

FAROESE FISHERIES: DISCARDS AND NON-MANDATED CATCHES

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ABSTRACT

The issue of discards and unreported catches is briefly discussed with regards to the Faroe Islands fisheries. No quantitative estimates of discarding have been undertaken at the present. However, some preliminary data based on on-board observer programs are available for some gear types, and is included here. Definitions of gear breakdown used in the management of Faroe Islands fisheries is also included.

INTRODUCTION

In the fisheries in Faroese waters, discarding of all fish is officially banned. However, this is not strictly enforced in many cases. With no quota regulations currently in use, there should be little temptations of discarding for the purpose of maximizing catch value. However, discarding might take place for other reasons. Faroese fisheries' legislation defines two categories of undersized fish. First, fish with a total length less than the minimum legal landings size are in principle not allowed to be on board and not allowed to be marketed. This can lead to discarding of undersized fish. Second, for each of the most important fish species, there is a length below which fish are categorized as 'young fish'. In cases where the proportion (by numbers) of 'young fish' in the catches exceeds certain limits in any fishing area, this area has to be closed temporarily for fishing. These closures generally last for only a short period of time, i.e., 1-2 weeks. Unverified reports indicate occasional discarding of young fish in order to avoid closure of an area with high catch rates.

Thus, three types of discarding can be identified:

- Discarding undersized commercial fish;
- Discarding damaged fish of commercial sizes; and
- Discarding non-commercial species.

The amount of discarded fish will mainly depend on the availability of such fishes. Availability, in turn, varies between years, seasons, areas and the selectivity of the gears. In this paper, these factors will be related to the different vessel groups in the Faroese fishing fleet.

Most of the non-mandated (i.e., not requiring reporting) catches in Faroese waters are used for private consumption, ranging from recreational fishing to the commercial vessels where the crew usually are allowed to take a small part of the catch for personal use. It is very difficult to assess the extent of this practice.

A special Faroese phenomenon is the hanging of fish to dry in the wind – an old tradition in the Faroes for preserving fish, appropriately called 'hung fish'. The fish is allowed to hang in the open to dry and is consumed at various degree of dryness. A special quality is obtained when the fish is allowed to hang and dry on a vessel at sea. By custom, fishing vessel crews are allowed to hang and dry all undersized fish for their own consumption and to give them away to family and friends. In years with good recruitment of young fish this can amount to a significant number of fish which are caught, hung and landed but not accounted for in the fisheries statistics. There are only limited data on the size and age distribution of these unrecorded catches. They are not included in the stock assessments but regarded as a part of natural mortality. Some attempts to estimate this amount have been made, but with limited success. These estimates are based on the assumption that each person in the Faroe Islands eats fish with a certain frequency, therefore it is theoretically possible to come up with 'guesstimates' on these amounts. One problem is that the age distribution of these fish is not known, and furthermore, fish which are accounted for in the fisheries statistics may also be used for the same products (dry fish).

In 1997, the Faroese Fisheries Laboratory initiated an observer program aimed at a quantitative description of the amounts of discards/non-mandatory catch in the traditional demersal fisheries within the Faroese fishing zone. For various reasons, the coverage of the fleet has so far not been adequate. Preliminary results from this program together with other information will be used to illustrate possible discarding practices and non-mandatory catches in the different Faroese fisheries.

RESULTS BY BOAT TYPE

Open boats

A large number of boats are within this group, most of them less than 2-3 GRT. Some of them take part in commercial fisheries, but most of them are used for recreational fisheries. They fish mainly for cod (*Gadus morhua*) and haddock (*Melanogrammus aeglefinus*). Discarding is not believed to be a big problem but non-mandatory catches are likely to be common in some instances. The total catch, however, is small.

Longliners less than 110 GRT

In total, 800 licenses are within this group, i.e., 5-15 GRT: 696 licenses, 15-40 GRT: 57 and 40-110 GRT: 47. Some of them are also using jigging machines at times. Most of them target cod and haddock. With respect to discarding/non-mandatory catch, they behave almost as the larger longliners (see below), although they very seldom fish in deep waters.

Longliners larger than 110 GRT

This group consists of 19 vessels. Very little is known about possible discarding and non-mandated catches. However, data exist from two trips with observers in 1997 and 1998. The results are given below, by trip.

Table 1. The total catch, discarded and landed catch on the first long line trip. All weights in kg. 'Hung' refers to catches air-dried by crew and landed for personal use without being recorded in official landings records.

Species	Cod	Haddock	Starry ray	Dab	Small redfish	Others	Total
Catch	65,362	61,955	216	176	9	23	127,741
Discards	62	55	216	176	9	23	541
Hung	2,000	-	-	-	-	-	2,000
Landings	63,300	61,900	0	0	0	0	125,200

Trip 2. 23. February - 3. March 1999

While the first trip took place in the autumn the second trip took place in the spring on pre-spawning fish, in two areas to the West of the Faroes in slightly deeper water compared to the first trip.

Effort: During this trip the entire line (approximately 42,000 hooks) was set in one setting per day in a criss-cross pattern, as compared to the two settings in a

Trip 1. 19. November - 3. December 1997

Three areas to the Northwest and West of the Faroes, all within the 200-m depth contour, were fished during this trip. All areas are recognized as good fishing areas for cod and haddock.

Effort: The long line was shot twice a day in a horseshoe pattern. Each set contained approximately 22,500 hooks. The setting was timed to the lunar cycle, avoiding sets at neap tides.

Catch: The catch of 127 tonnes (Table 1) consisted almost entirely of cod and haddock, which, apart from a few kg of fish that had been crushed in the conveyer belt systems, were landed. Bycatches of dab (*Limanda limanda*), starry ray (*Raja radiata*) and small redfish (*Sebastes viviparus*) were discarded. The number of young fish was quite high during this trip and quite a number of fish were hung. For a number of reasons the crew are sensitive to exposure of this custom, and the observer therefore refrained from taking any accurate census of the number hung. The observer, however, estimated the total number of fish hung to be in the order of 4,000 fish, with an assumed average weight of 0.5 kg. This estimate is included in Table 1.

horseshoe pattern on the previous trip. The setting was timed to the most favourable tidal currents.

Catch: The total catch (62 tonnes) was lower, but more diverse compared to the first trip (Table 2.), and the catch rates were also less. The most significant reduction was in the catches of cod. However, cod and haddock were of significantly larger size compared to the first trip. There were significant bycatches

Table 2. Catch in kg by species during the long line trip in February-March 1999.

Species	Cod	Haddock	Saithe	Ling	Tusk	Angler fish	Halibut	Starry Ray	Dab	Total
Catch	14,950	39,300	350	1,350	3,000	200	300	1,275	1,215	61,940
Discard	0	0	0	0	0	0	0	1,275	1,215	2,490
Landing	14,950	39,300	350	1,350	3,000	200	300	-	-	59,450

of ling (*Molva molva*) and tusk (*Brosme brosme*) in addition to minor bycatches of saithe (*Pollachius virens*), anglerfish (*Lophius piscatorius*) and halibut (*Hippoglossus hippoglossus*), which were landed. As on the first trip, the bycatch of dab and starry ray were discarded. These 2.5 tonnes (both species combined) represented 4% of the total catch, and was considerably high compared to the first trip. The crew took no fish during this trip to dry for private consumption.

Single trawlers less than 500 HP

During summer time these trawlers (about 5 vessels in this group) are allowed to fish inside the 12 nm zone, which is generally closed to all trawlers. These small trawlers target flatfish. In order to reduce the bycatch of other fish they are obliged to use sorting grids in the trawls. As a consequence, their catches consist primarily of the target species and discarding is believed to be minimal. As for other groups, small amounts of non-mandatory catches are expected. In other times of the year this group behaves like the single trawler 500-999 Hp.

Single trawlers 500-999 HP

There are only about 4 vessels in this group. Target species are cod and haddock. The minimum legal mesh size of 145 mm stretched mesh should disallow large bycatches of undersized cod and haddock, and the same applies to catches of other smaller fish species.

Single trawlers above 1000 HP

This group contains 13 vessels, which mainly target redfish (*Sebastes* spp.), Greenland halibut (*Reinhardtius hippoglossoides*), blue ling (*Molva dypterygia*) and other deepwater species. In this fishery the minimum legal mesh size is 135 mm stretched mesh (in the blue ling fishery 120 mm) and they are known to discard considerable amounts of non-commercial species. However, at the present time it is not possible to quantify the

discard. During part of the year they also target saithe, cod and haddock (mesh size 145 mm) with bycatch similar to the smaller single trawlers.

Pair trawlers less than 1000 HP and above 1000 HP

These two groups have 32 vessels. Mostly they target saithe with bycatch of cod and haddock. However, in years with high availability of cod and/or haddock they prefer to target these due to the higher market prices. The minimum legal mesh size of 145 mm stretched mesh should disallow large bycatch of undersized cod and haddock, and the same applies to catches of other smaller fish species. But no data exist at this stage.

Jiggers

These vessels can change between longline and jigging. When they use jigging machines they target cod and saithe with small bycatch of redfish, ling and others. Most of the catch is composed of large commercial species and discarding is believed to be minimal.

Gill netting vessels

Traditional fishery with gill nets for cod, saithe etc. has been banned for the last 20 years due to the risk of losing nets ('ghost fishing') and poor quality of the fish. However, since the beginning of the 1990s some vessels have been given special licenses to fish anglerfish (4 licenses) and Greenland halibut (6 licenses) with gill nets. Due to the large mesh sizes, bycatch of small fish species and undersized fish is almost non-existent. Catches of starry rays and other smaller skates are discarded. If the nets are allowed to fish for a longer period than usual, e.g., due to bad weather, the quality of the catch is so poor that large parts will be discarded.

The Fisheries Laboratory has on several occasions placed observers on board these vessels and some preliminary results are given here.

Greenland halibut fishery

During a 5 day trip in July 1998, total catch was about 50 tonnes, of which 25% were discarded. Discarded species were: Starry ray (23%), Greenland halibut (1%), cod/redfish/blue ling (1%). This appears to be a typical picture. If, as is thought to happen occasionally, the nets are allowed to fish for too long (e.g., due to poor weather), the discarding rate can rise up to 40% due to poor quality of the target species.

Monkfish fishery

The mesh sizes are larger than in the Greenland halibut fishery and the bycatch of non-commercial species/sizes appears negligible. As with the Greenland halibut fishery, if nets are allowed to fish for too long, problems with poor quality of the fish exist. However, not to the same degree, since monkfish seem to survive for a longer time in the nets.

Industrial trawlers

A mixed industrial bottom trawl fishery (for fishmeal and oil production) was initiated in 1982 with annual catches of 5,000-30,000 tonnes (reported to ICES). The majority of the catch is comprised of Norway pout (*Trisopterus esmarki*), but also some blue whiting (*Micromesistius poutassou*) and Argentine (*Argentina* spp.). The regulations stipulate a maximum bycatch of undersized 'food fish' (e.g., cod, haddock, saithe, ling etc.) of 2%. Two extremely large year-classes of haddock, i.e., the 1993 and 1994 year classes, created large bycatch problems for the mixed industrial fisheries starting from 1994. In 1994 large numbers of small haddock were found throughout the Faroe Plateau, which made it impossible to conduct the industrial fishery within the bycatch legislation. The mixed industrial bottom trawl fishery was consequently closed, and has since been banned within Faroese waters.

Pelagic vessels

Most catches are used for fishmeal and oil production and discarding is not a big problem. Catches of large herring and mackerel are mostly used for consumption and discarding is almost zero.

CONCLUSION

As the data presented here indicates, up to now discards and unreported catches have received little attention in the Faroe Islands. This short-fall requires attention.

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