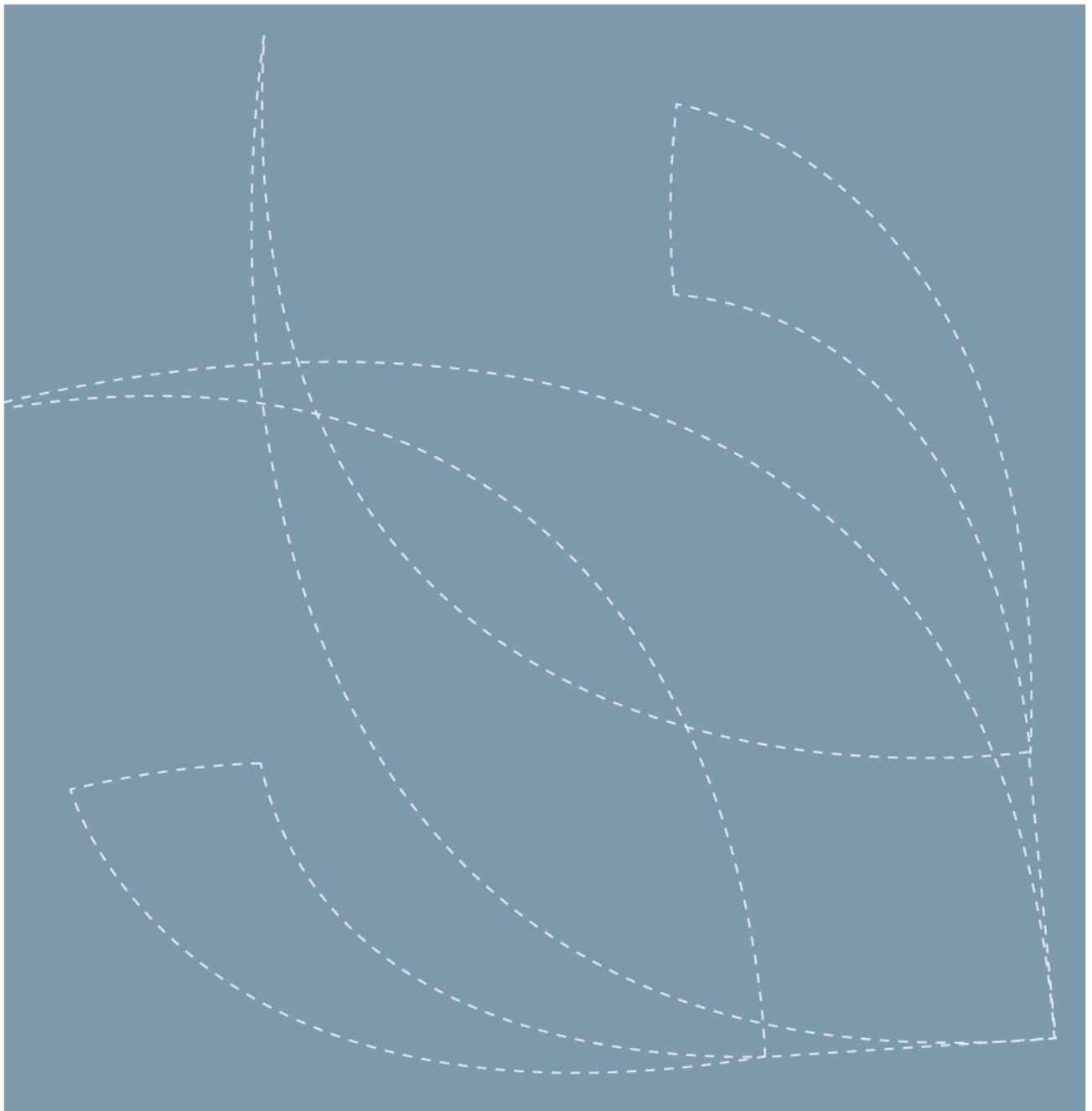


Sustainability certification and the market

Case studies of the United Kingdom and Sweden

Bjørg Helen Nøstvold, Ingrid Kvalvik and James A. Young (University of Stirling)





Nofima is a business oriented research institute working in research and development for aquaculture, fisheries and food industry in Norway.

Nofima has about 400 employees.

The main office is located in Tromsø, and the research divisions are located in Averøy, Bergen, Stavanger, Sunndalsøra, Tromsø and Ås.

Main office in Tromsø:

Muninbakken 9–13
P.O.box 6122
NO-9291 Tromsø

Ås:

Osloveien 1
P.O.box 210
NO-1431 ÅS

Stavanger:

Måltidets hus, Richard Johnsensgate 4
P.O.box 8034
NO-4068 Stavanger

Bergen:

Kjerreidviken 16
NO-5141 Fyllingsdalen

Sunndalsøra:

Sjølseng
NO-6600 Sunndalsøra

Averøy:

Ekkilsøy
NO-6530 Averøy

Company contact information:

Tel: +47 77 62 90 00

Fax: +47 64 94 33 14

E-mail: post@nofima.no

Internet: www.nofima.no

Business reg.no.:

NO 989 278 835 VAT

Report

	ISBN: 978-82-8296-135-6 (printed) ISBN: 978-82-8296-136-3 (pdf) ISSN 1890-579X
<i>Title:</i> Sustainability certification and the market - Case studies of the United Kingdom and Sweden	<i>Report No.:</i> 45/2013 <i>Accessibility:</i> Open
<i>Author(s)/Project manager:</i> Bjørng H. Nøstvold, Ingrid Kvalvik and James A. Young	<i>Date:</i> 24 October 2013
<i>Department:</i> Consumer and Market Research	<i>Number of pages and appendixes:</i> 23
<i>Client:</i> The Norwegian Seafood Research Fund - FHF	<i>Client's ref.:</i> FHF#900546
<i>Keywords:</i> Sustainability certification, industrial market, MSC, UK, Sweden	<i>Project No.:</i> 21133
<i>Summary/recommendation:</i> The case-studies of Sweden and the United Kingdom confirm that sustainability certification has become an established practice and is a significant factor within business to business trading. We also find that certification and consumer facing logos are more widely used in Sweden than in the UK. While the retail sector in the UK is positive towards the MSC and states that they have a need for the consumer facing logo which they do not charge for, our studies show that they to a very little degree use the logo on the products and that there is a price premium on the logoed products. Furthermore, "responsibly sourced" is a far more used statement facing the consumer as a concept than is claims of sustainability. UK producers are more sceptical towards certification and MSC in particular. They support the mission of the MSC but think the organisation has become far too large and commercial. In Sweden the respondents in the study have a higher confidence in the MSC, but also the WWF traffic light lists and KRAV. They do not see the need for other options. Even though the majority of frozen products are MSC branded, there is no logo in the seafood counter. The more luxurious the counter the less likely the purchasers are willing to see the MSC as a necessary sustainability certifier, or the necessity of certification at all. In general it is accepted that the consumer does not use the logo at point of purchase but relies on the supermarket taking the responsibility for sustainability. This raises the question of the necessity of a consumer facing logo.	
<i>Summary/recommendation in Norwegian:</i> Case-studier av det britiske og svenske markedet viser at bærekraftssertifisering er et godt etablert kjøpskriterium, selv om de fleste også kjøper ikke-sertifisert fisk. De to markedene er ulike både i holdning til MSC og bruk av logo mot forbruker. I Sverige er aktørene positive til bærekraftssertifisering generelt og til MSC. I Storbritannia er meningene mer delte, hvor supermarkedene er positive og produsentene mer negative til MSC. I Sverige er det meste av fryste produkter MSC-merket, men vi fant ingen ferskvaredisker som var sertifisert, selv om de kjøper MSC-sertifisert fisk. I Storbritannia argumenterte supermarkedene for nødvendigheten av å bruke logoen på produktene, men butikkundersøkelsene viser at det finnes lite MSC-merkede produkter. Vi stiller derfor spørsmål ved nødvendigheten av å ha en sertifisering rettet mot forbruker.	

Preface

This report is part-report 2 of the project “Marketing and value added effects for whitefish and pelagic industries of different eco-labelling schemes”. The project is financed by the Norwegian Seafood Research Fund.

Table of Contents

1	Introduction	1
2	Sweden	4
2.1	Data collection.....	4
2.2	Sustainability, environmental concerns and certification in Sweden	4
2.3	Companies and certification.....	7
2.3.1	Company policy and cooperation with e-NGOs	7
2.3.2	Certification, economy and consumer acceptance	8
2.4	Supermarket observations	9
2.5	Summary of the Swedish market	12
3	The United Kingdom	14
3.1	Data collection.....	14
3.2	Sustainability, environmental concern and certification in the UK.....	14
3.3	Companies and certification.....	15
3.3.1	Company policy and cooperation with e-NOGs	15
3.3.2	Certification, economy and consumer acceptance	18
3.4	Supermarket observation.....	19
3.4.1	A longitudinal supermarket survey	20
3.5	Summary of the UK market	20
4	Discussion	22
5	References	23

1 Introduction

The aim of the project “Marketing and value added effects for white fish and pelagic industries of different eco-labelling schemes” is to evaluate and compare any potential marketing and value adding gains for the Norwegian industry from an independent international sustainability scheme (MSC) versus other strategies, namely (1) no sustainability scheme or (2) a national scheme (like the Icelandic scheme). A key question related to the introduction of a national scheme is what, if anything, might be gained from establishing a national option as an alternative or an addition to the current supranational certification schemes that are currently used by the Norwegian industry?

There is an increasing focus on documentation of sustainability of the world’s fisheries and the requirement for third party certification has also had an impact on the Norwegian fishing industry, resulting in certification of our most important fish stocks. There are several actors operating in “the certification market” (see for example the MRAG report by Parks *et al.*, 2010; Pleym *et al.*, 2009 and Nøstvold *et al.*, 2010 for a review). The Marine Stewardship Council (MSC), Friend of the Sea (FOS) and KRAV are used by the Norwegian industry, where the MSC is clearly dominant. The MSC is also by far the largest actor in the European market (Nøstvold *et al.*, 2010). In addition to these international third party certification programmes, some countries such as Iceland and Alaska have chosen another path and developed national sustainability programmes, based on the certification accreditation of the international accredited certification body Global Trust Ltd. An assessment of the Iceland Responsible Fisheries programme (IRF) and the Icelandic choice were presented in Nofima Report 34 – 2012 “National Responsible Fisheries Schemes: An Option for the Norwegian Fishing Industry? A Case Study of Iceland Responsible Fisheries”

In this part report of the project we will examine how certification of sustainable seafood is perceived by industrial customers in two important markets for Norwegian fisheries; Sweden and the United Kingdom (UK). Sweden and the UK are the 5th and 6th biggest markets for Norwegian fish, with an export value of about 2.5 and 2.3 billion NOK respectively in 2012 (of which 1.4 and 1.2 billion NOK respectively is salmon).¹ Sweden and the UK are also eco-sensitive markets with a high portion of eco certified fish, food and household products. If the Norwegian industry are to consider another strategy for sustainability certification than MSC, looking into two “developed” sustainability and MSC markets that are important for Norway, will give an indication on how this will be perceived by the market and what challenges might be met. The case studies also serve as a status update of MSCs current market position in these to important countries.

The authority of sustainability programmes is grounded in the market transactions through the supply chain, and the (real or anticipated) requirement of the consumers, mainly voiced by the industrial buyers and non-governmental organisations (Cawthorne *et al.*, 2012; Parkes *et al.*, 2010). The reasons for certification are however diverse; market demand and question of market access, price premiums, differentiation and company reputation are some of these. Generally, expected economic interests are considered to be the main reasons for a fishery to enter a sustainability certification programme (market access and price premium). Further and related to this, certification is considered necessary to gain or maintain market access. Certification has grown to be a demand in many markets (by consumers and/or industrial buyers) as it is an accepted practice for proving sustainability. The industry here relates itself to a wider public and environmental NGOs, addressing

¹ <http://seafood.no/Markedsinformasjon/Statistikk>

the assumed public interests and concern for sustainably sourced food. The choice to enter a sustainability programme can therefore be based on both a rational economic utility consideration from the supply side and a moral consideration on the demand (but also supply) side (Roheim & Sutinen, 2006).

Whichever may be the case, a certified product should provide a market advantage. The exact nature of this advantage is however difficult to determine as research elsewhere has shown that consumers are not very concerned about sustainability of fish at the point of purchase and that it is a lesser influence on their purchasing behaviour (Honkanen & Young, 2012; Potts *et al.*, 2011). Further, the expectation of a price premium for certified fish and fish products no longer seems to be important in the fishing industry's considerations to join a certification programme. Even though some certified fish products have been found to carry a price premium at the retail level (Sogn-Grundvåg *et al.*, 2012), there is no evidence of such price premiums passing further along the supply chain to producers, processors or other channel intermediaries. Whilst the financial benefits from certification do not appear to be evenly distributed along the value chain (UNEP 2009; Washington & Ababouch, 2011), the costs do appear to be borne by the producers.

Environmental concern and eco-labelled products might be used as a tool for differentiation, though there is a risk that the label might drown in noise from excessive use of other labels (Potts & Haward, 2007). Indicators of sustainability, or eco-labels, are of course not the only messages communicated alongside seafood products; the country of origin, quality claims, whether the product is from a wild capture fishery or aquaculture and fishing method (e.g. line caught) are also common. These product cues also provide a means to differentiate product in addition to competing labelling and other marketing strategies such as price promotions, product innovation etc. Norway, for instance, has the logo of origin "Norge – fish from Norway" available for all seafood from Norway and intended to convey adherence to a set of values promoted more generically by the Norwegian Seafood Council. Sustainability certification is thus one of many available differentiation strategies for fish and fish products. The question of market access however still seems to be an important factor (Pérez-Ramírez *et al.*, 2012), especially related to eco-sensitive markets and the increasing demand for third party certification by industrial buyers (Unit, 2012; Washington & Ababouch, 2011). Finally, the choice to enter a sustainability programme may be considered a moral obligation, or a way to gain positive attention and improve reputation and therefore rational economy for a company (Cashore, 2002; Roheim & Sutinen, 2006). The drivers for certification are therefore diverse and the different actors' considerations may vary.

In this study we have gathered data in Sweden and the UK to gain insights into how actors in these markets consider the need to document sustainability, their perception of the sustainability in the fisheries sector, their need for a consumer facing logo and their attitudes towards and experience with certification schemes in general, and the MSC and IRF in particular.

Primary data collection for the project was undertaken through in-depth interviews with supermarkets, producers, traders, hotels, restaurants and key informants in both the UK and Sweden. The companies were selected based on their position in the market, in addition to recommendations from the MSC. The companies had different sustainability policies and the extent of use of the MSC or other sustainability logo varied. We have also used the companies' web-pages, shop observations and ad hoc interviews with the seafood counter staff to get a broader picture of the companies' sustainability policies and how well the policy is implemented throughout the

organisation. The studies in the UK and in Sweden were conducted in October 2012 and May 2013 respectively. Finally, a supermarket observation based on weekly observations since October 2010 in seven different supermarkets in the UK provided data on the number of MSC certified species and any price premium on certified products in the UK.

2 Sweden

The Swedes consume around 90 000 tons of fish annually, with a value of more than 7 billion SEK (0.8 billion €). Almost 15 000 tons of this is fresh fish (with a steady increase over recent years), around 37 000 tons processed and 39 000 tons frozen (decreasing from a peak year of 45 000 tons in 2010). The main species are salmon (ca 22 000 tons, representing most of the increase), followed by shrimp, herring and cod (about 10 000 tons each). Tuna, crayfish, mackerel, and Alaska Pollock are also important (around 3 000 tons) (Norwegian Seafood Council, 2012).

Sweden is an important market for Norwegian fish. In 2012 a total of 76 000 tons with an export value of 2.5 billion NOK was exported to Sweden. Besides salmon, cod, prawns, herring and mackerel are the most important, all of which hold MSC and/or KRAV certification. Other white fish are also exported in lesser quantities, and include non-certified fisheries.

2.1 Data collection

In-depth interviews with the Swedish seafood actors were conducted in May 2013. These included interviews with three of the four major retailers in Sweden, three producers and traders serving retail, hotels, catering and seafood counters across Sweden, and an interview with one of the larger hotel chains. Beforehand the MSC was asked to present a list of companies with MSC experience in the Swedish market. The list was then compared to recommendations from the Norwegian Seafood Council which includes the most important buyers and traders of Norwegian seafood. A search of the relevant companies on the internet and finally the practical issue of who would be willing to be interviewed determined which companies we visited.

Supermarket observations were also conducted in Stockholm, Kungshamn, Göteborg and Trollhättan, visiting 11 supermarkets within the different profiles of the retailers, in addition to four independent fresh fish counters and two seafood restaurants. Ad hoc interviews were conducted with personnel in the fresh seafood counters in the supermarkets, the independent counters and in the seafood restaurants.

2.2 Sustainability, environmental concerns and certification in Sweden

Sustainability and environmental concerns are deeply rooted in the Swedish market, to a much higher degree than in most other countries. The demand to buy sustainable or ecological food not only relates to the individual consumer, but goes all the way to the purchaser for hospitals, schools and large cantinas. In addition, local communities have set targets on how much ecological food they are to buy, and the Swedish government has developed a vision on how they are to achieve economic, environmental and social sustainable development in a long term perspective.² In line with this producers and retailers are strongly fronting their environmental concerns.

This concern might however not always run very deep and does not necessarily impact on consumers' behaviour. As one interviewee explained; this environmental friendly focus is often slightly off the point, for example consumers want ecological vegetables, but with no defects (which is hard to achieve without pesticides). Or the strong focus on the "best before" date where people

² <http://www.government.se/content/1/c6/02/21/70/97605cbc.pdf>

discard perfectly good food. The interviewee argued that dealing with these issues would probably have a bigger environmental impact than people's focus on certified seafood. Nevertheless, several fisheries in Sweden have been or are considered unsustainable and the EU Common Fisheries Policy has been contested in Sweden. The focus on sustainable fish is therefore understandable, and most of the fish eaten in Sweden today is from a few Scandinavian species and from strong fish stocks.

There are several providers of sustainability certifications or guidance for seafood in Sweden. The MSC is the most dominant, but KRAV, Friend of the Sea and Fish for Life are also visible in shops. Our informants however argued that Friend of the Sea, Fish for Life and other responsible fisheries schemes do not give access to the customers concerned about sustainability which requires certification; then you would need MSC or KRAV.

The **MSC** is the biggest provider of certified seafood in Sweden. Three Swedish fisheries are certified and another four are in assessment.³ Sweden however imports most of the fish it consumes. As of September 2012, the MSC reported that there were 1010 MSC labelled seafood products on sale in Sweden. 269 of these were originating from Norwegian fisheries. The MSC claims that all major retailers prefer MSC certified seafood and that they have a market share of 95% of eco-certified food. The uptake of certified food in the food service sector is also high because of the government and municipality procurement policies (MSC 2012 personal communication). Two municipalities hold MSC certification for their school canteens through an MSC project funded by the Swedish charity lottery, serving MSC certified fish to around 100 schools. This project includes educational material about sustainable fisheries, and allows the use of the MSC label on lunch menus. This is based on a similar project in the UK called "Fish and Kids" where 4 000 schools are certified. For more information about the MSC in Sweden, please see their home page http://www.msc.org/?set_language=sv.

Sweden has developed its own sustainability brand, **KRAV**. KRAV was established in 1985 and is a certification organization for organic products in general. Standards for capture fisheries were developed in 2001 (MRAG, 2010). In addition to ecological criteria, certification requirements are related to food safety, animal health, organic production and carbon footprint. KRAV applies to all kinds of food products, and KRAV is currently certifying almost 5 800 labelled products including dairy products, egg, cereals, vegetables and meat, as well as fish. There are seven certified marine fisheries; three fresh water and several aquatic producers.⁴ KRAV reports that there are 135 KRAV labelled fish products on sale, also including Norwegian fisheries (KRAV, 2013). KRAV is therefore a broader label and it has more extensive certification requirements than the MSC. Its market orientation is more limited, mostly applied in northern Europe, with a special position in Sweden. For more information about KRAV, please see their home page <http://krav.se>.

The **Iceland Responsible Fisheries** (IRF) is not common in Sweden, but then Sweden is not an important market for Icelandic fish. A few of our interviewees had heard of the Icelandic sustainability scheme, but were quite clear that if the IRF are to get a foothold in Sweden they will

³ Swedish MSC certified fisheries are North Sea herring, Northeast Atlantic mackerel, Baltic Sea cod (eastern stock). Additional two herring stocks are under assessment, as well as a crayfish and a mussel fishery.

⁴ KRAV certified fisheries are saithe, cod, haddock and Norwegian springspawning herring in the Norwegian and Barents Seas, Northern prawns (trawlfishing in the Barents Sea), Baltic Sea cod (eastern stock) and Lobster in the Kattegatt and Skagerrak. In addition, three fresh water stocks; trout, char and lake whitefish (Fyresvatn) and several several salmon and mussel producers are KRAV certified.

need extensive marketing. It was also clear that the Swedish actors did not seem to know the difference between the IRF logo of origin and the sustainability logo, which until October 2013 only applied to cod when haddock and saithe also got certified. For instance, one buyer of Icelandic seafood claimed to buy certified catfish, a species that is not certified as sustainable but is only branded by the Icelandic origin logo. As such, one of the conclusions in the report on the IRF in this project (Nøstvold et al. 2012) was that the sustainability certified logo and logo of origin are too similar, the logos illustrated in figures 1 and 2



Figure 1 Iceland responsible fisheries Certified sustainable logo with the tick



Figure 2 Iceland Responsible Fisheries origin logo, not certified and without tick

In addition to the certification programmes, the **World Wildlife Fund (WWF)** traffic light list for fish consumers is very important in Sweden.⁵ WWF are well known and most companies, being producers, traders, fishmongers or retailers, have some sort of cooperation with WWF. They are seen as a partner that is helpful both in terms of guidance and in terms of their traffic light list for fish consumers. This list has developed into an important part of buyers' checklist and most retailers and fish counters relate to it – even though not necessarily abiding with it at all times. Even though the list meets some criticism for being too complex for the man in the street, for not being sufficiently up to date and for varying between countries, it is used extensively. The WWF also supports the MSC and KRAV. For details of the Swedish department of WWF and the WWF checklist, please see their home page <http://www.wwf.se/vrt-arbete/hav-och-fiske/ww-fs-fiskguide/1243694-ww-fs-fiskguide-nr-du-ska-kpa-miljvnlig-fisk>.

⁵ The consumer guidance is developed together with the Seafood Choices Alliance, North Sea Foundation and the Marine Conservation Society. For more information see http://www.wwf.panda.org/what_we_do/how_we_work/conservation/marine/sustainable_fishing/sustainable_seafood/seafood_guides/ and <http://www.wwf.se/vrt-arbete/hav-och-fiske/ww-fs-fiskguide/1243694-ww-fs-fiskguide-nr-du-ska-kpa-miljvnlig-fisk>

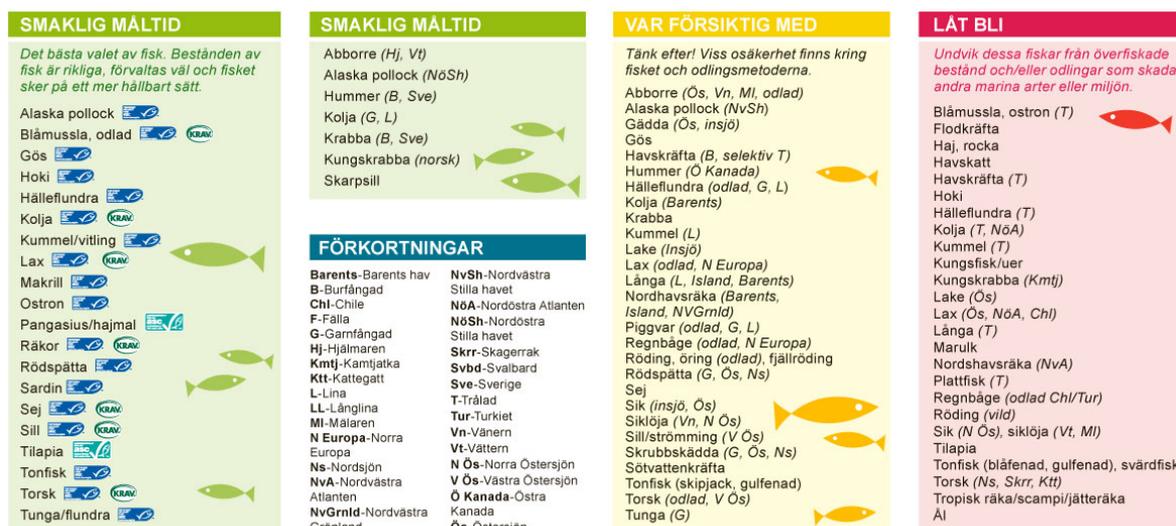


Figure 3 WWF's Swedish seafood traffic light guide (WWF Sweden)

Another organization concerned with promoting sustainable fisheries in Sweden is **Naturskyddsforeningen (SSNC)**. It is a Swedish non-profit environmental organisation that works with both influencing politicians and legislation, and also with more “hands-on” campaigns, debates, books, reports etc. The SSNC is used by a few actors in the seafood industry as a partner for discussion, but are by most perceived to be too aggressive and extreme. SSNC is still an important actor in raising public awareness and keeping the issue of sustainable fisheries and seafood industry practices on the public agenda. For more information see www.naturskyddsforeningen.se/om/om-oss#googtrans/en.

2.3 Companies and certification

There is a high level of knowledge about sustainability and the different certification programs amongst retailers and producers. In addition, shop owners generally try to live up to high standards for sustainability. But the area of seafood is somewhat special because there are several small agents and traders offering their products directly to the retailer or outlets. Our informants therefore stressed that the person responsible for purchasing for a single shop or a full retailer therefore has to be aware and have good routines. Nevertheless, sustainability is not the only demand; price, quality, and availability are also important factors.

2.3.1 Company policy and cooperation with e-NGOs

Most companies have their own sustainability policies, either publicly available (the retailers) and/or for internal use as a check list (most producers). The retailers however have different degrees of involvement in their shop's sustainability policy. Although they all have an overall policy, not every aspect can be implemented in every single store on every single product. How integrated the work on sustainability is in the different stores depends on the owner structure of the shops. For example, ICA has subsidiary shops where every shop is a single legal entity. Axfoods have some chains where they have full ownership and others where they do not. Some shops have also outsourced the seafood counter, totally independent of the mother company. As our supermarket observations showed, there are also big differences in the stores operating under the same retailer.

2.3.2 Certification, economy and consumer acceptance

All the retailers and producers we interviewed were buying certified fish, mostly by the MSC. Some did however not primarily focus on certification, but rather on sustainability in general. They made it clear that it is possible to be sustainable without being certified, often relating to advice from the WWF and their lists. Some also stated that they did not sell certified fish that did not fulfil their own standards, for instance Albacore Tuna which was considered to be too risky and prone to scandals and fraud. Most producers and traders were also quite pragmatic about buying uncertified fish. If the customer is not willing to pay for certified fish, or wants a species that is not certified, and even on the WWF red-list, they will trade it as long as it is legally caught.

There did not seem to be a general concern for the costs involved in certification. Mostly it seemed that the extra cost of certified raw material/product is covered with higher prices for the customers. Thus there is no profit and no cost in being certified. As stated by one of our informants:

Someone is paying, but it does not need to be me.

To certify the fresh seafood counters with MSC was however seen as too expensive, and as mentioned sometimes not up to the retailer but the single shop or fish counter because of the owner structure. Certifying single shops is much more expensive than the group certification you can get if all the counters were owned by one owner. The structure of the fresh counters in many retail chains therefore increases the cost of certification. Another argument for not using the MSC logo on the fresh fish counters was that the consumers there have the opportunity to ask and get an answer from staff, and that most of the fish was certified. In the freezer the need for a logo is more present as there is no one to ask.

The actors in our study say that the strength of KRAV is that it is a broad label, used on all kinds of organic products so the consumers are familiar with the KRAV label as distinct from other products. The reasons for not using it are the costs involved making the products more expensive. Some reported a 20-30% increase in price. In addition, because KRAV is operating with stricter certification criteria, the product portfolio is smaller. It might seem that the importance of KRAV is decreasing in the seafood sector in favour of other certification schemes, the MSC in particular.

It was also mentioned that it is too expensive for municipalities in Sweden to have a chain of custody certification for their hospitals, nursing homes, public cantinas and the like. Therefore, even though some have a policy to buy MSC certified seafood they are not certified and can therefore not use the logo or tell the story about MSC and sustainability to their clients or guests. Not all public kitchens however buy MSC certified fish, the suppliers stating that it was often a question of cost. As mentioned, two municipalities have certified their school cantinas with the MSC through cooperation between the MSC and a national charity lottery.

At a general level, a concern raised by some of the industry actors in our study is that using a sustainability logo on some products, and not all, may give misleading information to the consumers: because the MSC logo is seen and communicated to the consumer on the producer branded product, as to say that this is a sustainable choice, the other products without the MSC logo might be considered unsustainable. This would not only affect the standing and sale of the non-certified fish, but is also signalling that the shop is selling non-sustainable fish – even if it is not. Further, because the MSC logo is almost entirely used on frozen, lower value products, even though there is MSC

certified fish in the fresh fish counters, there is a risk that the MSC is not regarded as or associated with quality products.

On the other hand, several actors were sceptical or concerned about the number of different certification schemes available, even though very few seemed to be used in Sweden. They argued that the best thing would be to have one standard for sustainability and only a few sustainability certification schemes. As one actor stated:

“Otherwise the packages would look like something from an amusement park. “

Some actors therefore argued that the best thing for the industry would be if the confidence of the producer brands was high, making the use of sustainability logos on the products unnecessary.

You cannot let the consumer make the choice, we have to make it!

Swedish retailer

2.4 Supermarket observations

The use of sustainability certification in the frozen counter is clearly much higher in Sweden than in the UK. The supermarket observations revealed a very high use of sustainability labels on frozen products; MSC, KRAV and Fish for Life being the most common. The use of eco-labels on fresh products is however very limited. None of the fish counters we visited had a chain of custody certification allowing the display of the MSC logo on the products. Some had posted that the fish was MSC certified without using the logo, but this is probably not in agreement with the MSC (see Figure 1). All the purchasing managers in the fish counters considered MSC certification to be too expensive. According to them the cost of the initial certification is expected to be 50-80 000 SKR (6-9 000 €) and in addition you will need the yearly audit. Some claim that they will then need to add this cost to the price of the seafood in the counter, thus increasing the price, something they do not want to do. However, both the counters run by the retailers and most of the independent ones reported that they are buying MSC certified seafood. But while some counters only had certified fish, others had both certified and non-certified fish.

Fiskfileër		Märkning	Zon
Abborrefilé	599:-kg		Sverige
Escolarfilé	229:-kg		87
Gäddfilé	279:-kg		Sverige
Gösfilé	499:-kg		Hjälmaren
Havskattfilé	209:-kg		27
Hällefilé Blåkveite	269:-kg		27
Hälleflundrafilé	499:-kg	Odlad	Norge
Koljafilé	169:-kg	MSC	27
Laxfilé	199:-kg	Odlad	27
Långafilé	249:-kg		27
Marulksfilé	599:-kg		27
Rödingfilé	289:-kg	Odlad	Sverige
Rödingfilé gravad	299:-kg	Odlad	Sverige
Rödspättafilé	179:-kg		27
Rödtungafile	499:-kg		27
Sejfilé	129:-kg	MSC	27
Sjötungafile	799:-kg		27
Strömmingsfilé	79:-kg		Östersjön
Svärdfiskfilé	299:-kg		71
Torskilé	189:-kg	MSC	27
Torskrygg	399:-kg	MSC	27
Torskrygg rimmad	399:-kg	MSC	27
Tonfisk	399:-kg		71
Uerfilé	299:-kg		27
Vitlingfilé	169:-kg		27
Musslor			27
Blåmusslor	69:-nät		27
Hjärtmusslor	179:-nät		27
Vongole	199:-nät		37
Pilgrimsmusslor	459:-kg		USA
Bläckfisk	99:-kg		57
Moscardini	199:-kg		37

Figure 4 MSC used in letters only in one seafood counter

One retailer explains that to sell some red-listed species in the fresh fish counter is not so bad if it is caught as by catch. The explanation is that the handling of fresh seafood is very different from frozen. The turnover in the fresh counter is so high that you are able to sell small quantities of fish effectively. And if the fish is red-listed, but a by catch of a different sustainable fishery it should be sold and eaten, and not discarded. In the frozen section the process is quite different. If unsustainable or red-listed seafood ends up on a production line for freezing and packing it is on a much bigger scale and should be avoided.



Figure 5 In the Swedish fresh seafood counter no sustainability claims or logos are fronted on the signs

Many retailers claimed to have strict systems in order to make sure that their seafood is properly controlled. But interviews and supermarket observations might indicate that this does not function as well as intended all the time. As mentioned, the structure of the retail stores and outsourcing of the seafood counters explains some of this. It might also be caused by the fact that market demand for some species like scampi and tiger prawns are too high for the seafood buyer to ignore. They might then try to buy the best option out there, even though it is not certified or is in line with company policy and criteria. In the independent fish counters you will also find a much larger portfolio of species and products, many of which are not certified, but not necessarily unsustainable. However, it might seem that the more luxurious the counter the more red-listed fish on offer. All actors however stressed that they only sell legally caught fish, and preferably what is certified or at least on the WWF green list. Though it must be underlined that the independent actors never gave open support to the WWF or MSC, but prefer to relate to legally caught seafood.



Figure 6 A luxurious seafood counter with a very good assortment. They are only fronting a poster saying their seafood is legally caught

Generally the staff in the fresh fish counters had a high degree of knowledge about sustainable fisheries and the MSC, but most did not see the need to go for a chain of custody certification to use the logo on the products. The staff also argued that the consumers do not care that much, that they would tell the customer which fish is MSC or otherwise certified if requested; many used and had available the WWF fish guide and finally that the most important thing was that they bought legally caught fish, thereby perhaps revealing a high trust in the government's fisheries management.

2.5 Summary of the Swedish market

The focus on sustainability is high in Sweden as is the requirement for certification or documentation of sustainability. Both the MSC and KRAV seem to have strong support in Sweden. The MSC is most widely used and even though some actors report that they are considering alternatives, there is a generally positive attitude towards the MSC. There are divergent views however on the need to communicate this to the consumers through logos on the products. Parallel or as a substitute to this the WWF traffic light list is almost a standard reference in Sweden. The list is often present in the fish counters and repeatedly referred to by market actors. Nevertheless, legally caught seems for many to be just as valid criteria for purchasing as WWF listing and certifications. The general impression is that the Swedish seafood actors seem to have a practical and pragmatic attitude towards sustainability certification, appreciating the acceptance emanating from certification and green listing, but willing to sell non-certified and a few even selling red-listed fish, as long as it is legally caught.

The actors also note that other issues are emerging. The debate on quality is increasing, as is carbon foot print. Sustainability is an issue that has been on the agenda for many years. Today quality and

issues such as glazing, injection of phosphates and water, travel distance, food waste, additives, etc. are somewhat taking over in the media and in the organisational arena. The actors do not think this will replace the requirements for sustainability documentation, but might change how they think about fronting it to the consumers.

3 The United Kingdom

The estimated volume of seafood turnover in the UK market is 1.1 million tons and the seafood consumption in 2007 was approximately 21.1 kg per capita. Norwegian direct export to the UK in 2011 was 140 000 tons, valued at 2.55 billion NOK (1-14 billion being salmon). The UK is Norway's most important market for haddock and prawns (Norwegian Seafood Council, 2012).

As of September 2012, the MSC reported that there were 1241 MSC labelled products on sale in the UK. 97 of these were originating from Norwegian fisheries. The MSC claims that "Most major supermarket retailers (measured by market share) prefer MSC certified Seafood".

3.1 Data collection

The results and evaluation of the UK market are based on face to face in-depth interviews and secondary data from seafood buyers in three major retailers, three traders and producers, representatives from Seafish UK, representatives from Grimsby and Billingsgate fish markets. In addition we conducted 16 ad hoc interviews and observations in fresh seafood counters, covering all the larger retail chains and some well-known department stores. All the major retailers are represented with at least one store in at least one major city in the UK.

3.2 Sustainability, environmental concern and certification in the UK

Environmental concern, like sustainability certification or profiling environmentally friendly fishing gear, has for some years been an important way of differentiating a business or retailer in the UK. UK producers have felt the collapse of several fish stocks first hand, having to change production and product portfolio almost overnight. Campaigns like Greenpeace's retailer lists, rating the sustainability of the different retail chains followed up by very direct actions and demonstrations, and more recently Hugh Fearnley-Whittingstall's Fish Fight⁶ have drawn a lot of public attention towards seafood sustainability issues. Sustainability issues are therefore not only the retailer's internal challenge any longer but to a higher degree in focus and voiced by expectations and pressure from the media, the public (although maybe a short term consequence) and directly from the NGOs.

Many retailers have or have had statements claiming that a certain amount of their wild caught seafood products, or all in some cases, is going to be MSC certified by a certain year. In reality this has turned out to be difficult, if not impossible if the seafood counter is to have some assortment, after all only 10% of the wild caught fish globally is certified (numbers from MSC). This has led to most retailers and producers striving towards certifying more products but also taking on a more pragmatic approach, buying certified but keeping it at a business to business level; choosing not to use the consumer facing logo is one example.

You will never see us saying that "all our fish is caught sustainably" because to be quite honest by our definition it's not, a lot of the time it's just legal

A UK retailer

⁶ <http://www.fishfight.net/>

Responsibly sourced is much more commonly used fronting the consumer. Seafish UK explains the difference between responsibility and sustainability as: “sustainability is the goal. Responsible fishing is the behaviours and practices which can help achieve it” (Seafish, 2012). Furthermore it is generally accepted that the FAO Code of Conduct for responsible fishing is the “handbook” for defining responsible fishing behaviour. Retailers say they often prefer the term “responsibly sourced” because it is not so committing and that it includes more variables than sustainable.

3.3 Companies and certification

We want to know that what we are doing is actually making a difference.

A UK retailer

3.3.1 Company policy and cooperation with e-NGOs

Most companies have their own seafood policy and cooperate with some e-NGOs in one way or another; the Marine Conservation Society, Greenpeace and WWF are the three most important ones. Cooperation includes issues from development of buying policies and sustainability reports to just basic everyday consulting and discussions. Some do point out the necessity to work with NGOs who have a realistic idea of how to improve things. Some NGOs, in particular Greenpeace and some smaller activist groups are criticised for being too aggressive and having too little focus on what is possible to change. Either way, all the e-NGOs are used as advisors when forming seafood purchase policies or to answer simple questions like should we buy and sell this species or not.

“There’s no value in “no more salmon farming”, you know that is not going to happen to be quite honest with you... I’m quite happy to talk to people about responsible development, but if it’s you know dressing up and abseiling then what’s the value?”

A UK retailer

It is agreed that the MSC is by far the largest and most important provider of certification in the UK, although not everyone is satisfied with this solution for a variety of reasons. We did only look into the IRF as an alternative to the MSC and did not go into discussions of schemes like Friend of the Sea, Dolphin Safe and the schemes working for farmed seafood. Nevertheless, most believed that it was healthy for the MSC to have some competition from other sustainability certification providers, also the IRF and Alaska Seafood.

The retailers’ perception of the MSC is that the organization is helpful, provide good solutions for cooperation on marketing and promotions and that they as of today are the most credible certifier. Some use the MSC only as a way to ease the process of buying seafood that is considered sustainable while others claim to use the logo extensively towards the consumer. The reason why we say “claim” is that our on-going supermarket survey as of February 2013, then on-going for about 60 weeks, showed that only a few products actually were wearing the MSC logo. Table 1 show the number of products on sale in February 2013. Out of a total of 333 products, 21 were labelled with the MSC logo fronting the consumer. These are only pure fillet products and the results illustrate the deviation between the retailers’ claim and the actual number of MSC products observed in the stores. Furthermore, this does not mean that these other products are not MSC certified; only that it is not fronted towards the consumer with the logo.

Table 1 Number of MSC logoed products and total number of products observed - Products wearing the MSC- logo are marked in red

Frozen	ASDA	COOP	LIDL	M&S	MORRISON	SAINSBURY	TESCO	WAITROSE
Cod	0/18	0/2	0/10	0/9	0/7	0/3	0/2	0/11
Haddock	0/15		0/8	1/12	0/9	0/2	0/3	0/7
Alaska Pollock	0/29	0/5	0/8	0/5		0/2	0/3	0/6
Mackerel	0/1							
Chilled	ASDA	COOP	LIDL	M&S	MORS	SAIN	TESC	WAIT
Cod	0/5	0/2	0/1	0/11	0/6	1/3	0/1	0/5
Haddock	2/10	2/2	2/2	3/14	0/8	1/3	0/3	0/5
Alaska Pollock	0/4		0/8					
Mackerel	0/8	2/3		0/3	0/5	3/3	0/5	0/4
Fish counter	ASDA	COOP	LIDL	M&S	MORS	SAIN	TESC	WAIT
Cod	0/3				0/5			0/2
Haddock	2/4				0/4			0/3
AP	0/6							0/1
Mack	1/3							1/2
Total	5/106	4/14	2/37	4/54	0/44	5/15	0/17	1/46

Table 1 further illustrates the point that even though the MSC is fronted and may be preferred by the retailers, the extent to which MSC products are offered to consumers is limited.

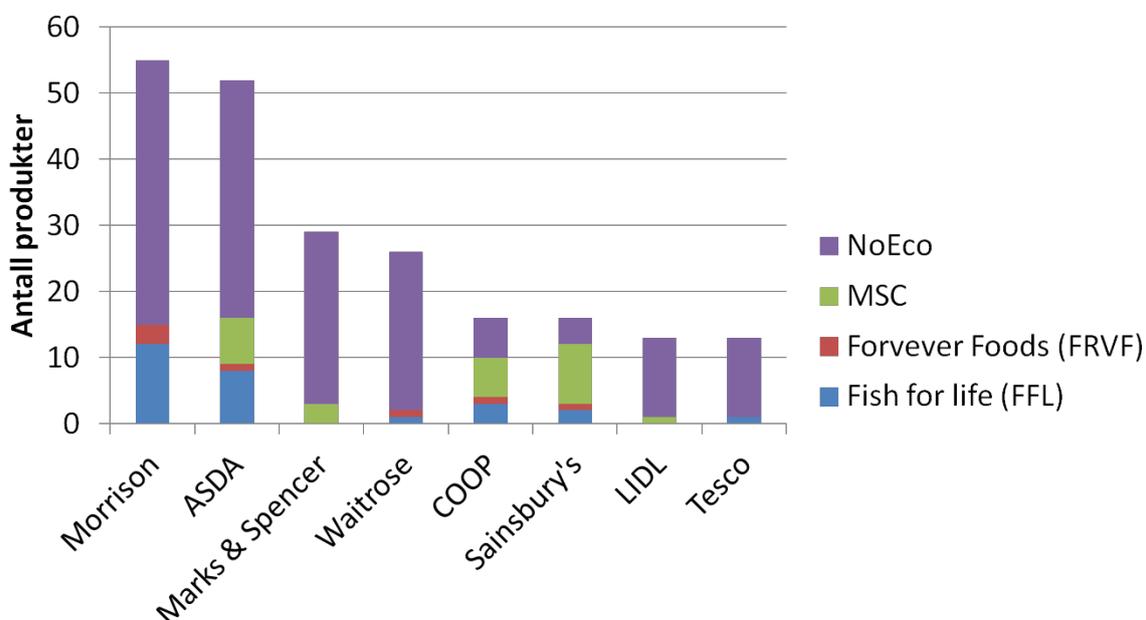


Figure 7 Number of products with and without eco-labels in UK retail

The UK producers are somewhat more sceptical towards the MSC than the retailers. They are expressing concern over the dominant market position of the MSC and do not always find the MSC either helpful or forthcoming. There is a concern that MSC has grown into a company more like a multinational cooperation than a non-profit organization. In all parts of the industry we found concerns about the cost and to what degree it is possible to control all aspects of the scheme.

I think MSC to my mind is a really good idea, but it's become far, far too commercial.
A UK producer

Only one trader reports paying extra for MSC certified fish; a premium of around 8%. The trader claims they get most of it back from their customers but not all, and that they do not get compensated for the cost of policing the system internally within the company. This producer mainly serves larger wholesalers, producers of ready meals and some public hospitals, schools etc., and if they do not get a return on their MSC products it might be because they are more strained by their customers than other sectors of the seafood industry, without this being investigated further.

None of the retailers claim to pay or charge extra for MSC certified products. As one retailer states:

No, we're not charging for sustainability

It is interesting in this regard that the price studies undertaken in this project and others find price premiums from 10-14% on MSC logoed products (Roheim *et al.*, 2011; Sogn-Grundvåg *et al.*, 2012; Sogn-Grundvåg *et al.*, 2013). Our longitudinal survey explained in detail below also shows that several other factors provide price premiums and therefore are one of many strategies to increase the price on products offered and with different costs involved. Figure 1 illustrates this for chilled cod and haddock.

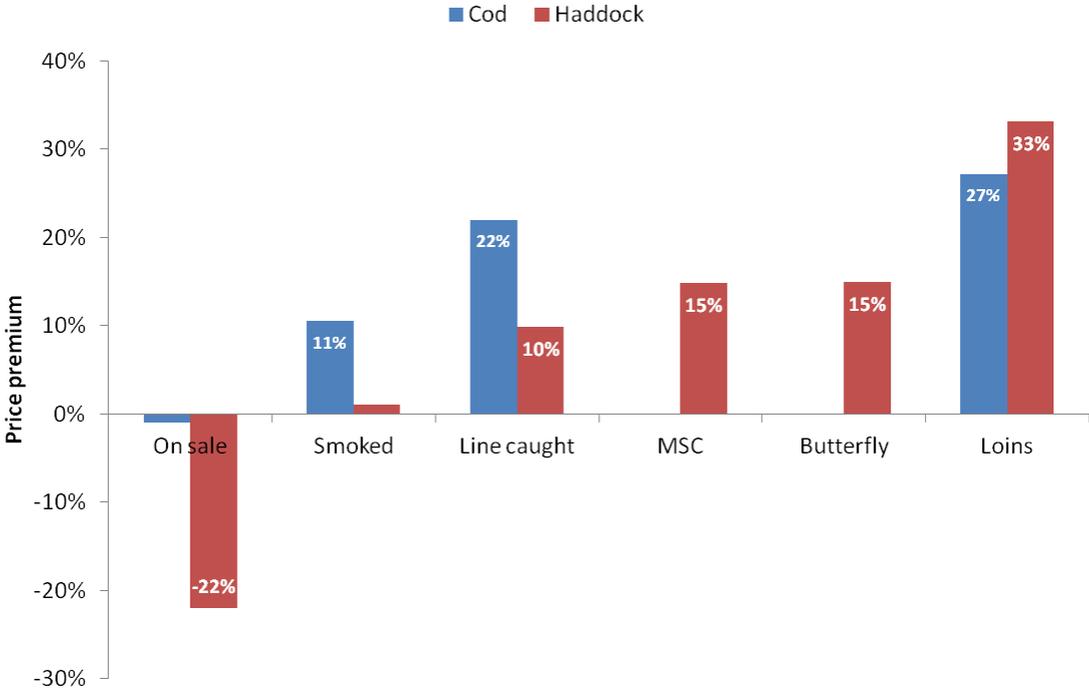


Figure 8 Price premium for different product attributes for chilled cod and haddock

The IRF are considered a credible and good alternative to the MSC on a business to business level, although they are criticised for being too small and having too little marketing impact as of yet. Some of our informants find it more reliable that the industry in a country develops its own certification programme, where the actors themselves are involved in setting up and monitoring the scheme. They argue that this should make the programme easier to police and also to be more rewarding and motivating for the actors involved. Those who criticise are actually using the same argument with the opposite interpretation; that a single country will not be an objective partner in the evaluation of their own fish stocks. And a third voice states that this might have been the case in the beginning but now they have the third party certifier in place through Global Trust.

3.3.2 Certification, economy and consumer acceptance

UK retailers and producers do not seem very concerned about the MSC consumer facing logo, although the retailers in particular claim they do need it. Their main reason for buying MSC certified seafood is to have documentation of sustainability. Many, especially the retailers, say they have stricter internal policies than what the MSC provides, thus using MSC as the minimum requirement for sustainability. Therefore, they might decide not to let a particular MSC certified fish enter their product portfolio. Then again, they make clear that an MSC certification eases their process of buying substantially and therefore is seen as very useful.

Third party certification does make it easier, but it's not a shoe horn, it's not a shortcut to be into our policies. We'd want to do our own checks as well.

A UK retailer



Figure 9 Some UK seafood counters show that a lot of different information and logos are fronted including a few products with MSC

Several sources say that consumers do not understand the concept of sustainability. They explain that if you ask the consumer up front they will state that they care, but this is not influencing their buying behaviour during hectic daily grocery shopping. The consumer leaves the responsibility of supplying (only) sustainable seafood to the retailer and trusts that they have made the right choices on their behalf. One retailer says that in their consumer study the consumer themselves state that:

Of course we are concerned about it (sustainability) but we come to you because we expect you to have done all the work

3.4 Supermarket observation

The MSC is the most used sustainability logo in both the fresh and frozen seafood counter, but as previously mentioned it is not broadly used toward the consumer. Country or area of origin is used more extensively and also fishing gear if caught by line or hook.

Observations and ad hoc interviews with all the major retail chains revealed in particular two factors of concern when it comes to sustainability and sustainability certification. Firstly there are many contradictions in UK supermarkets. These underline the need for some coordination and standardisation. For example some have their own sustainability programmes like Selfridges “Project Ocean”. Others like Wholefoods develop their own rules for traffic lights. These do not all agree with lists from more prominent e-NGOs like WWF and the Marine Conservation Society.



Figure 10 Selfridges are fronting their own Project Ocean logo on all their seafood

Secondly, the staff behind the counters were overall very under-educated as face to face information provider in the fresh seafood counter. Many could not answer simple questions about sustainability, the MSC or the retailer’s policy. Some claimed that they did not get any education from their employer and that they had often wondered why there were changes in the range, without being provided with an answer. It is a problem if the person the consumer meets at the counter cannot

answer or provide any further information on sustainability when the company policy is both extensive and focused. In some cases there were even signs and information that contradicted the information we got behind the counter. For seafood consumption in general it is worrying if the consumer is left with an uneasy feeling as to whether or not this was a sustainable choice. The retailers will need to educate their own staff if they are to educate the consumer, as some say is part of their policy aim on sustainability.

We will educate the consumer

A UK retailer

3.4.1 A longitudinal supermarket survey

In cooperation with another project there is an on-going longitudinal supermarket survey being undertaken. The data is gathered by weekly personal in-store observations of a range of frozen, chilled and fresh products and their prices since October 2010. This method has substantial advantages over scanner data in that much richer data on product characteristics can be obtained. In addition to the price information pictures were also taken and all attributes of the products were identified and coded.

The results showed that the 'line-caught' attribute gives cod and haddock a price premium of 18% and 10% respectively. The MSC eco-label gives a 10% price premium on haddock products. For frozen cod, haddock and Alaska Pollock the most recent analysis showed a price premium on MSC labelled products of 12.7%. Interestingly the analysis showed that products with uncertified eco-labels, like Fish for Life, are 10% cheaper than those without labels. The study cannot tell anything about the volume sold of the different products, nor the distribution of the price premium along the value chain.

To learn more about the study please see Sogn-Grundvåg *et al.* (2013) "The value of line-caught and other attributes: An exploration of price premiums for chilled fish in UK supermarkets", Sogn-Grundvåg *et al.*, (2012). "Oppnår krokfanget fisk prispremie i detaljistmarkedet?" and Sogn-Grundvåg *et al.* (In Press) "Product differentiation by credence attributes: the case of frozen whitefish in UK supermarkets".

3.5 Summary of the UK market

Sustainability is reported to be an important purchasing criterion and all retailers are buying certified seafood and/or have developed their own certification policy and programmes. While most retailers are positive towards the MSC, the processors are more sceptical. Most of our informants however were also positive towards other certification programmes, including the national programmes of Iceland and Alaska.

In the UK there are very few MSC logoed products available in both the fresh and frozen seafood counters. We see that responsibly caught is more commonly used as a statement fronting the consumer. Furthermore, we have documented that the retailers have challenges in educating their own staff on the topic of sustainability and also the company's own policy. There is substantial work to be done if sustainability and the consumer facing logos are to have a future.

There is a striking lack of correlation between retailers self-reported and observed price premiums on MSC certified products. The explanation as to why the seafood with MSC logo in the seafood counter is priced significantly higher than products without the logo, considering that so few report that they actually pay and get more paid for MSC products, might however be that most of the MSC fish is not sold with a producer facing logo and that the MSC is mostly used on a business to business level. This will need to be confirmed.

4 Discussion

In both Sweden and in the UK there is a focus on the sustainability of seafood, and the requirements for documentation of sustainability and traceability are prevailing in both markets. Even though most actors see the benefit of independent sustainability programs there is considerable variation in the use and attitudes towards the programs. In Sweden the attitudes towards the MSC in particular, but certification schemes in general, is much more positive than in the UK. Nevertheless, in both markets there is a demand for documentation of sustainability on the procurement level, MSC or not. Thus sustainability as a topic and purchasing requirement is here to stay and is a significant factor within business to business trading alongside other criteria. It seems however that it is too late to use sustainability for differentiation, even though the supermarket observation revealed a price premium on labelled products.

An interesting observation is that in Sweden the seafood actors are of the impression that in the UK the distribution of MSC products is far more advanced than in Sweden, while the opposite is true. The logo is used to a lesser degree than assumed in supermarkets in the UK. Even though the range of frozen products within the same species is larger in the UK than in Sweden, the UK number of MSC products in relation to the number of products offered is scarce. In Sweden most frozen products wears the MSC logo. Still, in both countries both producers and retailer are of the opinion that there are challenges with using a sustainability consumer facing logo. Firstly, because there are too many logos out there, and secondly because they find, often based on own studies, that the consumers want to rely on the retailer to be responsible and only sell sustainable seafood, thereby making logos unnecessary.

The preliminary results from the project show that MSC are providing a practical and easy solution for most actors. Still, there is dissatisfaction amongst many actors in Norway with MSC, and also among a number of UK producers and traders. The dissatisfaction is related to MSCs conduct, their dominant position and alleged conversion into a large multinational cooperation, and the lack of national control and motivation in the program. It might therefore be worth considering alternatives. And there seem to be acceptance for other solutions. Even though documentation of sustainability is necessary for the industry in meeting the requirement of the industrial buyers, our case studies show that in Sweden and UK it for the majority of actors does not have to be MSC. Furthermore, we find that the argument for the need for a consumer facing logo is exaggerated. Thus, a national scheme does not need a consumer facing logo, making a scheme easier and cheaper to establish and run. A national scheme does though need substantial promotion towards the industrial actors and NGOs in order to be recognised and accepted. Our study only relies on two markets. The findings therefore do not apply to all the markets for Norwegian fish. In our third and final report we will analyse our findings in a larger context, looking into the experiences with other national schemes, like IRF and ASMI, and results from other scientific publications on sustainability certification in general and MSC in particular. This should provide a better understanding of the marketplace, the benefits and challenges with staying in the MSC program, and a fuller picture of possibilities and challenges if choosing to withdraw.

5 References

- Cashore, B. (2002). Legitimacy and the Privatization of Environmental Governance: How Non-State Market-Driven (NSMD) Governance Systems Gain Rule-Making Authority, *Governance* **15**:4, pp. 503–529.
- Honkanen, P. & J.A. Young (2012). Critical Determinants of Consumers Buying Decisions for Sustainable Seafood. SUBMITTED, *Journal of Consumer Policy*.
- ISU (International Sustainability Unit) (2012). Towards global Sustainable Fisheries. The opportunity for transition. The Prince's Charities International Sustainability Unit (ISU), London.
- KRAV (2013). KRAV Marknadsrapport 2013. Available at:
<http://www.krav.se/sites/www.krav.se/files/marknadsrapport2013.pdf>
- Nøstvold, B., I. Kvalvik & J. Young (2012). National Responsible Fisheries Schemes: an option for the Norwegian Fishing industry? A Case study of Iceland Responsible Fisheries, Nofima Report 34/2013, Nofima, Tromsø.
- Nøstvold, B., S. Alm, I.E. Pleym & P. Honkanen (2010). Hva er drivkraften bak bærekraftig sjømat og hvordan er norsk sjømatnæring posisjonert? Rapport/Report 27/2010.
- Norges sjømatråd (2012). Landprofil Storbritannia.
- Norges sjømatråd (2012). Landprofil Sverige.
- Parkes, G., J. A. Young, S. F. Walmsley, R. Abel, J. Harman, P. Horvat, A. Lem, A. MacFarlane, M. Mens, C. Nolan (2010). Behind the Signs—A Global Review of Fish Sustainability Information Schemes. *Reviews in Fisheries Science*, **18**:4, pp. 344–356.
- Parkes, G., S. Walmsley, T. Cambridge, R. Trumble, S. Clarke, D. Lamberts, D. Souter & C. White (2010). *Review of Fish Sustainability Information Schemes – Final report* in Report prepared for the Fish Sustainability Information Group by MRAG. (MRAG ed., 2010).
- Pérez-Ramírez, M., S. Lluch-Cota & M. Lasta (2012). MSC certification in Argentina: Stakeholders' perceptions and lessons learned, *Marine Policy*, **36**, pp. 1182–1187.
- Pleym, I.E., P. Honkanen & K. Toften (2009). Hva menes med bærekraftig sjømat? Rapport/report 34/2009, Nofima, Tromsø.
- Potts, T. & M. Haward (2007). International trade, eco-labelling, and sustainable fisheries - recent issues, concepts and practices, *Environment, Development and Sustainability*, **9**:1, pp. 91–106.
- Potts, T., R. Brennan, C. Prita & G. Lowrie (2011). Sustainable Seafood and Eco-labelling: The Marine Stewardship Council, UK Consumers, and Fishing Industry Perspectives. In Scottish Association for Marine Science (ed.), *SAMS Report: 270-211* (Oban), 78.
- Roheim, C., F. Asche & J.I. Aantos (2011). The Elusive Pirve Premium for Ecolabelled Products: Evidence from Seafood in the UK Market. *Journal of Agricultural Economics*, **62**:3, pp. 655–668.
- Roheim, C. & J.G. Sutinen (2006). Trade and Marketplace Measures to Promote Sustainable Fishing Practices, *ICTSD Natural Resources, International Trade and Sustainable Development Series Iuuse Paper* (no. 3; Geneva, Switzerland: International Centre for Trade and Sustainable Development and the High Seas Task Force).
- Seafish (2012). The seafish guide to responsible sourcing.
http://www.seafish.org/media/742170/seafishguidetoresponsiblesourcing_201211.pdf
- Sogn-Grundvåg, G., T.A. Larsen & J.A. Young (In Press). Product differentiation by credence attributes: the case of frozen whitefish in UK supermarkets, *Journal of Agricultural Economics*.

- Sogn-Grundvåg, G., T.A. Larsen & J.A. Young (2012). The value of line-caught and other attributes: An exploration of price premiums for chilled fish in UK supermarkets. *Marine Policy*.
- Sogn-Grundvåg, G., T.A. Larsen & J.A. Young (2012). Oppnår krokfanget fisk prispremie i detaljistmarkedet? *Økonomisk Fiskeriforskning*, **22**:1, pp. 1–10.
- UNEP (2009). Certification and Sustainable Fisheries. *United Nations Environmental Programme (UNEP)*. (Division of Technology, Industry and Economics).
- Unit, The Prince's Charities International Sustainability (2012). Towards global Sustainable Fisheries. The opportunity for transition.
(<http://www.pcfisu.org/wp-content/uploads/2012/01/ISUMarineprogramme-towards-global-sustainable-fisheries.pdf>).
- Washington, S. & L. Ababouch (2011). Private standards and certification in fisheries and aquaculture. Current practice and emerging issues. *FAO Fisheries and Aquaculture Technical Paper, no 553* (FAO, Rome).

