Chapter 25
A Critical Insight into Fisheries Policies and Its Effects on Small-Scale Fisheries in Estonia

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Abstract This paper gives an overview of and examines the ways in which national and international policies and strategies regulating trade, labour, development and environmental matters have influenced small-scale or coastal fisheries in Estonia. The transition from the Soviet system to market economy in the 1990s had negative effects on small-scale fisheries in Estonia, which have been corrected only recently, after the country joined the European Union. Today, small-scale fisheries in Estonia are characterised by low incomes, dependence on external financial support, geographical mobility, ageing fisher population, the combining of income sources, and the rise of tourism. In conclusion, while there are still many serious difficulties in coastal fisheries and the economic importance of fisheries is declining, investments from the European Fisheries Fund (EFF) and European Maritime and Fisheries Fund (EMFF) are slowly, but steadily helping small-scale fishers to regain their footing.

Keywords Estonia · Small-scale fisheries · Fisheries development · European Fisheries Fund · European Maritime and Fisheries Fund

25.1 Introduction

This chapter gives an overview and examines the ways in which national and international policies and strategies regulating trade, labour, development and the environmental matters have influenced small-scale fisheries in Estonia. The chapter has two aims. First, it attempts to give a general overview of small-scale fisheries in Estonia. Second, it analyses the effects of various European funds, including the

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European Fisheries Fund (EFF), European Maritime and Fisheries Fund (EMFF) and Common Fisheries Policy (CFP) on Estonian small-scale fisheries.

The EFF has brought remarkable changes to Estonian small-scale fisheries since Estonia gained its independence in 1991. From the mid-1990s, Estonian small-scale fisheries, both coastal and inland, faced a decline in their main target species catch rates (Vetemaa et al. 2002; Ådjers et al. 2006; Bernotas et al. 2016). Along with this, the fisheries were characterised by their unstable marketing opportunities and low income, amortisation of fishing equipment and other infrastructure (Rural Development Research Center 2010; Ministry of Rural Affairs 2013; Armulik and Sirp 2018). After restructuring small-scale fisheries in 2008, and after the EFF funding period in 2007–2013, the negative trend slowly changed and Estonian small-scale fisheries have started to become more economically sustainable. More young people are joining the fisheries and the activities of fishery-related communities have diversified (Kaljuvee 2015; Fisheries Information Centre 2017). Nevertheless, restructuring and the EFF have not helped to solve the socio-economic hardship that had accumulated over past decades. Moreover, some changes have created confusion between fishers and fishery managing institutions, and fostered inequalities among fishing communities.

This chapter has been structured into several parts. First, it gives an overview of small-scale fisheries in Estonia, including a brief history, description of current socioeconomic situation, and insight into fishing practices. In the second part, it describes the policy context of Estonian fisheries and gives an overview of the institutional and organisational structure. This is followed by critical insight into the current situation and list of challenges small-scale fisheries in Estonia is facing. The chapter ends with a future perspective.

Different methodologies are used for investigating small-scale fisheries in Estonia. The overview relies on official reports, management plans and fishery surveys considering coastal fisheries. In addition, in the last section, there are examples from collected data during ethnographic research in the Pärnumaa Fisheries Area in the period of 2012–2014, and research into various stakeholders in Saaremaa and Hiiumaa Fisheries Areas in 2013. This includes semi-structured interviews, phone interviews, and participant-observation among various stakeholders in coastal communities, including fishers, fisheries scientists and managers, local politicians and entrepreneurs (see Plaan 2018).

25.1.1 Definition of Small-Scale Fisheries in Estonia

Estonian fisheries are divided officially by the Estonian Ministry of Rural Affairs into six categories: Ocean fisheries (*kaugpüük*), coastal fisheries (*rannakalandus*), Baltic Sea open sea fisheries or trawling (*Läänemere traalpüük*), inland fisheries (*sisepüük*), recreational fisheries, and aquaculture. This chapter will focus on the coastal fisheries, including both Baltic Sea coastal fisheries and inland fisheries, both of which are described as small-scale fisheries.

Coastal and inland fisheries are defined by boat size and fishing capacity. Accordingly, maximum boat length is 12 m and maximum fishing capacity is 183 kW and 38 gross tonnage (GT). Coastal fishery is allowed within 20 nautical miles of the coast or inside the 20 m isobath zone (Ministry of Rural Affairs 2013). Small-scale coastal fleet constitutes 97% of total national fleet (European Commission 2016).

25.1.2 Historical Background

Before the Soviet Union occupied Estonia in 1941, the entire Estonian fisheries fleet could be described as small-scale, a situation which changed with the Soviet power. During the Soviet occupation (1944–1991), fisheries were managed centrally and all small-scale fishers were forced to collectivise. No one was allowed to own a personal boat or ship. The fleet was modernised and motorised, and small-scale fisheries were forced to shift towards large-scale fisheries.

Before 1970s, there were few if any regulations concerning fisheries. By the beginning of the 1970s, Baltic Sea fish population was in decline and in 1975 the Soviet Union ratified the Gdansk Convention[1] (1973) and issued a new Fishery Law. This change marked an even stronger move from local management towards central governance. Since 1975, the regulations have become more internationalised and fisheries' management started shift away from local communities to external institutions.

After Estonia regained its independence in 1991, the state kept internationalising fishery regulations. All this has meant that the regulations were modified and changed very often, especially in the second half of the 1990s, when Estonia was harmonising its laws and regulations with international organisations. In 1991, Estonia joined Food and Agriculture Organisation (FAO). In 2003, Estonia became a member of the North East Atlantic Fisheries Commission (NEAFC), and in 2005 a member of the North West Atlantic Organisation (NAFO) and International Baltic Sea Fishery Commission (IBSFC). Vetemaa (2002) gives a detailed overview of the changes in small-scale fisheries. Overall, the constant restructuring and changing of laws created an atmosphere that was characterised by instability and few perspectives for the future. This was reinforced by economic difficulties.

With the collapse of the Soviet Union, the economic system of Estonia also collapsed and this had a devastating effect on the lives of all fishers in the country. The effects of the transition from the Soviet economic system to the market economy have been analysed in detail by Vetemaa et al. (2001, 2002, 2006) and Eero et al. (2005). To give a brief overview, after the collapse of Soviet Union, fishers were able to privatise cheaply the fishing gear and boats that used to belong to collective

[1] The Gdansk Convention is Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts. The Gdansk Convention was signed on the 13 September 1973 by Governments of the Baltic States (Denmark, Finland, German Democratic Republic, Federal Republic of Germany, Poland, Sweden and Soviet Union).

farms. In addition, the abolition of the border regime increased pressure on stocks as the first-buyer prices for fish increased (Vetemaa et al. 2006). For this reason, by the mid-1990s most coastal fish stocks in Estonia were being overfished (Ådjers et al. 2006). In addition, production costs grew, the traditional market in Russia was closed, and possibilities to find new markets were restricted due to the low profitability of the coastal fisheries under the capitalist economic system.

25.2 Description of Estonian Small-Scale Fisheries

Estonian small-scale fisheries are in a process of significant change. At the beginning of the century, the fisheries were on the verge of collapse: according to International Council for the Exploration of the Sea (ICES) fish stocks in the Baltic were at a historical low, many old fishing ports were breaking down and the fishing population was ageing (Ministry of Rural Affairs 2007; ICES 2012). This is believed to have been caused by the transition from the Soviet system to a market economy (Vetemaa et al. 2006). As Vetemaa et al. (2006) describe and fishers explained in interviews, there were three main reasons for this collapse. Firstly, in the 1990s, there was little or no investment from the Estonian state in coastal fisheries. Secondly, weak monitoring of fisheries allowed overexploitation in the beginning of the 1990s, which may have caused the decline in fish stocks. Finally, declining profitability in the second half of the 1990s discouraged new generations of fishers to enter fisheries. Today small-scale fisheries may be described on a much more positive note. With the help of the EFF money in the period of 2007–2103, 61 harbours and landing sites have been renovated, 8 harbours received investments to build cold storage and 28 fishers have renewed their fleet (Ministry of Rural Affairs 2013). Nevertheless, while various funds have allowed the fleet to be renewed and port facilities improved, the earnings of costal fishers remain low compared to the average Estonian salaries, which have risen 18 times since 1993 (Vetemaa et al. 2006; Statistics Estonia 2018). Today most small-scale fishers have diversified their economic activity. Fishing takes place mainly in spring and autumn and is supplemented with a variety of business activities, e.g. tourism in mid-summer and forestry in winter. While most of the fish is still bought by large fish mongers, many communities are increasingly processing, branding and selling the catch themselves. Overall, all this has attracted young people from coastal communities to get involved with the fisheries and for the first time in 20 years, the future of Estonian small-scale fisheries looks more promising. Relatively, the younger generation of Estonian small-scale fishers are fairly well trained – EFF funding has been used to offer different courses and educational trips to other small-scale fisheries in Europe. (Fisheries Information Centre 2017) (Fig. 25.1 Small-scale fisheries in Estonia).

Fig. 25.1 Small-scale fisheries in Estonia. Kihnu fishers taking out Baltic herring fish traps after spring season. (Photo Credit: J. Plaan)

25.2.1 Socio-Economic Relevance of Small-Scale Fisheries for Estonia

Estonian fisheries, including distant-water fishery, Baltic Sea and inland fishery[2] provided 0.2% of Estonia's Gross Domestic Product (GDP) in 2015: Small-scale fisheries represented 17.9% of this figure (Statistics Estonia 2018). The most profitable segment is the distant-water fishery, targeting shrimp as the main species in Svalbard, the North West Atlantic and the North East Atlantic fishing grounds. The Baltic Sea trawling sector, relying exclusively on sprat and Baltic herring, is the biggest segment: fishing 65% of the total catch of Estonia (Armulik and Sirp 2018; Statistics Estonia 2018). Based on first-sale prices, small-scale fisheries' sales revenues are estimated to have amounted to 10,421 million euros in 2016 (Armulik and Sirp 2018), making small-scale fisheries the second most profitable fishery segment. The Estonian population is 1.323 million people (as of January 2019) with 2376 (0.18%) registered as small-scale fishers. Small-scale fishers make up the largest percentage among these three sectors: distant water fisheries 100 fishers (3.7%), Baltic Sea fisheries 215 fishers (8%), and small-scale fishers 2376 (88.3%). Despite the smaller scale, revenues from inland waters are relatively large, contributing

[2] Estonian fisheries also include recreational fishing and aquaculture. These sectors are excluded from the comparison.

almost 20% of all revenues from fishing (Vetemaa and Eero 2005). The Estonian fishing sector, including small-scale fisheries, is considered as a part of a wider sector, including agriculture, forestry and fisheries in general.

The areas where small-scale fisheries are carried out are inhabited by approximately 175,000 people, excluding major cities in the areas. According to the Fisheries Information System of the Ministry of Rural Affairs, in 2016, there were 2376 registered small-scale fishers: of whom 1952 people were registered as Baltic Sea coastal small-scale fishers and 424 as inland small-scale fishers (54 in Lake Võrtsjärv and 370 in Lake Peipus). Women constitute 2% of fishers. For most fishers, fishing is a supplementary occupation combined with other occupation(s). It is estimated that just 3–10% of fishers obtain most of their income from fisheries and only 8% get more than 50% of their income from them (Armulik and Sirp 2014).

25.2.2 Locations

Small-scale fisheries are conducted in an area, which is defined in Estonia as the coastal fishery area. This includes sea coasts, lakes, or ponds and river estuaries, where the fishing sector provides notable employment. This excludes bigger cities within the costal fishery area. As mentioned above, small-scale fisheries are divided into Baltic Sea coastal fisheries and inland fisheries. Seaside coastal fisheries are divided geographically into four areas: Baltic Proper, Gulf of Riga, Väinameri, and Gulf of Finland. Inland coastal includes fisheries-related areas around Lake Peipsi or Peipus, Lämmijärv and Pihkva or Pskov Lake (3555 km^2), and Lake Võrtsjärv (271 km^2) (Estonian Ministry of Agriculture 2007). Baltic Sea coastal fisheries cover a shoreline that is 3794 km long, excluding fresh-water fishing areas (Ministry of Rural Affairs 2013).

In 2008, the Estonian coastline, both the sea coast and the inland coast, was divided into eight Fishery Areas. These Fishery Areas follow administrative division of Estonia.[3] Baltic Sea coastal fisheries include Harjumaa, Hiiumaa, Läänemaa, Pärnumaa, Saaremaa and Virumaa Fishery Areas. Inland fisheries include Lake Peipsi and Lake Võrtsjärv Fishery Areas (Fig. 25.2 Estonian small-scale fishery areas). Some Fishery Areas share geographical areas, where, for example, fishers from Hiiumaa, Pärnumaa and Saaremaa Fishery Area may share same fishing grounds in Gulf of Riga or Väinameri. Each Fishery Area includes a Local Action Group (LAG), whose most important task is to mediate EFF (2007–2013) and EMFF (2014–2020) subsidies between the local fishers and Estonian Ministry of Rural Affairs (formerly Estonian Ministry of Agriculture).

[3] At time of writing, the administrative division of Estonia changed due to administrative reforms in 2018. The impact on small-scale fisheries is yet to be seen.

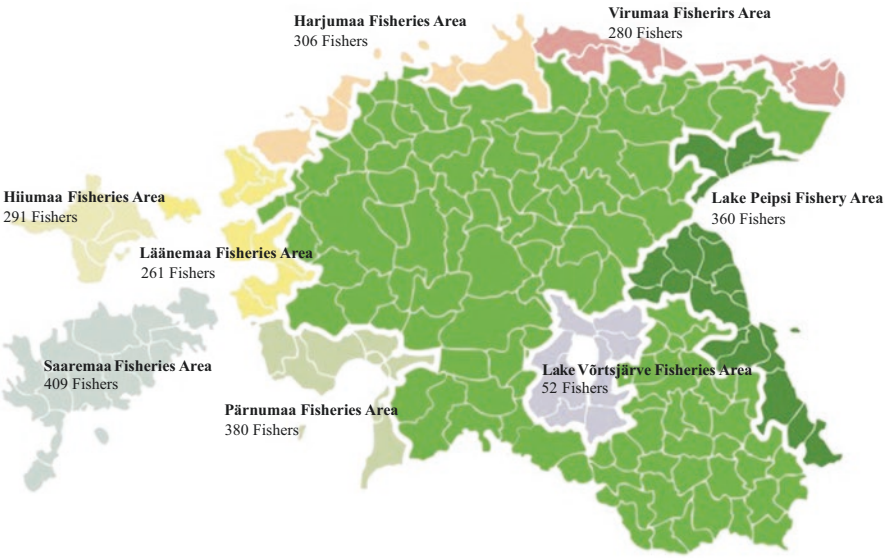

Fig. 25.2 Estonian small-scale fishery areas (Kalandusvõrgustik 2010)

25.2.3 Small-Scale Fisheries Target Species, Gears and Practices

Economically, the most important coastal fisheries species are Baltic herring (*Clupea harengus membras*) and European perch (*Perca fluviatilis*). In 2016, the Baltic herring fishery constituted 73.7% of the yearly catch while European perch fishery only 12.6%. Nevertheless, Baltic herring is a fairly cheap fish and represents only 30.8% of the entire coastal fisheries' gross value (European perch comprises 41.8%). During the period 2013–2015, the revenues of fishers have declined because herring and perch prices as the most lucrative species are showing long-term term downward trends (Armulik and Sirp 2018). Most important freshwater species are European perch (*Perca fluviatilis*), Zander (*Sander lucioperca*) and Common bream (*Abramis brama*) (Eschbaum et al. 2014). Inland fisheries comprise 21% (Lake Võrtsjärv 1.3%, Lake Peipus 19.7%) of the entire small-scale fisheries catch in Estonia (Armulik and Sirp 2018). For both fisheries, Vetemaa et al. (2006) have divided target species into three categories: (1) herring, (2) high-value species such as perch, pikeperch, eel, pike, whitefish, salmon and sea trout, (3) less valuable species such as cyprinids, flounder, burbot, etc.

Estonian small-scale fisheries fleet consists of 1557 boats, with a fishing capacity of 22.065 kW and 2201 GT (Petron 2018). The fisheries use four types of fishing gear: (a) line fishing, different types of hand line fishing and longline fishing equipment; (b) gill net; (c) fish traps; and (d) seine net. Coastal fishing metiers can be divided into two groups: (1) large quantity fisheries targeting herring, and (2) small quantity fisheries targeting various high-value and low-value species. Often coastal

fishers combine these two fisheries. Large quantity fisheries are carried out from a 10 to 12 m boat with a crew of 3–4 fishers. Under the 'derby-style' system (*Olümpiapüük* in Estonian) large numbers of crews compete with each other to catch the herring quota in a particular fishing area during a limited time window in early spring and late autumn. Fishing lasts 1–3 weeks until the quota is filled, forcing fishers to work day and night (Plaan 2018). The consequences of this "race for fish" system have been reported by Hannesson (2000). Small quantity fisheries are practiced from small 4–6 m row or motorboats. Crew does not exceed two fishers. Depending on the species the fisheries may be open year around. Because of the low quantities and labour characteristics (fishing is done only as a part-time job), fishers spend on the water only few hours a day, sometimes fishing only at weekends.

25.3 Socio-Economic Situation: State of the Art

Today, Estonian small-scale fisheries socio-economic situation may be characterised by: (1) low incomes, (2) dependence on external financial support, (3) geographical mobility, (4) an ageing fishing population, (5) the combining of income sources, and (6) the rise of tourism.

First, fisheries are characterised by low-income. According to a survey in 2012, the average income in the fishery sector was 698 euros per month, which is 17% lower than Estonian average gross-salary (Estonian Ministry of Agriculture 2013). It is worth bearing in mind that the official statistics may not show income from the fish sold 'under the table'. After 2012, the fishery sector is viewed as one with the agriculture and forestry sectors. In the sector, the average gross salary was 1151 euros per month in 2017 (Statistics Estonia 2018). In 2010, 44% of small-scale fishers earned less than 1000 euros per year (Eesti Uuringukeskus 2012). The study has not been repeated later but even these old data highlight what is one of the biggest socio-economic problem in Estonian small-scale fisheries. The main cause of the low-income is low first-sale prices (Fisheries Information Centre 2017; Armulik and Sirp 2018). Estonian Ministry of Rural Affairs defines this as one of the main factors that has caused youth to leave fishery-related communities, and is one of the major reasons why small-scale fishers' average age has been increasing and the population dropping between 1999 and 2008 (Ministry of Rural Affairs 2013).

Second, small-scale fisheries have become increasingly dependent on external financial support, especially on monetary support from the EU. In the period 2007–2013, Estonian Ministry of Rural Affairs used the European Fisheries Fund (EFF) to improve the situation of small-scale fisheries in Estonia. The EFF was created by the European Commission with the aim to provide funding to the fishing industry and coastal communities to help them to adapt to changing conditions in the sector: the fisher population was declining, the low income was not attracting young people and the infrastructure was slowly falling apart. The aim was to restructure small-scale fisheries in such a way they would become economically resilient and ecologically sustainable. For the period of 2007–2013, the EFF allocated €84.6 mil-

lion for Estonia, including €28.2 million added by Estonian State. Today, most small-scale fishing related communities find it hard to survive without external financial support. In accordance with the EMFF, the Estonian Ministry of Rural Affairs has already created a development plan for the years 2014–2020. The largest amount of monetary support has been assigned to be invested in technology (e.g. fish plant machinery, cold storage units) and innovation (e.g. collaboration with science). The aim is to make fishing ports more multifunctional and to use the existing infrastructure as efficiently and economically viable as possible (Ministry of Rural Affairs 2013).

Third, since joining the EU and implementing CFP, Estonian small-scale fishers have become geographically increasingly mobile. There is little research on the topic but personal conversations and interviews with fishers provide evidence that before joining EU there was little or no seasonal migration among coastal fishers. Conversely, in the study area in Pärnumaa Fisheries Area, several small-scale fishers were interviewed who stated that they migrate seasonally to other EU State waters to work on trawlers. In 2013, almost half of the Baltic herring trawlers in Bothnia Gulf, Finland, were owned by Estonian fishers, accompanied by Estonian crew (Nylander 2013). In addition, many men work seasonally as crew on trawling boats in Norway. Several Estonian small-scale fishers also move between the coast of Finnmark in Northern Norway and Estonia taking advantage of different fishing seasons and Norwegian fishery legislation (Gerrard 2013).

Fourth, Estonian small-scale fishery is facing the problem of an ageing population. In 2012, only 9.9% of small-scale fishers were under 30, while over 60 year-old fishers constituted 24.7% of fishers (Ministry of Rural Affairs 2013). While, there are signs that there are more young fishers entering the sector, there is still long way to go. Young fishery related community members have brought entrepreneurial activity and diversified income for coastal communities (interviews with LAG members 2013; Kaljuvee 2015). All fishery areas have been using EFF funding to train and offer technical skills to their small-scale fishers. The main focus has been on how to start a business; how to write a business plan; how to add value to the catch; and how to apply for external funding. The period of 2007–2013 shows that the most active fishers are the younger generation, who have just entered the small-scale fishing sector or are planning to do so in the future.

Interestingly, coastal fisheries are characterised by entrepreneurial activity and occupational diversity. Many fishing communities are enhancing the value of their catch within the community: all fishery areas (except Lake Võrtsjärv) have their own small regional fish processing plant(s) and several areas have created their local brand. This has allowed fishers to eliminate the middle man and sell their fish directly to customers. In 2010, 48% of fishers were processing and marketing their catch (Eesti Uuringukeskus 2012). In 2013, the number was already 66% (Statistics Estonia 2013). For example, Koguva Fishing Port in Saaremaa Fishery Area has its own brand, and it processes, packs and sells most of its catch to locals and visiting tourists directly from the wharf. Läänemaa Fishery Area has also created its own brand *Kipperi Kala* which is used for better marketing for the regional catch. The most active regions in developing new marketing schemes are Läänemaa, Lake Peipsi, Saaremaa, Harjumaa and Hiiumaa Fishery Areas. Nevertheless, because of

the low profitability and seasonality, the majority of coastal fishers are part-time fishers, supplementing their income with off-season work mainly in forestry or tourism (Vetemaa et al. 2006; Lambing and Reinma 2014).

Lastly, tourism has become an important secondary source supplementing fishing (Fisheries Information Centre 2017). Most fishery areas have their own fishery-tourism information centre (Hiiumaa, Läänemaa, Pärnumaa, Saaremaa, Peipsi Lake and Lake Võrtsjärv). All fishing harbours are renovated, so that in the future they can accommodate next to fishing boats also recreational boats and yachts. Coastal communities have used, besides EFF funds, various EU funding schemes to renovate old sheds into small bed and breakfast cabins, to build new conference centres for smaller groups, and to organise various events to attract visitors. In a few fishery areas (Hiiumaa, Harjumaa), fishers organise fishing tours for tourists. Rural and fishery related tourism is supported at a state level and has become an important characteristic of small-scale fishing communities.

25.4 Policy Context

After Estonia's accession to the European Union, local fisheries are regulated by the European Union's Common Fisheries Policy (CFP), which covers the use and protection of fishery resources, the structure and market organisation policy, and foreign policy on fisheries. The latter also includes fisheries' agreements with non-EU countries, and negotiations in international organisations.

The management of small-scale fisheries is divided between three institutions: the Estonian Ministry of Rural Affairs, the Ministry of the Environment, and the related Environmental Inspectorate. Scientific research is carried out by University of Tartu and University of Life Science.

The areas of the Ministry of Rural Affairs are the development of market organisation system, the award of structural support and state aid and the management of commercial fishing. All these areas are in correlation with the EU Common Fisheries Policy (CFP), including the structure of fisheries' markets. The structural support and state aid rely on and follow the guidance of the European Fisheries Fund (EFF) (2007–2013) and the European Maritime and Fisheries Fund (EMFF) (2014–2020).

The Ministry of the Environment drafts and implements the Policy of the Protection and Use of Fishery Resources, including the regulations to assure the reproduction of fish stocks and the protection and restoration of spawning grounds and habitats. Most of the fisheries are also regulated by international organisations. Today the distant-water fisheries are regulated through annual meetings of the Scientific Committee of the member-states of The Northwest Atlantic Fisheries Organization (NAFO) and the North East Atlantic Fisheries Commission (NEAFC), Baltic Sea trawling management is entirely regulated by the European Commission. Coastal and inland fisheries are managed nationally, with the exception of the migrating Baltic Sea fish species (Baltic herring, European sprat, Atlantic cod, Atlantic salmon), which are regulated by the European Commission under the

Common Fisheries Policy. The fisheries of local fish species (European perch, Zander, etc.) are managed and regulated by the Ministry of the Environment. In both cases the principles of the CFP have been implemented. While the fishing legislation has been coordinated with the EU legislation, the definitions, rights and obligations of small-scale fishers have been structured according to national legislation.

The monitoring of fishing activities is carried out by the Environmental Inspectorate belonging to the Ministry of the Environment. Environmental Inspectorate exercises supervision in all areas of environmental protection. It coordinates and executes supervision regarding the use of natural resources and the protection of the environment.

The Ministry of the Environment and the Environmental Inspectorate cooperate closely with the University of Tartu and University of Life Science, which carry out scientific research into the environment and distribute information regarding what is happening in the environment, including the data needed to make decisions for the organisation of inventories and monitoring.

At the local level, small-scale fisheries are supported and guided by Local Action Groups (LAGs), initiated and funded largely from EU. All LAGs belong to the Fisheries Groups Network. The Fisheries Groups Network acts as a supporting structure between the ministries and the LAGs and was formed with the aim of fulfilling the objectives set by European Fisheries Fund (EFF) and to allow better usage of the different EU funds.

25.4.1 National and EU-Policy Measures and Influences

The CFP has increased geographical mobile activity of Estonian small-scale fishers between other EU states. This has affected both Estonian small-scale and large-scale fisheries. This is a new form of migration, which can be linked directly to the CFP, as fishing beyond territorial waters was not allowed before implementing the policy. As the fish stocks in Baltic Sea keep declining and the allotted quotas become smaller, many fishers migrate seasonally to Finnish waters in spring. Today, more than half of the Baltic herring trawlers in Bothnia Gulf, Finland are owned by Estonian fishers, accompanied by Estonian crew members, and the number is increasing (Armulik and Sirp 2018). According to Nyland (2013), the ownership of Baltic herring trawlers in Finnish waters was 46.3% Estonians, 46.9% Finns and 6.8% Swedes in 2013. This movement has occurred because of several reasons. First, CFP allows fishers in every member state to allocate and purchase fishing quotas from neighbouring member states. Second, many fishers from richer Scandinavian countries happily sold their quotas and vessels to Estonians (and other Baltic State fishers), who were more willing to work for the lower incomes that the Baltic herring and the European sprat catches provided. Lastly, Estonians, who used their Soviet trade connections, managed to get better prices for the herring and sprat. Mainly by selling it to the Ukraine, Belorussia, and Russia, where canned Baltic herring and sprat is a highly popular dish. Overall, while CFP has affected

Estonian fisheries in general, it has increased mobility for small-scale fisheries and allowed them to stretch the fishing season and improve earning opportunities.

25.5 Institutional and Organisational Context of Small-Scale Fisheries

Each fishery area has its LAG. The aim of the LAG is to support practices involved with fishery and to support coastal communities, to support sustainable development, and to develop a strategy plan for the local small-scale fishery sector. LAGs connect different stakeholders in the fisheries sector, including fishers, NGOs, various entrepreneurs and local municipalities. They act as a mediator between different stakeholders at both Estonian and EU level.

25.5.1 LAGs – The Current Situation

Initially, LAGs were established to improve the capacity for collective action and allows fishers to influence governance arrangements according to local particularities. Phone interviews and analysis of LAG organisational structure show that by 2015 only a fraction of fishers have joined their local association (LAG) making their voices hard to hear. The smallest involvement is in Harjumaa Fishery Area, where only 7% of the small-scale fishers have joined the association. Also, both in Virumaa and Lake Peipsi Fishery Areas less than 17% of fishers have joined the association. Overall in 2015, only 33% of fishers have joined such associations.

There are several reasons for the low involvement among fishers. In the Harjumaa Fishery Area, it may be explained by its geographical location near to capital city Tallinn, providing better access to fisheries related organisations and other occupations. In East-Virumaa and in Lake Peipsi Fishery Areas, most small-scale fishers are Russian speaking minorities, making them hard to integrate into Estonian speaking institutions. In several fishery areas (Läänemaa, Pärnumaa, and Hiiumaa), fishers explain their low involvement due to a lack of trust in the state. In some fishery areas (Hiiumaa, Saaremaa), some fishers complained during interviews that the associations have been ‘highjacked by entrepreneurs’. For example, 60% of the members of the Hiiumaa Fishery Area LAG are local entrepreneurs, whose main activity is not fishing.

Interviews with Hiiumaa, Pärnumaa and Saaremaa LAG members showed that some entrepreneurs have joined a LAG in order to become eligible for EFF and EMFF funding. In addition, several fishers have registered themselves as entrepreneurs in order to save on taxes. This has had both positive and negative effects. On the positive side, many entrepreneurs are local young community members who use the EFF, EMFF and other EU funds to diversify their activities, while seasonally participating in small-scale fisheries (see Box 25.1).

Box 25.1: Illustration of Small-Scale Fisheries in Estonia
Hiiumaa, the second biggest island in Estonia, has a long tradition of coastal fisheries, since it was inhabited 5000 years ago. During the Soviet era, fisheries in Hiiumaa were organised through cooperatives "Hiiu kalur", employing about 1400 fishers (Põllu 2004). In 2015, Hiiumaa had a membership of 8589 people, out of which 317 individuals were registered as coastal fishers (3.7%). Since 2008, when a Local Action Group "Society of Hiiumaa Sustainable Fishery" or better known as NGO Hiiukala was formed and the first investments came through the EFF, fisher population has risen by 26 individuals. However, only 30% of coastal fishers consider fishing as their main income and 65% supplement their income from state pensions. Because of poor fish stocks, the fishers in the area are focusing more on fisheries-related tourism services than in any other fisheries area. Small-scale fishery catches have also declined significantly in recent years, while seal and cormorant numbers have increased. Cormorants are believed to be one of the biggest reasons for the decline in fish populations (Vetemaa et al. 2010). Fisheries of Hiiumaa share the same problems as most coastal fishing areas in Estonia: the fisher population is ageing and youngsters do not enter the fisheries mainly because of the high investment required in fishing gear and licences, and also low profitability. The seasonal characteristics of fisheries and lack of alternative job opportunities in Hiiumaa force young people to leave the island. The representatives of the society feel that EU investments in small-scale fisheries have helped the local fisheries to survive so far but for a better future the policies concerning fishing licences need to be changed and the state and local municipalities have to rethink regional development in general.

The second main issue is that some of the tasks of the organisations that manage and organise small-scale fisheries overlap and some of the aims contradict each other (Plaan 2014). Many high officials, scientists and specialists who work for the organisations have admitted either openly or in personal interviews that because of the long process of restructuring fisheries since independence in 1991, it is hard to follow all the changes. Many regulations are outdated, the work has become more bureaucratic and sometimes decisions are made far from the LAGs. Research in Pärnumaa Fisheries Area showed that this has created mistrust between fishers and fisheries officials, and in some cases, between fishery scientists, all of which has resulted in poaching and not following the regulations.

In addition, often the aims of the EFF, EMFF and LAGs contradict the aims and measures of environmental conservation Estonia has taken, for example contradicting the aims of NATURA 2000 network.[4] Both Läänemaa and Pärnumaa Fishery

[4] Natura 2000 is a network of core breeding and resting sites for rare and threatened species, and some rare natural habitat types which are protected in their own right. As prerequisite for becoming

Areas are covered by extensive environmental restrictions, which do not allow fishers to enter into protected areas throughout the year or in certain periods of the year. Interviews with top environmental officials and fishery scientists revealed that in many cases fish stocks have recovered but often the conservation measurements and fisheries regulations are outdated (Plaan 2014). One of the biggest problems has been the increase in the cormorant population and its effect on fish stocks (Rattiste and Saks 2009; Vetemaa et al. 2010). Conservation regulations and policy that do not allow fishers, themselves, to regulate cormorant population has made the situation in some cases critical (e.g. Debout et al. 1995). Hence, when the EFF and EMFF attempt to support the environmental, economic and social sustainability of small-scale fishery communities, in many cases, fishery regulations and conservation measurements impede them.

25.6 Small-Scale Fisheries and Its Challenges

Despite several positive trends that have been highlighted earlier, Estonian small-scale fisheries still face a number of challenges.

First, often investments made with EFF funds have not solved societal problems which have cumulated during years of fluctuations in fish stocks (Vetemaa et al. 2006), low first-sale prices (Ministry of Rural Affairs 2013), economic instability and conflict with the state officials (Plaan 2014, 2018). Solving the problem of instability in fisheries and socio-economical hardship with better infrastructure (e.g. new fishing equipment or renovated ports) has not delivered a better life for already stressed communities. If mitigation and adaptation to low fish prices and declining population can be tackled along with the immediate needs for employment, economic development, and public health, there is a greater likelihood of a successful sustainable life for small-scale fishers. Nonetheless, there is a concern that the focus of the state's plans is mostly on the technical and infrastructural interventions with little, if any, attention to social and institutional issues. For example, Koguva Port in Saaremaa Fishery Area was renovated using funds from the EFF and European Union Structural Assistance in 2008. The cost of renovation work was €483,000. In 2008, the traditional fishing community Koguva had 3 small-scale fishers, today there are 2 fishers left. Hence, the funds used for infrastructure do not necessarily fixed the societal problem, where there are just not enough fishers in the community. Young men have moved away a long time ago and soon there will be no one who knows how to pass on the knowledge about fishing.

Second, often, those few fishers who have stayed in the coastal communities do not have enough qualifications or education to write or manage projects funded by the Estonian State, EU or EFF/EMFF. According to study in 2012 (Eesti Uuringukeskus 2012), 48% of small-scale fishers have primary education, 44%

an EU Member, Estonia had to submit proposals for Natura 2000 sites meeting the same criteria as earlier EU Member States.

have secondary education, and only 8% have higher education. In some cases because of the lack of experience and knowledge, several projects have failed and fishers have lost their personal capital or ended up in debt to funders. For example, a group of Kihnu fishers in Pärnumaa Fishery Area invested personal capital together with EFF funds into cold storage in 2007. Unfortunately, due to mistakes in managing the newly created business, the cold storage was declared in bankrupt after just the second year and fishers who invested in the scheme were left broke. Hence, low education and little experience have kept many potential fishers away from EFF/EMFF funds.

Third, in some cases EFF funding has been used by outsiders who have little relation with small-scale fisheries, if any, and have used the funding schema for personal gains. As an overview and analysis of LAGs reveal, many members are from non-fishery related fields and are members only to become eligible for funds. Interviews with EFF fund users in Saaremaa and Hiiumaa fisheries areas also showed that in some cases people unrelated to the traditional communities use the funds to start personal tourism business. This has created conflicts within the community and does not support the wellbeing of local people. For example, a new owner of newly renovated port in Saaremaa Fishery Area admitted that in spite of the 'beautiful words' in the reports, he is actually into real estate business and is not that interested in developing small-scale fisheries. In his words the EFF fund has been used to add value to his property (anonymous, interview 2014).

Finally, despite the fact that EU funds support fishery-related tourism as one of the main tools to create economically sustainable fishery-related communities, these funds do not support everyone in the communities. Ethnographic research in Saaremaa and Pärnumaa Fishery Areas show that tourism supports only few families in the community (Plaan 2014). Newcomers to the tourism sector are usually pushed away from the sector and fund providers prefer to support already established entrepreneurs. This again has created conflicts and envy within community members and social inequalities in the traditional fishing villages.

25.7 Looking to the Future

Thanks to restructuring and the EFF, the socio-economic situation of Estonian fishery-related communities has improved and community members look to the future with a positive spirit. Interviews with the heads of the Local Action Groups reflect this mood.[5]

First, they believe that one of the most important objectives for the future is to continue to keep building small regional fish processing plants and to create better marketing opportunities for fishers. This is seen as the best way to get better prices

[5] Phone interviews with heads of Saaremaa, Peipsi Lake, Harjumaa, Lake Võrtsjärv and Pärnumaa LAG (2015).

for the catches and increase fishers' incomes. Local processing, adding value to the catch and direct marketing are seen as key to decreasing reliance on large fish mongers.

Second, an important task is to continue to diversify income opportunities for coastal communities. The EFF funding period has shown that tourism and other supporting businesses help to keep young generations in the communities (Lambing and Reinma 2014). Moreover, small-scale fisheries add value to new tourism enterprises and support traditional lifestyle. In the future, LAGs hope to integrate small-scale fisheries better with other local businesses and hope to provide more off-season activities for fishers.

There is also a crucial need to integrate small-scale fishers into the activities of LAGs. The heads of the LAGs hope that the success of the EFF will attract more fishers to join the association. This will give fishers much better access to decision-making and help them to get their voices heard.

Nevertheless, many heads of the LAGs agree that there have been mistakes with funding. Some projects have failed because of a lack of training and knowledge. In some cases, EFF funding has been misused. There is a need for better supervising and training in the future.

25.8 Conclusion

Estonian small-scale fisheries are a small sector that only makes a small contribution to the Estonian economy. The tumultuous period after the collapse of Soviet Union has left them with challenges that are hard to overcome. Nevertheless, the numbers of small-scale fishers has remained stable in the previous decade, showing its social and cultural importance among coastal communities. While the Estonian fishing community is ageing, there are signs that more young people have decided to stay or return to fishery-related communities and are more actively participating in small-scale fisheries. A major factor has been state level support and the input from various EU funds, most importantly the EFF and EMFF – encouraging the belief that economically resilient and ecologically sustainable small-scale fisheries are possible. Fishing communities have diversified their occupations, learned how to give more value to their catches, and tourism has become an indispensable part of the local life. Fishing communities and Local Action Group members are looking more positively toward the future. More active communities have already renovated their harbours and fleet, diversified their activities and most importantly, they give good examples and ideas to other communities in the future. Nevertheless, investments in infrastructure, buildings and gear may not be enough to fix the socioeconomic burden that has its roots in the transition from Soviet system to market economy. The biggest problem small-scale fishers face – migration of youth and ageing population – can only be fixed through all-inclusive rural development policies and not just with local investment into concrete and machines.

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