and Tuesday, he sells directly from the boat in his own town, while the rest of the week he drives the van to other places nearby. He stops for around an hour in each place, making it to two or three stops in an afternoon. After roughly an hour, he says, there is no more customers coming by.

In this way, his former fishing practice has now been transformed into a mix of being fisher and fish monger. As he explains, he is himself rather talkative and enjoys meeting the consumers, often regulars or returning tourists, and he values the immediate feedback they give on quality and taste. He is convinced that maintaining a high quality is key to his success. If the consumer has a bad experience they will not come back. He has a Facebook profile which has more than 1,600 followers, and he is also using a national website for direct sales called *Havfriskfisk.dk*. Through this website, consumers can obtain the necessary information on docking time and species available. He is actively engaged with the consumers via social media and informing them on incoming catches, posting pictures of fishing activities or even his own home-cooked fish meals. Through direct sales, the fisher is more directly involved in the value chain and, in a way, uses his personality as a brand or identity for the company. It is of course a matter of personal preferences if these marketing tools and methods are attractive at all. Some people prefer to take a more anonymous role in the production, and some will require training to be a good salesman and presenter. For those who engage in direct sales, these skills will be necessary, as will changes in the practice and potential investments.

Increased resilience

By engaging in direct sales, he brings his kilogram price from DKK 6–7 to around DKK 30–40, which is crucial for his economic survival with the limited amounts of quota available for him. He stresses that the car was bought in cash and that he is soon without debt in his boat as well. In this way, he is a cardinal example of a small-scale fisherman who has organised his fishing operation in a market-based quota system to increase resilience without further “risky” investments. As a consequence, he has transformed his practice into a combination of fishing, marketing and selling to local consumers. When asked if *community supported fishery* or similar models would be a next step for him, he is critical, explaining that he would be afraid to have periods when he cannot deliver the promised catches. With his current practice, it is first come first served, which is suitable for the unpredictable nature of his small-scale fishing practice and in line with his desired independence. He is considering, though, if he could organise sales for other fishers, since he often sells out early.

Potentials of direct sales

It is hard to estimate the potential of direct sales. In the case above, the fisher covers his own town and a number of surrounding small towns. On an island with roughly

40,000 inhabitants he estimates himself that there would only be room for 2–3 of his kind fully engaged in direct sales. On the other hand, the recent developments in the food sector has proven that food consumption and shopping patterns are changing. Danes are eating more and more fish,¹⁷ while at the same time the total share of organic food is growing¹⁸ (almost reaching 10% in 2015). There has, at the same time, been an increased focus on locally produced food, and the number of farm shops are increasing as well. If the local direct sales of fish are influenced by some of the same trends, there should be room for an increase in direct sales. Direct sales would be a relevant way to increase the resilience of local small-scale fishers but would probably not be enough in itself to secure viable harbour facilities and infrastructure in the long run. However, direct sales can also be seen as a stepping stone for additional initiatives, where the fisher is further involved in the marketing and processing of catches and further linked to local consumption through restaurants and events.

¹⁷ DTU Aqua: <http://fiskeritidende.dk/vi-spiser-langt-mere-fisk-end-tidligere/>

¹⁸ Økologisk Landsforening: <http://okologi.dk/newsroom/2017/05/danskerne-saetter-ny-oeko-rekord>



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Nordic fisheries at a crossroad

Nordic fisheries at a crossroad explores how Nordic small-scale fisheries can develop to promote high value creation and product specialization. By looking at recent developments among small-scale but land-based food producers we suggest specialization and dedication as the main development strategies. The central notion is to break away from the price-competitive globalised fish markets and develop new products or distribution models. To succeed in this, there is a need for substantive and coordinated efforts to bridge the gap between conventional logics and the new development logics, between supply and demand. The vision should be to develop viable and composite markets for high quality and specialty fish products through dedication and specialization. Markets that go beyond the local and reach supermarkets and consumers on a national and international scale.



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