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8. Faroe Islands (Føroyar)

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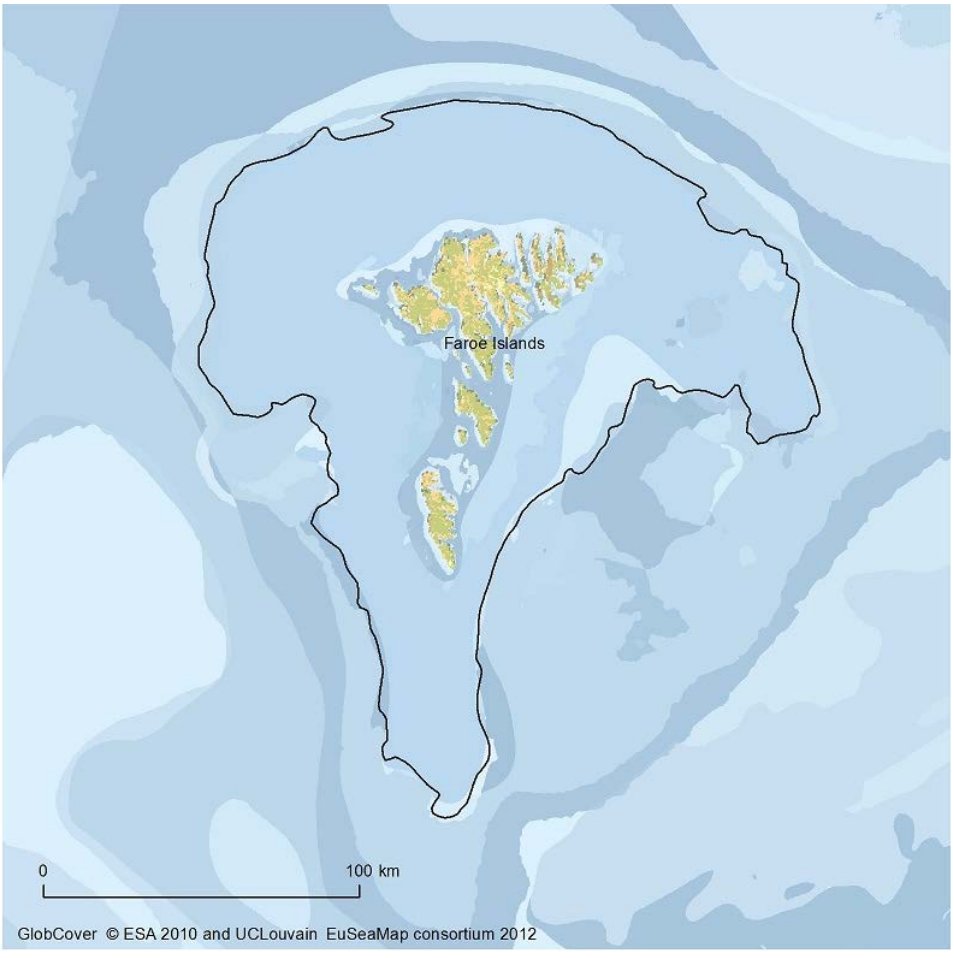
8.1 Setting the scene

The Faroe Islands (Faroes) is an archipelago consisting of 18 islands about halfway between Norway and Iceland, 320 kilometres north-northwest of Scotland (62°00'N 06°47'W). The islands cover a land area of 1,400 km². The maritime economic zone is approximately 274,000 km².

Figure 79: Map over the case study area



Source: ESA 2010 and UCLouvain, EuSeaMap consortium 2012.

50,000 people live in the Faroes. The settlement structure with small often isolated villages, larger regional towns and a dominant capital city is characteristic in the Faroes. Some 20,000 people live in the capital region of Tórshavn. In total, there are 115 villages in the Faroe Islands, of which 58 have less than 100 inhabitants.

Figure 80: Tórshavn, the picturesque capital of the Faroe Islands

Photo: Håkan Tunón, 2017.

The language spoken is Faroese (Føroyskt) and belongs to the West Scandinavian group of the North Germanic languages. Danish has the same legal status as Faroese on the islands.

The Faroe Islands are fundamentally dependent on the sea and on marine resources. The economy is almost entirely based on offshore fisheries and aquaculture. In 2016 the total export was approximately EUR 1 million, of which 96% was fish, mostly chilled or frozen. Some 40% of Faroese export consists of aquaculture and some 30% comes from the catch of mackerel, cod, herring, haddock, blue whiting and saithe (Hagstova, 2017; Rigombudsmandens beretning, 2016).

Figure 81: Fishing and aquaculture are the fundament of Faroese economy

Photo: Håkan Tunón, 2017.

Figure 82: Salmon farming in a fjord on the island of Vágar

Photo: Håkan Tunón, 2017.

8.2 Nature's contributions to people

Fishing and sheep farming are considered the most important parts of traditional everyday life in the Faroes, both from a subsistence and social/cultural point of view. Historically, it was essential to have sheep, hunt or fish to make a living, but nowadays it is more of a supplement to the household economy.

The conditions for cultivation are not very favourable as only some 4% of the terrestrial area is suitable for cultivation. The main crops are hay, potatoes and rhubarbs.

Farming of semi-domestic sheep that graze freely on semi-natural pastures is popular as a family tradition and very important as a supplement to the household. There are approximately 70,000 sheep in the Faroe Islands.

Figure 83: Most of the Faroese landscape consists of open pastures that have been grazed for centuries by sheep

Photo: Håkan Tunón, 2017.

Fishing from small boats has been practiced for centuries – both as a hobby and as a supplement to the household economy. The practice is considered everyman's right and there are no regulations.

Pilot whale hunting and seabird harvesting are thriving local traditions in the Faroe Islands that form an important aspect of the cultural heritage. Pilot whale hunting in particular, is an iconic Faroese tradition.

8.2.1 Seabird hunting

Ever since the islands were inhabited, seabirds have been a main source of nourishment for the Faroese. Puffins, fulmars and guillemots have been a crucial source of meat, but even gannets, kittiwakes, shags, Manx shearwater, razorbills and other species have been hunted (e.g. Storå, 1968, p. 121–126). Some of these species are still hunted today, but they do not play the same vital role for the Faroese household.

Around 1.5 million pairs of seabirds live in the Faroe Islands today – a reduction of about 25% over the last 15 years. A hunting regulation is in place and accepted among hunters. It has been estimated that the annual harvest fluctuates between 65,000 and 240,000 birds, mainly fledglings and puffins (CAF 2008: 4), but due to the decline in populations during the last decades, the total number of harvested sea birds is probably somewhere between 50,000 and 100,000. These are thought to be mainly fulmars, but no concrete statistics have been recorded.

Figure 84: Puffins (*Fratercula arctica*) were earlier one of the main species for the Faroese bird hunt, but due to the rapid decline in population a provisional stop has been implemented

Photo: Nazuna Nakao, 2015.

The Faroes hold some of the largest colonies of Atlantic puffin, which used to be the most important species for the hunt. The traditional hunting method involves a prolonged net-catcher "fleyðingarstong", best described as a long stick with a net at the end. The hunt thus requires a landscape that allows the hunter to get close to the bird, but these landscapes lie in areas where hunting rights belong to landowners, reducing the availability of viable hunting grounds. Historically, the puffin hunt was an important part of the household economy. However, low population numbers have resulted in local protection methods and hunting bans since 2013.

Today Atlantic fulmar is considered the most important species for the hunt. The population size is estimated at 800,000 birds, of which about 100,000 youngsters are harvested every year. Adult birds are mostly hunted using the net-catcher technique. Fledglings are caught at sea from boats using a landing net.

The Faroes hold a small gannet population of about 2,000–2,400 birds. Most of the year, gannets are out in open seas and only migrate to the Faroes to breed. The single gannet colony in the Faroes is located on Mykines, where the birds place their crowded nests on top of steep inaccessible cliff formations. Locals catch about 200 gannet fledglings annually. The catch is divided between landowners and hunters.

8.2.2 Egg harvest

Egg harvesting is a century-old tradition in the Faroe Islands, carried out in cooperation between villagers, allowing them to reach guillemot and fulmar eggs on shelves of steep bird-cliffs, which can be up to 400 metres high.

Today egg harvesting is less important in Faroese tradition, but still practiced at a small scale for lesser black-backed gull, guillemot and fulmar. It is mostly practised in small villages with strong egg-harvesting traditions, where fulmar eggs are particularly favoured. For example, local people in Sandoy and Skúvoy now harvest eggs once a year on a single day, but the date varies. Specific sites that have been selected for the harvest, due to their relatively secure accessibility, have been used for generations and hence have well-established names. Traditional equipment constructed from wool and wood is used. The eggs are divided between the people participating in the harvest according to their role in the activity (https://www.atlanticseabirds.info).

8.2.3 Pilot whale hunting

Whaling in the Faroes is traditionally non-commercial and restricted to species that are spotted from land or near to the shore. Whaling in the Faroes is regulated by "the act on whaling in the Faroes". The hunt targets five species: the white-beaked dolphin, Atlantic white-sided dolphin, bottlenose dolphin, harbour porpoise and long finned pilot whale, the latter of which is the most important as a food resource. Long finned pilot whale is the largest of these whales and the one that is being caught in larger numbers. Other species are more like "by catch". In the 1890s, Norwegian whalers developed modern commercial whaling in the Faroe Islands targeting blue, fin, humback, sei and sperm whales. However, in 1902, a law safeguarding Danish and Faroese interests reserved the whaling practice for Danish citizens or companies in which Danes held at least 50% of the share capital. Commercial whaling of large whales stopped in 1984, but traditional household whaling has continued. Catch statistics (Statistics Faroe Islands, www.hagstova.fo has that statistic) show that some hundred white-beaked- and white-sided dolphins, and between zero to five bottlenose dolphins and harbour porpoises, are caught annually.

The traditional pilot whale hunt is presumed to be as old as the earliest settlements in the Faroes. Pilot whaling is mentioned in the Sheep Letter, a Faroese law from 1298, which is a supplement to the Norwegian Gulating law. Catch statistics have been recorded sporadically since 1584 and consistently since 1709. The records are thought to be one of the most comprehensive data sets for hunt in the world (Bloch 2000; Kerins 2010).

The pilot whales in Faroese waters are considered to be part of the North Atlantic population. The population is estimated to consist of about 800,000 animals, of which approximately 100,000 live around the Faroes. From 1992 to 2013, between 228 and 1,572 pilot whales were killed annually (Hagstova, 2017; IUCN, 2017). The number of whales killed each year is completely dependent on opportunities. The hunt happens only when someone spots a grind (a school of pilot whales) close to shore. The harvest is presumed sustainable as the annual catch corresponds to some 0.1% of the population (IUCN 2017).

Figure 85: The traditional pilot whale harvest is still important for Faroese meat production

Photo: Nazuna Nakao, 2013.

Table 9: Pilot whales killed in Faroes

Year	Numbers	Schools	Min	Max	Food units (skinn)	Food units (kg)	Meat (kg)	Blubber (kg)	Per capita (kg)	Dried (kg)	Kills of total pop. (%)
2013	1,104	11	21	267	8,302	597,744	315,476	282,268	12	5	0.1
2012	713	12	2	195	4,885	351,720	185,630	166,090	7	3	0.1
2011	726	9	21	204	4,682	337,104	177,916	159,188	7	3	0.1
2010	1,107	14	17	228	8,008	576,576	304,304	272,272	12	5	0.1
2009	310	3	23	188	2,974	214,128	113,012	101,116	4	2	0.0
2008	0	0			0	0	0	0	0	0	0.0
2007	633	10	1	231	5,522	397,584	209,836	187,748	8	3	0.1
2006	856	11	1	176	6,614	476,208	251,332	224,876	10	4	0.1
2005	302	6	5	116	2,194	157,968	83,372	74,596	3	1	0.0
2004	1,010	9	1	445	8,276	595,872	314,488	281,384	12	5	0.1
2003	503	5	44	153	3,968	285,696	150,784	134,912	6	2	0.1
2002	626	10	3	114	4,276	307,872	162,488	145,384	6	2	0.1
2001	918	11	22	186	7,376	531,072	280,288	250,784	11	4	0.1
2000	588	9	4	246	5,344	384,768	203,072	181,696	8	3	0.1
1999	608	8	4	196	5,398	388,656	205,124	183,532	8	3	0.1
1998	815	8	54	251	6,001	432,072	228,038	204,034	9	3	0.1
1997	1,172	15	5	172	7,588	546,336	288,344	257,992	11	4	0.1
1996	1,524	14	16	435	11,122	800,784	422,636	378,148	16	6	0.2
1995	228	5	4	108	1,216	87,552	46,208	41,344	2	1	0.0
1994	1,201	6	26	666	7,781	560,232	295,678	264,554	11	4	0.2
1993	808	10	11	193	5,237	377,064	199,006	178,058	8	3	0.1
1992	1,572	14	17	341	11,798	849,456	448,324	401,132	17	7	0.2

There are four phases in the traditional hunt. In *grindaboð*, a flock of whales is spotted, people are informed and gathered to hunt according to hierarchic rules and social relations. In *grindarakstur* a flock of whales is driven to a bay using boats. In the bay, the whales are killed in *grindadráp*. The hunt ends when the meat and blubber is shared in *grindabýti* (Joensen, 1976).

There are 23 authorised whaling bays in the Faroes. The selction of which bay to use for a specific hunt is mostly dependent on the current, as it is hard to drive whales against the current. If currents are equally suitable for two bays, the finder of the flock or local authority-figure decides. As there are no special whaling boats, regular fishing- & leisure boats are used. When the whales have beached themselves, they are killed (Bloch *et al.*, 1990, p. 38; Bloch & Joensen, 2001, p. 62; Kerins, 2010, p. 113–148).

8.2.4 Tourism

The number of visitors to the Faroe Islands is growing. Especially outdoor activities including birdwatching and angling are of great interest, but also more cultural aspects, including traditional livehoods, are attracting tourists.

The Faroes have flight connections to Denmark, Norway and Iceland all year, as well as a regular ferry connection to Denmark and Iceland. In recent years, a growing number of visitors have arrived in the summer months on large cruise ships.

Figure 86: The Faroese landscape attracts many tourists

Photo: Håkan Tunón, 2017.

8.3 Biodiversity and ecosystem characteristics

8.3.1 Habitats

The Faroe Islands are located on the Faroe shelf, which reaches 200 m depth. The seabed is varied and comprises everything from bedrock, rocks and boulders, to sand and clay, and combinations of these. Due to strong tidal currents, the seabed in shallow regions on the shelf consists of mainly sand and stones. Silt and organic material can be found in deeper areas (ICES, 2008).

The Faroe Islands comprise eighteen islands that are separated by fjords and sounds, with maximum depths of 100 m. The rugged landscape is characterised by ice-carved mountains covered in grass and heather without any tree-like vegetation, strongly marked by grazing sheep all year around. The Faroe Islands have been shaped by glaciers. The coastline is mostly rocky, with sandy or gravelly beaches along fjords and bays.

8.3.2 Key Species

The few terrestrial species in the Faroe Islands have all been introduced by man. However, the islands have plenty of native seabirds and a diverse marine fauna consisting of numerous fish, marine mammals and shellfish.

Over 300 bird species have been recorded in the Faroe Islands. Of these, around 50 species breed regularly on the islands and another 60 are regular visitors.

Some 200 fish species are found in Faroese waters. Most of these species occur in low abundance and are not exploited. Around 20 species of fish are commercially exploited on the Faroe plateau.

Table 10: Key Species in the Faroes

Classification	Species names
Terrestrial species	Mountain hare (*Lepus timidus*), mouse (*Mus domesticus*), rat (*Rattus norvegicus*) and semi-domestic sheep
Birds	Seabirds: Northern fulmar (*Fulmarus glacialis)*, European storm-petrel (*Hydrobates pelagicus)*, northern gannet (*Morus bassanus)*, common eider (*Somateria mollissima)*, black legged kittiwake (*Rissa tridactyla*), common guillemot (*Uria aalge*), shag (*Phalacrocorax aristotelis*), Manx shearwater (*Puffinus puffinus*), razorbills (*Alca torda*), lesser black-backed gull (*Larus fuscus*) and Atlantic puffin (*Fratercula arctica*). Waders: Eurasian oystercatcher (*Haematopus ostralegus*) (the national bird of the Faroe Islands)
Marine mammals	Long finned pilot whale (*Globicephala melas*), white-beaked dolphin (*Lagenorhynchus albirostris*), Atlantic white-sided dolphin (*Lagenorhynchus acutus*), bottlenosed dolphin (*Tursiops truncatus*), harbour porpoise (*Phocoena phocoena*) and grey seal (*Halichoerus grypus*).
Fishes	Demersal species: cod (*Gadus morhua*), saithe (*Pollachius virens*), haddock (*Melanogrammus aeglefinus*) and ling (*Molva molva*) Pelagic species: Atlantic mackerel *(Scomber scombrus),* Atlantic herring *(Clupea harengus)* and blue whiting *(Micromesistius poutassou)* Flat fishes: Greenland halibut (*Reinhardtius hippoglossoides*), monkfish (*Lophius piscatorius*) and Atlantic halibut (*Hippoglossus hippoglossus*) Other common species of economic importance: tusk (*Brosme brosme*), blue ling (*Molva dypterygia*), ocean perch (*Sebastes marinus*), whiting (*Merlangius merlangus*) and Atlantic catfish (*Anarhichas lupus*) The farming of Atlantic salmon (*Salmo salar*) and rainbow trout (*Oncorhynchus mykiss*) Ecologically important species: sandeel (*Hyperoplus lanceolatus*) and Norway pout (*Trisopterus esmarkii*)
Shellfish	Horse mussel (*Modiolus modiolus)*, blue mussel (*Mytilus edulis*), Norwegian lobster (*Nephrops norvegicus)*, knife-mussel (*Ensis ensis*), common sea urchin (Echinus esculentus), edible crab (*Cancer pagurus*), queen scallop (*Equipecten opercularis*) and common whelk (*Buccinum undatum*)

8.3.3 Significant structural features

The Gulf Stream is one of the most important factors influencing ecosystems in the Faroese region. More locally the islands are surrounded by warm water masses in the uppermost 500 m. This "Modified North Atlantic Water" derived from the North Atlantic Current flows towards the east and northeast. The water is typically around 8 °C with salinity around 35.25 ppt. Below 500–600 m, the water in most areas is dominated by cold water (< 0 °C) with salinities close to 34.9 ppt (ICES, 2008).

There are strong tidal currents reaching 1–2 m/s, allowing for efficient mixing of the shelf water. This results in homogeneous water masses in the shallow shelf areas with constant temperatures from surface to bottom. The temperature ranges from around 6 °C in March to 10–11 °C in August–September. The well-mixed shelf water is

separated relatively well from the offshore water by a persistent tidal front, which surrounds the shelf at about 100–130 m bottom depth. In addition, residual currents have a persistent clockwise circulation around the islands (ICES, 2008).

8.3.4 Ecosystem function

The marine ecosystems around the Faroe Islands are highly productive with a high diversity and abundance of marine species. The Faroes are part of a larger Atlantic ecosystem, but on a more local scale, there is a clear difference between on-shelf and off-shelf areas. The on-shelf ecosystem has distinct planktonic communities, benthic fauna, and several fish stocks. Furthermore, about 1.5 million pairs of seabirds breed on the Faroe Islands and take most of their food from the shelf waters (ICES, 2008). The marine primary production on the Faroe plateau is concentrated to the period between April and September, with rather large differences between years according to nutrient availability and weather.

On land primary production is mainly linked to the grass-like vegetation, which reaches its maximum in June to August.

Many seabirds breed on the sea cliffs. Most sea cliffs in the Faroe Islands are to the northern and to the western parts of the islands and can be up to 500m high. In some areas the black sea cliffs are painted white by the sheer number of birds breeding there. Some birds, like puffins, breed in colonies on grassy steep slopes, where they dig a nesting burrow.

The clean temperate waters and strong currents around the Faroe Islands provide ideal conditions for many marine species.

8.4 Drivers and pressures

8.4.1 Direct

The stock sizes of the most important fish species (cod, haddock and saithe) are historically low and recruitments have been bad for several years. Regulative authorities have discussed changing quotas and/or fishing days for industrial fishing. Restrictions on small boat fishing has also been mentioned, but not actively discussed.

Sand extraction from the seabed is widely practiced in the Faroes due to its economic value and accessibility in fjords and along coastlines. Furthermore, there is no legal restriction on sand extraction. Sand eels prefer sand with specific grain size and quality, and continued sand extraction from near-shore areas could result in habitat loss for sand-eel and puffins. The population losses of the sand eel are also thought to be a result of industrial fishing.

Increased activities in bays including transportation, sand extraction and aquaculture, can change the landscape and topography of the bay. These issues can have impacts on biodiversity and key species, along with the suitability of bays for pilot whaling (Joensen, 2002).

8.4.2 Indirect

The waters around the Faroes are getting warmer, with temperatures rising from 12 °C to 13 °C across the last twenty years. This increase, together with large-scale, climate-related ecological changes has disrupted the food web in the North Atlantic. A northward shift in the distribution of plankton and copepods is affecting stock size and distribution of some fish species. Several pelagic fish species such as Atlantic mackerel and Atlantic herring, now migrate into Faroese waters in greater numbers. Demersal stocks are, however, diminishing. Cod larvae feed on a very specific copepod (*Calanus finmarchicus*) and successful recruitment depends on a plentiful supply of this food item. Changes in climate have altered the balance of food, with resultant bad cod recruitment.

Changes in climate, including sea temperature, has effects on fishing, with impacts differing depending of the type of fish stock. Pelagic fish are highly mobile and move easily to more favourable locations. With modern fishing equipment, travelling longer distances to follow stocks is possible, and thus the economic impacts of the changes in stocks are not that large. Instead, the risk of over-fishing has become a challenge for fisheries management. Dermersal fish tend to be slower to respond to change and thus fisheries dependent communities might be able to adjust to slow changes in stock locations. However, if temperatures change suddenly, stocks can crash (Thostrup & Rasmussen, 2009, p. 14) with ensuing challenges for fisheries communities.

Seabirds including kittiwake, puffin, guillemot, Arctic tern and seagull have decreased significantly during the last decade, whereas gannet, fulmar, shag and black guillemot have not experienced similar declines. Many factors are thought to contribute to changes in population numbers, including changes to food source, changing currents and other consequences of global warming. Improved waste management at fish factories may contribute to reduced food availability for seagulls.

Figure 87: Black guillemot (*Cepphus grylle*) in winter plumage in the harbour of Tórshavn

Note: This species has not undergone the same decline as several other seabird species in the Faroe Islands.

Photo: Håkan Tunón, 2017.

8.4.3 Urbanisation

The traditional resource related activities – hunting, fishing and sheep farming – have created the backbone to settlement structure in the Faroe Islands. During the last decades, the population in the Faroe Islands has undergone remarkable changes. Globalization, along with the changes in the economy towards the service sector and knowledge-based economies, have challenged traditional settlement structures. Today almost 90% of the Faroese population has a road connection to Tórshavn with a maximum driving time of around 90 minutes and some 40% of Faroese population live in the growing capital region itself. Especially better housing and job opportunities are particularly attracting women and younger generations to capital.

At the same time, the population in the smaller villages and especially on the small islands, has decreased dramatically with only 1% of population now living on small islands without road connection (Hagstova, 2017).

These small islands are the most viable locations for traditional livelihoods of bird hunt and egg gathering. Urbanisation threatens the traditional egg-harvest and the hunt of some bird species, as the catch is highly dependent on good cooperation between skilled hunters. Even though many of these small islands have more inhabitants during summertime, depopulation makes it difficult to maintain traditions

as the number of skilled hunters is decreasing and fewer are interested in learning traditions. Generally a shift away from traditional village life is occurring.

The harvest of both eggs and birds from the cliffs requires a group of people. Apart from the persons descending the cliff in order to collect the eggs or catch the birds, many strong arms are needed to pull up the climber. But hands are becoming fewer. For example, Skúvoy only had 32 residents in 2017, and Mykines only had 14. To meet this shortage of labour, an ATV (4-wheeled All Terrain Vehicle) is now often used to pull the ropes for fulmar egg harvesting in Skúvoy.

Changes in the population is also affecting pilot whale hunting. If the catch takes place in a sparsely populated area with bad accessibility, it can be hard to organise a successful hunt. If the catch takes place in a densely populated area or in a bay with good accessibility, large numbers of people often participate and dividing the catch in an equitable way can be challenging.

8.4.4 Traditional local food

Local food is of a great importance in the Faroe Islands. The harvest, distribution and consumption of traditional food occurs in relation to availability of food items. Apart from formal distribution methods in commercial systems, informal distribution systems exist and increase access to traditional food. Rasmussen *et al.* (2014, p. 195–199) list three ways of accessing traditional local food:

- on the one hand, there is an extensive distribution of fish and lamb because those are available through commercial systems. They can be bought in larger stores and are distributed in local market places;
- on the other hand, subsistence hunting, farming and fishing for personal consumption is common. These products do not only include fish and lamb, but also sea mammals, seabirds and their eggs. The number of persons involved in these activities is hard to estimate, but activities are generally considered an important part of life either through personal involvement or through family and good neighbour relations;
- furthermore, informal access to traditional products occurs through sharing. The availability and sharing of pilot whale blubber and meat after a hunt is an important social and cultural activity.

The importance and relatively high consumption of local food can be seen in the following statistics: In the population census in 2011, 73% of the households stated that supplement food sources are available – meaning that the household uses food from local sources that is not purchased from stores. Use and access to local and especially traditional food, is heavily dependent on social relations, where one lives and one's access to a boat (Hagstova, 2017).

The importance of self-caught fish is remarkable. 70% of the Faroese households that do not have a boat have access to local food. 94% of households with a boat have access to local food.

In Tórshavn the access to local food (64% of households) is not as high as elsewhere in the islands (80% of households). Particularly the younger generation is not as closely connected to hunting and gathering traditions, both in terms of distance and in lifestyle choices. For example, attitudes to whale meat are particularly impacted by international trends. However, local foods are becoming trendier in Tórshavn where the restaurant KOKS, which serves local food with modern inspiration, was just presented with its first star in the Guide Michelin. KOKS and other popular restaurants serve fulmar, fermented meat and other traditional specialities on their menu.

8.4.5 Activities

There is a growing international movement against whaling on the Faroes, which has further indirect negative impacts on fish export. Widespread media campaigns by international environmental and wildlife protection groups have increased international focus on the traditional whale hunting in the Faroes. Organisations have tried to force Faroese authorities to end pilot whale hunting since the mid-80s. During the latest email campaign in mid-2010s, there was an attempt to put pressure on the Danish Parliament to stop the hunt. This is despite all laws and regulations regarding fishing and hunting, including whaling, on the Islands are governed by the Faroese Parliament since the adoption of the home rule act in 1948 (Kerins, 2010, p. 13–30).

In addition, Sea Shepherd Conservation Society has led operations in the Faroe Islands, especially in 2008, 2014 and 2015. The Sea Shepherd works with direct action, resulting in several confrontations between them and the Faroese/Danish police. Several activists were arrested for disrupting ongoing pilot whale hunts, both at sea and on land. The organisation succeeded in getting big media attention from all around the world (Kerins, 2010, p. 27–28; Singleton, 2016).

Figure 88: An unfriendly message painted of the walls of the historical fortress of Tórshavn, probably connected to the traditions related to pilot whales

Photo: Håkan Tunón, 2017.

The expansion of tourism might generate new challenges, with demands on infrastructure that can have negative impacts on ecologically sensitive regions (Thostrup & Rasmussen, 2009, p. 15). Birds, in particular, may be among the most impacted species.

8.4.6 Threats

Animals high on the food chain are exposed to high levels of industrial chemicals, heavy metals and PCBs, which accumulate in all levels of the marine food web. Several epidemiological studies show that the traditional marine food of the Faroes, that consists of fatty pilot whale blubber, fish and seabird fledglings, is particularly rich in methylmercury, polychlorinated biphenyls, perfluorinated compounds and polybrominated diphenyl ethers (Axelrad *et al.*, 2007; Myers *et al.*, 2007; Fliedner *et al.*, 2012; Weihe & Joensen, 2012). This health hazard has the potential to change Faroese cuisine in the long run.

Environmental toxins including mercury, as well to a smaller extent arsenic, cadmium, zinc, lead, copper and selenium, can be found in pilot whale meat. Many organochlorine compounds such as PCBs can be found in blubber. Therefore, health authorities recommend restricted intake of whale meat and blubber. Nowadays, whale meat is not recommended for children or for females in a fertile age, with strong impacts on the maintenance of traditions (Bloch, 2000, p. 29; Diet recommendation..., 1998).

Plastic is also becoming a major threat to many seabird species, particularly Atlantic fulmar seem to be especially attracted to picking up and eating floating plastic.

Tunnels between the islands increase accessibility for people, but also increase the potential for the spread of rats with potential risk for bird colonies as theyeat eggs and chicks.

8.5 Governance of ecosystem services and influencing policies

The Faroe Islands are a self-governed (autonomic) part of the Danish Kingdom with their own legislative parliament (Føroya løgting) and a government that is chaired by the prime minister (løgmaður) and no less than two other ministers. The Faroes are organised in to 30 municipalities, of which the largest is Tórshavnar with 20,885 inhabitants (Hagstova – Statistics Faroe Islands, 2017) and the smallest is Skúvoyar with 42 inhabitants.

8.5.1 International / EU

Although Denmark is a member state of the European Union, the Faroe Islands have chosen to remain outside the Union. Accordingly, the Faroe Islands negotiate their own trade and fisheries agreements with the EU and other countries. Faroese autonomy in foreign relations is provided by a treaty between the Faroe Islands and Denmark, which is enacted in legislation.

The Faroe Islands participate actively in a range of international fisheries management arrangements and organisations in the North Atlantic, including the Northeast Atlantic Fisheries Commission (NEAFC), the Northwest Atlantic Fisheries Organization (NAFO), the North Atlantic Marine Mammal Commission (NAMMCO), the North Atlantic Salmon Conservation Organization (NASCO) and the International Council for the Exploration of the Sea (ICES).

Marine environmental protection is regulated according to the Marine Environmental Act, with regulations implemented in line with requirements under international conventions such as the MARPOL convention for the Prevention of Pollution from Ships and the OSPAR Convention for the Protection of the Marine Environment in the North Atlantic. The responsible authorities are the Environmental Agency, the Faroese Maritime Authority and the Faroese Fisheries Inspection.

8.5.2 National

To protect the rich bird life in the Faroe Islands, the government has appointed Mykines, Nólsoy and Skúvoy as Ramsar sites.

Several national acts and decrees exist to protect nature and limit the use of resources:

- act on Bird hunting (FO: Fuglaveiðilógin): "Løgtingslóg nr. 27 frá 9. september 1954 um fuglaveiðu v.m., sum seinast broytt við løgtingslóg nr. 48 frá 15. mai 2014";
- act on "Grannastevna" (FO: Lóg um grannastevnu, Eng. "meeting of the villagers"): "Lov nr. 170 af 18. maj 1937 for Færøerne om Grandestævne m.m.";
- act on hare hunting (FO: Haruveiðulógin): "Løgtingslóg nr. 128 frá 25. oktober 1988 um haruveiðu;
- act on Nature conservation (FO: Náttúrufriðingarlógin): "Løgtingslóg nr. 48 frá 9. juli 1970 um náttúrufriðing, sum seinast broytt við løgtingslóg nr. 110 frá 29. juni 1995";
- act on protection of the environment (FO: Umhvørvisverndarlógin): "Løgtingslóg nr. 134 frá 29. oktober 1988 um umhvørvisvernd, sum seinast broytt við løgtingslóg nr. 128 frá 22. desember 2008";
- act on protection of the marine environment (FO: Havumhvørvislógin);
- decree on dragging of puffins from their burrows (FO: Loyvi at draga lunda): "Kunngerð nr. 120 frá 21. november 1986 um serliga fuglaveiðu";
- decree on sampling of guillemot eggs (FO: Loyvi at rana egg): "Kunngerð nr. 60 frá 16. mai 1986 um ræning av lomvigaeggum".

8.6 Insights from indigenous and local knowledge

Apart from the on-going traditions surrounding the harvest of pilot whales, fish and seabirds, there is rich folklore on the Islands, especially the tradition of chanting many verses about traditional livelihoods. As there was no written Faroese language until the end of the 19th century, the ballad (fo: kvæði) survived through the centuries orally. Chanting is still popular, especially in combination with the traditional Faroe circle dance. For example, the first record of named birds in the Faroes comes from the old Faroese Bird Ballad, presumably dating back over 500 years (Schei & Moberg, 1991).

One of the most famous and well-known ballads are *Grindavísan*, the pilot whaling ballad from the 1830s that describes the hunt. This song describes pilot whaling as a symbol that has later become a growing part Faroese national identity (Joensen, 1976, p. 21–22; 1990, p. 182). The pilot whale hunt is an important motif in literature, music, art and handicrafts. *Grindaknívur*, the knife used for the pilot whale hunt, is an impressive example of Faroese handicrafts (Joensen, 1976, p. 15; 1990, p. 182).

Pilot whale have a long history as the Faroese national symbol, adopted in the 19th century to symbolise Faroese nationalism and identity. Pilot whaling was proudly shown as a part of local culture i.e. in postcards and travel stories. However, since the mid-70s when international criticism against whaling started, and especially after 1986 when commercial whaling stopped, the national romantic picture of a pilot whale has undergone symbolic inversion (Joensen, 1990, p. 182–184; Sanderson, 1994, p. 187; Nauerby, 1996, p. 24, 177–178). Despite this, pilot whalea still represent traditional ways of living in the Faroe Islands and contribute to the close relationship between man and nature that even still thrives in the urbanised population on the Faroes (Nauerby, 1996, p. 177–178).

The importance of the pilot whale hunt was more significant historically than it is today. Nowadays the hunt is maintained as a traditional and social practice, as well as a supplement to more modern cuisine. Strict regulations apply to the hunting procedure and the distribution of the meat. Hunting has never been based on economic issues, but is a local, social activity. Everyone, including children, is invited to participate in the hunt and as there are no professional hunters – it involves "learning by doing", and one normally learns how to kill a whale from a close relative. A lot of knowhow in pilot whaling has its origin in fishing, including boating skills and judging currents and weather conditions (Hauan & Mathisen, 1993, p. 126–127).

Successful hunts require cooperation and established social organisation (Joensen 1976, p. 37), with controlled processes and clear working roles. It is said that a successful pilot whale hunt requires not only local knowledge and knowhow, but also superstitious traditions, like specific *grind* weather, tools and behaviour of the hunters (Bloch & Joensen, 2001, p. 57–64).

Figure 89: The hunting of pilot whales is more than just a way to get meat

Note: It is a cultural symbol and an important social context for the Faroese people.

Photo: Nazuna Nakao, 2015.

Meat and blubber has always been freely shared between the local people following specific rules. The harvested whale meat and blubber is divided amoung participants in the hunt. Depending on the size of the catch, the people who live in the area typically also receive a share. The local sheriff decides how to divide share. In order to divide the catch in an equitable way, each whale is measured in "skind". One skind corresponds to approximately 38 kg meat and 34 kg blubber. Each participant and/or local gets their share according to hunting law, after which the meat and blubber is often shared with friends and family (Bloch *et al.*, 1990, p. 41; Bloch, 2000, p. 26–28). Thus whale meat is a part of a non-economic exchange system that combines people and households, creating both economic and social connections (Kalland, 2000, p. 208).

Even pilot whaling has undergone both social and technological developments, but the main function is still to get food for the household and not to make any economic profit. The new tools are more effective and do less harm to the whale before it is killed, but a successful hunt is still dependent on knowhow and cooperation between the participants (Sanderson, 1994, p. 194–195).

8.6.1 What is it to be Faroese?

It is often claimed that to feel Faroese one has to be brought up on the islands or have adapted to the way of living and the values in the Faroes. Faroese people are influenced by the rough and changeable nature, the unpredictability of the weather, the wind, the rain, the beauty of nature, the long daylight in the summer and the darkness in the winter, the strong family bonds and close connection to friends and the community in general. The possibility to wander freely in nature is defining, along with the watching eye of everyone in a small community where Christian values are everyday life and where the Faroese language is spoken (Andreassen, 1992; Gaini, 2013; Joensen, 1987).

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