HAGFRÆÐISTOFNUN HÁSKÓLA ÍSLANDS

Hagfræðistofnun Háskóla Íslands
Odda v/Sturlugötu
Sími: 525-4500/525-4553
Fax: 552-6806
Heimasíða: www.hag.hi.is
Tölvufang: ioes@hag.hi.is

Report nr. C99:06

Implication of Responsible Post Harvesting Practices on Responsible Fishing

Report to the Ministry of Fisheries

June 1999

Foreword

As a part of the OECD Committee's Study on the Economic Impact of Responsible Fisheries, the Directorate for Food, Agriculture, and Fisheries Committee invited the member countries to inform about the implications of responsible post harvesting practices on responsible fishing in their country. The report presented here, the National Report, is prepared by the request of Ministry of Fisheries by the Institute of Economic Studies (IoES).

The National Report describes the post harvest practices implemented in Iceland such as national catch sold in foreign ports, foreign catch sold in national ports, catch processed on land and at sea and the distribution and marketing of the fish products. Post harvest policies such as price controls, measures applying to export and import flows, measures to reduce post harvest losses and waste, to improve the use of by-catch are also part of this report. Finally data about the Icelandic international trade flows and the consumer information about the origin of the fish products and eco-labelling schemes in Iceland can be found in the National Report.

Ayse Sabuncu is the author of the report.

IoES in June 1999

Tryggvi Thor Herbertsson,
Director.

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1. Introduction

The Icelandic economy depends heavily on fisheries. In 1997, marine products export constituted 71 per cent of commodity exports and 47 per cent of all national foreign currency earnings. The fishing industry's direct contribution to GDP was 14.4 per cent in the same year, but the total contribution goes up to 40 per cent when indirect contributions (backward and forward linkages of the fishing industry) are taken into account. [1]

The total Icelandic catch in 1997, was 2.2 million tonnes, with a value of ISK 56 billion (US $ 789 million.)

Table 1 Total landed catch 1992-1997, by volume and by value

Total landed catch (from all banks)	1992	1993	1994	1995	1996	1997
by volume (thousand tonnes)	1,568	1,699	1,511	1,605	2,055	2,199
by value (ISK million)	48,689	49,718	49,023	54,095	57,388	54,467

Source: Icelandic Fisheries Association: *Utvegur* 1992-1997

The same year the number of vessels was 1993 and the fisheries employed 10 per cent of the workforce, 5840 person in harvesting and 6680 person in the processing sector.

In Iceland, economic welfare depends critically on continual operation of the fisheries and its international competitiveness. The fisheries in Iceland do not receive any direct subsidies from the government which ended its official support to marketing monopolies for fish export in 1980. But, nevertheless the government is heavily involved in securing favourable operating conditions for the fishing industry.

The fishing industry is a major determinant of personal incomes and income distribution, especially in coastal regions. Therefore the fisheries management is one of the major component of Iceland's economic and regional policy. Currently the fisheries are managed by a system of individual transferable quota shares (ITQ) which was introduced in 1984. Under this system all fisheries are subject to vessel catch quota where the quotas represent shares in the total allowable catch (TAC). They are permanent, perfectly divisible and fairly freely transferable.

Despite of ITQ system, stocks of many species have declined, including that of the cod. This is especially alarming, as cod is by far the most commercially valuable species fished in Icelandic waters. In 1995, the government therefore adapted a new method for calculating the TAC of cod each year. This new method appears to be an improvement over the previously used one as the cod stock was 58 per cent larger in 1998 than it was in 1995.

[1] Arnason, R. (1995). *The Icelandic Fisheries: Evolution and Management of a Fishing Industry*. Fishing New Books, Oxford.

2. Post Harvest Practices

2.1 Main Commercial Species and Fisheries Management Instruments Used for those Species

2.1.1 Main Commercial Species

The most important Icelandic fishery is the demersal or groundfish fishery, which in 1997 consisted of 71 per cent of the value of landed catch. Cod, haddock, redfish and saithe are the main demersal species. Pelagic fisheries based on capelin and herring are also valuable, yielding 14 per cent of the total catch value. In addition to demersal and pelagic fisheries, shrimp, lobster and scallop fisheries have also significant commercial value, amounting to 15 per cent of the total catch value.

Table 2.1 Icelandic fisheries: catch and value data

	Average catch (1000 MT) 1992-1997	Estimated catch values* (US$M)
Demersal species		
Cod	208.1	217.6
Haddock	51.8	59.7
Saithe	55.7	37.1
Redfish	117.9	114.0
Other**	60.4	106.6
Total	*493.9*	*535.1*
Pelagic species		
Capelin	947.4	77.9
Herring	204.0	26.8
Total	*1,151.4*	*104.7*
Crustaceans		
Shrimp	65.5	101.7
Lobster	1.8	5.9
Total	*67.3*	*107.6*
Shellfish		
Scallop	8.0	3.8
Grand Total	*1,720.7*	*751.3*

Notes: * At 1997 average unit catch prices and exchange rate (1USD=70.98 ISK, Hagtölur mánaðarins)
** Mainly Greenland halibut, wolffish, tusk, ling and plaice.
Source: Fisheries Association of Iceland, *Utvegur* 1992-1997

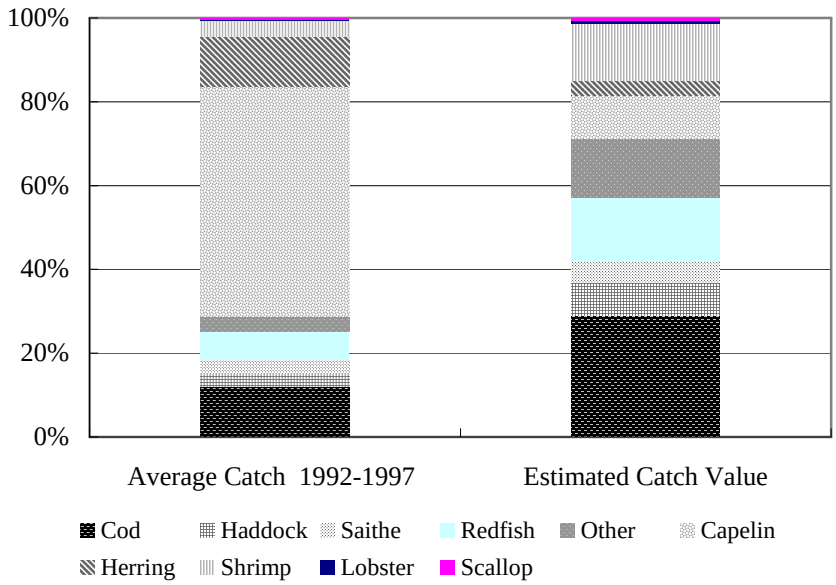

Fig. 2.1 Percentage breakdown of the catch and value data

2.1.2 Fisheries Management Instruments[2]

In Iceland the current fisheries management system is based on a system of individual transferable quota shares (ITQ). This system was first adopted in 1984 and has been instituted at different times and in different forms in various fisheries. It was made uniform for all the species under quota regulation by the Fisheries Management Act in 1990, which took effect in 1991. Currently, the species subject to quota regulation in Iceland are cod, haddock, saithe (pollock), redfish (ocean perch), Greenland halibut, plaice, dab, Icelandic scallop, nephrops (Norway lobster), shrimp, herring, capelin, wolffish and witch. Some 98 per cent of catch landed in 1997 were subjected to ITQs.

The individual quota shares represent shares (percentages) in the total allowable catch (TAC), within the fishing year, of all regulated species. The catch quota of each vessel is therefore a multiple of its quota share and the TAC. Every vessel that fishes in the Icelandic exclusive economic zone (EEZ) must hold a commercial fishing permit. Furthermore, in order to fish the regulated species, the vessel must posses catch quota derived from the quota shares, or catch quota transferred from another vessel.

The quota shares were initially allocated in 1984 according to vessels catch performance during the three previous fishing seasons. Shares are permanently attached to the vessels, but can be divided up and/or transferred. The quota share remains unchanged from one year to the next unless quota shares have been transferred. The allocated catch quota of each vessel however, changes from one year to the next, depending on the TAC for the species in question. The catch quota within each fishing year is transferable between vessels holding commercial fishing permits. Under current law, the TAC for regulated species for the fishing year is set by the Minister of Fisheries based on recommendations from the Marine Research Institute (MRI).

[2] The main source of this section is Arnason, R. (1995). *The Icelandic Fisheries: Evolution and Management of a Fishing Industry*. Fishing New Books, Oxford.

All Icelandic fishing ships are subject to the ITQ system with one exception. A number of vessels under 6 gross registered tonnes fishing with hook and line are either subjected to a limited number of fishing days or to a catch maximum in cod.[3] The system is quite flexible in the individual quota constraint each year. Current rules allow a quota holder to exceed his annual quota for each species by 5 per cent subject to a corresponding reduction in his quota next year. Similarly the quota holders are allowed to postpone the harvesting of up to 20 per cent of their annual quota until next year. Finally, it is permitted to switch up to 5 per cent of the annual quota (in value terms) from one species to another within the year.

Until 1999, under this system, only vessels with prior fishing experience could acquire quotas. But in that year the Supreme Court of Iceland ruled that this regulation is a violation of the citizens' basic constitutional right of equal access to employment opportunities. Consequently, the rule was changed so that now all registered seaworthy vessels can receive a license to fish stocks that are not regulated by quota limitations. However, the vessels need to acquire a quota for all other species.

2.1.3 Other Fisheries Management Methods

1. Area closures

Many fishing areas in Iceland are subject to temporary and permanent closures to protect immature fish and spawning grounds. The use of special gears is prohibited or limited in certain areas. For example fishing with trawls is basically prohibited inside 12 miles from base line. MRI has the authority to close fishing areas temporarily without prior notice if the proportion of small fish in the catch exceeds certain limits.

2. Seasonal closures

Many fisheries, e.g. inshore shrimp, are subject to seasonal closures. The main objective is to protect the spawn of other species. Furthermore, fishing in the spawn areas of cod is prohibited during the spawn season.

3. Gear regulation

There are many restrictions on fishing gear such as the number of allowable nets, mesh sizes, etc.

Table 2.2 Minimum mesh sizes

Fishing gear	Mesh size
Bottom-trawl	135 mm
Danish-seine	135 mm
Gillnets	139.7 mm

Source: Ministry of Fisheries: fisheries regulations

4. Minimum size of catch

The goal of these restrictions is the protection of the juvenile fish. However, the minimum size of catch limitations for demersal species were cancelled as they encouraged the discarding of undersized catch. If sudden amount of fish in catch is under reference size, the fishing area is closed.

[3] This might change in the next couple of years as it is likely that all the fisheries will be under the ITQ system.

Table 2.3 Reference size of caught fish for closing areas

Species	Minimum size	Per cent of catch
Cod	length 55 cm	25
Haddock	length 45 cm	30
Saithe	length 55 cm	30
Redfish	length 33 cm	20
Herring	length 28 cm	25
Inshore Northern shrimp	length 13 mm	30
Offshore Northern shrimp	length 15 mm	30

Source: MRI

5. Catch rule for cod

At the beginning of the fishing year 1995-96, a new management scheme for cod has started to be implemented. From this date on, cod catches are limited to 25 per cent of the average of the estimated fishable stock of that fishing year, however, with a minimum catch level of 155 thousand tonnes. The objective of this new application is a rational utilisation of the cod stock.

2.2 Proportion of Catch Landed Direct from Harvesters and "At Sea" Processors to Foreign Ports

The value of catch from Icelandic grounds sold in foreign ports constitutes only a small proportion of the total value of landed catch. This proportion has been decreasing steadily and was 0.53 per cent in 1997. High fish prices in Iceland are an important explanation for this trend together with the increased production on board of the fishing vessels.

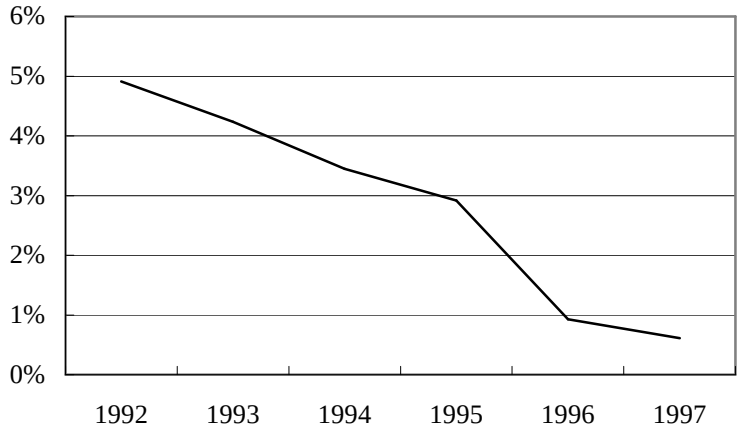

Fig. 2.2 Percentage of catch landed to foreign ports in total landed catch

2.3 Proportion of Catch Landed at Domestic Ports from Foreign Flagged Harvesters and "At Sea" Processors

Landings in Iceland increased rapidly after the Icelandic government relaxed the restrictions on the landing of fish by foreign registered vessels in 1992. Landings, measured in tonnes, increased almost continuously up to 1996, whereas the value of the landings decreased in 1996, mainly because the volume of the more valuable demersal species declined while that

of the less valuable pelagic species such as capelin, rose. Both the volume and value of the foreign landings decreased in 1997.

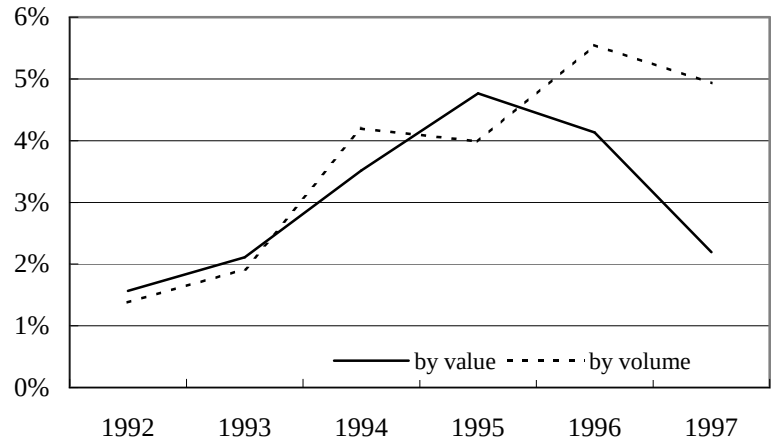

Fig. 2.3 Percentage of catch by foreigners in total landed catch

2.4 Share of the Catch Processed "At Sea" and "On Land"

Fish processing takes place either on land or at sea. The land-based processing can be divided into freezing, salting, drying, canning and the production of fish meal and oil. Most of the fish is processed on land, with the land-base factories accounting for between 90-93 per cent of the total production of catch from Icelandic banks in the years 1992-97. In 1997, output amounted to 2 million tonnes of fish products, with a catch value of 34 billion ISK (US$ 479 million). This constituted of 63 per cent of the total catch value of fish products that year.

Freezing is the dominant process at sea. The volume processed at sea varied between 7 to 10 per cent of the total volume in 1992-97. The value of the fish processed at sea on the other hand is higher or 28 to 33 per cent of the total value.

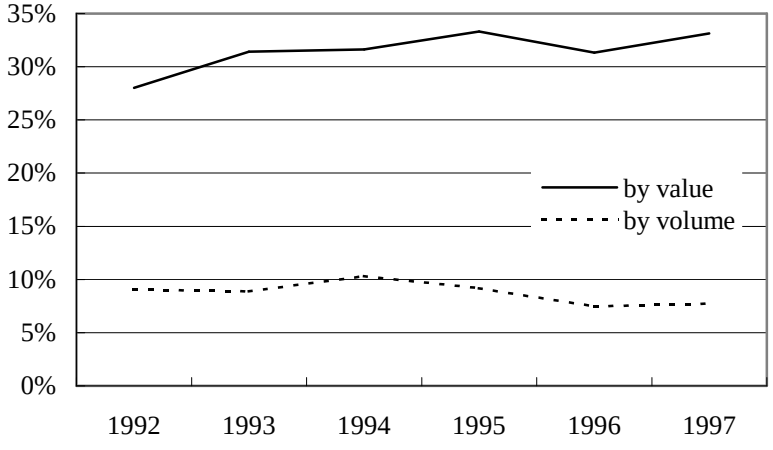

Fig. 2.4 Proportion of catch processed at sea

2.5 Diagram of the Different Marketing Chains

In Iceland, the same firm often both owns fishing vessels and operates processing plants. As a consequence, most of the fish landed in Iceland is brought directly to processing plants, thus

bypassing completely the local fish markets. In 1997, 44 per cent of total landed catch, in value terms (81 per cent in tonnes), went to domestic processing directly from harvesters.

The supply of the catch to the processing sector increased drastically with the introduction of the wetfish auction markets in 1986. In 1997, 15.4 per cent of the total catch was auctioned at these markets, creating a more efficient alternative for independent boats. All the wetfish auction markets use specially designed computer systems. These systems not only connect local auction markets to each other but also serve as an information database. The supply of fish to auction markets, sales during auctions, detailed information about buyers and sellers are some of the important information recorded by the computer systems. Almost all the auctioned fish is sold for domestic processing but a small percentage of it is exported in containers.

Since most of the fish, processed or fresh, is exported, the export companies are quite important in the marketing and distribution of fish products. The sale and marketing of the fish products for export is mostly in the hands of a few large sale organisations. These marketing firms are not independent; they are owned by the processing firms and they serve the marketing needs of the processing sector. The main sales and marketing organisations are: Icelandic Freezing Plants Corporation, the largest exporter specialised on frozen seafood products; Iceland Seafood International plc, another big exporter of frozen seafood products; the Union of Icelandic Fish Producers (SÍF), which concentrates on saltfish exports. Numerous smaller exporters operate alongside these large sales and marketing organisations.

2.6 Effects on the Commercial Flows of the Management Instruments Applied

One important aspect of the ITQ system was to end the free access, the competitive arrangement of the fisheries. The competitive fisheries management, given that the TAC is limited by the size and regenerative capacity of the fish stocks, is economically wasteful; i.e. generates very little or no net economic benefits. The ITQ system in Iceland has provided the economically appropriate signals and incentives for the fishing industry. The rate of expansion of fishing fleet decreased, the fishing effort has been lowered and the quality of catch increased in many cases.

There are, however, some problems in terms of final demand adjustment under TAC quota and ITQ system. The proper adjustment to final market demand requires a change in the quantity, quality and species composition of the catch. But, the aggregate supply of catch is mainly determined by the TACs for individual species based on biological considerations rather than demand fluctuations. Moreover, under ITQ fisheries management system, quota prices normally adjust to ensure that the TACs are approximately met. Therefore, the aggregate supply and species composition of the catch is fairly inflexible over the year.

3. Post Harvest Policies: Description and Effects

3.1 Price Controls Set on Landings or at any Other Place in the Post Harvest Sector

From 1961 to 1987, the Fishing Industry Price Determination Board set the price for every significant species and quality of fish. In 1980's the system came under considerable criticism. As a result, in 1987 a special legislation that allowed wetfish auction markets was passed. The market was; however, not completely free as from 1987 to 1991 the Fish Price Determination Board set the minimum wetfish prices.[4] Since 1991 market forces have been completely respected.

In spite of no officially determined fish price, the actual wetfish price is not always competitively determined, as most of the catch is not sold in competitive wetfish markets. Instead, it is transacted between the harvesting and processing departments of the vertically integrated fishing firms. However, the value of the fish that goes to the wetfish markets has been increasing and as a result the wetfish prices have become more competitive.

3.2 Measures Applying to Export Flows

Until quite recently, the government granted de facto export monopolies to the large marketing organisations by its reluctance to issue export licences to others. But lately this policy has been changed and licences to export fish products are now generally granted to reputable applicants. The current official fish export policy is therefore best characterised as controlled *laissez faire*.

3.3 Measures Applying to Import Flows

The import flow measures practised in Iceland used to be very restrictive. In 1992, Icelandic government relaxed these restrictions which led to a rapid increase of fish landings by foreign flagged harvesters, especially from non European Union countries. From 1999 on, Iceland has a common border with European Union (EU). Therefore the EU import rules apply in Iceland. How this change will effect the foreign landings in terms of composition and in terms of the origin of the landings is unclear. It should be noted that all imported fish is processed in Iceland are exported, none goes to domestic consumption.

3.4 Measures to Reduce Post Harvest Losses and Waste, to Improve the Use of By-catch and to Minimise the Environmental Impact of Post Harvesting Activities

The Ministry of Fisheries, the Marine Research Institute (MRI) and the Icelandic Fisheries Laboratories (IFL) have jointly undertaken measures to reduce post harvest losses and waste, improve the use of by-catch and to minimise the environmental impact of post harvesting activities. MRI explores new possibilities for harvesting and provides advice for the long-term sustainable harvesting of fish stocks. The IFL have the role of promoting the advancement of Icelandic fishing and fishing processing through a variety of research and development

[4] The wetfish price is the price of landed catch.

projects. MRI and IFL have implemented many projects in the past and there are many ongoing projects. In Iceland, all parties are well aware of the importance of resources: the fisherman, the processing industry, the export organisations and the general public.

Among the recent projects that have been implemented is the establishment of a committee that is entrusted with the task of making recommendations to the ministry for improved handling of marine resources. Its main tasks are to promote improved utilisation of resources, and to minimise by-catch and discarding of catches by proposing standards on e.g., gear riggings, mesh size, use of sorting grids or on other sorting devices. In the spring of 1996 a bill was adopted by the Icelandic parliament, the Althing, which was the result of the committees proposals. Concerning responsible treatment of commercial marine stocks, the bill specifies clearly what actions are permissible and what actions are not. Abusive practices such as discarding fish, avoiding weighing-in of catch or fishing in excess of quotas will not be tolerated. There are clear provisions in the new law as to the responsibility of all parties involved; not only the vessel owners and crew, but port employees, drivers of transport vehicles, etc. are all liable. Punishment for infringements have been made more severe and become heavier still in the case of repeated violations.

The "By-Catch Bank" was on of the projects implemented under ministry supervision. Its role was to buy from vessels species that otherwise would be discarded, and find processing opportunities and markets for these by-catches. Its other activities included organising restaurant promotions of new catch items, in co-operation with leading chefs.

There are many other ongoing projects, not only implemented by the ministry but also by the processing firms that aim to minimise the losses. The use of pressured water to clean the bones in order to get more meat from harvested fish is only one of them. Every processing and exporting firm is aware of the importance of the maximum utilisation of resources and emphasise the practices applied in their firms.

4. International Trade Flows

4.1 Export Flows in terms of Value, Volume, and Composition

In 1997, the total volume of exports of marine products amounted to 795 thousand tonnes, with a value of ISK 95 billion. This represented a 1.4 per cent increase in weight and 3.2 per cent increase in value at constant exchange rates from the previous year. In Iceland, fish exports constitute a very large share of the total export of goods. In 1997 they accounted for 71.4 per cent of total export of goods, but 52 per cent of all exported goods and services. The export of marine products is also an important source of foreign currency earnings. In 1997 the earnings from fish exports amounted to 47 per cent of total foreign earnings.

Table 4.1 Exports of goods (fob) and services by industries, 1992-97
(ISK millions at current prices)

	1992	1993	1994	1995	1996	1997
Marine products	69,881	74,571	84,838	83,873	92,582	93,684
Agricultural produce	1,632	1,620	2,132	2,055	2,550	2,105
Manufactured products	15,924	15,125	16,525	21,040	25,000	25,039
Other goods	1,195	1,942	4,645	5,679	5,520	6,704
Export of services	33,764	41,036	44,782	44,643	50,457	59,010

Source: Icelandic External Trade, Commodities and Countries 1997, Statistics Iceland

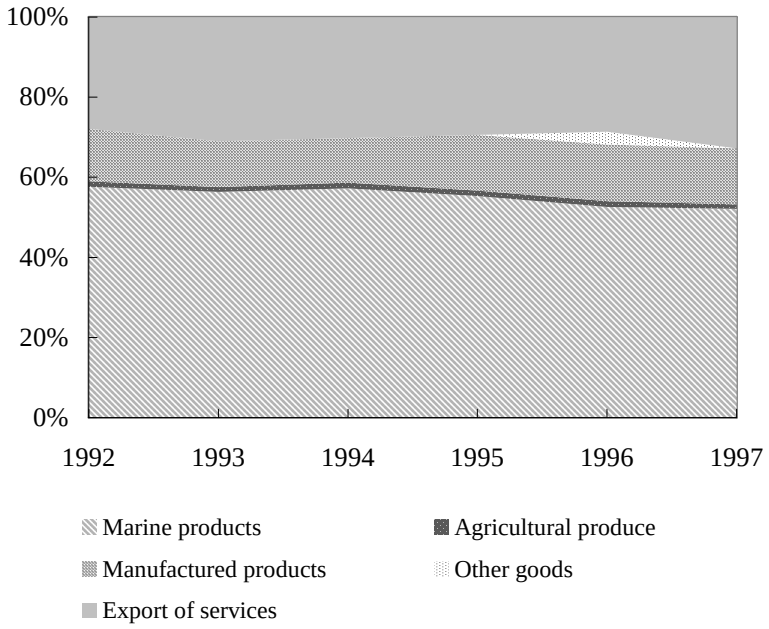

Fig. 4.1 Percentage breakdown of exports of goods and services by industries 1992-1997

Main export categories of fish products are frozen products, salted fish, fish meal and oil and fresh iced fish.

Table 4.2 Classification of fish exports by volume (thousand tonnes)

Years	Frozen	Salted	Iced	Dried	Meal & oil	Canned	Other	Total
1992	190.4	51.3	89.6	6.4	210.3	2.8	19.2	569.9
1993	201.9	50.3	75.2	6.8	275.4	2.7	23.1	635.4
1994	244.5	60.5	62.2	6.2	263.0	2.8	0.8	640.1
1995	224.4	59.8	47.9	6.1	264.7	2.1	2.6	607.5
1996	269.5	67.5	48.1	5.7	387.7	2.4	2.9	783.8
1997	280.1	61.9	55.6	7.7	382.1	3.2	4.4	794.9

Source: Fisheries Association of Iceland: *Utvegur* 1997

Table 4.3 Classification of fish exports by value (ISK millions)

Years	Frozen	Salted	Iced	Dried	Meal & oil	Canned	Other	Total
1992	42,154	12,021	8,390	794	5,766	1,399	784	71,308
1993	46,737	10,912	7,620	975	7,535	1,521	792	76,091
1994	55,699	13,410	8,047	779	7,579	1,779	249	87,540
1995	53,685	13,892	6,977	669	8,295	1,521	694	85,734
1996	54,556	16,131	7,460	694	13,993	1,463	1,003	95,300
1997	53,239	15,486	8,007	1,003	15,838	1,820	1,133	96,498

Source: Fisheries Association of Iceland: *Utvegur* 1997

Domestic consumption of fish products was 6,259 tonnes in 1997, only 0.3 per cent of the total amount produced.

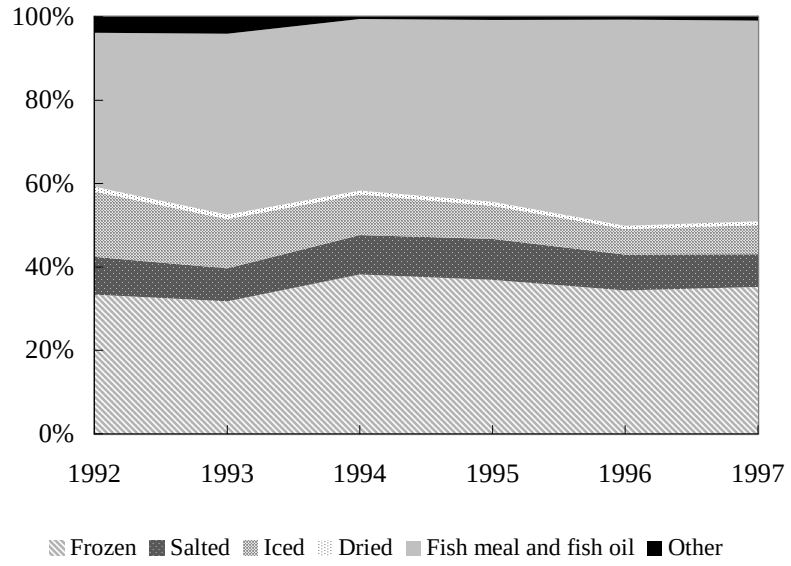

Fig. 4.2 Relative export volume of fish products by type of processing

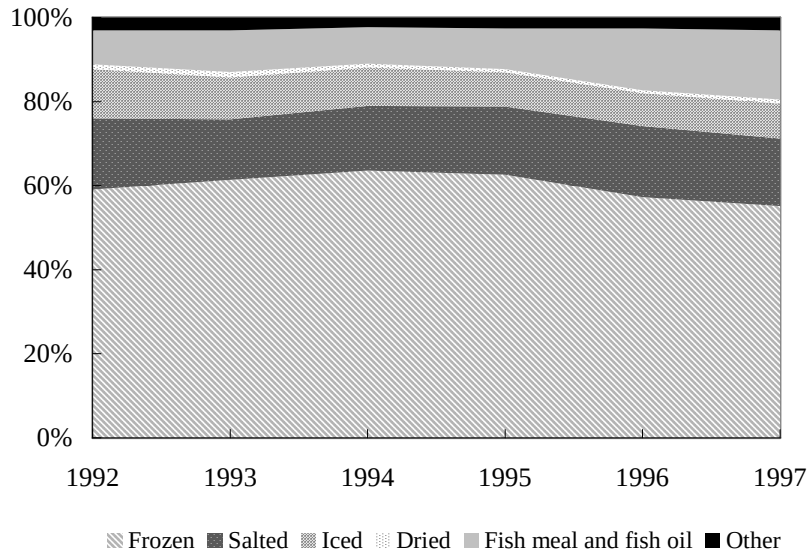

Fig. 4.3 Relative export value of fish products by type of processing

The main export markets of Icelandic fish products are EU countries, United States and Japan.

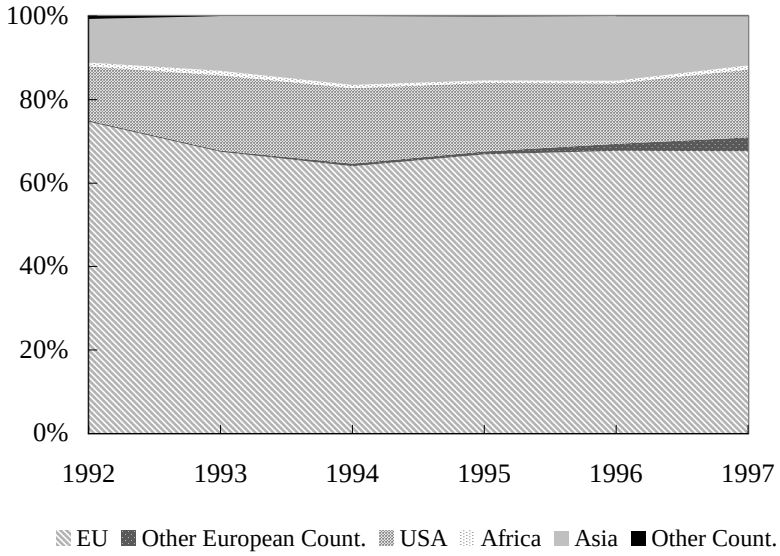

Fig. 4.4 Percentage breakdown of marine products by market area

4.2 Import Flows in terms of Value, Volume, and Composition

The imports of marine products are small relative to the amount exported. Thus, in 1997 the imports were only 6.5 per cent of exports in terms of volume and 2.5 per cent in terms of value. Moreover, the volume of imported fish products decreased by 52.7 per cent in 1997 compared to previous year. The corresponding decline in value was 12.5 per cent.

Table 4.4 Foreign Fishing Trade Balance 1997
(Volume: thousand tonnes; Value: ISK Million)

Product	Imports		Exports		Balance	
	Quantity	Value	Quantity	Value	Quantity	Value
Total fish and fish products	55	2,316	795	96,498	740	94,181
Total edible	19	2,107	414	80,712	394	78,605
Fresh, chilled fillets	*	0,3	9	3,425	9	3,425
Frozen whole	10	1,138	145	13,210	137	12,072
Frozen fillets	0,2	63	85	22,824	84	22,761
Frozen blocks (minced fish)	0.06	0.8	4	286	4	285
Salted, dried and smoked fish	0.6	139	72	17,364	71	17,225
Shellfish	6	569	19	5,302	12	4,733
Canned or prepared fish and shellfish	0.3	97	29	13,664	28	13,567
Fish oil	0.03	5	131	4,612	131	4,607
Fish meal	0.2	7	250	11,174	250	11,166
Other	36	296	49	4,636	13	4,340
Total	**129**	**6,740**	**2,004**	**273,707**	**1,874**	**266,967**

Source: Fisheries Association of Iceland

5. Consumer Information

5.1 Labels Specifying Country of Origin

All fish consumed domestically in Iceland comes from Icelandic waters. The home market is small and consumers are well informed about the fish origin, freshness, species, etc. Therefore labels are not necessary for the local market.

The situation is different, on the other hand, in the international markets or in export markets where consumers do not have enough knowledge about the fish. It is important for Icelandic exporters that the consumers have the correct information about the origin of the product. Therefore both producers and exporters support efforts to enforce that the correct labels are used to specify the country of origin. For the Icelandic fish industry the quality of the fish is of foremost importance. Consequently, the exporters are eager to let the quality of their products be reflected in these labels.

5.2 Eco-labelling Schemes

In Iceland it is widely supported that the consumers should be better informed on the products they purchase, for instance, what species it is, where it was caught, how the stock in question is utilised and in what condition it is. One way of informing the consumers about the above matters is to eco-label fish products which fulfil a set of criteria.

Defining criteria for eco-labels is not the task of a closed interest group. It must be done by impartial parties and public authorities where scientific advice on the condition of stocks is the basis for their rational exploitation, together with credible surveillance of fishing. Trust-worthy environmental certification needs to focus on condition of the stock and the quality of the products. Political questions concerning the management of the fishery, such as how the fish is carried out, who fishes, and where the catch is processed, should not affect the assessment as to whether the stock is well utilised or not.

Appendix

Table A.1 Imports by major products and by country, 1997

		Quantity	Value
301	Fish, crustaceans, molluscs and other aquatic invertebrates		
	Russia	10,385	1,047,931
	Norway	2,046	237,420
	Canada	1,693	198,540
302	Fish, fresh/chilled		
	Russia	508	52,139
	Faroe Islands	211	14,077
	Greenland	60	2,717
303	Fish, frozen, excl fish fillets and other fish meat		
	Russia	9,363	934,033
	Denmark	381	32,638
	Germany	307	61,108
304	Fish fillets and other fish meat -- fresh, chilled or frozen		
	Russia	81	17,936
	Norway	65	26,183
	Spain	47	8,911
305	Fish, cured; smoked		
	Faroe Islands	420	72,384
	Norway	149	43,163
	Canada	36	17,947
306	Crustaceans w/n in shell, live, fresh		
	Canada	1,523	144,439
	Norway	1,616	140,608
	Estonia	648	57,524
16	Prep of meat, fish or crustaceans, molluscs etc		
	Thailand	157	35,390
	Norway	70	31,059
	Philippines	32	7,060
1604	Prepared/preserved fish; caviar and caviar substitutes prepared from fish eggs		
	Thailand	153	32,786
	Norway	70	31,059
	Philippines	32	7,052
1605	Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved		
	Great Britain	4	3,264
	Denmark	11	2,977
	Thailand	154	2,604
2301	Flour etc. of meat, meat offal, fish, crustaceans		
	Faroe Islands	131	4,635
	Russia	68	1,839
	Lithuania	38	725
1504	Fish/marine mammal, fat, oils		
	Faroe Islands	18	2,681
	Great Britain	9	2,041
	Norway	1	10

Source: Fisheries Association of Iceland

Table A.2 Exports by products, 1997

		Quantity	Value
03	**Fish & crustacean, mollusc & other aquatic invertebrate**		
0302	**Fish, fresh/chilled, exc 304**		
030212	Salmon Pacific, Atlantic & Danube	864	240,806
030219	Salmonidae nes	151	58,406
030221	Halibut	1,159	317,268
030222	Plaice	3,082	419,483
030223	Sole	97	21,154
030229	Flatfish nes	2,250	245,738
030231	Tunas, albacore or longfinned		
030232	Tunas, yellowfin	*	2
030233	Skipjack o stripe-bellid bonito		
030239	Tunas nes	*	61
030240	Herrings	2,413	33,904
030250	Cod	5,314	705,008
030261	Sardines	2	118
030262	Haddock	6,236	612,936
030263	Coalfish	472	25,528
030264	Mackerel	926	37,975
030265	Dogfish & other sharks	48	5,295
030266	Eels		
030269	Fish nes	22,770	1,677,380
030270	Livers and roes	6	1,633
0303	**Fish, frozen, excl fish fillets & other fish meat in 0304**		
030310	Salmon, Pacific	10	430
030321	Trout	224	49,207
030322	Salmon Atlantic and Danube	191	46,702
030329	Salmonidae	89	12,627
030331	Halibut	11,028	3,132,130
030332	Plaice	209	36,852
030333	Sole	25	5,258
030339	Flatfish nes	2,875	341,513
030341	Tunas, albacore or longfinned		
030342	Tunas, yellowfin		
030343	Skipjack or stripe-bellid bonito		
030349	Tunas nes		
030350	Herrings	14,583	574,406
030360	Cod	1,249	161,619
030371	Sardines, sardinella		
030372	Haddock	38	3,289
030373	Coalfish	22	3,238
030374	Mackerel		
030375	Dogfish and other sharks	1	32
030376	Eels		
030377	Sea bass		
030378	Hake		
030379	Fish nes	111,114	7,918,286
030380	Livers and roes, frozen	6,109	924,424
0304	**Fish fillets & other fish meat, fresh, chilled or frozen**		
030410	Fish fillets and other fish meat	9,176	3,425,341

		Quantity	Value
030420	Fish fillets frozen	84,581	2,282,4074
030490	Fish meat nes, minced or not, frozen	3,711	285,709
0305	**Fish, cured; smoked fish w/n cooked**		
030510	Fish meal fit for human consumption		
030520	Livers and roes	1,486	522,559
030530	Fish fillets	15,684	3,816,801
030541	Salmon, Pacific, Atlantic and Danube	241	207,732
030542	Herrings smoked	9	2,807
030549	Fish nes	2	1,179
030551	Cod dried	9,014	1,512,002
030559	Fish nes, dried	2,959	729,363
030561	Herrings	1,742	98,352
030562	Cod	33,019	9,372,150
030563	Anchovies		
030569	Fish nes, salted and in brine	7,726	1,101,489
0306	**Crustaceans w/n in shell, live, fresh**		
030611	Rock lobster & other sea crawfish		
030612	Lobsters nes	727	536,267
030613	Shrimps and prawns	15,610	3,653,137
030614	Crabs		
030619	Crustaceans nes		
030621	Rock lobster & other sea crawfish		
030622	Lobsters nes+B126	*	18
030623	Shrimps & prawns	*	24
030624	Crabs		
030629	Crustaceans nes	33	2,493
030710	Oysters		
030721	Scallops, including queen scallops	52	45,512
030729	Scallops, including queen scallops	1,533	964,414
030731	Mussels		
030739	Mussels		
030741	Cuttle fish and squid		
030749	Cuttle fish and squid	338	25,350
030751	Octopus		
030759	Octopus		
030760	Snails, (ex sea)		
030791	Molluscs nes	147	20,212
030799	Molluscs nes	236	54,580
16	**Prep of meat, fish or crustaceans, molluscs etc**		
1604	**Prepared/preserved fish; caviar & caviar subst prepared from fish eggs**		
160411	Salmon	105	54,539
160412	Herrings	1,507	328,972
160413	Sardines, sardinella & brislg o sprats		
160414	Tunas, skipjack & Atl bonito		
160415	Mackerel		
160416	Anchovies		
160419	Fish nes	44	23,613
160420	Fish	143	57,572
160430	Caviar and caviar substitutes	1,272	1,000,637
1605	**Crustaceans, molluscs and other aquatic invertebrates, prepared/preserved**		
160510	Crab		

		Quantity	Value
160520	Shrimps and prawns	25,728	1,2198,988
160530	Lobster	*	17
160540	Crustaceans nes		
160590	Molluscs and other aquatic invertebrates		
2301	**Flour etc of meat, meat offal, fish, crust**		
230120	Flour, meal & pellet of fish, crust,	250,379	11,173,507
1504	**Fish/marine mammal, fat, oils**		
150410	Fish-liver oils & their fractions	1,682	321,947
150420	Fish fats & oils & their fractions exc liver	129,970	4,339,886
150430	Marine mammal fats & oils & their fract		

Source: Fisheries Association of Iceland

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