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Assessment of the status, development and diversification of fisheries-dependent communities

Kolka Case study report

25.11.2010

Acronyms

BIOR	Fishery Department, Institute of Food Safety, Animal Health and Environment
CFP	Common Fisheries Policy
EFF	European Fisheries Fund
EU	European Union
FIFG	Financial instrument for financial guidance
FLAG	Fisheries Local Action Group
GT	Gross Tons
ICES	International Council for the Exploration of the Sea
NUTS	Nomenclature of territorial units
MSY	Maximum sustainable yield
SOF	State owned farms

This report has been prepared through a joint collaboration between Robert Arthur (MRAG Ltd) and Maris Plikshs and Erik Kruze of the Fishery Department, Institute of Food Safety, Animal Health and Environment (BIOR), with the active support of stakeholders Kolka village. The authors acknowledge the important role played by local stakeholders in providing both the quantitative data and the qualitative information presented in this report.

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1. INTRODUCTION

General description of the location

The area of Kolka lies at the mouth of the Gulf of Riga and the Baltic Sea. The area has strong historical roots in coastal fisheries and there is an associated fish processing sector. In these respects, the village of Kolka is characteristic of many of the villages along the coast in this area, representing small communities with strong ties to maritime activities and to self-sufficiency. Kolka village represents a particularly extreme example as the village is backed by the Slitere National Park, restricting the scope for alternative or additional livelihood opportunities, such as forestry and agriculture, that are options in other villages and increasing local dependence on the fisheries. This makes the village an ideal candidate for inclusion in the study as many of the issues will be more widely relevant but the village and its location mean that fisheries are more important than in some of the others alsong the coast.

Economic activities in villages along the coast tend to be restricted, in part due to the legacy of the 50-year Soviet occupation. During this time, much of the coast was designated as a restricted area because it was considered a frontier zone and both commercial and recreational activities were restricted.

Location

Kolka village, with geographical coordinates of 54.44 N and 22.35 E, The village is situated near to Cape Kolka - the most Northern point of western Latvia (Figures 1 and 2). Cape Kolka is a unique geological structure that is associated with a seven kilometres long and two metres deep sandbank that extends out to the Kolka lighthouse. This sandbank separates the Irbe Strait from the Gulf of Riga and the fisheries of the Irbe Strait and region of Kolka are included under the Gulf of Riga fisheries. Following recent administrative changes, Kolka village is located in Dundaga County (Figure 3). Kolka is the only area in Dundaga County that is associated with marine waters. Most of the territory surrounding Kolka village is located within the Slitere National Park, which provides a range of recreational and eco-tourism opportunities.

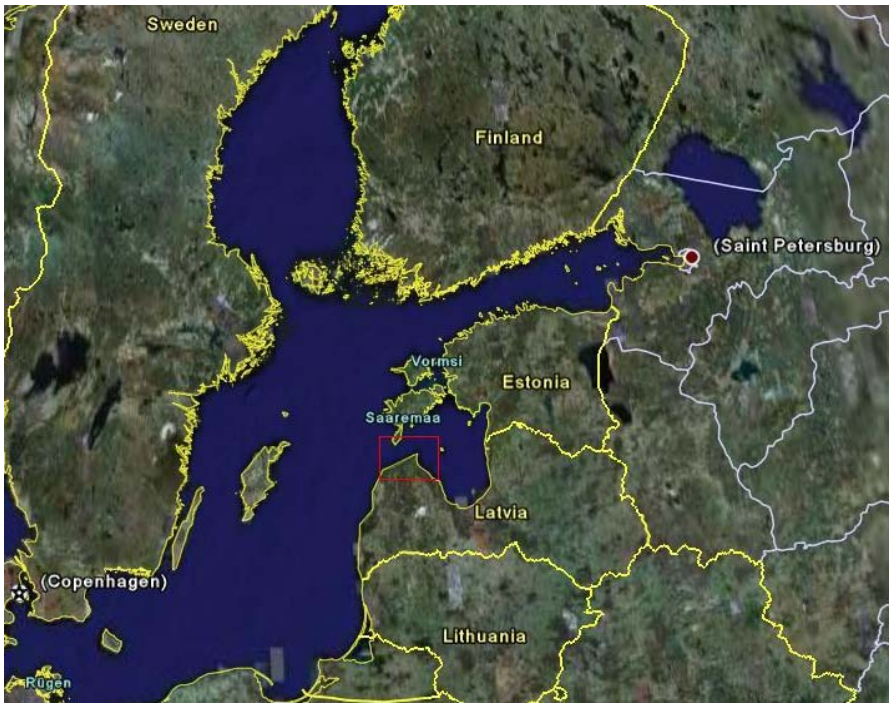

Figure 1: The location of Kolka village and the study area.

Figure 2: The location of Kolka village in relation to Cape Kolka.

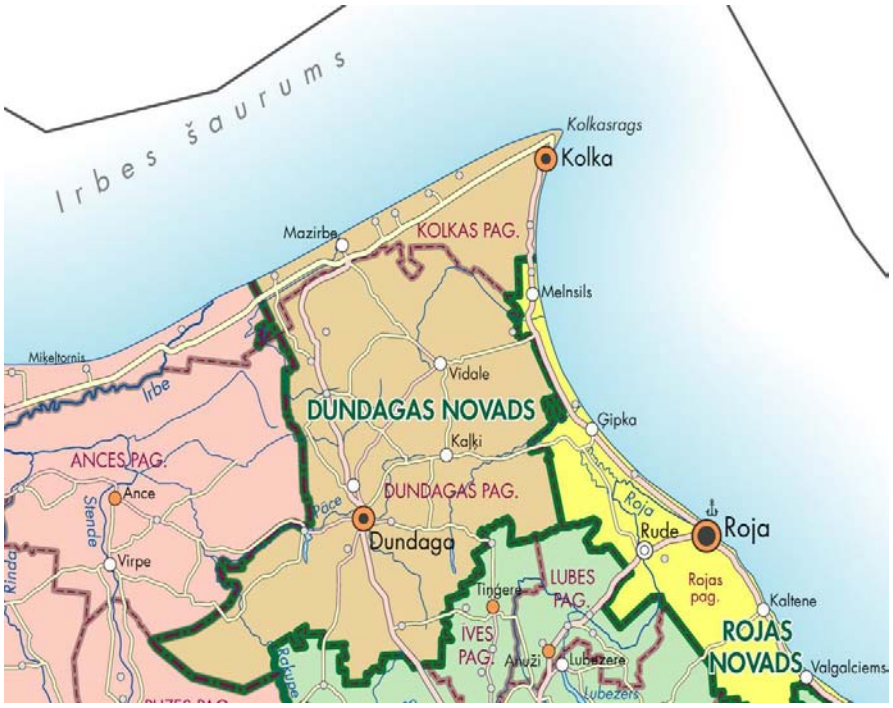

Figure 3: The location of Kolka village in relation to the local administrative boundaries.

Key geographical characteristics of the community

Kolka village is located on the east shore of the Cape Kolka peninsula, where it is afforded greater protection from storms caused by the prevailing strong westerly winds. The entire region is low-lying, typically just a few meters above sea level and with no natural geological formations. The region is built upon sand-dunes that were formed at the end of last ice age and that are and now over grown with pine forests. The shoreline along the coast is typically sandy with wide beaches and with gently sloping sandy ground that extends out to sea. Villages along the coast typically face these beaches and piers and jetties have been built that extend out to sea and provide places where boats can load and unload, the local exception is Roja, where an inlet has provided an opportunity to develop a small harbour and a larger settlement has grown up as a result. Kolka village is relatively isolated with the nearest large towns being the regional centre Dundaga (37km), Talsi (75km) and Ventspils (78km). The distance from Latvia's capital city, Riga, is around 160km.

There are no tidal actions observed in this area and the water level varies only in the range of about +/- 1m, largely dependent and driven by wind direction and speed. The average water temperature in winter is +7°C and summer this rises to around +15°C. The shallow nature of the waters off Kolka give rise to these variations and in recent years there have been some particularly high temperatures recorded with water temperatures of up to +31°C having been observed. The water temperature generally has an effect on the distribution of fish and whitefish migrations tend to follow the colder water flows. Water salinity remains constant during all seasons approximately 5‰. The low salinity also affects species distributions and there is a range of typically freshwater fish species found and caught in this area. The climate is typical coastal with relative cold summers (average +16.3°C) and warm winters (-3.5°C). Kolka village is in one of the most rainless regions in Latvia with the average rainfall reaching just 568 mm/year.

Most of the people who are working in Kolka village are also living in Kolka, just 10% are inhabiting surrounding villages Sīkrags, Mazirbe, Košrags, Pitrags, Saunrags, Vaide and Uši.

Kolka has always been known as a fishing village but one that does not have a large amount of fisheries infrastructure. There has never been a big harbour in the village, just a pier for bigger boats and smaller fishing vessels to unload their cargo for the local processing factory. Smaller coastal boats are usually beached and are dragged in and out of the water by land vehicles. About seven kilometres north of Cape Kolka there is a man-made island that has been built to house a lighthouse. The lighthouse alerts shipping of the dangerous shallow sandbank, which for centuries has been known as unpredictable ship sinker.

2. DEMOGRAPHIC ASPECTS

Population and population age structure

Overall this area of the Latvian coast is characterised by a low population density and scattered small villages. For Kolka village there is no long-term data on population numbers and population structure. However, data from recent years indicates a trend in overall population. Since 2004 the population of Koka village has been decreasing. This decline is a pattern that has been seen across the whole of Latvia, particularly in the more rural regions further away from big towns. As Figure 4 indicates, there was a small stabilisation of the population during 2007 and 2008, but after the economic crisis in 2008 a sharp decline is seen. The main reason for these declines, as with elsewhere in the rural areas, is economic with people moving to find better jobs, most often towards larger towns and more urban areas. There have been no significant changes in the Kolka community age structure over recent years but the general trend is again similar to the national picture in Latvia wherein the population is ageing.

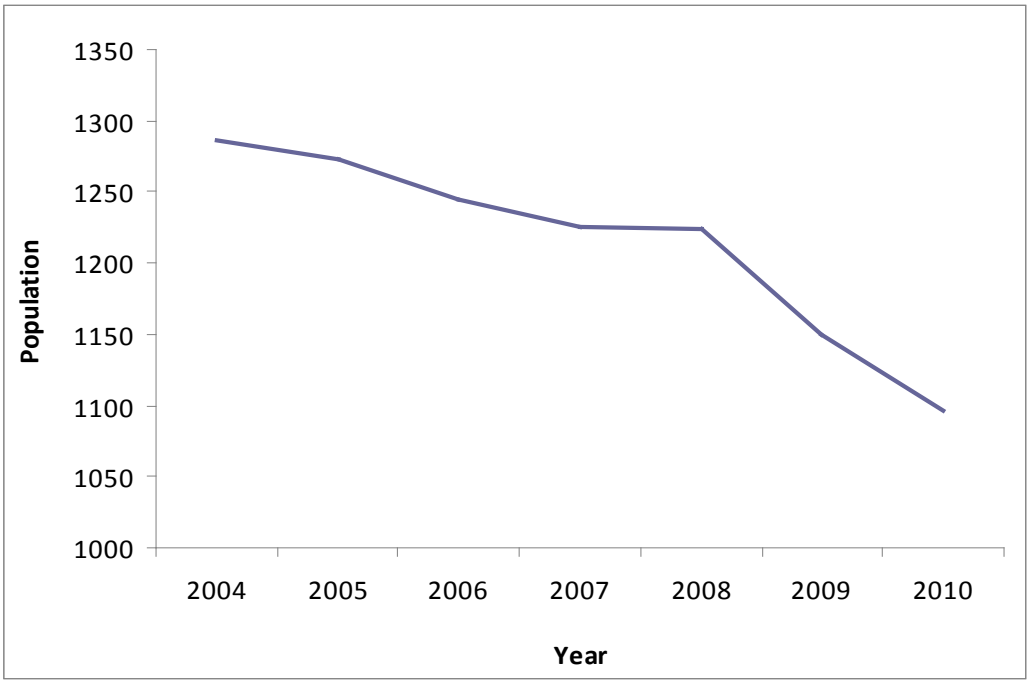

Figure 4: Trend in total population in the Kolka village between 2004 and 2010.

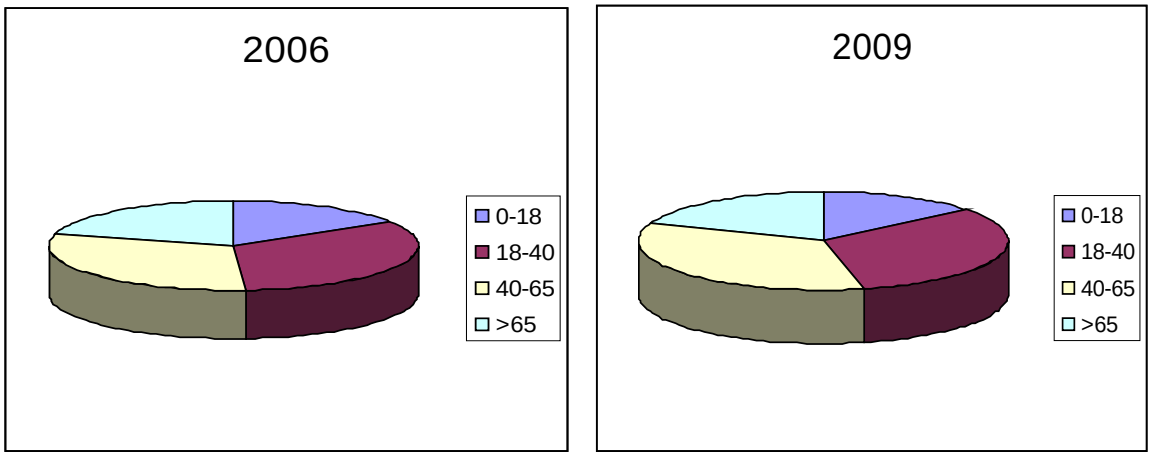

Figure 5: Age structure and change in age structure for the population in Kolka village in 2006 and 2009.

Ethnicity and migration

The history of Latvia has shaped the ethnicity of the country and following re-independence there are a minority of Russians who have remained in Latvia. The main nationality in Kolka is Latvian (91.6%). This represents the typical situation for most of the rural regions away from bigger Latvia's towns (except Latgale region where the presence of Russian people is greater). Kolka village is important in that it is home to a particular ethnic minority called Līvi, Lībieši or Livonians who belongs to Finno-Ugric language group. These people have inhabited the coastal areas of Latvia since 3000- 2000 B.C. and in the Middle Ages there were some 15,000 living among the Latvians in these regions. Since then the numbers have declined and now there are just a few people remaining who still remember the Līvi language and it is highly endangered. Kolka village is home to one of the last remnants this ethnic group with the highest number of Līvi peoples in the historical area of this Livonian coast. In 1995 of total 186 Livonians in Latvia, 53 lived in Kolka and they represent 1.8% of the total population of Kolka village.

There has always been a small in and out migration of people to other neighbouring villages and towns due to employment opportunities and marriage. However the recent trends represent a departure from this historical pattern with a strong out-migration of younger economically more active people to more urban areas and, with accession to the European Union, to other countries. To begin with, this was mainly short-term migration by some family members to gain higher income that they could bring back to Kolka. However, since 2008 and the economic crisis, out migration has intensified and in most cases it is now complete families that are leaving. This is having a big effect in the village and as a result, in 2010 there were only two children born in Kolka and the number of schoolchildren attending the local school has decreased by about 50% in the last three years.

3. ECONOMIC ASPECTS

Most of the people in Kolka are, and have always been, employed in fish catching and fish processing. This, together with the constraints on diversification that the national park represents and the legacy of the Soviet period, are major factors as to why there have been no significant changes in the community's economic diversity. Most of the population is employed in fish processing (~79% from economically active inhabitants), the second one is

municipal or public sector (~13%), then commercial fishing (3%) and other services including tourism (3%). Fish processing also provides employment opportunities for people living in areas around Kolka who travel in to work in the factories.

Importance of economic activities

The Fish processing factories and the public sector are important employment opportunities as they provide people with work during all year round. However, as the production is exported to Eastern countries (canned fish) or to Western (EU) countries (frozen cod filets) the intensity of production can differ seasonally or yearly depending from economic situations or market prices. For example the strong decrease in canned fish production was recorded in 1998 because of the economic default situation in Russia.

The fisheries in Kolka are seasonal, lasting mainly from March till October. The main reason for this is because of hard weather conditions in autumn and possible ice cover during winter and early spring months. Most of the fishers are operating from small vessels and these would be dangerous to work from in the autumn storms. There are currently 13 commercial coastal fishing companies registered in Kolka, but in order to optimise the use of gears and manpower they tend to operate as 2-3 cooperatives.

Services, such as hotels, restaurants and tourism-related businesses also have a strongly seasonal character. These businesses operate during the 2-3 summer months during which tourists from all around the world are visiting the area, drawn by the scenery of Cape Kolka and the national park. It is estimated that annually approximately 50,000 people are visiting the Kolka area and this tourism provides opportunities for around 20 people in Kolka during the season. Eco-tourism has been suggested as a potential opportunity for the area as the nature reserve and position of Kolka on the migratory pathway for many bird species provide an opportunity that could be exploited. There has been interest in the past to develop these opportunities with eco-tourism characterised as ‘‘the only development possibility’’ for the economically ‘‘frozen’’ region, with its aging and shrinking population[1]. However, the traditional way of life, distrust of the motivations of those promoting change and the seasonal and uncertain nature of tourism along with the need to make investment to obtain benefits has meant that any opportunities are only slowly being realised.

Outside of the fisheries sector, economic activities have remained fairly stable with no big increase in opportunity or any big falls.

Employment and unemployment

Unemployment in Kolka is more or less similar to other rural areas of the country and certainly to other villages along the coast because Kolka is not so isolated from neighbouring regions with similar economic activities. The unemployment level has been increasing over time (Table 1), but after the economic crisis it is interesting to note that unemployment in Kolka is lower than in Latvia overall. One of the reasons for this is that the local economy is strongly connected with the fisheries and this is a renewable resource within which most of the stocks are in a fairly good state.

Table 1: Unemployment Level in Kolka over time

	2003	2005	2008	2009
Unemployment (%)	2.7	5.7	7.8	10

[1] Jucevics, E. (1997). Slitere sodien un rit [Slıtere today and tomorrow]. *Kurzemes Ekspresis*, March 21, 6.

Most of the people in Kolka are working in full-time employment and the importance of part-time employment is very low. Overall the importance of fish processing is very high (Figure 6). There is however a degree of seasonal movement of labour between sectors, for example during winter when the coastal fishery is not operating because of natural circumstances; the fisherman will work in the fish processing factories or in forestry. In general, the area economically is dependent on the fish processing sector that recently has proved to be very stable.

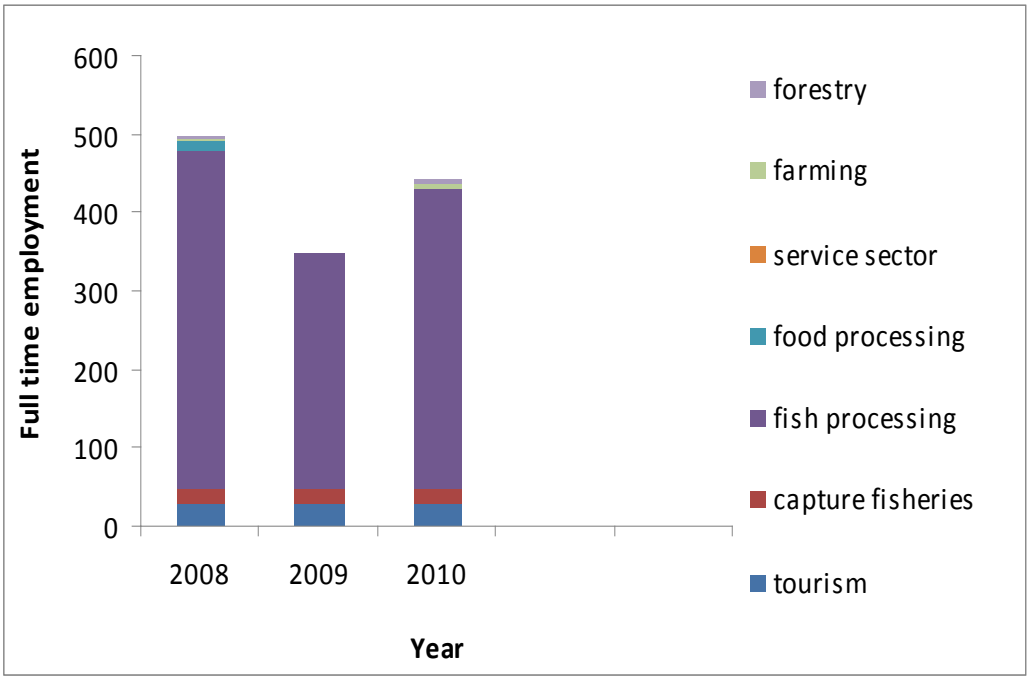

Figure 6: Full time employment by sector over time. Data are not available for a longer period due to administrative changes.

Infrastructure

The infrastructure within Kolka village is very limited. Aside from the fisheries infrastructure (discussed in sections below), the key non-fisheries infrastructure is related to the service sector with two food stores, gas station and one hotel and to the public sector (one primary school and one music school). There is a small university research station nearby where students undertake ecological fieldwork linked to both the national park and the marine systems.

There is a small level of tourism sector activities in the regions of surrounding villages during summer months that supports one guesthouse per village. The agriculture and forestry activities in Kolka area are very limited that is not typical for Latvia in general. Typically rural coastal villages would exhibit mixed livelihoods that include elements of fishing, agriculture and forestry. However, Kolka is particularly dependent on fisheries because most of Kolka's territory is under the jurisdiction of the Slitere National Park with the result that no agricultural or forestry activities are allowed. As a result there is only one small farming company and one forestry company in the area and opportunities for increasing these and additional diversification are extremely limited.

Kolka is fairly well connected to other parts of the country. The best connection to Kolka has traditionally been the eastern road from Riga although that leads north-west to the important

Latvian harbour city of Ventspils. The road to Ventspils has been in a very bad condition in recent years and there is currently an effort to upgrade the road along the north-western coastline with financial support from the European Union and it is under re-construction and due to be completed in 2013. The nearest international airport is Riga airport although a small local airport exists in Ventspils. The nearest commercial fishery harbour to Kolka lies in the nearby town of Roja.

Local development plans

The local development plans were established during 1990's. However due to Latvian regional reform that has occurred since January 2010 when Kolka was placed within Dundaga municipality no plans have been drawn up and the existing plans must be reconsidered. As it stood, there were no plans for additional investment in Kolka and the plans were focused on maintaining the public sector services (primarily the schools) with no funds allocated to local government for any form of development. For the future it is anticipated that the priority for development will be in the traditional sector that has been a priority for Dundaga – agriculture – and it is uncertain to what degree fisheries will feature in the new plans.

4. FISHERIES AND AQUACULTURE SECTOR

The fisheries catching sub-sector is very limited in Kolka. There is only a local coastal fishery in Kolka area. This fishery operates out of small fishing vessels in the Gulf of Riga and Irbe Strait areas in waters of up to 20m depth using trap-nets, gillnets and flounder seines. The fisheries are managed on the basis of the counties and the number of gears that can be used. Until 2010 Latvian Fish Resource Agency recommended the number of gear that can be used in every local county. It was reviewed and accepted by National Board of Fisheries and the individual counties (in this case Dundaga) distribute the licences to the individual fishers. Since 2010 the number of gears is included in Latvian Council of Ministers Regulation Nr.1375.

The fishers tend to each have their own company but they will work together in small teams to increase their overall efficiency. Besides this commercial coastal fishery there is also a locally important recreational/subsistence fishery from which all landings are used for household consumption. Commercial fishers in Kolka can only survive economically by exploiting a full range of species during the fishing season that lasts from March to September. In winter they need to find alternative employment and traditionally this would be in forestry or factories. In Kolka this is an issue as the National Park constrains options.

As mentioned above, the sector is dominated by the processing sub-sector that is responsible for the majority of employment and income generated. However, the capture fishery does have an important role within the local culture and way of life. There are no aquaculture or ancillary sectors developed in area. During the 1980's there were several attempts to start sea farming of rainbow trout near Cape Kolka. However, these initiatives failed as local environmental and weather conditions were not suitable for this activity.

Details of the local fishing fleets

There are strong historical roots within the coastal fishery in Kolka and also at present it is one of the most active traditional coastal fishery spots in Latvia. The geological characteristics of Kolka provides coastal fisherman good conditions to successful work on both sides of the Kolka Cape giving shelter from the seasonal prevailing Western or Eastern winds. Vessels are operating on day trips and target a range of species.

There are currently 13 registered commercial fishers in Kolka. The local fleet consists of small (8-10 m long) specialised fishing boats that operate within the trap-net and seine fishery. Additionally there are several small boats with small outboard engines or even paddles that are used in the gillnet fishery (catching largely for household consumption). Fishing is seasonal, targeting species in sequence as they become more abundant. The gillnet fishermen mostly use benthic gillnets with mesh sizes between 45mm - 180mm (used to target freshwater fish and roundfish) and 16mm - 36mm (to target herring). For trap-net fishery there are trap-nets with mesh size from 36mm to 80mm and specialised flounder fishing with seines with 55mm mesh size (all meshes are given in net length from knot to knot).

Table 2: Kolka fleet segments 2010

Segment (length class)	Number of vessels	main gears used	Number of crew (average)	Main species fished	Main fishing locations (ICES areas)	Trip length (average days)
00-12	43	gillnet	2	Flounder, Sea trout, Salmon, Herring	44H2	1
00-12	7	trapnet	4	Flounder, Sea trout, Salmon, Herring,	44H2	1
00-12	7	sein	4	Flounder	44H2	1

Figure 7: Man fishing area for Kolka fishing fleet represented by the extent of the < 20 m depth zone.

In recent years there has been a strong increase in the number of small boats registered in the Kolka area. A key driver for this change has been the economic crisis of 2008, in response to which a lot of local and neighbouring area inhabitants entered the subsistence gillnet fishery. This has led to a substantial increase in the registered fleet (see Figures 8-10), but practically no significant increase in overall landings or effort (Figure 11) because most of these people only set up their very limited amount of gillnets a few times a year with no guarantee that they will catch anything at all because many of them lack the skills. Overall there were 90 coastal gillnet fishing licenses granted for Kolka in 2010.

Most of the active fishermen in Kolka are old people, who work in fishery since the Soviet times. There is a small seasonal drop of younger people, but they can not afford to permanently stay in this profession. Generally the fishers in Kolka find that they are facing increasing costs while prices remain relatively stable. Being mainly small-scale fishers they have difficulty accessing credit and cheaper inputs. One example is fuel. Fishers are unable to purchase fuel in sufficient quantity to get discounts as they are unable to use the fuel before it degrades or be able to store the amount they would need to buy.

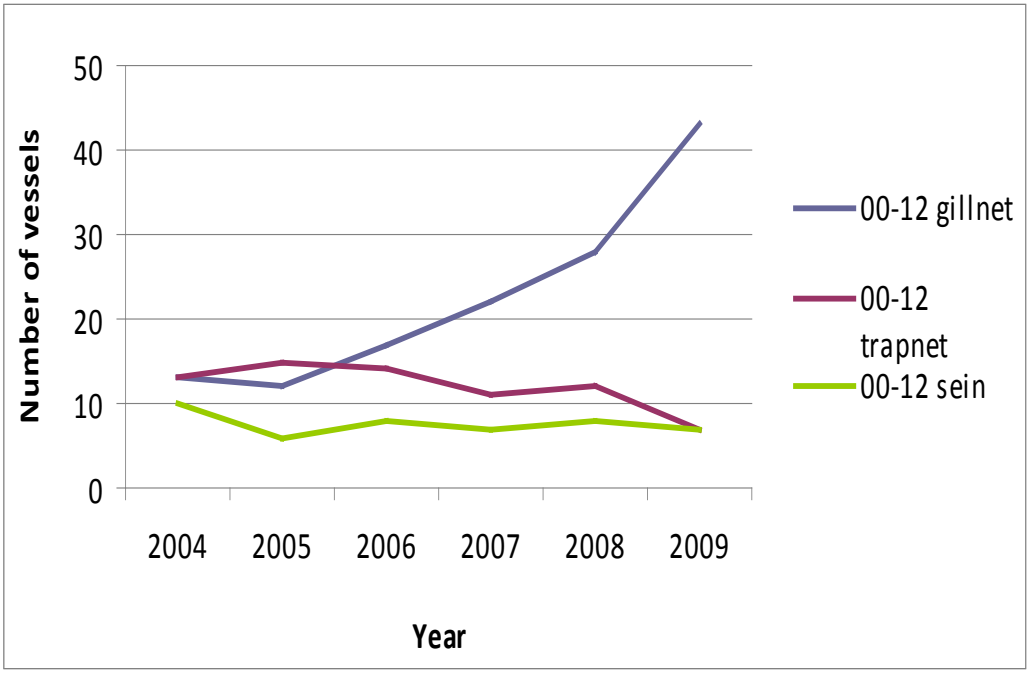

Figure 8: Trends in Kolka fleet segments by vessel numbers and gear types.

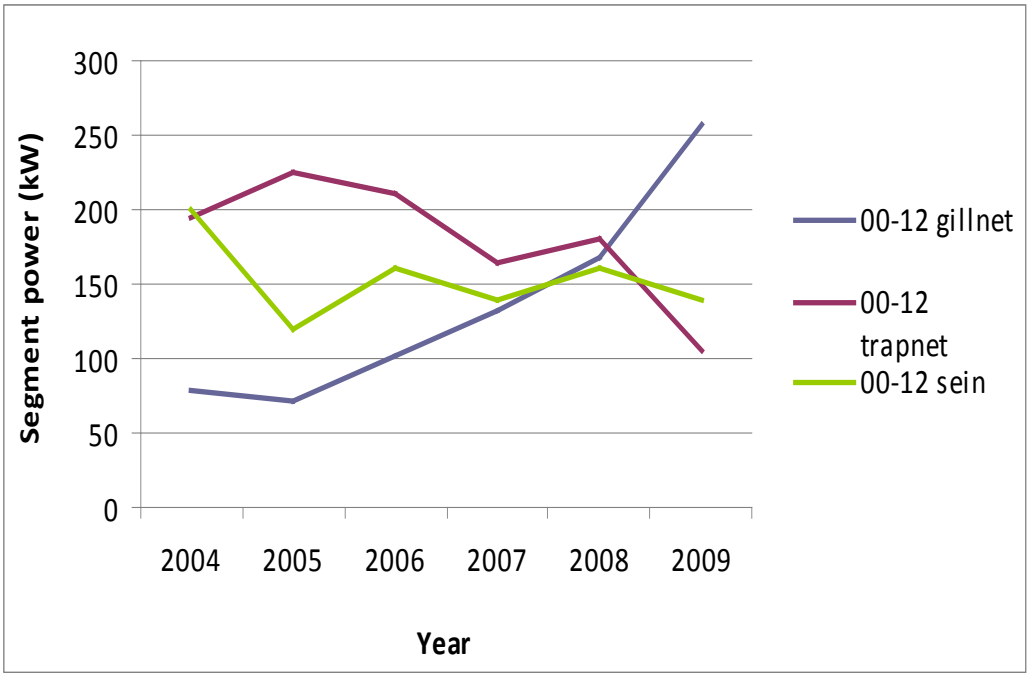

Figure 9: Trends in Kolka fleet segments by fleet power (kW).

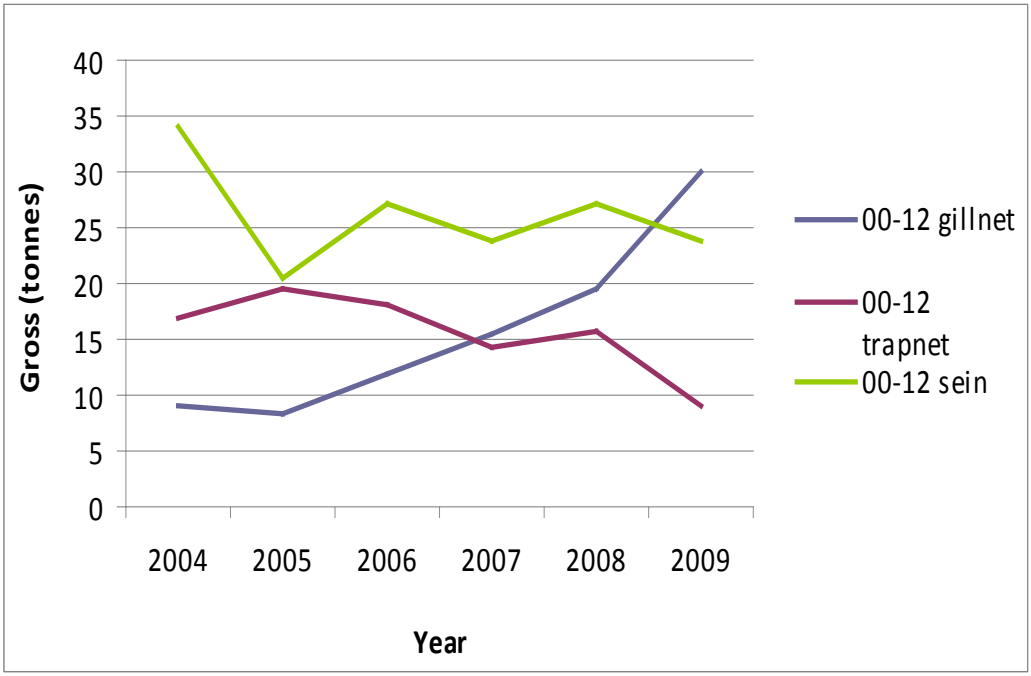

Figure 10: Trends in Kolka fleet segment by tonnage.

The trend in increasing gill net use contrasts with a reduction in the use of trap nets in the local fisheries. These are larger gears and are expensive to maintain and replace. Finding themselves in difficult economic circumstances, some fishers are choosing not to replace trap nets that have been damaged, lost or that otherwise need replacing. This has an impact on the nature of the fisheries, tending to make the small-scale operators even more small-scale.

Fish stock status

As in rest of coastal Latvia the main fish caught in the Kolka area is the Baltic herring, mostly using pound-nets (a sort of trap net) in early spring when the herring are migrating to the coastal areas to spawn in the Gulf of Riga. The stock status of Baltic herring is currently stable so it is possible and permitted to pursue a specialised spawning herring coastal fishery.

Kolka is also the last place in Latvia where a specialised coastal flounder fishery using seines is found. The region of Kolka, with its shallow waters and sandy banks is a good environment for the flounder and it is found in the coastal waters in relatively numbers, facilitating this method of fishing. The stock status of the flounder is also stable in this region.

The stock status of salmonids and freshwater species is more or less unknown. In the region of Kolka these species are migrating between the Gulf of Riga and the open Baltic Sea and the fishery on them is typical seasonal. However information from fishers suggests that there has been a recent decrease in salmon stock abundance. This tendency is observed recently

throughout Latvia. One explanation for the reductions in salmon abundance put forward by fishers has been the reduction in hatchery production.

In addition to these main stocks, the fisheries, particularly the herring fisheries, have been affected by increases in the number of mitten crabs. These exotic species appear to be increasing in abundance and fishers report that they are taking fish that are caught in gillnets.

Table 3: Fish stocks exploited by Kolka's fleet and their status

Species	ICES Area	Management responsibility	Stock status relative to MSY (above, near, below, unknown)	Main management regulations affecting the stock
Flounder	44H2	LVA	Stable	
Herring	44H2	EU	Stable	Number of pound-nets
Salmon	44H2	EU	Decreasing	Number of trap-nets and gillnets
Sea Trout	44H2	EU	Decreasing	Number of trap-nets and gillnets
Perch	44H2	LVA	Stable	Number of trap-nets and gillnets
Bream	44H2	LVA	Stable	Number of trap-nets and gillnets
Vimba	44H2	LVA	Decreasing	Number of trap-nets and gillnets
Garfish	44H2	LVA	Stable	Number of trap-nets and gillnets

Fisheries infrastructure

There is limited fisheries infrastructure in Kolka. The commercial fishermen have their own small warehouses for inventory with some small refrigerators for the fish. Most of the catch is sold to the local processing factories and local inhabitants. Only a small part of the catch goes to neighbour regions depending on the season and the situation in the market.

There is a concrete pier adjacent to the fish processing factories that is used for unloading the catch from bigger vessels to the fish processing factories and these larger coastal fishing vessels are maintained near the pier. The small costal vessels mostly are located near the gears on land and are moved with land vehicles.

Details of the local catching sub-sector

The catching sub-sector is characterised by strong seasonality. The season of herring fishery with pound-nets lasts from March through to June and the fishery is regulated by means of the number of allowed pound-nets. In Kolka area the total number of allowed pound-nets is 32. As a by-catch in this fishery the garfish is taken.

The trap-net and gill-net fisheries start in May and are continuous through until October-November depending from weather conditions. Again, the fishery is controlled through the number of gears that are allowed. For Kolka, a total of 180 gill-nets (35 of which are herring nets), 29 trap-nets, 25 fyke-nets and 5 small mesh-size trap-nets is allowed. A vessel is able to operate more than one type of gear.

The flounder seine fishery starts on second half of May and is continuous through to the end of summer. There is no limit on the number of seines in the flounder fishery because of the relative health of flounder stocks.

Most of the landings in Kolka are of herring (Figure 11) and the landings can vary between years with the fluctuations in the herring stocks. The price of herring also varies with this fluctuating annual abundance and also varies within years as the season progresses so it is very difficult to determine a average annual price. The price of herring typically varies from around 0.35 EUR/kg in the start of fishing season and drops to 0.07 EUR/Kg in the hot summer months. Such difference is determined by fact that Kolka is the first area in the Gulf of Riga where spawning herring appears and the fishers of Kolka are able to gain a price premium for the early catches of herring. After that landings of herring are increasing in other areas and the total price decrease.

The second most important fish species is flounder. It has a stable stock state over the past decade. The total landing is dependent mainly from market demands. In the last years there is a small increase of price of flounder and is generally in the region of 0.35 EUR/kg.

The price of Salmonids (Baltic salmon, seatrout, rainbow trout and whitefish) stays also stable trough the years by 3.5 EUR/kg, but there has been a decrease in the total landings of these species. This is seen to be related stock decrease (suggested as being driven by reductions in hatchery production) and also the increase of natural mortality due to seal predation. Seals have been highlighted as a particular problem in the area, with seal numbers reported to have increased in recent years.

Freshwater fish species where caught mostly in the summer months and have a very extensive price rate starting from freshwater eel with 10 EUR/kg and ending with fish like roach and bleak that have little or no commercial value.

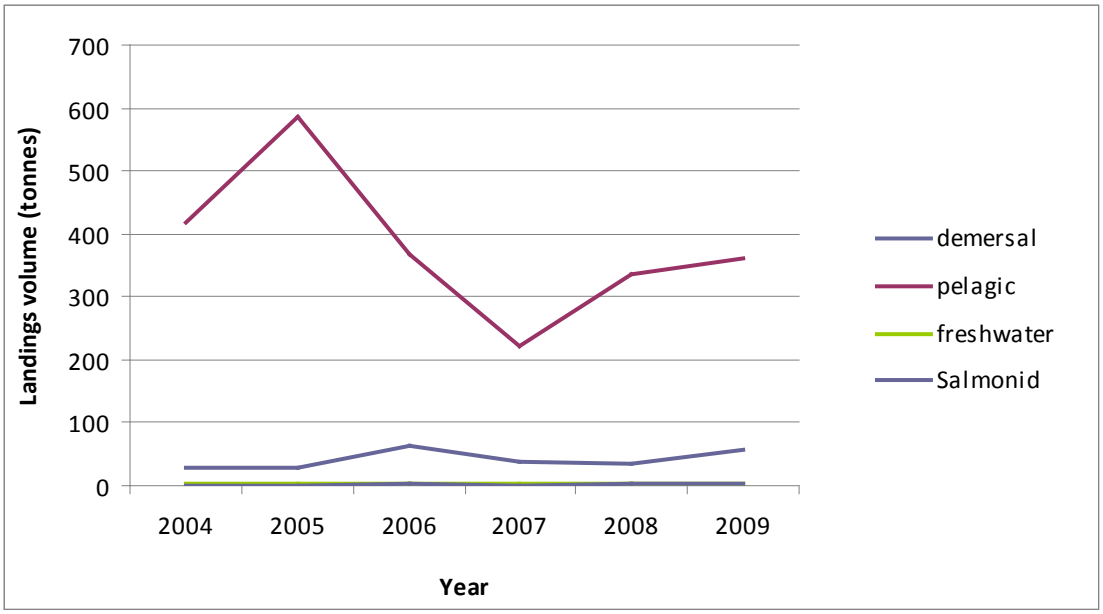

Figure 11: Trend in the volume of landings in Kolka area over time.

Table 4: Average annual price of fish species in Euro per kilogram. Fish prices for 2009

Species	Herring	Flounder	Salmon	Seatrout	Perch	Pikeperch	Eel	Other
Eur	0.16	0.31	3.5	3.5	0.42	1.14	10	0.42

Most of the herring landed by Kolka coastal fishers goes to a Norwegian Company based in Roja called "Baltic Seafood" that processes the fish to produce frozen products. The fishers also sell their herring catch to other companies elsewhere if there is a good price, but all other fish species are staying in the local market.

Details of the local processing sub-sector

Presently there are two fish processing companies in Kolka “SIA Līcis 93” and “Banga Seafood International AS”.

The biggest company is “SIA Līcis 93” which operates since the beginning of 1990’s. The factory employs 300-400 people and processes small pelagic species to create a local speciality of smoked canned fish. The main species that are used in this process are the Baltic Sprat (*Sprattus sprattus balticus*), Baltic Herring (*Clupea harengus membras*) and smelt (*Osmerus eperlanus*). All species are caught by Latvian fishing vessels. However, the proportion of fish provided to the processing factory by the Kolka fleet is very small - about 0.5% of the total catch (~4 tons annually). This mainly occurs during pound net fishery in spring, i.e. May-July. The processing plant (and the plants in the other villages along the coast) secure the supplies of raw materials mostly from the Ventspils fleet and/or other smaller fleets in Roja and Engure. The fish are transported from these ports by land vehicles to the processing factories.

The company SIA Līcis 93 also has five vessels registered on its name. One is MRTK type vessel (27m in length and 221KW engine) and four MSTB type vessels (18m, 110-184KW). These vessels are fishing in the Baltic Sea and Gulf of Riga. As these vessels are registered in Riga harbor they mainly unload their catch in Riga. Only very small part of the landings of these vessels is unloaded directly in Kolka (around 4-6 tons annually). Thus, these vessels cannot be defined as a part of Kolka fleet.

This factory involves sorting, smoking, flavouring and canning of fish and also the manufacture of cans and packing of the product. Production at the factory runs to around two million cans per month. The factory needs to ensure a constant supply of fish for its operations yet these species are highly seasonal in abundance. The processors get around this by having a large cold storage facility where it is possible to hold fish frozen when they are bought during the time that catches are abundant. The main product is smoked sprat, herring and smelt in oil. This is a product that has a special status in the EU as a speciality product. This sort of factory is typical of the coastal communities and many of the villages along this part of the coast have a similar facility producing the same speciality canned fish.

Most of the production from this factory is exported to Russia and Ukraine, just a few percent of the total production stays in Latvian market. The processing industry is therefore highly dependent on the Russian markets and any changes in these markets can have a strong effect on Kolka. There have been a few instances where this has happened, once when there was a difference in the standards applied to foods that led to a reduction in exports and, more severely, the Russian economic crisis of 1998, which had a major effect on Latvia’s coastal fisheries, sending unemployment levels to 25% in Kolka by January 1999[2].

[2] Schwartz, K.Z.S (2006) ‘‘Masters in Our Native Place’’: The politics of Latvian national parks on the road from Communism to ‘‘Europe’’. *Political Geography* 25: 42-71

"Banga Seafood International AS" is a smaller fish processing factory with 40 employees. It is a Baltic Cod (*Gadus morhua callaris*) filleting factory that works only with fish caught by Latvian vessels and all the production is exported to Western Europe. From 2004 until 2008 there was a third factory "SIA Baltijas zivis" with approximately 60 employees and a turnover of 2.85 million Euros annually but this factory was unable to compete and ran into economic difficulties that led to its closure.

Unfortunately while it is possible to estimate the number of cans produced by the pelagic processing plant, there is no public data or particular information about the values and volumes of those companies. These companies are private businesses and this is considered confidential information.

Details of the local aquaculture sub-sector

There is currently no aquaculture in Kolka and there are no plans to initiate any. In the past there have been attempts to establish aquaculture in the area. The most recent of these was in the late 1980's when a rainbow trout farming project was trialled. This was during the Soviet time and the project was started as a collective farm project. However, the project quickly ran into difficulties because the hydrological and weather conditions of the area were not suitable for trout farming and the project was cancelled.

Details of the local sub-ancillary sector

There is no dedicated ancillary sub-sector in Kolka. Instead local fishers repair their inventory (vessels and gears) by themselves buying only raw materials. The fisherman do the ancillary works by themselves transporting supplies from Riga several shops or other neighbouring towns, in particular Roja, where there is a small harbour.

5. GOVERNANCE

Key local institutions

In Latvia, costal fisher interests at the national and international levels are represented by Latvian Fisherman Federation. The fishers of Kolka are members of this organisation and actively participate in its meetings and other activities. Within Kolka there are some small cultural organisations in Kolka, that mostly are arrange small ethno-cultural events during tourist season and educate local children.

As well as the fisheries sector and civil society organisations there are some government institutions in the region – local municipalities, Slitere National Park, Livonian Coast, Regional Environmental Protection Board, Building Control Board, and others, that are responsible for control and implementation of laws for individual sectors of the coastal zone and that affect policy and practice within Kolka. In the past the location of the coast as on the border of the Soviet Union meant that there was a high degree of control over activities in the area such that local people were highly restricted in what they were allowed to do (and not). Since re-independence this has changed but the area around Kolka is dominated by the Slitere National Park, which constrains local options.

Each government institution tends to work in its own sphere with its own methods and budgets (though these may be limited) and there is no joint coastal planning. There is also a degree of distrust amongst the different interests represented within these institutions exemplified by the interests on the one hand to preserve the coastal regions in a natural

state, and on the other an interest in opportunities for economic and social development and the pursuit of higher living standards for local people.

As highlighted in the 'future plans' section, local governments have many responsibilities but, especially since the financial crisis, inadequate financing. The focus of local government has been restricted by necessity to essential services and 'fire-fighting' activities with much less emphasis and resources available on planning future development. In addition the process of people moving from the country to the towns, as a result of a lack of opportunities in the coastal regions, is creating concerns within these local government and civil society institutions about the long-term future of the area and how the communities can be supported to maintain viable and productive roles within the area.

While there have been no local fisher organisations in Kolka beyond the local cooperatives, there have been moves under the Axis 4 programme to establish a Fisheries Local Action Group (FLAG) that covers the Kolka area. This is being initiated with the assistance of the Northern Kurzeme Business Association, which was contacted as part of this study. The FLAG covering Kolka is part of a larger initiative that was created in 2008 to support the areas of:

-Domestic production, (this one would include coastal fisheries)

-Health and relaxation

-Heritage values

-Environment improvement

This organization covers 11 regions in northern Kurzeme including Kolka region- Dundaga, Lube, Īve, Valdgale, Ance, Puze, Ugāle, Usma, Pope, Tārgale. Kolka has only one coastal fisher representative involved in the decision making for FLAG. The FLAG development plan was developed through local consultations (including in Kolka) that sought to identify the sector needs and investment priorities. This was for project ideas to be put forward and incorporated into the local development plan, to be realised through the FLAG programme. The amount of money provided for the first round of the project admission was about 65,000 Euros with a limit of 20,000 Euros per project.

However, the consultation process was not well understood by local fishers, which led to a low level of involvement and the majority of projects that were submitted were rejected because of a lack of concreteness and details. A number of fisher proposals also related to environmental improvement, but as these required construction permissions they could not be accepted. Currently there are two projects related to fisheries accepted by the association and now in the evaluation stage - one in Usma region (an environment improvement project for Usma lake which includes also sport fishing issues). The second is in Kolka and is again an environmental improvement project that aims to bring tourists into the sea, to watch fisherman catching fish and later smoke it. For this the fisherman need a second boat for tourists. The investment amount is around 3300 EUR

5.2 Public intervention

It is known that the EU supporting funds have been invested in the modernisation of fish processing factories in Kolka (e.g. updating cold storage facilities). This is similar to the situation in whole Latvia but there is no detailed public information about the source and costs because of commercial confidentiality issues. The local government has not received any of EU's public investments because of the lack of a regional planning report. Support to regional development planning was stopped during the period of national regional reform

which was enforced in 2010 under which administrative boundaries were re-shaped and under which new development plans must now be drawn up. The first payment the regional government plans expect to receive will be in the summer of 2011.

Table 5: Public interventions (presently available information)

Public investment	Source of funding	Investment cost	What was the investment intended to achieve?	What were the outcomes (or expected outcomes)
EU payment in 2003	EU	115,000 EUR	Modernization of the fish processing factory "SIA Baltijas zivs"	The company had a good start and successful worked till 2008
Compensation for ship scrapping	EU	70,000 EUR	Scrapping of two coastal vessel in 2008	Reduce the size of the fleet

6. STAKEHOLDER ANALYSIS

The area of Kolka is quite small but the following key informants were consulted. In addition the team visited the local processing factory and had additional discussions with representatives and additional local fishers.

Table 6: Local contacts

Name	Organisation	Contact details
Aldis Pinkens	Head of Kolka region government	aldis@dundaga.lv
Guntis Otomers	Local Fisherman and Fish Processing Factory representative	Otomers@inbox.lv

7. QUALITATIVE ANALYSIS

Key events and drivers of change

7.1.1 Demographic aspects

The declining and ageing population in Kolka has largely been driven by the perception that there are limited opportunities within the area for people. One Latvia had joined the EU there was an increase in the rate of out migration. While the Slitere National Park is a popular tourist destination the opportunities for local people to benefit remain limited and the tourist activity is highly seasonal in any case, often coinciding with the fishing season so further limiting opportunities. The economic crisis has increased the level of out migration and there are concerns within the community and local government about the potential long-term effects of this as the school may face closure.

7.1.2 Economic aspects (all sectors)

The biggest challenge facing Kolka is its remoteness and lack of alternative employment for many of its residents outside the fishing sector. This is exacerbated by the National Park, which restricts the alternatives available to local people as many forestry and agricultural activities are prohibited. While the community is highly dependent on fisheries there have been pressures within this sector as costs have been rising while the first-sale process have remained fairly constant. Despite these difficulties, most people, including those within the municipal and regional governments, appreciate the importance of fishing in terms of cultural heritage. While there have been no big changes in opportunities over time the current perception is that since the economic crisis everything is being maintained at a low level of activity and that there will be change only with a change of wider economic circumstances.

7.1.3 Fisheries and aquaculture aspects

Increasing costs have dominated the sector. For example, fuel costs have more than doubled since Latvia joined the EU and spare parts for boats and gears have showed a similar trend. The catching sub-sector is dominated by small vessels. In recent years and especially since the economic crisis, there has been an increase in the number of small vessels that are fishing for household consumption using passive gears. It is also very difficult for local fishers to get insurance for their gears. Insurance companies consider fisheries to be a high risk enterprise and are reluctant to insure while fishers complain that it is difficult to get compensation from the insurance companies when you have got insurance and make a claim. The nature of the coast makes fishing operations risky as, despite the shelter of the Cape, the coast can be quite stormy and fishers risk their gear being damaged. In 2009 two out of three in the trap net fishery were damaged. Fishers cannot afford to replace these gears and are only able to repair them where they can. The situation is now such that it is no longer profitable or affordable to start a new commercial fishing venture.

The economic difficulties have led to some leaving the fishery. In 2008, with assistance under the decommissioning scheme, two local vessels were scrapped. Decommissioning elsewhere has also affected Kolka. Three or four people from the village who were working as crew on larger vessels operating out of Roja lost their jobs when these vessels were scrapped.

There have also been concerns about interactions with the fishery and other species. The seal populations are reported to have increased dramatically in recent years and seal damage to fishing gears is reported to be a problem. Increasing numbers of exotic mitten

crabs have also become a problem as they climb the set nest and take fish from the nets or damage them. The amount of fish lost or spoiled is believed by fishers to be high.

The processing sub-sector remains the most economically important part of the sector providing employment for large numbers within the community as well as from surrounding areas. This is particularly important for women, many of whom work in the factories. However, the work requires long hours and the pay is very low, making this unattractive but it remains one of the few opportunities in the area. The processing sector concentrates largely on the specialist product canned smoked sprats and herring that the area is famous for. This is, however, a product that is highly dependent on the markets in Russia and Ukraine and has proven to be vulnerable to changes in these markets, with the entire cnnery threatened with closure following the Russian crisis in 1998.

While the European markets have provided both new opportunities and increased competition it has meant that exports (which make up a large part of the production) are easier as while there is more regulation at the factories themselves (the costs of which are borne by the companies) there is less paperwork associated with exporting.

Adaptation

7.2.1 Demographic aspects

The out-migration that has been seen in Kolka is itself an adaptive response to the perceived lack of opportunities in Kolka and, indeed, along the coast. The limited opportunities for alternative employment have limited the adaptive response within the community to the demographic trend of falling populace and the out-migration of younger and more economically active individuals and families. The key concern amongst locals is how to continue to support people in their ability and desire to remain in the area and pursue their traditional livelihoods and raise families given the rising costs and stable or decreasing returns. This is seen as particularly important given the historical and ethnic aspects of the communities.

7.2.2 Economic aspects (all sectors)

The region has a healthy environment with stable fish stocks and a suitable environment with the National Park, Cape Kolka and its location on major bird migration routes for tourism. The future industrial development of the area is restricted by natural obstacles (no river mouth areas) that not allow building harbours. While the environment and Park may attract tourists they also act as an obstacle for evolving industry other than fish processing because of the Slitere National Park. Agricultural development is also limited due to the Park but even if this were not so, the soils in the area are very poor and the opportunities for agriculture would be very limited.

The local inhabitants are totally dependent on fish processing and if there were no these industry the feeling was that the area would be economically dead. This situation has led to some tension over the possible future for the area with proponents of the National Park arguing that the future should be in eco-tourism and that fishing is not a viable industry to support the area in the future and local people, many of whom argue that the people, their culture and their livelihoods are tied to the seas and to fishing and that any alternative would see them marginalised.

The local government is able to play only a marginal role in supporting adaptation and development. The reasons for this are due to the reworking of the administrative boundaries that means that no new development plans can be put forward until 2011 and a lack of

resources, especially since the economic crisis, that has meant that local government must focus on maintaining existing services and not on resourcing development plans.

For those who have become unemployed (and the unemployment rate has increased) they are eligible for half salary if they engage in community work. This is a scheme in force across Latvia and funded via the EU. Furthermore, people within the community who are receiving less than 90 Lats per month are eligible to receive a monthly parcel from the EU. There are currently around 50 people who receive these and the number has remained stable over recent years.

In many respects the community in Kolka see themselves as coping at present rather than adapting as their opportunities to do so are limited.

7.2.3 Fisheries and aquaculture aspects

The increasing costs (electricity, fuel and taxes) and stable fish prices has affected those in the catching sub-sector using larger gears and there has been evidence that there is switching from trap nets to gillnets among some smaller vessels. According to local fishers this is because of the cost of maintaining and replacing trap nets and the lack of insurance. These gears are relatively expensive and fishers can no longer afford to repair and replace them and are switching to the lower cost gillnets as a result.

Fishers have very little opportunity to influence costs. While fuel subsidies are available, these have tended not to work well for the small scale sector in practice as the small quantities they require do not qualify and they cannot store larger quantities. Fishers have responded to this by attempting to act together to purchase fuel and be able to take advantage of fuel subsidies. In the cod fisheries the effect of a decrease in price has been that fishers are prepared to wait until the end of the season to fish at a time when the price of cod will be highest. There have been no other significant changes as fishers are very small-scale and are therefore limited in their ability to switch markets or identify new marketing opportunities. Fishers have also found that there are limited options to increasing value of the catches. Some have attempted to process fish – mainly through smoking the catch – but this takes up time when pursued on a small scale and requires additional permits. To obtain these requires investment up front and represents a risk to the fisher. Fishers have not found a way yet to deal with the difficult interactions with other species. While there have been attempts to find a way to utilise the mitten crab catch this has not yet been successful.

The processing sector has also faced issues with rising costs. Accession to the EU has also created a more challenging environment for the whitefish processors as they are facing increased competition and their location can act against them. As local producers explained, Latvian producers lose out in competition with Polish producers in particular. The Polish producers are located closer to the European markets and this secures them an advantage. The importance of the processing sub-sector has made this a focus for investment and EU funds have been used to modernise aspects of the factories, including cold storage and containerisation.

The future

Because it is recognised that Kolka village has become increasingly dependent on fisheries that are facing cost increases and stable prices with limited options for diversification and that this represents a coping community rather than one that is adapting, the future scenarios are dominated by concerns. From the perspective of the local government one of the most immediate concerns is the future of the school. With numbers diminishing and few new children being born in Kolka the school may face closure. As well as reducing the employment that the school provides, there will be larger ramifications. In the first instance

the village will be less attractive to younger potential new entrants but the school also has a key role within the wider community as a focal point and this would also be lost to existing residents. At its most extreme it is suggested that the future of the village will be limited to older people who will be living largely subsistence lifestyles. It is suggested that these people need fewer services (e.g. retail outlets, schools etc.) and can therefore afford to stay in places with limited opportunities and services. The situation was compared to that of the 1950's when many rural villages died out.

The local respondents highlight the question of where they fit in the future. Fisheries can have a role in future food production and maintaining local communities but there are also other interests in the area. The coastal communities have a particular historical and ethnic place in the region and there is a question of the extent that there should be investment to maintain these traditions. The community themselves see themselves as maintaining traditions that are linked to environmentally friendly living and businesses. Within this the fisheries (catching and processing) have a significant part to play but that there is a need to sustain the sector and ensure there is support for the fleet; and factories. These people see only a limited role for tourism given the short season, investments required and uncertain nature of tourist numbers and spending but recognise that this could potentially increase.

On the other hand there are others who see that the future of the area should be based to a greater degree on the National Park and exploiting this as a tourism resource. Within this, local people should ensure that their environmental impacts are minimised and look to engage in providing services to the tourists. This has led to conflicts between these competing visions and the role of local people within the environment. Local critics of the idea of placing the emphasis on eco-tourism point out that there are important questions of who would benefit from increased eco-tourism – the Park administration or local people – and who would lose out. Can fishers and fish processors who have limited resources and may be working for low wages be able to take advantage of any opportunities?

Governance

If the industry representation is without a strong voice, their interests and needs will not being met. While a FLAG covering the Kolka area has been established, knowledge about it by fishers and the local administration is low and the study was used to raise awareness of the existence of the FLAG. At present only one local representative, Dainis Zvirbulis (a coastal fisher), is involved into the decision making for the FLAG, representing Kolka fisheries interests.

Also there is an issue of the political levels. There is a local village council made up of elected representatives who meet to discuss concerns within the village and identify potential actions. The municipality supports local public services but has limited resources for development. Locally there are conflicts arising because of a weakly regulated land market which results in prosperous land owners consolidating land and properties in the coastal zone while.

There are also conflicts at a larger scale. For Kolka another key institution is the Slitere National Park administration and the plans for the National Park. The regulations laid down by the Park already affect the livelihood options for Kolka residents and ongoing debates on the future of the region (see above) could be significant for Kolka and other villages along the coast.

Dundaga county now has jurisdiction over Kolka and Kolka will be included within the development planning process expected to identify plans in 2011. In terms of more direct fisheries governance, the fishing sector is in favour of regionalisation in the implementation of fisheries policy, as this would give them a greater say in the future of the region, debates

in which they feel with the governance arrangements and changes, they are becoming marginalised.

The role of public intervention in the past and in the future

There has been limited public intervention in the recent past and small-scale fishers complain that they are unable to qualify for public support and that the larger processing firms are better placed to take advantage. It is hoped that development of local fisher groups will provide a useful mechanism for planning local sectoral investments, ensuring that even the smaller operators can benefit but there is no knowledge of how these opportunities are developing in coastal Latvia. Being the only maritime region in Dundaga county, a county that has traditionally focused investment on agriculture, Kolka and Kolka fishers are concerned that they may be marginalised within the process of prioritising investment and development options.

The FLAG offers a potential opportunity if awareness about it can be raised within the coastal communities. However there are some obstacles, many of which relate to the small-scale nature of the fishing operations in Kolka. As the association representative explained, the fishers require assistance with the writing of the project and other paperwork and the association can provide this but there are further obstacles to the uptake of their ideas. In particular, fishers lack resources and access to credit. Because the programme provides support for just 50% of the project, and because of the small scale of the sector it is nearly impossible to operate with some savings or get credit and fishers could not prove enough earnings and returns with their business ideas. It is hoped that this situation will improve in 2011, when the investment support should rise to 60%.