

# Environmental Change and Local Foodways in the Faroe Islands, a North Atlantic Artisanal Whaling Society

Russell Fielding, Department of Geography and Anthropology,

Louisiana State University; USA

## Abstract

*In the short term, the direct effects of global warming upon artisanal whaling in the Faroe Islands may be negligible. However, other environmental changes now underway—some of which share causal elements with global warming—show signs of having immediate and possibly terminal effects on this traditional cultural practice. These same environmental changes are likely to have similar effects on other artisanal and aboriginal whaling activities throughout the circumpolar North.*

*The Faroese pilot whale harvest—known locally as the grindadráp—is currently being threatened by the increase of industrial and agricultural pollutants found in the tissues of pilot whales. The consumption of pilot whale meat and blubber that is high in these pollutants has been shown to contribute to a variety of health problems. In 1998 the Chief Medical Officer of the Faroe Islands recommended that pregnant women no longer consume pilot whale meat or blubber and that everyone limit their consumption. Now, ten years later, this fall will likely see the new recommendation that no one should eat any pilot whale meat or blubber at all. Because the only practical purpose of the grindadráp is food production, it would seem that the new recommendation also suggests terminating this longstanding and traditional method of Faroese food production.*

*This paper will briefly discuss the history of the grindadráp in the context of its broader human-environmental interactions. It then describes the various threats to the grindadráp's continuance over the years, including the pollution problem and the research that has been done into its health effects. It concludes with a look to the future and at what changes the Faroese would have to make in their current food systems were the grindadráp to cease and what the environmental effects of those changes might be.*

## Introduction

The meat and blubber of the long-finned pilot whale (*Globicephala melas*) have long been an important part of the diet in the Faroe Islands. Several times each year, large family groups—known as schools or pods—of pilot whales are driven ashore in a collective effort by dozens of Faroese boats and are killed with small handheld knives when the pod has become beached on the shore or stranded in the shallow water. The meat and blubber are divided and distributed, free of charge, among the participants and then among the residents of the district in which the landing took place. This activity—known locally as the *grindadráp* or sometimes just *grind*—is governed by strict regulations under Faroese law and is not subject to the jurisdiction of the International Whaling Commission (IWC) owing to the absence of the pilot whale from the list of species protected by the IWC. Grindadráp<sup>1</sup> have occurred throughout the Norse history of the Faroes with written descriptions from as early as 1632 (Sanderson 1992, 50), locally-kept statistical records dating back to 1584, and archaeological evidence for the presence of pilot whales in the early Faroese diet dating to the “Viking-Age” (Sanderson 1992, 27)<sup>2</sup> which is generally defined in the Faroes as lasting from AD800 to AD1035 (Edwards 2005, 590). The grindadráp still occurs today, with surprisingly few modifications since its earliest record.

## Challenges

Throughout the history of the Faroe Islands, various human or environmental forces have challenged the continuation of the grindadráp. Of these, three have dominated academic discourse in recent decades about the persistence of whaling in modern societies. These are:

1. Over-extraction, that is, the possibility that the whaling activities could take place at an unsustainable level, thus exhausting the stocks of pilot whales or decreasing their genetic diversity to the point that they are no longer able to maintain a viable population. With this scenario, Faroese whaling would cease simply because

---

<sup>1</sup> The same word can be singular or plural. *Grind* is pronounced with a soft *i*, and sounds much like the English word *grinned*.

<sup>2</sup> Sanderson cites Dahl (1971, 69) thus: “Part of the diet of those who lived at Kvívík is revealed by finds of bones of sheep, cows, pigs, seals and pilot whales, guillemots, razor-bills, cormorants, sea-gulls and, of course, cod.”

there would not be enough whales to make the activity worthwhile, or the activity would become illegal (either by Faroese or international law) before the stocks got too low in order to facilitate a revival of the pilot whale population. Over-extraction in the Faroes would echo the situation that Newfoundland experienced with its own pilot whaling in the mid-twentieth century (Dickinson and Sanger 2005).

2. Protest and boycott, in the form of anti-whaling organizations successfully lobbying other nations or individuals to stop trade with the Faroes unless they cease whaling activities, thus decreasing the market for Faroese fish, by far the islands' main export. In this scenario, the Faroese would voluntarily give up whaling (a non-commercial activity) in order to save their fisheries (their leading source of income) from international boycott. The peak of the protest against Faroese whaling occurred during the 1980s and 90s and was well documented by Sanderson (1990, 1994) who herself was a key player in the discourse in her role with the Faroese Office of the Prime Minister which required her to provide official answers to many of the English-language protest letters written to the Faroese government.
3. Pollution in the form of mercury and other toxins that accumulate in the tissues of the pilot whales and cause adverse health effects in people who consume meat and blubber from the whales. This threat has been thoroughly researched and documented both by Faroese scientists and researchers from abroad. Leading the research efforts are two medical doctors, Philippe Grandjean of the Harvard School of Public Health and the University of Southern Denmark's Institute of Public Health, and Pál Weihe, chief physician in the Department of Occupational and Public Health in the Faroese Hospital System. If this threat were to lead to the termination of whaling in the Faroe Islands it would be the result of a government ruling or recommendation in the interest of public health and would most likely originate from the office of Dr. Weihe.

In recent decades, each of these scenarios has taken its turn as the leading threat to the grindadráp's continuance, at least in the realm of public perception. In the following subsections, I will discuss each threat as well as its likely outcome.

### *Overextraction*

It is imperative, when managing the use of any natural resource, to be sure that the extractive activity is conducted in a sustainable way. The Faroese take on average 900-1000 pilot whales each year, though there is much variance from this mean. In some years—notably those surrounding the Second World War—many more whales than average are taken; in other years no whales are taken at all.

Overextraction could become a threat to any wild animal harvest. Without good management there is the potential for the hunters or fishermen to simply catch too many of their prey, reducing the population to a point from which it cannot return. When this happens the species, as a resource, is essentially extinct.

Comparisons can be made with a similar North Atlantic pilot whale drive that occurred in Newfoundland during the 20<sup>th</sup> century (see Fielding 2007a). Newspaper archives from the mid-1800s show that the occasional pilot whale drive was an important source of supplemental income for residents of the southeast peninsula of Newfoundland who earned a share of the proceeds from producing and selling whale oil (Cranford and Hillier 1995, 9). Detailed records have been kept since the beginning of the modern—or, commercial—pilot whale fishery, which began in 1946 at Dildo, Trinity Bay (Pinhorn 1976, 49; Dickinson and Sanger, 2005, 132). For the first five years of the commercial pilot whale fishery's existence, pilot whales were harpooned from boats one at a time, as were other whale species hunted by Newfoundland whalers. The first modern commercial pilot whale drive occurred in Newfoundland in 1951 when 3,100 whales were driven ashore during several separate drives that year. Precise records were kept of all whaling activity in Newfoundland and show that landings increased to a peak of 9,794 in 1956 (Pinhorn 1976, 49).

By the mid-1960s, the pilot whale stocks around Newfoundland had started to decline. In 1972, the Government of Canada enacted a moratorium on whaling and the pilot whale fisheries

were closed. In the two decades that pilot whale drives occurred in Newfoundland, approximately 55,000 whales were landed (Dickinson and Sanger 2005, 136). The role of the pilot whale fishery in the decline in pilot whale numbers is a debated topic even today in Atlantic Canada (Abend and Smith 1999, 8). Some former whalers contend that over-fishing of the pilot whales' primary food—squid—was the cause for their decline (Cranford & Hillier, 1995, p. 13). Most, however, theorize that there are no more pilot whales because the whale drivers have killed them all; over-exploitation cannot be ignored in the decline of the species (Dickinson & Sanger, 2005, p. 136). What is certain is that pilot whales are not often sighted in the areas in which they were once driven.

Whether or not the Canadian stocks and Faroese stocks of pilot whales are connected is the topic of some discussion. The United States National Oceanic and Atmospheric Administration (NOAA) treats the two as separate stocks (see Abend and Smith 1999) but The Canadian Department of Fisheries and Oceans has found evidence that the two stocks might be connected (see Sergeant 1986). Sergeant's hypothesis relies on the fact that catches of pilot whales decreased in both areas during the late 1960s. However this decrease seems to fit with the long-term cycle in the Faroes, where catches increased again in the late 1970s, while pilot whales are still rarely sighted in the Newfoundland waters where they were once taken. Pilot whales that were tagged with a satellite transceiver and released in the Faroe Islands showed a range of travel that did not approach the western Atlantic and the Canadian coastline (Bloch, et al. 2003). A similar study conducted off the northeastern coast of the United States gave similar results—that the tagged pilot whale did not travel across the Atlantic (Mate, et al. 2005).

Conducting an accurate count of the pilot whale population has been an ongoing project for the Faroese biologists. According to Dorete Bloch, lead biologist at the Faroese Museum of Natural History and director of the museum's pilot whale research projects, there are approximately 778 000 pilot whales in the eastern North Atlantic stock. On average, the Faroese take 900-1000 whales per year, meaning that the grindadráp accounts for less than 0.1% annually. The IWC states that a sustainable hunt is 2% (Bloch, personal communication 2005). The number of pilot whales killed annually is regulated by the Faroese Ministry of Fisheries. The Minister's office can forbid future grindadráp if it is known that enough meat and blubber have already been stored up (Bjørn Kalsø, Minister of Fisheries, personal communication 2005).

After 424 years of recorded grindadráp occurring in the Faroe Islands, and with the catch records showing a fairly regular twenty-year cycle, one can be reasonably sure that the pressure put upon the pilot whale stocks in the northeast Atlantic by the Faroese is sustainable. Overextraction does not seem to be a threat and will likely not lead to the abandonment of the grindadráp, as it did with the pilot whale drive fishery in Newfoundland.

### *Protest*

Though the grindadráp has been well documented in travelers' tales and cultural studies of the Faroe Islands for centuries<sup>3</sup>, it remained relatively unknown outside of Scandinavia until the mid-1980s. Sanderson (1990) describes the quick shift that the grindadráp made from a relatively unknown method of food procurement and source of national distinctiveness and pride, to an alleged crime against nature and target of international protest. Her detailed chronology will be summarized here:

1981 – Greenpeace representatives visit the Faroes to document the (now ceased) Fin whale catch. Their visit coincides with three large grindadráp. The representatives' final report to Greenpeace (Glover 1981) focuses primarily (and critically) upon the grindadráp.

1984 – A Danish television company produces a documentary about the grindadráp that increased its visibility to a degree.

1985 – At the annual meeting of the IWC in Bournemouth, UK, the topic of the grindadráp is brought up—though the IWC maintains its stance that it would not regulate the harvest of small cetaceans. Campaign letters from environmental organization and journalistic pieces critical of the grindadráp are published this year. As a result of these campaigns, letters and preprinted postcards begin to arrive at the Office of the Prime

---

<sup>3</sup> For a thorough textual history of the grindadráp from the earliest writings to 1900, see Sanderson 1992; prominent English-language descriptions of the grindadráp include Joensen 1976 and Wylie 1981.

Minister in Tórshavn. Kate Sanderson is responsible for answering much of this correspondence<sup>4</sup>.

1986 – Paul Watson, founder of the environmental organization *Sea Shepherd*, makes a highly-publicized visit to the Faroes with the intention of stopping the grindadráp. Also this year, the regulations regarding the grindadráp are changed dramatically with the goal of ensuring a more humane death for the whales.

1991 – The High North Alliance is formed, according to its website, to “protect the rights of whalers, sealers and fishermen to harvest renewable resources in accordance with the principle of sustainable management.”

1993 – *Grindamannafelagið* (Faroese Pilot Whalers’ Association) is formed to establish regulations for more humane killing methods in the grindadráp. Also this year environmental organizations begin calling for a protest of Faroese products, especially seafood, which makes up over 96% of the country’s exports (Statistics Faroe Islands 2005, 37).

1995 – IWC commends the improvements in killing methods that were instituted on the recommendation of the *Grindamannafelagið*.

2000 – Paul Watson returns to the Faroes and patrols the coastline with the goal of driving pods of whales away from the islands and thus, preventing the grindadráp.

2001 – Greenpeace makes a statement declaring that it judges the grindadráp to be a sustainable harvest.

In the past, and especially during the 1980s, it seemed to some Faroese that the international protests and threatened boycott might require a cessation of the grindadráp. In an August 2005 interview with this author Ólavur Sjurðarberg, then the president of *Grindamannafelagið*, remarked that the protest was the biggest threat to the continuance of the

---

<sup>4</sup> In an interview, Ms. Sanderson related to me with satisfaction that every one of these personally-written letters received a letter in reply. Only the preprinted, mass-produced postcards (which numbered in the tens of thousands) were unanswered.

grindadráp. This opinion was echoed as recently as March 2008 by Rolf Guttesen, a Faroese geographer at the University of Copenhagen. Perhaps catalyzed by the protest, the Grindamannafelagið was organized and implemented changes to improve killing methods and to ensure sustainability. In this regard, the protest had a positive effect in the Faroe Islands and many Faroese credit the anti-whaling organizations with instigating these changes. Today the efforts of most anti-whaling organizations are being directed against the scientific whaling<sup>5</sup> conducted by Japan in the Southern Ocean and the Faroes have not been subject to much direct protest nor has the proposed boycott had any noticeable impact. Greenpeace accepts the grindadráp as a sustainable harvest. It seems then, that the protest has not ended—or even lessened—the occurrence of the grindadráp in the Faroe Islands.

### *Pollution*

As top predators in their food chain, pilot whales accumulate high levels of methylmercury (MeHg), persistent organic pollutants (POPs), and other toxins in their muscle and blubber tissue. Some of these contaminants are naturally-occurring. MeHg, for example, is a result of mercury—either occurring naturally as it degasses from the earth's crust, or anthropogenic in the form of pollution—that reacts with atmospheric methane (Grandjean and Weihe 2008). About half of atmospheric mercury is naturally occurring and half can be attributed to pollution. Industry, especially coal-fired power plants, is a major contributing source anthropogenic mercury in the atmosphere (Joensuu 1971). When MeHg is formed, it is absorbed by marine plankton and fish and bioaccumulates as it moves up the food chain. Humans who eat meat and other tissue from top predators such as tuna, sharks, and pilot whales are exposed to elevated levels of MeHg and other toxins. It is often found that people living in fishing communities have higher than average levels of these contaminants (Grandjean and Weihe 2008).

Faroese people have been found to have a high rate of exposure to marine contaminants—a finding that has been linked to the amount of pilot whale meat and blubber in their diet. Mercury was first discovered to be a risk to the Faroese population in 1985. Since that time, 1751 children have been chosen at or before birth and divided into three cohorts to take

---

<sup>5</sup> Most anti-whaling organizations deny the *scientific* basis of Japan's whaling activities.



part in a long-term study known as the Children's Health and Environment in the Faroes (CHEF) Project to determine the effects of MeHg and other marine contaminants. The oldest of these children are now 22 years old. Through their participation they have provided the medical researchers with much important information. Children in the third cohort were born between 1998 and 2000 and show lower levels of mercury exposure than the first cohort. This indicates that the dietary recommendations issued by the Faroese government had been followed (i.e. people were eating less whale meat and blubber).

With time and reduced exposure, mercury levels in the human body decrease. POPs do not. (Hence *persistant* in the name.) As lipophilic substances, they are stored in the fat, or blubber, of the pilot whale. When humans eat the blubber they absorb the POPs which stay in their systems for many years. Women who were exposed to POPs as children can still pass on the contaminants to their babies. For this reason, in the 1998 dietary recommendations Dr. Weihe stated that it was best for girls and women not to eat blubber at all until they have given birth to their children (Weihe 1998).

Now, ten years later, Dr. Weihe plans to go one step further. While the 1998 recommendations allowed for one or two meals of pilot whale meat and blubber per month for healthy adults who will not become pregnant, the 2008 recommendations will likely suggest that no pilot whale meat or blubber be eaten at all. In an interview this August, Dr. Weihe said that,

[t]he content of mercury and organochlorides in pilot whales is so high, to see it from a health perspective, it would not be advisable to consume it... Our best advice is not to eat pilot whale meat and blubber. End of story.

Could it be, then, that pollution will be the obstacle that the grindadráp cannot overcome? As more developing nations industrialize, marine pollution will likely increase. As the meat and blubber become more contaminated, their risk will begin to outweigh their benefits. The conflict involved when the same food has both beneficial and detrimental qualities has been studied with regard to the Faroese diet with the conclusion that one can exercise good judgment in choosing foods that are high in benefits such as fatty acids but low in contaminants. (Budtz-Jørgensen 2007). Clearly this suggests the replacement of pilot whale meat and blubber with seafood from a different species in the Faroe Islands.

The Faroese are proud of the grindadráp. For centuries it has been a national symbol, only briefly losing this status during the protests of the 1980s and 1990s. Jóan Pauli Joensen, in one of the earliest academic treatments of the grindadráp, calls it “a distinctive cultural characteristic for the Faroe Islands” (1976, 5). Sanderson, in her textual history of the grindadráp, found evidence that it had been singled out as a “characteristic feature of Faroese culture” and “an established symbol of Faroese national identity” (1992, 1). The grindadráp has produced an extensive material culture. Faroese artists Sámal Joensen-Mikines and Tróndur Patursson have each produced a series of grindadráp-themed paintings that depict the frenzied action as a pod of whales are driven and killed at the water’s edge<sup>6</sup>. Whaling equipment is often displayed in houses as décor, taking it beyond its mere utilitarian purpose. The grindaknívur—pilot whaling knife—is “the pilot whale hunt’s most distinguished piece of equipment and it is also considered one of the foremost Faroese contributions to Nordic artistic craftsmanship” (Joensen 1976, 15). The knives are decorated with inlaid carvings of whales, boats, and whaling tools, though none are purely ornamental. Each knife is built strong enough to cut through a pilot whale’s blubber and muscle and to break its spinal cord (Fielding 2007b, 31). In addition to the objects of material it has produced, the grindadráp has inspired authors, poets, and songwriters in the Faroe Islands for centuries.

The Faroese cling tightly to their culture but they also heed the advice of their public health professionals. The third cohort of children in the CHEF Project, born in 1998 and 2000 show lower concentrations of MeHg than the first cohort, born in 1986 and 1987. The directors of the project attribute this decrease to the obedience of the children’s mothers to the dietary recommendations. Dr. Weihe believes that the results of his study, and his upcoming revised dietary recommendations will lead to a cessation of the grindadráp:

I feel bad to be on the doorstep of saying something that can be very offensive to the culture... In a few years time the phenomenon of pilot whaling will have disappeared in the Faroes. That’s my honest gut feeling (Weihe 2008).

---

<sup>6</sup> It has been said that these paintings (and by association, of the grindadráp) represent the only “red” in the Faroe Islands. Photographers and artists who visit the Faroes are impressed by the brilliant greens, the many shades of gray in the sea and sky, and the rich brown of the volcanic soil. When the water of a whaling bay is stained with the blood of the whales after a grindadráp, the Faroes also show red.

It appears that the pollution may accomplish something that overextraction and protest were unable to do in the Faroe Islands. It could lead to the ending of the grindadráp. Only time will tell. But that time is quickly approaching and contingency plans must be made.

## **Alternatives**

In 2002, products from the grindadráp were found to make up 30% of the meat produced locally in the Faroe Islands (Anonymous 2002, 13). Though the grindadráp is a noncommercial activity—that is, no money changes hands throughout the process of killing and butchering the whales or distributing and preparing the meat and blubber—its economic value can be “measured against the economic and environmental costs of importing the same amount of food” (Anonymous 2002, 13). When one considers the possible cessation of the grindadráp and the gap that its absence would leave in the Faroese meat supply, one must consider environmental as well as economic costs of filling that gap.

Three alternative forms of food production are currently being discussed in the Faroe Islands: an increase of meat imports, an intensification of local livestock production, and the shifting of some of the fish that is currently exported to availability for local consumption.

### *Increased Imports*

By far, the major country of origin for imports to the Faroe Islands is Denmark. In 2005, the last year for which I have statistics available, the Faroes imported over DKK<sup>7</sup> 1 billion (US\$216 million) worth of goods from Denmark, compared with the countries of origin for the next-highest amount of imports: Spain at DKK 298 million (US\$56.6 million), Germany at DKK 264 million (US\$50.2 million), and Sweden at DKK 229 million (US\$43.6 million). Put another way, the Faroe Islands receives 26.7% of their total imports from Denmark, compared with 7% from Spain, 6.2% from Germany, and 5.4% from Sweden (Statistics Faroe Islands 2006, 32). The Faroe Islands also have long-distance trade partners, often importing meat—especially lamb—from as far away as New Zealand (Guttesen 1996, 87). As the cost of both food and fuel increases, these import costs will certainly increase even if the amount of food imported remains

---

<sup>7</sup> DKK is the standard abbreviation for Danish Kroner, the currency of both Denmark and the Faroe Islands.

constant. If the Faroe Islands were to increase their imports to fill the gap left by the cessation of the grindadráp, they would also incur higher cost for transportation and would be contributing, through the increased usage of fossil fuels, to the same sources of marine pollution that led them to abandon the grindadráp in the first place.

### *Intensification of Local Livestock Production*

Livestock has been an important part of the Faroese food economy since the islands were first settled. When the Norse arrived in the Faroe Islands during the 9<sup>th</sup> century, they brought primarily sheep but also cattle with them and established European grazing management practices (Thomson, et al. 2005, 738). These practices and the level of intensity with which they were implemented were evidently sustainable as human ecologists have found no evidence that the early Norse overexploited the land for their farming and livestock industries. Certainly their activities transformed the pristine landscape to which they had arrived, but their limited numbers and experience working in northern settings led to a sustainable use of the local resources (Edwards 2005, 592).

Population has increased dramatically since the time of Norse settlement. The land area of the Faroes, of course, has not increased and remains 1399km<sup>2</sup> today just as it was in the 9<sup>th</sup> century. As population increased, so did the intensity of farming, well into the 19<sup>th</sup> century. In 1865 farming (including livestock-raising) was the main occupation in the Faroes, employing some 68% of the workforce (Guttesen 1996, 7). In 1996, farming employed only 2% of the workforce, with commercial trades and services making up the largest sector of the economy (Guttesen 1996; 86, 8).

Livestock management is still an important industry in the Faroe Islands. Through extensive government programs, the Faroese dairy industry has become self-sufficient in milk production, though it is supported through the importation of hay and supplemental fodder from Iceland and other European countries. The website of Statistics Faroe Islands shows that, though the number of dairy farmers has decreased from 111 to 51 since 1990, the number of dairy cattle has basically remained constant, from 2070 in 1990 to 2093 in 2007. The government programs encourage the consolidation of dairy farms into fewer, larger holdings to maximize milk production.

Though sheep greatly outnumber humans in the Faroe Islands, the sheep industry is declining. Mutton and lamb imported from Iceland and New Zealand supplement local production but cultural preferences allow locally-raised meat to sell for a much higher price. Guttesen suggests that the Faroe Islands could support a larger sheep industry but that cultural acceptance of a shift from traditionally pastoral to industrial sheep-rearing would need to happen first (1996, 86-87).

If the Faroese are to use their land resources to replace the meat lost by the closure of the grindadráp, they will have to reassert livestock as a major industry while maintaining the sustainable practices with which Faroese farming was begun by the original Norse settlers. It has been suggested that the current pattern of land ownership, which has led to a scattering of tiny, irregularly-shaped parcels that are incompatible with modern farm machinery need to be reformed (Guttesen 1996, 86). Whether the culture will accept these changes, and the associated changes that they would produce in the Faroese landscape, is yet to be seen.

#### *Increased Consumption of Local Fish*

Bioaccumulation, the increased concentration of pollutants in the tissues of animals toward the top of their food chains, is especially relevant to the issue of contamination in pilot whales. The fact is that some fish and sea mammals show much higher levels of mercury and other contaminants than other species do. Dr. Weihe states that the concentration of mercury is so high in pilot whale meat that, “for every portion of whale you could eat 100 portions of cod.” He advocates replacing whale meat in the Faroese diet with locally caught fish. In 1994 the Faroe Islands exported over DKK 3.4 billion (US\$659 million) worth of fish which comprised over 94.3% of their total exports (Statistics Faroe Islands 2005, 37). Perhaps some of these exports could be kept at home for local consumption.

A shift from foreign to local markets for a portion of the Faroese fish catch would provide locally produced food that is high in protein and fatty acids (as are pilot whale meat and blubber) and would not incur the environmental or economic cost of transporting the products from Europe or beyond. Nor would the limited amount of available land be taxed by higher usage in the farming and livestock industries. The Faroese economy would be affected by the loss of a portion of foreign trade and export power, but if the fish were sold in Faroese markets,

the local economy would also be stimulated by the addition of a cash commodity in place of a non-commercial meat source. The economic impact would then be transferred to the individuals who buy the fish in place of the whale meat that they had formerly received at no cost. The loss of any natural resource must be accompanied by increased cost as systems adjust to fill the gap left by its absence.

## **Conclusion**

While the grindadráp has existed for centuries and has overcome the threats of closure due to overextraction and international protest, it appears that the problem of pollution that leads to marine contaminants in the meat and blubber of the pilot whale may be too great for the grindadráp to withstand. If the proposed dietary recommendations are published this fall as planned and the public abides by them as expected, it is likely that the Faroe Islands will witness an ending of the grindadráp, as Dr. Weihe predicted, within just a few years. Along with the loss of a locally valued national tradition, the ending of the grindadráp will lead to a loss of an important, free food source. The culture will survive, for while a culture may produce a rich variety of materials, traditions, and practices, its existence is not dependent upon any one of them. Faroese national identity can endure without the grindadráp but attention must be given to identifying a sustainable source of food to replace the meat and blubber lost in its closure. The solution will likely not lie in any one of the proposed replacements alone: increased imports, intensified local agriculture and livestock industries, or increased consumption of local fish; but rather in a combination of the three. And though a dinner of dried pilot whale meat, salted blubber, and boiled potatoes is considered to be the Faroese national dish, another meal will rise to take its place, will be embraced by the culture, and enjoyed for years to come. Flexibility and diversification will be key attributes of a successful and nutritionally-balanced future for the Faroe Islands.

## References

- Abend, Alan G. and Tim D. Smith. 1999. Review of Distribution of the Long-finned Pilot Whale (*Globicephala melas*) in the North Atlantic and Mediterranean. NOAA Technical Memorandum NMFS-NE-117. Woods Hole: NOAA
- Anonymous. 2002. The Faroe Islands—A North Atlantic Perspective on Sustainable Development. Tórshavn, Faroe Islands: Løgmannskrivstovan [Faroe Prime Minister's Office].
- Bloch, D., M.P. Heide-Joergensen, E. Stefansson, B. Mikkelsen, L.H. Ofstad, R. Dietz, and L.W. Andersen. 2003. Short-term Movements of Long-finned Pilot Whales *Globicephala melas* around the Faroe Islands. *Wildlife Biology* 9(1): 47-58.
- Esben Budtz-Jørgensen, Philippe Grandjean, and Pal Weihe. 2007. Separation of Risks and Benefits of Seafood Intake. *Environmental Health Perspectives* 115(3): 323-327.
- Cranford, G. and R. Hillier. 1995. *Potheads and Drumhoops: A Folk History of New Harbour, Trinity Bay*. St John's, Canada: Flanker Press.
- Dahl, Sverri. 1971. The Norse Settlement of the Faroe Islands. *Medieval Archaeology* 14: 60-73.
- Dickinson, A. B. and Sanger, C. W. 2005. *Twentieth-Century Shore-Station Whaling in Newfoundland and Labrador*. Montreal: McGill-Queen's University Press.
- Edwards, Kevin. 2005. "On the Windy Edge of Nothing": A Historical Human Ecology of the Faroe Islands. *Human Ecology* 33(5): 585-596.
- Fielding, Russell. 2007a. "A Comparison of Pilot Whale Drives in Newfoundland and the Faroe Islands." *The Scottish Geographical Journal* 123(4): 160-172.
- \_\_\_\_\_. 2007b. Peacefully Watching the Slaughter: Whale Hunting in the Faroe Islands. *The Explorer's Journal* 85(2): 30-37.
- Glover, M. 1981. *Faroese Fin Whale Campaign – 1981*. London: Greenpeace.
- Grandjean, Philippe and Pál Weihe. 2008. *Children's Health and the Environment in the Faroes* [website]. Accessed online at <http://www.chef-project.dk/>
- Grandjean, Philippe, David Bellinger, Åke Bergman, Sylvaine Cordier, George Davey-Smith, Brenda Eskenazi, David Gee, Kimberly Gray, Mark Hanson, Peter van den Hazel, Jerrold J. Heindel, Birger Heinzow, Irva Hertz-Picciotto, Howard Hu, Terry T-K Huang, Tina Kold Jensen, Philip J. Landrigan, I. Caroline McMillen, Katsuyuki Murata, Beate Ritz,

- Greet Schoeters, Niels Erik Skakkebæk, Staffan Skerfving, and Pál Weihe. 2007. The Faroes Statement: Human Health Effects of Developmental Exposure to Chemicals in Our Environment. *Basic & Clinical Pharmacology & Toxicology* 102, 73–75.
- Guttesen, Rolf. 1996. *The Faeroe Islands Topographical Atlas*. Copenhagen: Det Kongelige Danske Geografiske Selskab and Kort & Matrikelstyrelsen.
- High North Alliance. 2008. *The High North Alliance* [website]. <http://www.highnorth.no/> Accessed 14 September 2008.
- Joensen, Jóan Pauli. 1976. Pilot Whaling in the Faroe Islands. *Ethnologia Scandinavica*: 1-42.
- Joensuu, Oiva I. 1971. Fossil Fuels as a Source of Mercury Pollution. *Science* 172(3987): 1027-1028.
- Mate, B.R., B.A. Lagerquist, M. Winsor, J. Geraci, and J.H. Prescott. 2005. Movements and Dive Habits of a Satellite-monitored Longfinned Pilot Whale (*Globicephala melas*) in the Northwest Atlantic. *Marine Mammal Science* 21(1): 136-144.
- Pinhorn, A.T. 1976. Living Marine Resources of Newfoundland-Labrador: Status and Potential. *Bulletin of the Fisheries Research Board of Canada* 194: 49.
- Sanderson, Kate. 1990. Grindadráp: The Discourse of Drama. *North Atlantic Studies* 2(1-2): 196-204.
- \_\_\_\_\_. 1992. *Grindadráp: A Textual History of Whaling Traditions in the Faroes to 1900*. Unpublished M.Ph. Thesis. University of Sydney.
- \_\_\_\_\_. 1994. 'Grind'—Ambiguity and Pressure to Conform: Faroese Whaling and the Anti-Whaling Protest. in Milton Freeman and Urs P. Kreuter (eds.) *Elephants and Whales: Resources for Whom?* Basel, Switzerland: Gordon and Breach. 187-201.
- Sergeant, D. E. 1986. Possible Connexion of Pilot Whale (*Globicephala melaena*) Populations at Newfoundland and the Faroe Islands. *Report of the International Whaling Commission* 38.
- Statistics Faroe Islands. 2008. *Statistics Faroe Islands* [interactive website]. Accessed online at <http://www.hagstova.fo/>
- \_\_\_\_\_. 2005. *Faroe Islands in Figures 2005* [pamphlet]. Tórshavn: Hagstova Føroya.
- \_\_\_\_\_. 2006. *Faroe Islands in Figures 2006* [pamphlet]. Tórshavn: Hagstova Føroya.
- Thomson, Amanda M., Ian A Simpson, and Jennifer L. Brown. 2005. Sustainable Rangeland Grazing in Norse Faroe. *Human Ecology* 33(5): 737-761.



Vidal, John. 2000. Ocean Warriors. *The Manchester Guardian*. 19 July. Accessed online at <http://www.commondreams.org/headlines/071900-01.htm/>

Weihe, Pál. 2008. Interview with the author. Tórshavn, Faroe Islands: 12 August.

\_\_\_\_\_. 1998. *Diet Recommendation Concerning Pilot Whale Meat and Blubber – Faroe Islands August 1998*. Tórshavn, Faroe Islands: Heilsufrøðiliga Starvsstovan.

Wylie, Jonathan. 1981. Grindadráp. in J. Wylie and D. Margolis (eds) *The Ring of Dancers: Images of Faroese Culture*. Philadelphia: University of Pennsylvania Press.