Survey of the trade flow in the fisheries sector in Asia

revised version

Analysis for the Norwegian Ministry of Fisheries and Coastal Affairs

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1. Introduction, methodology, recommendations

This report is written for the Norwegian Ministry of fisheries and Coastal Affairs. It is written by Gunnar Album with support from Alistair Graham and Maren Esmark. This second version is revised based on input from companies after the first version was published in June 2009.

There has, to a certain extent been an exchange of information between the Norwegian Directorate of Fisheries and the consultant.

The Ministry of Fisheries and Coastal Affairs asked for a survey answering the following questions:

- To what extent cod and haddock from the Barents Sea is sent to Asia, especially China, for processing?
- Who are the central players in catching and transport of the fish and what are the transport routes?
- What percentage of the whitefish going to Asia is IUU fish?
- What companies in China are behind the bulk of processing and export?
- How do control and judicial in the recipient countries work to unveil IUU fish?

The findings in this report are based on a combination of official sources like trade statistics, companies' web sites, scientific reports, and interviews with industry players, government officials, researchers, representatives of sales organisations and NGOs, in Norway, Russia, Hong Kong and China. As some of the information comes from unpublished sources not all findings are referenced.

As will be shown in chapter 2, the data on imports to China vary significantly from source to source. I have combined information from many different sources to reach an estimate of the volume of Barents Sea cod and haddock trade to China. Interpretation of database information has been aided by industry players.

It has also not been possible to identify everybody who is behind catch and transport of cod and haddock from the Barents Sea. Official records - Russian and Norwegian quota holders list - and Lloyd's vessel register will give you a list of the official controllers of vessels and quotas. It is, however, known that non-Russians control many of these vessels and/or their quotas.

There are also a number of traders registered in the British Virgin Islands and Seychelles buying and selling fish from the Barents Sea. The owners of some of these have been identified with the help of industry players, but many of them remain unknown.

1.1 Brief conclusions

Cod and haddock from the Barents Sea have been transported to China for processing since the late 1990ies. The volume of cod has increased from a few tonnes in the beginning to between 60 and 100 000 tonnes at present. The volume of cod seems to have been stable for the last three years.

The haddock imports have increased staidly and are still increasing. The total Chinese haddock import was 42 000 tonnes in 2007.

Both in the European side of the cod and haddock trade and in the Chinese import and processing of the fish, there are a multitude of companies involved. Our research, however, indicates that many of these companies are fronts and agents for a relatively limited number of big players. The now Hong Kong based Ocean Trawlers dominates the industry with an estimate of 25% of the landings from Russian vessels.

There has been a significant change in trade patterns and trade routes over the last two to three years. This might be ascribed to increased control cooperation between Norway and Russia, attention from media and NGOs, and the introduction of the Port State Control Regime in NEAFC. It also seems that the larger companies in the industry decided to get rid of the IUU

fish in order to increase the fish prices and that this took place, and had effect, *before* the Port State Control Regime was in place May 1st 2007.

Trade statistics do not show any significant reduction in the Chinese import of Atlantic cod and haddock. But trade statistics are unreliable. The main problem is that China does not operate with a separate HS code for Atlantic cod – the same HS code also covers Pacific cod, pollock, various reef cods and probably also other white fish species. Also on the European side, there are sources of inaccuracies, e.g. confusion on country of origin and country of departure. Cod and haddock landed and exported from Norway from Russian flagged vessels, but fished in Norwegian waters seem to be labelled variously as Norwegian or Russian of origin. If this fish is transported to e.g. the Netherlands and repacked, it will get an EU Health Certificate and be recorded on arrival in China as being of Dutch origin.

The processing industry in China is concentrated in Dalian and Qingdao. Also in China, Ocean Trawlers is the dominating company. Other stable, large processors are Unibond, Pacific Andes and Trident. There seems to have been many smaller players earlier, but most of these have given up with increasing cod prices.

There is still IUU fishing and illegal transport going on. During the month of October 2007, there were two documented transports of a total of 1500 tonnes of cod and haddock. From industry sources, also other transports of IUU fish are known. The fact that the route and method use to get this fish passed the control systems is worrying.

New EU regulations to prevent IUU fishing to be introduced in 2010 will require changes in some of the Chinese routines for traceability and labelling. They will also, and maybe more challenging, require the harvesting countries in (in this case) Europe to provide information and traceability that is not in place today.

1.2 Recommendations

A key condition for exposing illegal fishing and illegal trade is to have good control and description of the legal trade. It is against the background of the legal trade that the illegal

becomes visible. This report shows that more work has to be done to establish routines that can follow the legal trade continuously.

There are control mechanisms and/or sources for tracking at all the points in the chain described; the fishing ground, the transhipment, the landing in port, the export and import and the re-export and re-import. To make these control mechanisms functional they need to be in compatible formats. There needs to be common definitions on the HS codes under which fish is categorised when imported or exported, and there needs to be clearer definitions of Country of Origin and Routing Country.

The NEAFC port state control regime is a major improvement, but has the weakness that fish transports that are not landings are not recorded. It also has the weakness that it is not open information.

With new EU regulations to deter IUU fishing coming into force from 2010 China as a processor will need paperwork from the supplier of the fish (in this case Barents Sea fishing nations) that it is legally caught. Norway should initiate cooperation with China to make NEAFC information and Chinese tracking methods through the CIQ or other bodies, compatible.

There is already an established academic cooperation between the University of Bergen and the Fisheries College in Tromsø and the Oceans University of Qingdao. A joint programme could be set up between the institutions analysing in more depth some of the general issues discussed in this report.

Our study indicates that the Iberian countries, Denmark and the UK has been and may still be a market for Barents Sea IUU cod. A further study of imports and landings of fish from the Barents Sea to these countries should be considered.

This report shows that there still are illegal landings of cod and haddock coming out of the Barents Sea. The theft of fish in the volumes estimated by the Directorate of Fisheries is among the most serious economic crimes in Norway. It may seem that investigating them requires more resources, especially expertise in economic crime, than what is used at the moment. Some of the players are described in this report. I have made the choice of which

companies and vessels to describe based on a risk assessment. It is likely that an investigation into the traders requires closer cooperation between the Directorate of Fisheries and economic crime units of the police in Norway and in other countries.

A substantial percentage of the fish from the Barents Sea is traded through companies registered in tax havens. Norwegian authorities should take steps to identify who is behind these companies. IUU fish means black money which may be used to get access to fishing rights or to avoid control mechanisms. The prevailing presence of tax haven companies may also be a management problem.

2. Chinese imports of cod and haddock

Data from various sources both open and company internal sources have been used in this report. This chapter goes through them in a somewhat tedious way. The Ministry has requested advice as to how they can keep track of the development of the China-trade, both regarding participants in the trade and its volume. The problem with cod is that there does not exist any straight forward information on the trade in Atlantic cod between Europe and China.

To illustrate this fact I have compared the data from four different sources in figure 1. These figures are for Head-off and Gutted (HG), frozen cod. They vary with a factor of five for Russia. For the Netherlands, they vary from zero to almost 80 000 tonnes. To make the confusion complete, none of the figures for Norway from the same four sources, fit official SSB[1] figures.

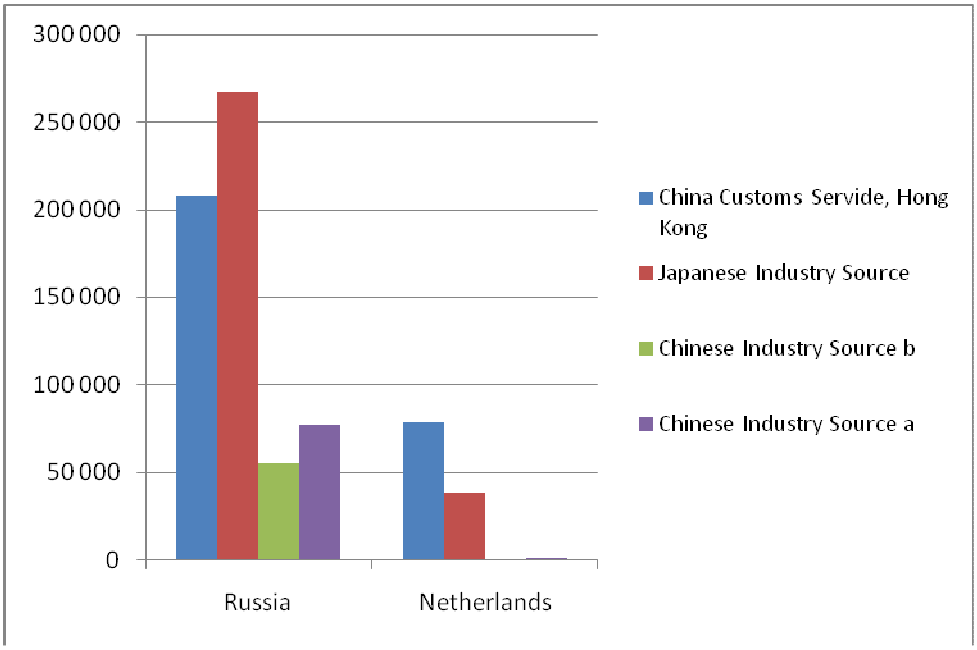


Figure 1: Data on cod imports to China from four different sources, Jan-Oct 2007.

There are two main reasons for the confusion: The main problem is the Customs Code (HS 03035200) under which frozen, HG cod is imported to China, may cover species of cod,

[1] Statistics Norway

Alaska pollock and other white fish, like hoki and hake and some blue whiting, but not all of it.

The other big source of errors is the registration of exporting country. The country that issued the Health Certificate is the Country of Origin. If Russian fish is repacked in the Netherlands for further transport to China, it needs a new HC and will end up with CO: Netherlands in the Chinese statistics.

2.1 Sources - trade data

Because of the problems mentioned above, I have used several different sources for trade data.

1. Customs General Administration of P.R.China in Beijing bought from CCS (China Customs Statistics) Information Centre, Hong Kong. 1999, 2000, 2001, 2003, 2004, 2005, 2006 and first 10 months 2007. Sorted on country of Origin and Country of Departure

2. Globefish groundfish report 2006, FAO. White fish filet imports to the EU.

3. AIPCE White fish study 2007. White fish filet imports to the EU.

4. A set of cod import figures month by month from a Japanese industry source.

5. Imports of cod to China first nine months 2007, sorted on country of origin. The cod processing company that has compiled this list for us has used unit prize to eliminate shipments of pollock, although they say that some high-prized MSC labelled pollock might still be included.

6. Register of 25 top cod and haddock importers 2006 and first 8 months 2007, sorted on importing company.

7. Imports of cod, haddock and pollock to Qingdao harbour, first half 2007; specified on each shipment-type with Country of Origin, importing company, volume and value.

8. Shipment-by-shipment registers from Goodwill China Business Information Ltd for cod and haddock 2005-2007.

2.2 Cod

The records from CCS (China Customs Statistics) Information Centre, Hong Kong give the imports to China of Pacific and Atlantic cod, other cod species, Alaska pollock and other white-fish from 1999 to 2007.

According to these data, the total cod import (import under HS codes 03036000 and 03035200) into China increased from 1999 to a peak near 700 000 tonnes in 2005, and has been reduced since, to less than 500 000 tonnes total in 2007.

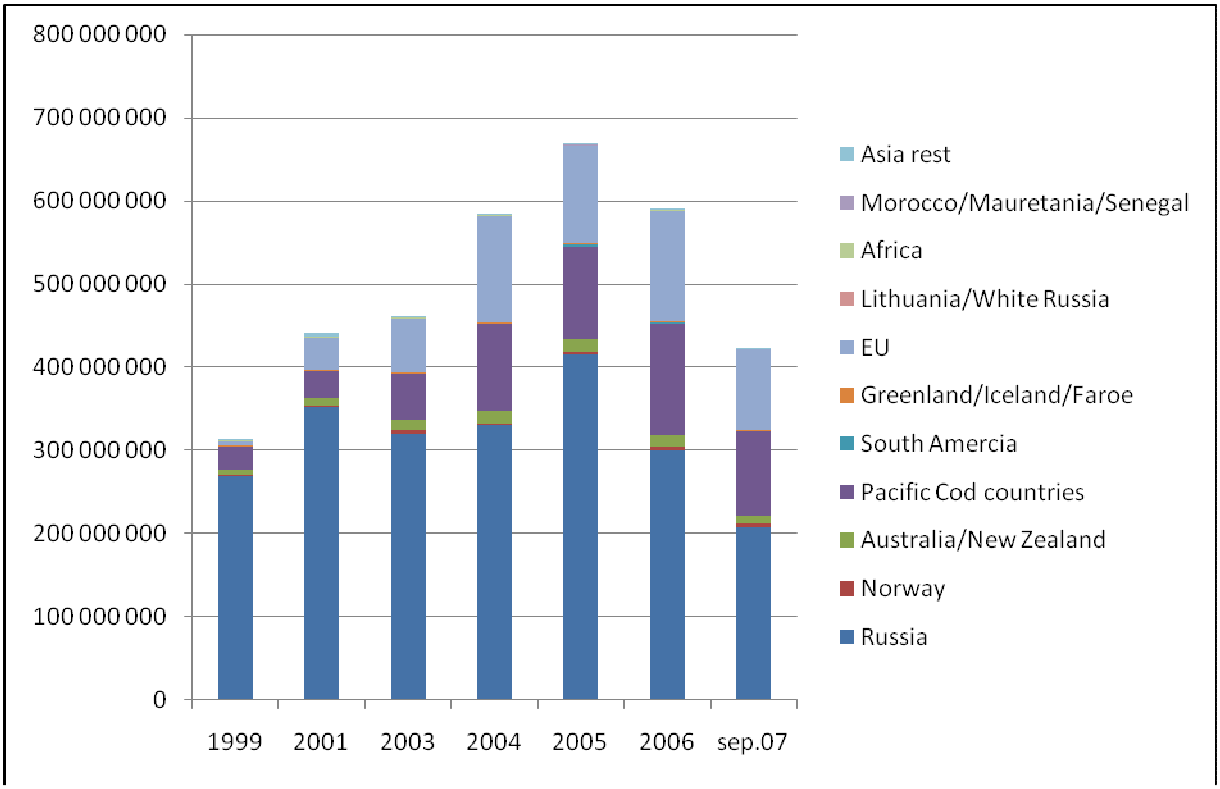


Figure 2: Total import of cod (HS 030352000/03036000) to China, sorted on Country of Departure. 1999 - 31.10. 2007 Source: China Customs Statistics) Information Centre

If we look at the imports to China from typical transit countries for Barents Sea cod (Figure 3), the picture is different. These imports have been relatively stable for the last four years. The Netherlands is by far the biggest exporter of these. Of other developments, it can be mentioned that the import from the UK is drastically reduced, a conclusion that is supported by landing data (see table 20-21). Belgium appears with quite high export in some years

(especially 2006) and none in others. The Directorate of Fisheries have no records of landings in Belgium from the Barents Sea.

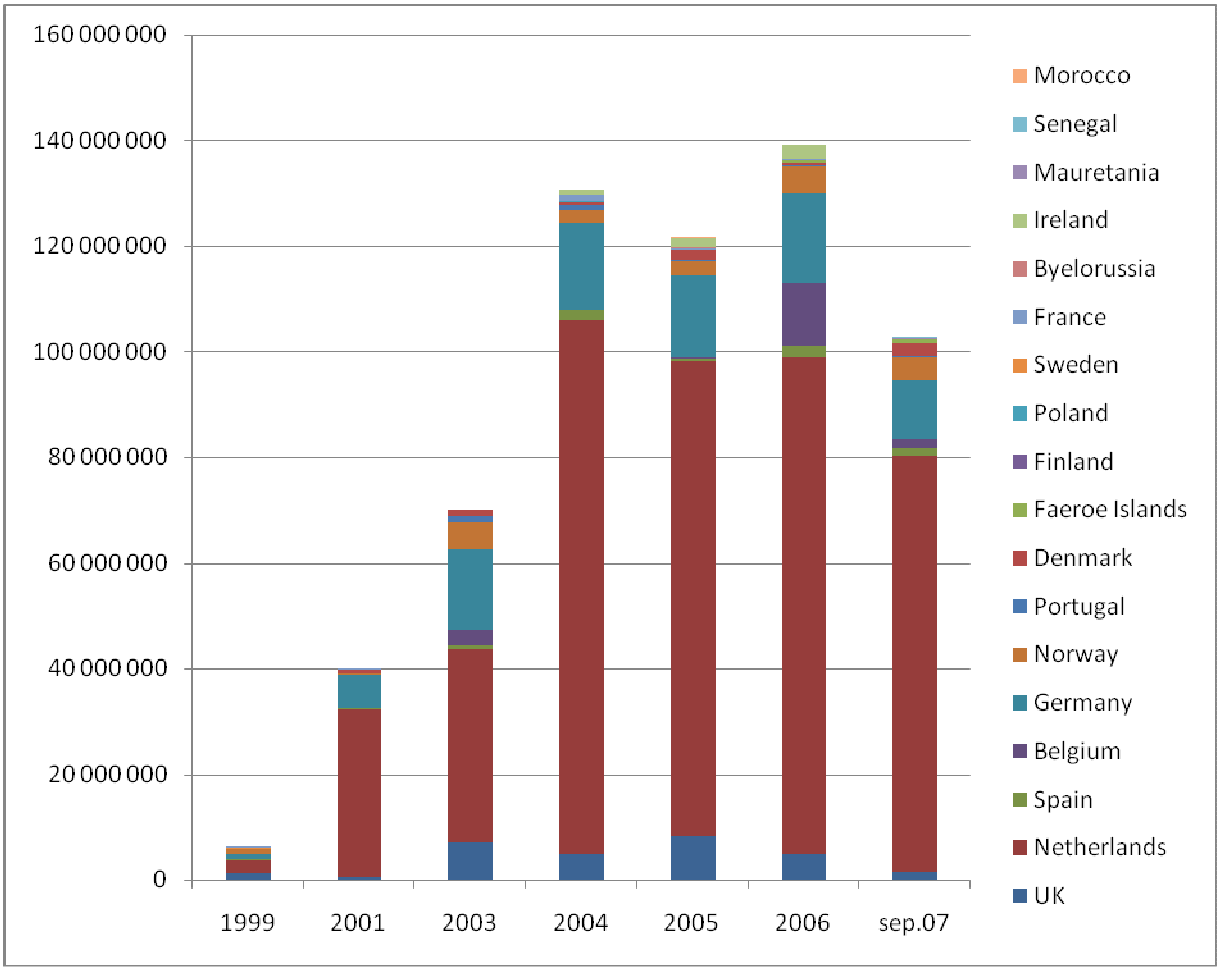


Figure 3: Total import of cod (HS 030352000/03036000) to China from potential transit countries, sorted on country of departure. 1999 - 31.10. 2007 Source: China Customs Statistics) Information Centre.

In these figures we also see shipments from possible "alternative" transit countries outside the NEAFC Port State Control Regime, like Morocco and Mauritania. These countries are now cooperating more and more closely with European countries like Norway and with NEAFC.

If we compare the CCS figures with figures from a Japanese industry source, we see that they are quite coherent, given that the CCS data covers one more month than the data from Japan.

Comparing Japanese Industry source to China Customs data. Tonnes HG					
	Japanese industry source				
Origin	**Jan-Sept 2006**	**Jan-Sept 2007**	**Jan-Oct 2007 China Customs statistics**	**Difference**	**Percentage difference**
Japan	17 154	20 663	22 379	1 715	8%
Korea	8 961	7 093	8 752	1 650	19%
North Korea	3 925	896	895		0%
Russia	306 206	266 917	293 243	26 326	9%
USA	28 255	21 953	23 428	1 450	6%
Netherlands	49 207	38 752	40 038	1 286	3%
Germany	4 869	6 422	6 422		0%
Norway	8 261	8 937	9 591	645	7%
New Zealand	6 962	8 472	9 503	1 031	11%
Argentina	204	345	344		0%
Total	**434 004**	**380 450**	**414 597**	**34 147**	**8 %**

Table 1: Cod import to China. January through September 2006/2007. HG weight.

2.2.1 What is included in "cod" □

I have not been able to identify all species that are imported to China under the HS code 03035200 □ □ □(□□ □ □ □ □□□ □ □ □ □□□ □ □ □ □□□□ □□ □ □ □□ which is translated "frozen cod".

The character for cod, □ is also found in pollock □ □ *"narrow cod"*, in Blue Whiting □ □ *"blue cod"* and in Hake □ □ □ *"un-bearded cod"*. *"New Zealand un-bearded cod"* □ □ □ □ □ □ makes Hoki. All of these "cod" seems to be imported under the same HS code; cod imports from New Zealand are probably hoki and cod imports from Chile are probably hake.

Haddock □ □ □ is *"black line cod",* but does not come under the same HS code.

2.2.2 Separating Alaska Pollock from Cod in import statistics

Of all the species imported under the HS-code for cod, Alaska pollock is the one with the highest volume. Some figures of Alaska pollock trade is shown here as a reference to the cod import data. The first is the imports of pollock through Qingdao harbour for the first half of 2006.

Chinese Pollock import first 6 months 2007. Kg.	
Country of Origin. Selected Countries	**Volume**
Russia	115 969 944
Netherlands	5 148 318
USA	2 460 827
Japan	1 883 454
Norway	697 904
UK	1 444 474
Iceland	968 983
Faeroe	1 569 058
Sub total selected countries	**130 511 445**
Total all countries	**140 925 767**

Table 2: Pollock import to China first 6 months 2007. (all pollock species, not only Alaska pollock.) Source 7.

These are all pollock imports, including Atlantic pollock. The imports from Russia are 115 000 tonnes – equivalent of 230 000 tonnes annually. This is Qingdao Harbour only. Dalian is a big pollock Harbour too, and more important for pollock than for cod and haddock.

EU imports of Alaska Pollock filets. HG weight equivalents. Tonnes				
	2003	**2004**	**2005**	**2006**
China	217 093	213 513	216 857	297 115
Russia	87 405	53 155	34 824	60 457
USA	112 578	181 684	179 804	151 894
total	**417 077**	**448 352**	**431 485**	**509 467**

Table 3: Alaska Pollock filet imports to the EU (25). Weights in HG equivalents. Sources AIPCE White Fish Study

The two sources agree quite well; the Chinese import of pollock is just below 300 000 tonnes per annum for the last two years if we assume that most of the American pollock market is

met by American produced pollock. The CCS data gives the 2006 Russian export of cod to China to 396 000 tonnes. As much as ¾ of this may be pollock.

2.2.3 Detailed data from industry sources

In addition to the data from the Japanese industry source, I have had access to three sets of data from companies in the Chinese processing business. These are better specified on species than the CCS data, but I do not have long time series of such detailed information. The different sources are referred to by their number given above (chapter 2.1.1).

The data from source 5 is given in table 4. It is generated from harbour information. The processing company that set up this list has used unit prize to eliminate shipments of pollock, although they say that some high-prized MSC labelled pollock might still be included. This is not a fool-proof method; as can be seen in chapter 4, some shipments of cod from Norway is reported into China at a unit price of 1000 US$/MT, which is a quarter of the going rate. There has been no attempt to sort out Pacific cod, so the list should contain both cod species.

This data is sorted by country of origin, not country of departure, which means it should be based on the country that issued the Health Certificate. One point worth noticing is that when price is used to sort out “non-cod”, the imports from the Netherlands are only 1 800 tonnes, compared to 40 000 according to the China Customs Statistics. This might indicate that a significant part of the volume from the Netherlands is blue whiting. The rest of the potential transhipment countries (UK, Germany, Spain Portugal) are registered with relatively small exports.

Cod import to China January –September 2007 Unit is kg HG		
Country of origin	**China Industry source 1 Jan –Sept 2007**	**China Customs Statistics Jan – Oct 2007 HS 03035200**
Russia	73 314 984	293 243 220
USA	*12 564 157*	*23 428 456*
Norway	6 036 843	9 591 414
Netherlands	1 783 803	40 037 776
Korea (rep)	*1 720 200*	*8 751 894*
New Zealand	*1 690 493*	*9 503 513*
Japan	*1 134 440*	*22 378 825*
Germany	755 311	6 421 652
Korea DPR	*724 579*	*895 654*
Greenland	*694 103*	*1 316 090*
Denmark	527 818	1 847 774
UK	385 054	506 059
Spain	371 752	503 405
Portugal	178 814	236 252
Faeroe Islands	146 887	148 633
Uruguay	*54 801*	*290 543*
Iceland	*26 602*	*42 774*
Togo	*25 613*	*25 613*
Canada	*21 244*	*2 674 378*
Ireland	15 736	15 736
Australia	*7 225*	*7 225*
total	**102 180 459**	**421 866 886**
Total Barents Sea countries	**83 517 002**	

Table 4: Imports of cod to China Industry Source 5 and China Customs Statistics. 2007

Excluding non-Barents Sea cod nations (in italics in the table), we get an import of 83 500 MT for 8 months – 125 000 tonnes annually. I have excluded Greenland and Iceland, assuming that the import from them is from their own fishery, although some of it may be Barents Sea cod from Icelandic vessels. I have also excluded South Korea at this point, although there might be cod going from Europe to Busan to be re-exported to China. These 125 000 tonnes include Atlantic and Pacific cod.

The next set of data, (Source 6) lists the top 25 importers of cod and haddock for 2006 and the first 8 months of 2007. (Attachment 6). The list is given as imports under HS 03037200 (Haddock) and HS 03036000/03035200.

25 biggest imp each species/year. Units in kg HG				
	Haddock 2006	**Haddock 2007 (8 months)**	**Cod 2006**	**Cod 2007 (8 months)**
Top 25 importers	34 921 604	26 508 006	94 141 731	68 140 291
total import	37 196 397	27 889 387	127 811 543	89 890 952
adjusted for 12 months	**37 196 397**	**41 834 081**	**127 811 543**	**134 836 428**

Table 5: Cod and haddock import to China 2006 and 2007 (8 months). Source 6

It is a curious fact that these figures do not seem to contain Alaska pollock. They are supposed to be based on the HS codes only, but are only a seventh of the total volume given in the CCS data set. For haddock, the total is identical to the CCS figures. The only plausible explanation is that the figures come from a combination of CIQ and customs sources.

2.2.4 Atlantic and Pacific cod

One remaining problem is to sort out the Atlantic cod from the Pacific cod. Total Pacific cod landings are reported by the FAO to be between 330 and 400 thousand tonnes for the past seven years. The USA reports their landings to be between 210 and 260 000 tonnes in the same period, out of which about 30 000 tonnes live weight equivalent, is exported to China/Hong Kong and Taiwan.

US Cod Exports							
	2001	2002	2003	2004	2005	2006	2007- YTD
Groundfish COD NSPF Fillet Frozen							
Canada	790	430	350	605	415	435	225
China / Hong Kong / Taipei	795	320	485	655	665	1 520	235
Japan	4 335	920	1 230	135	330	2 030	5
SKorea	380	420	305	100	25	-	70
Asia	90	25	35	160	60	110	80
Europe	1 750	2 750	2 110	405	425	1 260	4 260
Russia	25	40	1	5	-	25	35
Others	280	350	339	410	355	285	15
TOTAL	**8 445**	**5 255**	**4 855**	**2 475**	**2 275**	**5 665**	**4 925**
Groundfish COD NSPF Frozen							
	2 001	2 002	2 003	2 004	2 005	2 006	2007- YTD
Canada	8 345	10 850	9 840	9 055	4 365	2 090	895
China / Hong Kong / Taipei	3 155	4 835	10 205	16 290	15 525	20 725	10 135
Japan	29 120	23 800	20 960	25 580	20 085	14 960	5 310
SKorea	4 345	6 100	8 270	6 520	7 080	6 770	11 980
Asia	175	155	115	600	2 290	1 560	160
Europe	15 405	12 470	16 220	25 725	33 490	34 040	23 235
Others	925	335	110	175	225	115	5
TOTAL	**61 470**	**58 545**	**65 720**	**83 945**	**83 060**	**80 260**	**51 720**

*MT

*Source: NMFS

Table 6: US exports of cod 2001-2007. Figures in tonnes.

The different data discussed above, indicate a total import of around 130 000 tonnes of cod and other species under the same HS code except pollock and blue whiting annually for 2006 and 2007. These figures are for HG frozen cod and should be multiplied with 1,5 to get live weight.

The figures in source 7 are specified on exporting country and importing company. The data comes from the Qingdao port authority, and is sorted on haddock, pollock and cod. Based on their knowledge of the importing companies, our source has sorted the imports in Atlantic, Pacific and "Atlantic and Pacific" (uncertain). The data do not cover Huangdao Island, which is an industrial area with fish processing plants. (see chapter 4.9)

	Volume (kg)				
	AC	PC	AC/PC	total	Adjusted for 12 months
Russia	12 887 923	16 962 882	6 919 707	36 770 512	73 541 024
Norway	1 144 640			1 144 640	2 289 280
Netherlands	568 360			568 360	1 136 720
UK	315 875			315 875	631 750
White Russia	74 101			74 101	148 202
Portugal	80 024			80 024	160 048
Denmark	166 113			166 113	332 226
Faeroe	97 146			97 146	194 292
France	41 063			41 063	82 126
Greenland	199 154			199 154	398 308
Japan		389 655		389 655	779 310
New Zealand			38 000	38 000	76 000
Togo			25 613	25 613	51 226
Uruguay			51 412	51 412	102 824
USA		5 407 385		5 407 385	10 814 770
Total	**15 574 399**	**22 759 922**	**7 034 732**	**45 369 053**	**90 738 106**

Table 7: Imports of cod to China, sorted on Country of Origin. First half 2007

Assuming that transports to Qingdao are relatively evenly spread over the year, this would indicate a total import of cod (these figures should give cod – and cod only) of 90 000 tonnes HG for 2007. Out of which at least 31 000 tonnes would be Atlantic cod and 45 000 tonnes Pacific cod. Splitting the uncertain column at the same ratio as the identified fish (about 42% Atlantic cod) gives a total of about 38 000 tonnes of HG Atlantic cod of Russian origin imported to China in 2007 – and about 52 000 tonnes of Pacific cod.

I am not in a position to tell whether the cod registered imported from Portugal, Faeroes, France, UK etc is transhipped and repacked Russian fish or of it is of the origin of the exporting country. I assume that the import from White Russia (Belarus) is Russian Barents Sea cod. (In Customs sources this shipment is registered as Russian) . Togo and Uruguay appears as exporters of cod in several sources. Cod from Togo might be fish which is transhipped on one of several Togo-flagged, black listed fish carriers operating in the North Atlantic. Several industry sources say that they will not touch cod out of Uruguay as it is IUU

fish. The traders say that the owners of the IUU fish look for a place to land the fish outside the EU/Norway/Russia are (NEAFC, thus) and end up in e.g. Uruguay.

The figures here suggests an import for 2007 totally of about 38 000 tonnes of HG Barents Sea cod and about 51 000 tonnes of Pacific Cod from Russia and the US. The customs data (source 8) has about 10% of what we assume to be cod landings imported through Dalian Customs, the rest through Qingdao.

Imports of frozen HG cod to China 2007. Our estimates. Tonnes HG			
Atlantic Cod		Pacific Cod	
Russia	32 700	Russia	41 000
Norway	2 300	USA	10 000
Repacked Russian Atlantic Cod	3 000		
Total	**38 000**		**51 000**

Table 8: Imports of frozen HG cod to China 2007. Estimates

The figures from Qingdao harbour are very low compared to all other data. Possible reasons will be discussed in chapter 2.3.1.

2.2.1 EU imports of cod filets

The table below, which shows the import of cod filets to the EU from China, Norway and Russia, for the period 2003-2005, shows a total cod filet import equivalent to 154 000 tonnes of HG cod in 2005 and 158 000 in 2006. The import from China is 90 000 and 100 000 respectively.

Filets of cod in HG equivalents. Tonnes Import to EU 25				
	2003	2004	2005	2006
China	52 844	63 590	91 943	101 932
Russia	30 229	21 009	30 554	29 201
Norway	33 347	32 413	31 572	27 057
	116 420	**117 012**	**154 069**	**158 191**

Table 9: Cod filet import to the EU 2003-2005. Weights in tonnes of HG equivalents. Source: AIPCE White Fish Study, Brussels, September 2007

It should be mentioned that other statistics contradict this figure. The Groundfish report from Globefish/FAO 2006, gives significantly lower figures. The FAO does not have figures for China further back than 2004.

Filets of cod in HG equivalents. tonnes Import to EU 25		
	2004	2005
China	46000	65714
Russia	15000	21857
Norway	27714	29286
total	88714	116857

Table 10: Cod filet import to the EU 2004-2005. Weights in tonnes of HG equivalents. Source: Globefish Commodity update: Groundfish. FAO 2006.

2.2.2 Analysis of shipment by shipment data

The following is based on individual shipment data from the Chinese Customs Authorities. It is sorted on the HS codes and thus covers all the cods including pollock.

In table 10, the cod of Russian origin is sorted by routing country. I have left out fish that comes through Russia assuming most of it will be Alaska pollock, since there is no direct route from the Kola Peninsula to China. Cod landed directly in China on a Russian ship, will be registered with Russia as both Country of Origin and Routing Country.

According to these figures, trade of Russian cod via routing countries on the Atlantic is increasing steadily from 2005 through 2007.

Transports through the Netherlands are increasing, whereas the UK and Germany have reduced their role as routing countries. There is Russian fish going though both Canada and Iceland in 2006 and 2007. This should be studied more closely, since there is no logistic reason for these routes.

Chinese imports of Barents Sea cod			
Cod of Russian origin, sorted by routing country	**2005**	**2006**	**2007**
Belgium	240 030	490 238	467 433
Canada		25 601	125 172
Chile	23 588		
Denmark	1 515 146	120	409 410
Germany	8 454 443	4 216 863	3 893 597
Morocco	172 408		
Hong Kong		80 342	133 462
Iceland		4 654	123 453
Korea Rep		416 078	253 926
Netherlands	18 859 232	30 294 671	37 555 018
New Zealand			579 280
Norway	886 521	1 140 287	782 407
Puerto Rico	19 839		
Portugal	26 617		94 120
Senegal			178 211
Singapore			22 500
Spain	30 660	1 195 096	840 082
The Faroe Islands		250 481	960 598
United Kingdom	6 796 196	4 038 513	1 044 969
United States	280 034	40 578	47 982
Uruguay	78 588		22 000
total	**37 383 302**	**42 193 522**	**47 533 620**
CO Netherlands	53 499 026	58 762 609	40 144 129
Total CO Netherland + CO Russia routed through other countries	**90 742 695**	**100 956 131**	**87 677 749**
CO Norway	**4 148 493**	**10 115 139**	**10 558 807**
Total Russia routed through Atlantic countries+NL+Norway	**94 891 188**	**111 071 270**	**98 236 556**

Table 11: Chinese cod imports. CO: Atlantic Russia, Netherlands and Norway

This table gives cod imports in three steps:

1. Cod-fish of Russian origin routed through other countries (excluding all cod going directly from Russia to China)
2. Cod-fish of Dutch Origin
3. Cod-fish of Norwegian Origin

If all this is Atlantic cod, it fits quite well the European import of cod filets from China – equivalent of 90 000 tonnes of HG cod in 2005 and 100 000 in 2006.

There are several sources of error also in these figures. Firstly, I know from industry sources that there is Atlantic cod from Russia routed through European harbours that are registered as imported to China with Russia as routing country. I do not know why and not how much. Secondly, the import from the Netherlands is registered in other sources with very low value (about US$ 600 per tonne). This indicates that most of the Dutch volume may be blue whiting.

2.3 Import data versus IUU estimates

According to the Norwegian Directorate of Fisheries, the overfishing of cod in the Barents Sea is reduced from 80 000 tonnes round weight in 2006 to 40 000 in 2007. The landings were, according to the Directorate, distributed as in table 12.

Landings of Russian cod 2007 HG weight				
	Third Country	**Russia**	**Norway**	**Total**
transport vessel	63 381	25 892	0	89 273
fishing vessel	3 194	1 991	56 907	62 091
total	**66 575**	**27 883**	**56 907**	**151 364**

Table 12: Landings of Russian cod 2007. Source Directorate of Fisheries

Of the 66 500 tonnes landed in 3rd countries, 45 500 tonnes HG was landed in the Netherlands in 2007, according to the Directorate of Fisheries. The Chinese import figures show a total of 37 500 tonnes of Russian origin, routed through the Netherlands. We also know that some of the Dutch 40 000 tonnes of cod (see table 11) is actually Russian cod repacked in the Netherlands. We also know that cod is sorted in the Netherlands, big fish go to Iberia, small fish (under 2 kg) go to China.

The estimate of 45 500 tonnes of HG fish into the Netherlands seems to be low compared to the import statistics in China.

2.3.1 Summing up cod imports

It is not possible to give a precise figure of the Chinese imports of Barents Sea cod. My estimate is based on the following:

Qingdao harbour data suggests a total Atlantic cod import of between 40 000 and 50 000 tonnes, based on the assumption that between 80 and 90% of cod imports pass through Qingdao harbour. The reason may be that the import over Huangdao harbour, which is near Qingdao and part of Qingdao customs point, but not included in the Qingdao harbour landings is quite high.

Other industry sources indicate slightly higher volumes. If the split estimated by industry sources between Atlantic and Pacific cod in Qingdao harbour is correct, trade data suggests an import of between 50 and 55 000 tonnes.

Analysis of shipment by shipment data, where 47 000 tonnes come out of Russia through other countries, 10 000 tonnes come out of Norway and we assume that some of the Dutch fish is repacked Russian cod, indicates a slightly higher volume; around 60 000 to 65 000 tonnes.

From industry sources we know that most of the Atlantic cod is re-exported to Europe. The estimate of 65 000 tonnes fits with the FAO figures of cod filet imports to the European Union. The AIPCE white fish study gives a much higher figure – a European cod filet import from China equivalent to 100 000 tonnes of HG cod.

One significant point is that none of the data above indicate a reduction in the availability of Barents Sea cod to Chinese processors. This may be because the IUU landings documented by the Directorate of Fisheries never went to China in any big volume, but was consumed in Europe. Or it may be that the significant reduction in IUU fishing indicated by Directorate of Fisheries estimates never took place. It may also be that China is simply increasing its percentage of cod processing - legal or illegal.

2.4 Haddock

The data for haddock should be more accurate than the cod data as there are not many other haddock species around the world. I have been informed however, that Patagonian Toothfish is imported to China as "haddock from Malaysia." In the figures from 1999, the haddock from Australia and Malaysia, shipped through Hong Kong, might be just that.

Haddock import to China. Sorted on country of origin **Source: CCS** Volume in kg						
	1999	**2001**	**2003**	**2005**	**2006**	**2007**
Japan		119 856				
Korea Rep		826 020	328 760		17 642	
Norway		358 167	1 688 006	5 860 041	8 464 257	10 520 113
Russia		4 155 883	12 343 721	16 512 740	25 587 974	28 470 059
United States		43 331		75 167	343 362	1 407
New Zealand		396 400				
Malaysia	16 376					
Canada	501 176	66 780	5	7	23 126	229
Belgium			7 620		12 129	
Denmark			141 442	336 184		47 741
U.K.			573 211	560 524	441 975	276 198
Germany			18 540	893 004	762 444	126 345
Netherlands			124 660	1 393 284	960 658	2 189 538
Iceland			24 960	187 632	339 233	928 441
Australia	102 271					
Portugal				100 701	49 340	215 752
Dominican Rep				3 164		
South Africa					71 971	
Faeroe Islands					12 680	11 691
Uruguay					1 132	
Spain					108 474	196 939
total	**619 823**	**5 966 437**	**15 250 925**	**25 922 448**	**37 196 397**	**42 984 473**

Table 13: Haddock Imports to China, Country of Origin. 1999-2007. Source 1 (2007 from source 8)

Haddock import to China. Sorted on country of departure Source: China Customs Statistics, Hong Kong kg						
	1999	**2001**	**2003**	**2005**	**2006**	**2007**
Japan		74 856				
Korea Rep		1 643 630	328 760	135 418	17 642	
Denmark		53 338	141 442	436 190		265 785
U.K.		45 176	573 211	1 701 876	2 884 212	732 668
Germany		1 248 964	18 540	3 491 431	6 463 046	6 644 089
Netherlands		785 867	124 660	7 017 912	15 738 421	25 178 581
Norway		308 085	1 688 006	3 950 167	3 934 752	3 626 787
Russia		1 371 926	12 343 721	8 537 625	6 425 918	5 038 253
Canada	501 176	66 780	5	287 554	23 126	206
United States		20 275			26 500	45 244
New Zealand		347 540				
Hong Kong	118 647			7		
Belgium			7 620		782 658	349 046
Iceland			24 960	172 318	254 124	224 534
Morocco				48 150		
Dominican Rep				3 164		
Portugal				83 924		110 962
Spain				56 712	572 895	321 049
South Africa					71 971	
Uruguay					1 132	
Senegal						2 730
Faroe Islands						268 560
total	**619 823**	**5 966 437**	**15 250 925**	**25 922 448**	**37 196 397**	**42 984 473**

Table 14: Haddock Imports to China, Country of Departure. 1999-Oct 2007. Source 1 (2007 from source 8)

Also in the data for haddock, we see that the UK export to China has been reduced significantly over the last couple of years, whereas the German exports are increasing as are the Dutch. An increase should also be expected since the haddock quotas have been increased.

The data from CCS fits the information over the 25 biggest importers for haddock (source 6). We also see that almost 70% of the haddock imports are of Russian origin, but only 17% has Russia as country of departure. About 50% of the total haddock imports to China seem to be transhipped Russian haddock, thus. But, as with cod, it should be remembered that if the fish is repacked and needs a new Health Certificate, the country of origin will be given as the

issuer of that HC. Some of the imports from the Netherlands, Germany, UK and other transfer countries may also be of Russian origin.

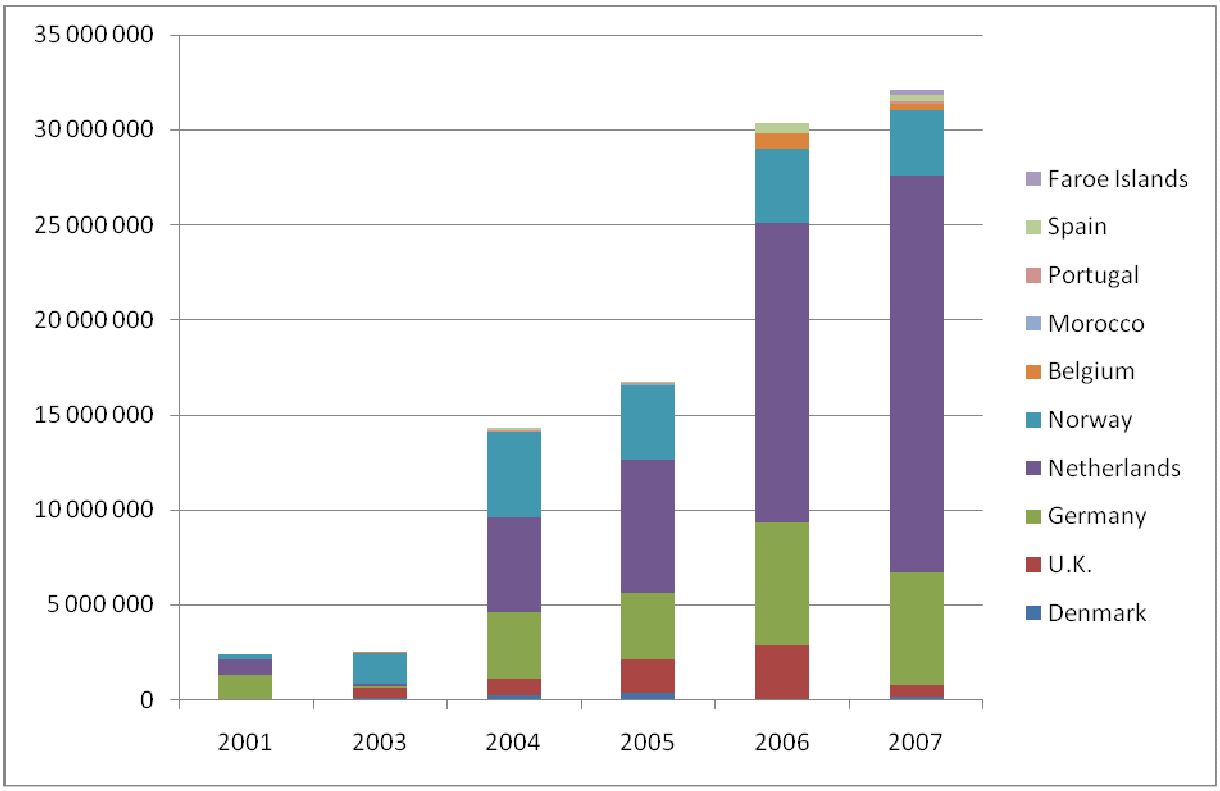


Figure 4: Haddock imports to China from potential transit countries 2001 - Oct 2007Source CCS

Industry sources in China say that the haddock market is quite different from cod. Firstly, many processors avoid it because it is a "*difficult fish*" - mainly referring to the "*problem of yellowing*". Secondly, it is a cheaper fish than cod and more of it enters the domestic Chinese market.

Filets of haddock imports to EU 25. HG weight equivalent				
	2003	2004	2005	2006
China	7 921	8 226	9 044	14 169
Russia	3 631	3 259	4 809	6 714
Norway	11 489	11 544	10 709	11 333
total	**23 041**	**23 030**	**24 561**	**32 215**

Table 15: Haddock filet import to the EU 2003-2005. Weights in tonnes HG equivalents. Source: AIPCE White Fish Study, Brussels, September 2006

As seen in figure 4 and 5, the haddock imports to China are steadily increasing. The CCS import statistics, the import by the 25 biggest companies (attachment 6) are coherent. Compared to cod, the return of haddock to the EU is quite low. Of a Chinese import of about 35 000 tonnes of HG in 2006, only filets to the equivalent of 15 000 tonnes of HG were imported to the EU (table 13). One reason may be that haddock is used in China, among other places by McDonalds.

Imports of Haddock through Qingdao Harbour. First half 2007			
	volume (kg)	**value (US$)**	**unit price US$/MT**
RUSSIA	5 488 875	16 036 937	2 922
NORWAY	1 691 348	3 705 804	2 191
FAEROE	11 691	38 580	3 300
ICELAND	36 686	110 606	3 015
PORTUGAL	137 025	314 451	2 295
WHITE RUSSIA (Belarus)	25 068	20 054	800
Total	**7 390 693**	**20 226 432**	**2 737**

Table 16: Import of Haddock though Qingdao harbour first half 2007

Industry source 6 fits the CCS data quite well. But the imports through Qingdao harbour do not at all fit the import data from customs through the same harbour for the same period. Throughout the work on this report, I have heard people talk about the possibility that cod is camouflaged as haddock.

Comparing two sources on imports through Qingdao Harbour. First half 2007		
	Qingdao harbour records	Chinese customs records
RUSSIA	5 488 875	10 595 542
NORWAY	1 691 348	5 585 023
FAEROE	11 691	11 691
ICELAND	36 686	184 236
PORTUGAL	137 025	137 025
WHITE RUSSIA (Belarus)	25 068	
SPAIN		28 048
UK		20 696
GERMANY		47 637
NETHERLANDS		448 204
Total	**7 390 693**	**17 058 102**

Table 17: Cod imports through Qingdao Harbour. Comparing two sources.

The records for the Ocean Trawler companies do not fit either, as the company itself informed us in an e-mail:

"Our own record shows that during Jan 1 to June 30, we (OTA+SSL) have imported 7869 MT of A. Cod and 4860 MT of Haddock. Total of 12729 MT of both Cod and Haddock. From the custom record,(from Qingdao harbour) OTA/SSL has imported 9334MT of A.Cod and 3281 MT of Haddock. Total is 12615 MT. If we look at both Cod and Haddock, the figure is correct. When we import Cod and Haddock, we imported them under different HS Code. We cannot understand why the deviation but at the end, our total import is very close."

There is, thus a chance and a possibility (and in some cases a reality) that cod can be misreported as haddock or the other way around.

2.5 Discussion and conclusions

It is difficult on the basis of the above to say anything confirmative about possible reductions in the overall import of Barents Sea white fish to China as a result of reduced IUU catches or about changes is the trade routes.

- Different sources for trade statistics contradict each other. If Norway – or NEAFC – wants to have a source of information to continuously monitor the trade in Barents Sea fish to China, a system of registration of imports and exports and an agreement for sharing that information must be negotiated with China.

- Industry sources systematically say that the IUU catches in the Barents Sea have been reduced. They also say that the reduction has come gradually – and not only as a result of the last couple of years' increase in control activities. The worst years, according to some, were 2000 to 2003. The same sources are also unison in the opinion that the bulk of the IUU fish stopped in Europe all the time – and was not re-exported to China. The trade data supports such a theory: Even if IUU landings have been reduced, the trade with China is stable or increasing for cod and clearly increasing for haddock.

- The Netherlands have steadily increased its share of the trade – the UK and Germany seem to have reduced theirs.

- There are some transports of fish that should be investigated further, like Russian fish entering China trough Canada and Iceland.

3. Buyers and Trade Routes

To describe all players involved in the fishing and trading of Barents Sea whitefish is an insurmountable task. This chapter will describe some of the groups/networks of fishing and transport vessels and their activities possible connections between them, focussing on some of the bigger players and some of the structures which have been involved in IUU fishing or suspected thereof.

3.1 Buyers of Russian Barents Sea cod

Although there are many companies and many traders, there seems to be a relatively small group of companies buying the bulk of the cod from the Barents Sea.

Between the fishing vessels and the buyer there are different kinds of traders. Some of these are companies that are part of a bigger group (like Nederlandse Vishandelsmaatschappij and other Ocean Trawler trading companies), others are one man set-ups who are soliciting shipments rather than buying and selling fish.

In the Barents Sea cod and haddock trade there is a quite substantial number of companies that are difficult to identify and where their beneficial owners are hidden. If such companies trade in illegal fish – it is extremely hard to trace them.

One example may be the companies buying the fish from the now blacklisted Mumrinskiy. In 2007, the Mumrinsky landed fish in Eemshaven and Kangamiut bought most of it. In 2008, the buyer of the fish from Mumrinsky is a company called Kessor Plus Ltd. No information seems to be available on this company. There are several others. Among the new traders in 2008 are the British Virgin Island registered, Netherlands based companies like: Zeevis Distribute Nederland BV and Diepgevroren Visoverslag Amsterdam BV.

3.2 Trade Routes

The cod and haddock from the Barents Sea follow many different routes. In the following I will attempt to explain the main routes and to draw attention to possible alternative routes as a consequence of improved control in harbours that earlier may have been landing point for IUU fish.

1. Fish is landed at one of the bonded cold stores along the Norwegian coast and transported to European harbours; The map below is from Samskip of Iceland. There are also other providers of this local European transport, e.g. Hammerfest Kysttransport (Arne Wæraas). This fish will either be sealed and have Norway as country of origin, and a Norwegian Health Certificate or it may labelled as of Russian Origin. It is also clear from the map that there are routes that may take fish to and from the Baltic and the Black Sea. It may also be repacked in the Netherlands and have an EC Health Certificate

2. Transhipment at e.g. Bjørnøya and landing in European harbours for consumption/processing or for further transport to China. Rotterdam-Qingdao is a 40 day trip. One example is given below.

Vessel	GUNVOR MAERSK
Voyage Number	0807
Rotterdam	10 - 11 Mar
Bremerhaven	12 - 13 Mar
Zeebrugge	-
Port Tangier Mediterranee	-
Algeciras	17 - 18 Mar
Suez Canal	22 - 23 Mar
Tanjung Pelepas	02 - 03 Apr
Singapore	-
Yantian	06 - 06 Apr
Hong Kong	07 - 07 Apr
Shanghai	-
Xiamen	08 - 08 Apr
Ningbo	09 - 10 Apr
Busan	12 - 13 Apr
Kwangyang	13 - 14 Apr
Dalian	15 - 16 Apr
Xingang	16 - 17 Apr
Qingdao	18 - 18 Apr

Table 18: Schedule Rotterdam – Qingdao. Maersk

3. Greenland → Faeroe Islands → China. This fish should be seen in the statistics as CO: Greenland and have a Greenland Health Certificate.
4. Murmansk or other North-west Russian Ports → St Petersburg by truck or train, St. Petersburg → Netherlands → China.

3.2.1 Distribution

It is hard to give definite figures on the distribution of landings between different harbours. Information available from companies, harbours, customs, and other authorities does not cover all landings and all harbours. The following should be seen as indications only. The figures are given in HG equivalent (most of the fish is Headless and Gutted, but the filet landings are calculated as their HG equivalent)

In 2005 Eemshaven was the main forwarding port for landings from the Russian Barents Sea fleet with about 20 000 tonnes, Grimsby second and Velsen third. In 2007 Velsen had more

than tripled the landings and by September 2008 it is already higher than the total for 2007. Eemshaven is reduced to a quarter of 2005 levels and Grimsby and Bremerhaven have almost disappeared as ports for transhipped cod and haddock.

Top five cod harbours 2005 HG weights		
Port	cod	haddock
Eemshaven	21 00	3 400
Grimsby	14 70	2 400
Velsen	10 000	1 600
Bremerhaven	7 000	1 500
Kirkenes	5 900	1 300

Table 19: Top five harbours 2005-2007 Source: Directorate of Fisheries

Top five cod harbours 2007 HG weights		
Port	cod	haddock
Velsen	34 100	11 800
Kirkenes	18 000	6 400
Tromsø	8 900	3 000
Båtsfjord	8 700	2 700
Hammerfest	8 600	2 600

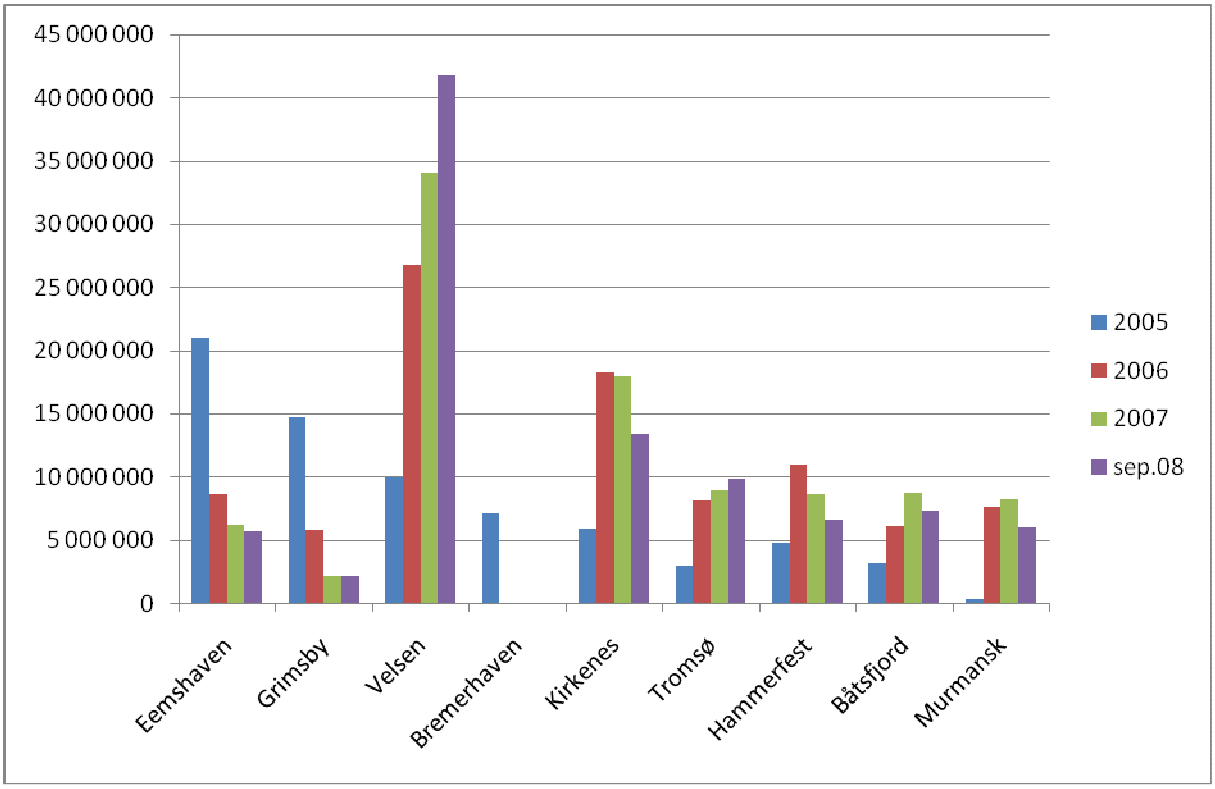


Figure 5: Development in landings of cod in different harbours. HG weights. Source: Directorate of fisheries.

Information on Spain and Portugal is sketchy for 2007(but should be available with NEAFC). With that in mind, it seems that there has been a shift from 2005 to 2007 towards Norway and Netherlands away from Germany and the UK and possibly Iberia. Be aware that the figures given for Russia here (and Arkhangelsk and Murmansk above) are from companies reporting on landings destined for re-export mainly. The total figures for Russia are, of course much higher, but official figures are not published.

Landings of cod. HG weights. Percentage of total landings registered								
	2005		2006		2007		sep.08	
Netherlands	32 304	25 %	36 068	28 %	45 375	40 %	47 687	48 %
Norway	21 337	17 %	55 413	44 %	55 207	48 %	44 960	45 %
Russia	228	0 %	6 353	5 %	5 867	5 %	4 448	4 %
UK	18 611	15 %	7 722	6 %	2 537	2 %	2 081	2 %
Spain/Portugal	933	1 %	3 947	3 %	104	0 %	491	0 %
Germany	7 145	6 %	0	0 %	0	0 %	0	0 %

Table 20: Landings from Russian vessels. 2005 – Sept 2008. Directorate of Fisheries

3.2.2 Comparing landings to export

Below is an overview of Russian cod landed in the Netherlands, Norway and the UK, and Russian cod imported to China through the same countries. The figures should be seen as illustration only. Russian cod changes from Russian to Dutch origin when repacked in the Netherland and there are cases where Russian cod that has been through the Netherlands, is recorded as coming directly from Russia when entering China.

These inaccuracies notwithstanding, the Chinese import of cod from the Netherlands may seem high compared to the landings registered there.

	2005		2006		2007	
	landings	imports to China	landings	imports to China	landings	imports to China
Netherlands	32 304	18 859	36 068	30 295	45 375	37 555
*NL incl NL as CO**		*72 358*		*89 057*		*77 699*
Norway	21 337	887	55 413	1 140	55 207	782
UK	18 611	6 796	7 722	4 039	2 537	1 045

Table 21: Landings compared to import to China. 2005-2006. Sources Directorate of Fisheries and Chinese Customs. Cod coming imported to China with Russia or the Netherlands as Country of Origin and the Netherlands as Routing Country. HG weights.

3.2.3 IUU Landings

The changes in landing pattern described in the chapter above, may, of course give rise to speculations on IUU-landings. Grimsby and Eemshaven have been suspected of being "white-washing" harbours and their share of the landings seems to have been drastically reduced. So has Bremerhaven's. And this has happened in the year when the Port State Control Regime came into place. The data does not answer, though, where all the IUU fish of 2005 did go. Since the data here is for the first 10 months of 2007 only, the landings of cod are about the same in the two years, and the landings of haddock considerably higher.

When it comes to illegal landings several industry sources are in agreement that Thorshavn was a main port for illegal landings in the early days (approximately 1998-2002) – i.e. whole vessels of unreported fish being taken to Thorshavn and from there to Spain, Portugal and China. There also seems to be agreement that Bremerhaven, Eemshaven and Grimsby were important harbours for IUU fish in the period after that and up to 2005-2006.

In 2008, traders are warning me that there is *"too much fish coming from Murmansk to the Netherlands by boat"*. Also people in the Dutch cold-store business find the volume high.

3.2.4 Russian sources on IUU-trade

The trade routes for IUU-fish are likely to have changed with the introduction of a port state control regime in NEAFC. It is also likely to be different with different types of IUU fish. According to Russian sources, illegal fishing occurs (or at least occurred) within all kinds of companies and this fish is landed, and traded in different ways, depending on what

kind of company is involved. The following are based on transcripts from conversations with these sources.

The sources divide the fishing companies/operations in three general groups:

- Legal, well connected companies, normally big companies with enough quota to support their fleet and infrastructure may be involved in IUU fishing occasionally or on the initiative of the master or when the vessel is leased to others. Norwegian authorities have suspected that such vessels have sold illegal landings in combination with regular landings in European harbours. In the past, it may have been difficult or near impossible for the end user of such fish to determine its legality.

  Big fishing companies seem now to be interested in ousting illegal catch from the markets to keep the prices high. It looks like big companies started "clearing the ground". On several occasions during the last year big cargos of illegal catch were seized by the police. Obviously, such operations would have been impossible without information from interested competitors.

- Semi-legal, medium size companies without enough quota to support their fleet, which normally consists of old inefficient boats. These might be coastal fishing companies, fishing farms. The boats are either leased out, or never go to the sea. In the first case, the quota holders go to sea and try to fish as much as possible if the controls are not in place. In the other case, the quota is fished by other companies on the basis of special agreements and then it is the boat operator who is responsible for the performance of the boat. Illegal catch, if any, is transhipped at sea to international destinations. The production is marked before transhipment or onboard transport vessel as a product of some third company (existing or not). One example of this is the fish landed in Qingdao in October 2007 (see chapter 3.5.3)

- Illegal companies or individuals which are operating solely at their own risk, use small or unregistered boats based in the places along the coast wherever the mooring and landing are possible and port control is missing. The fish normally is landed in Russia, frozen in mobile refrigerators and legalized through a number of transactions between

fly-by-night companies. The fish is normally delivered from the coast to mainland by trucks. The transit of cargo is bribed on the checkpoints of traffic police.

3.2.5 New routes out of Russia

With the port state control regime, illegal catches may have to find new routes. According to the same sources, there are at least three land-based routes from Russia to the international markets:

1. To St. Petersburg by train or truck and further to Europe or China.
2. Over land to Norway (delivered by truck, hard to identify the origin as the trader normally is not a fishing company).
3. To St. Petersburg by train, by sea to Denmark. From Denmark to Europe or China.
4. To St. Petersburg by train/truck, boat to the Black Sea. Repacking and transport to Egypt or other container port on one of the Europe-China container ship routes.

I have been given various estimates of the land trade between North-West Russia and St. Petersburg – between 10 000 and 20 000 tonnes annually may be an educated guess.

There is also the possibility of sea-transport directly from trans-shipment in the Barents Sea to a port outside the NEAFC control area. Such ports are Dakhla, many Mediterranean harbours, the Black Sea, or all the way to e.g. China or another Asian port.

Dakhla is a fishing harbour with the necessary facilities and is the base of several companies involved in fishing on Moroccan quotas. The political situation in occupied West Sahara is tense and information is hard to obtain. If you have a good fish carrier and you want to get out of the NEAFC area and have little risk of control, Dakhla is a good place. Two Norwegian traders in Russian cod have told us that Dakhla has been used as a landing harbour. There are also harbours with good facilities further down the West-African coast with a large fish trade, mainly in pelagics. Mauritania is registered with consignments of cod in 2005.

The thawing of the Arctic may open the Northern Sea Route to regular traffic between Europe and the Pacific in the summer – and thereby also for IUU fish. With today's control regime

that means that IUU fish would have to be taken directly to Asia without being transferred to a container vessel in a European Port. Shipping along the Northern Sea Route would be easy to monitor and cooperation with Russia should ensure that this does not become a major problem. The cost of transporting fish in a small fish carrier compared to a refrigerated container is very high and as of yet the Smolninskiy, going all the way from the Barents Sea to Qingdao landing cod there in October 2007, is the only known direct transport to China from the fishing grounds in the Barents Sea.

3.2.6 Traders on the European side

Landing data show a quite large number of companies buying and trading white fish from the Barents Sea. It is a mix between well known seafood producers and traders and what seems to be one-man companies, companies that do not really exist (are not registered anywhere) and cover established players cover companies for various purposes.

4. Cod and Haddock processing in China

This chapter is based on a combination of sources. The main quantitative source is the customs data for 2005, 2006 and 2007. This however is not enough; partly because it in some cases is difficult to decide what fish has been imported, and partly because many of the groups import under other names than their more well known ones. The customs data have been complimented with interviews with seafood companies at the Seafood Expo in Dalian, November 2007, a list of cod imports to China for the first half of 2007 (Source 7) and other sources.

Most of the cod and haddock processing in China is performed for a customer, usually in Europe. This customer may also own or run the plant in China, like Ocean Trawlers or they may buy the fish in Europe and let a Chinese processor cut the filets and send them back, like Pacific Andes does. They would be reluctant to buy fish from a trader who did not plan to take back the finished product, especially for an expensive fish like cod.

In the table 23 below, describing Chinese imports of Russian cod, I have excluded cod of Russian origin routed through Russia. The reason is that from interviews I know that most of it is Pacific cod and pollock. There may be some Atlantic cod that is lost in the figures though, mainly because of misreporting of routing country.

The haddock figures in table 24 should be accurate, though. We see that Ocean Trawlers through their importer Shandong Jinyi Textile have increased their share of cod from 4 to 17% and have kept their share of the haddock at about 20%.

Top Chinese Cod importers 2005-2007 HS code Cod, CO Russia routed through Atlantic Country or CO Cod fishing Atlantic Country			
	2005	2006	2007
Shandong Jinyi Textile Co Ltd	4 565 661	10 140 507	17 668 275
Shandong Orient Ocean Technologies Stock Co Ltd	3 974 097	6 621 704	8 196 015
(tom)	0	334 266	6 889 942
Rushan Huagreat Aquatic Products Co Ltd	4 236 068	3 661 808	6 018 368
Longkou Sanming Seafood Co Ltd	0	2 942 474	6 012 864
Qingdao Sanyang Aquatic Product Co Ltd	1 410 204	3 006 120	5 122 299
Rongcheng Taixiang Aquatic Food Products Co Ltd	3 256 416	2 773 548	4 967 843
Rongcheng Hai Dou Food Co Ltd	4 186 887	2 583 283	4 933 485
Weihai Weidongri Comprehensive Food Co Ltd	2 271 711	3 698 203	4 562 721
Qingdao Da Xi Yang Yong Jia Food Co Ltd	0	3 703 707	3 799 197
Qing Dao Combined Hua Tong Trade Co Ltd	1 878 256	1 752 981	3 170 821
Laizhou Fangyuan Food Co Ltd	681 585	1 410 186	3 090 655
Rongcheng Jiarong Foods Co Ltd	2 010 445	2 686 230	2 548 095
Rongcheng Nan Guang Food Co td	1 052 828	1 706 362	2 451 340
Yan Tai Lian Fa Fishery Co Ltd	2 267 140	2 877 905	2 418 935
Rong Cheng City Mu Ze Food Co Ltd	207 954	868 967	2 277 502
Qingdao Qilin Food Co Ltd	3 073 578	4 147 156	1 510 462
Dalian Kowa Foodstuffs Co Ltd	0	0	1 498 048
Qing Dao Zhu Di Fishery Co Ltd	0	224 280	1 227 996
Dalian Zhudao Foodstuffs Co Ltd	3 561 058	941 270	1 177 744
Qingdao Guoxing Food Co Ltd	13 851 266	8 420 232	0
Qingdao Zhengjin Grop Imp &Exp Co Ltd	8 260 502	8 260 502	123 354
Qingdao Zhengjin Haiqing Aquatic Products Co Ltd	1 646 820	5 585 531	42 022
Qingdao Unibond-Zhengjin Aquatics Products Co Ltd	3 380 971	5 319 155	0
Qing Dao Da Xi Yang Yong Xin Food Co Ltd	3 977 223	3 186 232	785 496
Yan Tai An Xin Food Co Ltd	2 708 937	2 913 225	0
Qingdao Yashijia Food Co Ltd	2 237 181	2 751 416	36 400
Qingdao Zhongjia Food Co Ltd	8 965 257	2 598 637	0
Qingdao Fusheng Food Co Ltd	1 089 525	299109	532 870

Table 22: Top importers of cod routed through Northern Europe 2005, 2006 and 2007. Source: China Customs Data.

Chinese haddock imports by company 2005-2007

Company	2005	2006	2007
Shandong Jinyi Textile Co.Ltd	6 725 683	7 624 015	8 231 478
Shandong Orient Ocean Technologies Stock Co Ltd	955 988	1 980 292	4 622 208
Rushan City Huanyu Food Co Ltd	2 104 943	3 956 288	3 787 476
Qing Dao Combined Hua Tong Trade Co Ltd	1 906 200	2 094 376	3 652 099
Yan Tai Lian Fa Fishery Co Ltd	250 492	1 620 944	2 250 620
NA	0	65 590	2 067 794
Qingdao Jin Beifood Co Ltd	379 235	2 830 189	1 592 272
Qingdao Hua Kai Aquatic Product Co Ltd	182 010	339 973	1 559 733
Qingdao Sanyang Aquatic Product Co Ltd	1 191 196	2 238 443	1 400 028
Yantai Shui Xing Food Co Ltd	0	0	1 340 267
Qingdao Zhongken Import & Export Company	0	850 970	1 150 675
Qing Dao Da Xi Yang Yong Xin Food Co Ltd	643 631	1 249 340	1 022 706
Qingdao Longyuan Aquatic Products Co Ltd	0	1 531 422	975 884
Dalian Xu He Lian Food Co Ltd	438 025	1 044 703	966 128
Da Lian Xin Hai Yang Food Co Ltd	1 952 401	1 779 924	714 531
Qing Dao Lian Yang Food Processing Co Ltd	0	0	669 698
Dalian Ocean Fishery Imp & Exp Corp	50 820	451 070	608 808
Qingdao Da Xi Yang Yong Jia Food Co Ltd	0	404657	587 483
Qingdao Yijia Imp & Exp Co Ltd	0	411306	552 587
Ri Zhao Rong Xing Food Co Ltd	0	0	508 409
Laizhou Fangyuan Food Co Ltd	349 289	648 692	471 321
Qingdao Fusheng Food Co Ltd	2 956 505	565604	0
Liaoning Machine Import & Export Co Ltd	778 738	199812	0
China Food Co	763 154	0	0
Shandong Meiheer Int'l Trading Co Ltd	581 715	339 973	0
Qing Dao Chang Rong Food Co Ltd	482 536	223299	0
Rushan Huagreat Aquatic Products Co Ltd	425 633	0	0
Yan Tai Yu Yuan Fishery Co Ltd	373 446	0	0
Qing Dao Hong Fu Ying Shui food Co Ltd	0	628 306	260 504
Qing Dao Run Yu Food Co Ltd	0	601 112	426 492
Qingdao Zhengjin Grop Imp &Exp Co Ltd	0	603 110	290 531

Table 23: Chinese haddock imports by company 2005-2007 Source China Customs Data.

As mentioned earlier, some companies are foreign owned and controlled and may own the fish from the fishing ground, through processing and all the way to the country of consumption.

4.1.1 Import categories

Processing with Imported Materials

The manufacturer will purchase the materials directly from overseas with foreign currency; the manufacturer will use those materials for production and finally export the end product to overseas. In this case, the manufacturer should usually pay the imported tax at first, and there will be a tax rebate if the end product they produced is exported to overseas.

Entrepot trade by bonded area

It means the product is imported into or exported through a customs warehouse inside the specific bonded area in China at first. The importer or exporter does not need to pay the customs duty within one year when the goods are store in the warehouse. Usually, the importer and exporter in this case is just the trader, and they will arrange the final buyer or seller to "import" or "export" the goods from the customs warehouse and the final buyer and seller will pay the customs duty.

Customs warehousing Trade

It means the product is imported into or exported through a customs warehouse in China. The activities is quite similar to the "enterpot trade by bonded area" with the major difference is Customs warehouse in this case means the individual warehouse outside the bonded area.

Processing and Assembling

The manufacturer will import, but not purchase, the materials from overseas; the manufacturer will use those materials for production and finally export the end product to overseas. In this case, the manufacturer need not to pay the imported tax, but the customs would claim the imported tax when they prove or believe that the manufacturer do not use all the imported materials for producing goods and exporting to overseas.

Border Trade

This is the trading activities near the border of China and other countries; they are usually trading in small amount.

Ordinary Trade

This refers to general trading that the importer or exporter will pay the imported tax in full.

Other

This refer to trading activities that the importer or exporter do not have the import and export license, but they are approved by the customs to import and export the product temporary or case by case.

4.1.2 Bonded warehouse

One development worth noticing is the increase in the use of bonded warehouse. The Qing Dao Combined Hua Tong Trade Co Ltd is the Eimskip bonded warehouse that accepted the obviously illegal landing of the cod and haddock from the Smolninskiy. It has increased its import from 1800 to 3 200 tonnes from 2005 to 2007. There are of course also other bonded cold stores, both in Qingdao and other places. The fish that enters China into these facilities are registered in the customs papers as Entrepot Trade by Bonded Area" or "Customs Warehousing Trade". If the warehouse is inside a bonded area, it is Entrepot Trade, if not it is Customs Warehousing Trade. In both cases, the importer is allowed one year's duty free storage in the warehouse. The total landings of Atlantic cod into these were about 10 000 tonnes in 2007. For haddock it was 6 500 tonnes, up from 2 200 in 2005. The share is also rising – from less than 10% in 2005 to 15% in 2007.

4.2 Ocean Trawlers

Ocean Trawlers (OT) is by far the largest buyer of cod and haddock from the Barents Sea. The company (Figure 1) was built up on bareboat charter agreements in the late 1990'ies. The company was originally based in Drøbak, Norway, and moved to Hong Kong in 2003. The holding company, MPM Invest AS was re-established in Moss later the same year. It is owned by Vitali Petrovich Orlov, Magnus Roth and Tiffin Holding Aps. It is not clear what role MPM Invest AS has today, if any. In May 2008, Gunnar Mannsfield took over the post of CEO from Thomas Zachrisson.

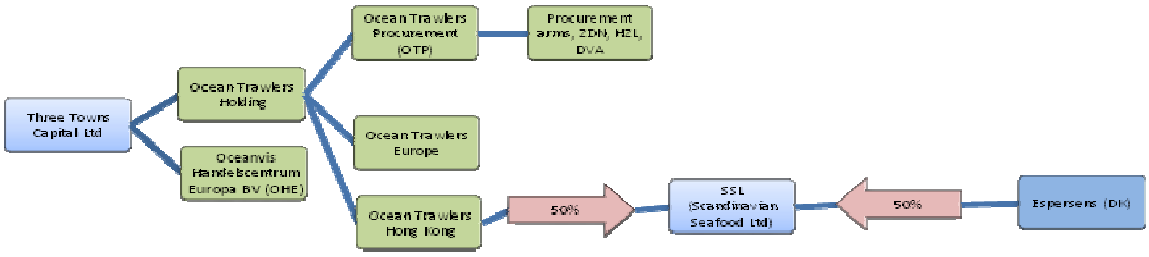


Figure 6: Company structure of Ocean Trawlers

4.2.1 Purchasing and landings

Procurement companies

Ocean Trawlers has had a variety of procurement companies and associated companies over time. It is unclear why these change so frequently. Below are some of the procurement companies used in recent times:

- **Anglia Trading** was their main procurement company for HG fish. Most purchases were booked directly into Ocean Trawlers International, but handled by Anglia. The company is dormant since 2008.
- **Bay Trading** was "related" to Ocean Trawlers according to the company in 2008. It was mainly for purchases of IQF fillets from factories in Murmansk and H/G from non – associated fishing companies. It is not clear what OT means by associated companies. Since Bay Trading ceased operations 2008 no processing for OTH is performed in Murmansk.

- **Ocean Resources Int.** is an old trading company in the OT group. It has not been active for the last couple of years and is under closing.
- **Ocean Supply Ltd, Hong Kong** is a service company in the OT group and is supporting the fishing vessels mainly with technical issues, buying repairs and equipment. There is no fish trading activities in this company, according to OT, but the company is registered as buying fish landed in Velsen.
- **Nederlandse Vishandelsmaatschappeij (NVM)** was a fish trading subsidiary of OT, but is now under closing.
- **Zeevis Distribute Nederland BV (ZDN), Diepgevroren Visoverslag Amsterdam BV (DVA)** and **Hollandse Zeevoedsel Logistiek BV (HZL)** are all wholly owned subsidiaries of OTP, and OTP is a wholly owned subsidiary of OTH.
- **Oceanvis Handelscentrum Europa BV (OHE)** is wholly owned by Three Towns Capital Ltd. (TTC), OTH's ultimate parent company,

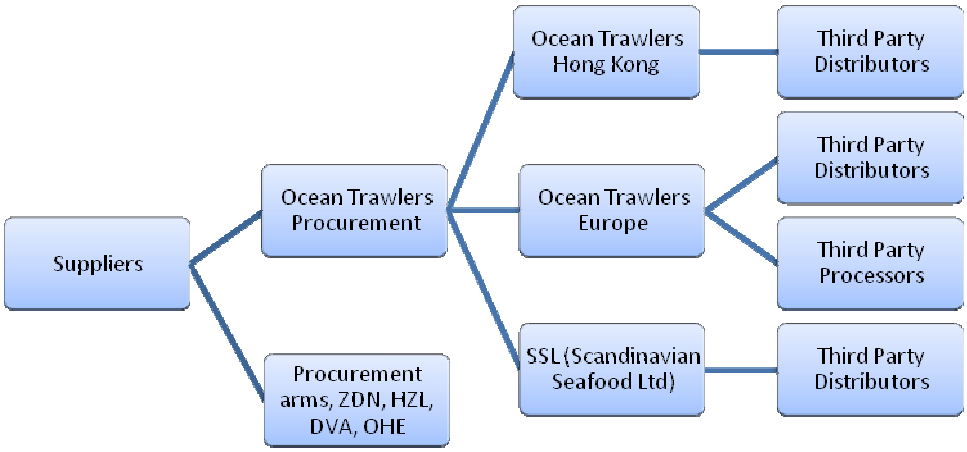


Figure 7: Supply chain of Ocean Trawlers. Source: Ocean Trawlers, personal communication.

Figure 2 shows the supply chain of Ocean Trawlers as described by the company. Ocean Trawlers Procurement Ltd buys the fish from the suppliers and sells it on to Ocean Trawlers Europe, Ocean Trawlers Hong Kong and to Scandinavian Seafood Ltd, the Joint Venture with Espersen. Ocean Trawlers Europe was incorporated in England on 22 November 2007 and trades in the global frozen fish market. Ocean Trawlers Procurement Ltd is incorporated in

Mauritius. [2] The reasons for using a Mauritius registered company between the Russian vessels and an English company may have to do with taxes.

4.2.2 Ocean Trawlers purchases in detail

According to the company itself, they buy 50 000 tonnes of HG cod and 10 000 tonnes of HG haddock yearly. This amounts to 75 000 tonnes of cod and 14 000 tonnes of haddock round weight.

Table 25 gives a list of the vessels OT bought fish from in 2008, and the approximate volumes for comparison.

	Live weight (quota weight) (factors: cod 1,5 haddock 1,4) (MT)	Bought from Barents Sea Fisheries, HG weight (MT)	HG fish exported to China (MT)	end product from China (MT)	average yield in processing)
Cod	75 000	50 000	20 000	15 000	75 %
haddock	14 000	10 000	10 000	5 800	58 %
Total	89 000	60 000	30 000	20 800	

Table 24: Company structure of Ocean Trawlers

There are 50 vessels on the List of vessels and companies that sold cod and haddock to Ocean Trawlers in 2008 (Table 2 below). Of these, 14 are on the list of vessels up for certification. These 14 had landed about 25 000 MT of cod to OT in 2008, half of the company's total purchase.

In Table 2, the landings to Ocean Trawlers are estimated for each vessel that the company bought fish from in 2008. The company has provided a list of the vessels, with a percentage of the total purchase which originated for each of them. The figures for cod catch OT and haddock catch OT in the table below are then calculated by me on the presumption that both the cod and haddock landings were common on all the vessels. In reality, some of them may have landed only cod, others only haddock, though based on what is known about OTs earlier purchasing policy this is not likely.

[2] High Court of Justice, Claim no: HC0803277, Amended Particulars of Claim

Vessel name from OT vessel list	Share of OT total catch	Vessel Name	Fishery number	Owner	Cod catch OT MT	Quota weight cod Ot MT	Haddock catch OT MT	Quota weight OT MT
Genichensk	0,15 %	Genichesk	M-0108	Kompaniya LKT Ltd	75	113	15	21
Osveiskoe	0,23 %	Osveyskoe	M-0050	Ros-1 JSC	115	173	23	32,2
Strelnya	0,35 %	Strelnya	K-1728	JSC Atlantrybflot	175	263	35	49
Sev Zvezda	0,53 %	*JSC Severnaya*			265	398	53	74,2
Energiya	0,38 %	Energiya	M-0174	Energiya Collective Farm	190	285	38	53,2
FPP Belokamenka	0,19 %				95	143	19	26,6
Saphhire II	1,13 %	Sapphire 2	M-0338	FCF RK Im Kalinin SD	565	848	113	158,2
Mekh. Kruznetsov	0,75 %	Mekanik Kuznetsov	M-0319	Sojana Collective Farm	375	563	75	105
Bukhta Naezdnik	2,63 %	Bukhta Naezdnik	G-0019	Ostrov Sakhalin JSC	1 315	1 973	263	368,2
Sevrybkholflot	2,79 %	Sevrybkholodflot	M-0271	Udarnik 2	1 395	2 093	279	390,6
Kokshaysk	2,54 %	Kokshaysk	M-0100	Shapoma	1 270	1 905	254	355,6
Bugsy	0,30 %	Bugsy	S-0159		150	225	30	42
Lotos	0,16 %	Lotos	M-0406		80	120	16	22,4
Sayda	2,15 %	Saida	M-0222	Rybprominvest Ltd	1 075	1 613	215	301
Orj	2,92 %	Or	M-0374	Kuzema CF	1 460	2 190	292	408,8
Dbeliai	3,19 %	Obeliai	M-0073	Nord Pilgrim Ltd	1 595	2 393	319	446,6
Vityaz	3,14 %	Vityaz	M-0074	Nord Pilgrim Ltd	1 570	2 355	314	439,6
Konotop	2,92 %	Konotop	M-0292	Arkhangelsk trawl fleet JSC	1 460	2 190	292	408,8
Achinsk	1,52 %	Achinsk	M-0298	Arkhangelsk trawl fleet JSC	760	1 140	152	212,8
Vetluga	2,43 %	Vetluga	M-0299	Arkhangelsk trawl fleet JSC	1 215	1 823	243	340,2
Gorsk	1,28 %	Gorsk	M-0296	Arkhangelsk trawl fleet JSC	640	960	128	179,2
Novazovask	0,25 %	Novoazovsk	M-0285	Arkhangelsk trawl fleet JSC	125	188	25	35
Klintsy	0,95 %	Klintsy	M-0287	Arkhangelsk trawl fleet JSC	475	713	95	133
Zapolyarje	1,92 %	Zapolarye	M-0301	Andeg Fisheries Collective Farm	960	1 440	192	268,8
Norilsk	1,48 %	Norilsk	M-0300	Andeg Fisheries Collective Farm	740	1 110	148	207,2
Oksino	0,85 %	Oksino	M-0312	Andeg Fisheries Collective Farm	425	638	85	119
Serpuhov	0,78 %	Serpukhov	M-0318	Severny Poljus Collective Farm	390	585	78	109,2
Nesj	0,75 %	Nes	M-0307	Nenets Rybakkholkhozsoyuz Ltd	375	563	75	105
Prizyv	1,25 %	Prizyv	M-0065	Murmansk Gubernskiy Flot JSC	625	938	125	175
Ivan Tornev	1,33 %	Ivan Tornev	M-0066	Murmansk Gubernskiy Flot JSC	665	998	133	186,2
N Repnikov	0,39 %	Nikolay Repnikov	M-0064	Murmansk Gubernskiy Flot JSC	195	293	39	54,6
Korund	3,79 %	Korund	M-0254	Murmanskiy Traloviy Flot-4	1 895	2 843	379	530,6
Topaz	5,42 %	Topaz A	M-0232	Murmansk Trawl Fleet-3 Close JSC	2 710	4 065	542	758,8
Odoevsk	1,12 %	Odoevsk	M-0063	Murmansk Trawl Fleet-2 JSC	560	840	112	156,8
Strelets	5,70 %	Strelets	M-0269	Murmansk Trawl Fleet 1	2 850	4 275	570	798
A. Gugunov	4,22 %	Anatoliy Gugunov	M-0201	Murmansk Trawl Fleet JSC	2 110	3 165	422	590,8
B. Zaytsev	4,00 %	Boris Zaytsev	M-0202	Murmansk Trawl Fleet JSC	2 000	3 000	400	560
P. Petrov	0,26 %	Pyotr Petrov	M-0059	Murmansk Trawl Fleet JSC	130	195	26	36,4
Novator	0,80 %	Novator	M-0058	Murmansk Trawl Fleet JSC	400	600	80	112
Y. Gunin	2,17 %	Yakov Gunin	M-0204	Murmansk Trawl Fleet JSC	1 085	1 628	217	303,8
I. Shankov	2,18 %	Ivan Shankov	M-0200	Murmansk Trawl Fleet JSC	1 090	1 635	218	305,2

Vessel name from OT vessel list	Share of OT total catch	Vessel Name	Fishery number	Owner	Cod catch OT MT	Quota weight cod Ot MT	Haddock catch OT MT	Quota weight OT MT
Rubin	1,38 %	Rubin	M-0250	Rybprominvest Ltd	690	1 035	138	193,2
Kap. Gromtsev	4,00 %	Kapitan Gromtsev	M-1015	Rybprominvest Ltd	2 000	3 000	400	560
Georgievsk	3,87 %	Georgievsk	M-0105	Karat-1 JSC	1 935	2 903	387	541,8
K. Shajtanov	2,57 %	Kapitan Shaytanov	M-0104	LCC Karat	1 285	1 928	257	359,8
Isumrud	5,12 %	Izumrud	M-0334	Rybooloveckaya Kompaniya Sogra Ltd	2 560	3 840	512	716,8
Kapitan Durachenko	5,94 %	Kapitan Durachenco	M-0407	Alternativa JSC	2 970	4 455	594	831,6
Amerloq	2,49 %	Amerloq	M-0032	Gavan-Solovki JSC	1 245	1 868	249	348,6
Gremyachinsk	3,00 %	Gremyachinsk	M-0303	Rybooloveckaya Kompaniya Sogra Ltd	1 500	2 250	300	420
Atik	0,31 %	Atik	M-0247	Iceberg plus Ltd	155	233	31	43,4
TOTAL					**49 985**	**74 978**	**9 997**	**13 996**

Table 25: List of vessels and companies that sold cod and haddock to Ocean Trawlers in 2008

4.2.3 Transhipment and landings

In 2005 Ocean Trawlers landed fish in many European harbours, mainly in Velsen and Eemshaven in the Netherlands, but also in Swinoujscie, Poland, where their partner Espersen has a factory, in Grimsby and in the Faeroe Islands. In 2005 at least 24 different transport vessels were used. Some of the transporters seem to be dedicated to a few routes, like the Petrogradskiy and the Petrozavodsk, landing fish for Ocean Trawlers and others in Grimsby in 2005 and having changed it to Velsen in 2007.

4.2.4 Processing in China

Ocean Trawlers imports into China go through the Hiking Group. According to OT, Hiking is also importing for other processors. In some sources, the imports are registered under “Hiking Group Shandong Gaintex Co Ltd” (source 7) and in some sources as “Shandong Jinyi Textile Co Ltd” (source 6). Some processing is Ocean Trawlers owned and some of it is processed by SSL (Scandinavian Seafood Ltd) a joint venture with Espersen. Some of the SSL fish is imported through Qingdao Xiyuan Frozen Food Co Ltd.

The Ocean Trawlers Chinese factories are all situated in and around Qingdao, Shandong Province.

Gain Seafood is a part of the Hiking Group, as shown in Figure 8. It processes Barents Sea whitefish on long term contract with Ocean Trawlers.

Xiyuan Cold Storage is also processing Barents Sea whitefish on long term contracts. Subsequent to the merger between OTA and SSL they are currently operated under Skandi Seafood Ltd., the joint venture company in which each of Three Towns Capital and Espersen is holding 50% of the shares.

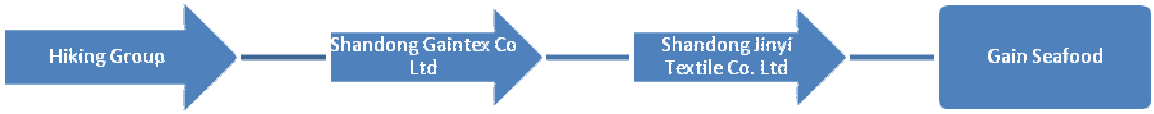


Figure 8: Part of Hiking Group Structure

Fuchang and Changyong are two processors listed in communication to me from Ocean Trawlers with no further description. The actual identity of the companies is not perfectly clear. The List of Registered Seafood Establishments and Vessels Exporting to U.S. has two companies called Fuchang: *Zhanjiang Fuchang Aquatic Products Freezing Plant* and *Qingdao Fuchang Foods Co., Ltd*. There is also a *Weihai Fuchang Food co Ltd,* exporting filets from China. The EU list of approved seafood exporters to the EU has a *Fuchang Refrigeration Plant* in Qingdao on their list. I can find no reference to Changyong in import or processing statistics.

In 2008, OT was processing at Shimeian in Licang District, Qingdao and Sanhe in Rushan. It is not clear what happened to these two last factories.

None of the factories which are contracted are owned by OTH or TTC but by different, private 3rd party owners.

4.2.5 Ocean Trawlers imports to China 2005-2007

Below in Tables 3-8 is an overview of imports of cod 2005-2007 registered in China Customs Statistics on Shandong Jinyi Textile Co Ltd, which is the main Ocean Trawlers fish import

vehicle. These figures are not sorted by price or country of departure, and may contain pollock.

Shandong Jinyi Textile Co Ltd	Cod	2005
Country of Origin		volume (kg)
Chile		**27 487**
Denmark		**69 529**
Germany		**195 858**
Netherlands		**50 013**
Norway		**1 528**
Russia		**29 130 534**
Uruguay		**364 956**
Total		**29 839 905**

Table 26: Ocean Trawlers cod import 2005 Source China Customs Data.

Shandong Jinyi Textile Co Ltd	Cod	2006
Country of Origin	Routing Country	volume (kg)
Russia		**21 245 132**
Total		**21 245 132**

Table 27: Ocean Trawlers cod import 2006 Source China Customs Data.

Shandong Jinyi Textile Co Ltd	Cod	2007
Country of Origin	Routing Country	volume (kg)
Denmark	Denmark	**47 569**
Greenland	Germany	**168 596**
Netherlands	Netherlands	**607 467**
Norway		**647 863**
Russia		**26 495 955**
Spain	Spain	**220 082**
The Faroe Islands	Netherlands	**97 146**
Total		**28 284 678**

Table 28: Ocean Trawlers cod import 2007 Source China Customs Data.

Shandong Jinyi Textile Co Ltd Haddock 2005	
Country of Origin	volume (kg)
Iceland	24 024
Norway	**315 184**
Russia	**6 386 475**
Total	**6 725 683**

Table 29: Ocean Trawlers haddock import 2005 Source China Customs Data.

Shandong Jinyi Textile Co Ltd. Haddock 2006	
Country of Origin	volume (kg)
Norway	**415 162**
Russia	**7 208 853**
Total	**7 624 015**

Table 30: Ocean Trawlers haddock import 2006 Source China Customs Data.

Shandong Jinyi Textile Co.Ltd Haddock 2007	
Country of Origin	volume (kg)
Netherlands	**576 823**
Norway	**25 874**
Russia	**7 426 286**
Spain	**168 891**
Total	**8 197 874**

Table 31: Ocean Trawlers haddock import 2007 Source China Customs Data.

4.3 Pacific Andes

Hong Kong based Pacific Andes is one of the biggest seafood producers in the world, with an annual production of 350 000 tonnes in 2006 and 471 000 tonnes in 2007. It would go too far to describe the entire structure of the Pacific Andes Groups here, but I will give a brief outline of the Chinese side.

Pacific Andes processing plants in China			
Plant	**Opened**	**Products**	**EU Plant Number**
Xinxing Foodstuff (Qingdao) Co, Ltd.	OCT, 2000	Mainly pink and chum salmon. Alaska Pollock, redfish	3700/02649
Aqua Foodstuff (Qingdao) Co, Ltd.	OCT,1998	Pollock, Flounder	3700/02659
Pacificandes Foodstuff (Liuting) Co,Ltd.	OCT, 2005	Apo, Salted Apo, P. Cod, Saithe, GHL	3700/02951
Qingdao Canning & Foodstuff Co, Ltd	MAY, 1993	Apo, Red fish, Orange roughy	N/A
Hongdao	2008?		

Table 32: Pacific Andes processing plants

Pacific Andes has been processing fish in China for 15 years. They started building up large scale processing when the Soviet Union collapsed and Russian pollock and other fish became available for international investors and processors. They built up a structure of filleting factories based, among other sources, on pollock from the Resource Group International (Røkke) controlled Russian pollock vessels. In 2007, Pacific Andes imported around 50 000 tonnes of pollock for processing in China (source 7)

In 2004 Pacific Andes got control over the former state controlled Chinese "China Fisheries International Limited" (CFIL). On 12 July 2004, Zhonggang, a 70% owned subsidiary of PAH, acquired 49.9% of the issued share capital of CFIL and at that time Jade China was the other shareholder which beneficially owned the balance of 50.1% of the entire issued share capital of CFIL.

Golden Target, a wholly owned subsidiary of PAH, further acquired 2% of the issued share capital of CFIL from Jade China. As a result of these acquisitions, PAH indirectly owned 51.9% of the entire issued share capital of CFIL and CFIL became an indirect subsidiary of PAH and PAIH on 31 December 2004. PAH has subsequently undergone a group restructuring exercise in relation to its shareholdings in CFIL whereby CFIL became an indirect wholly owned subsidiary of CFGL.

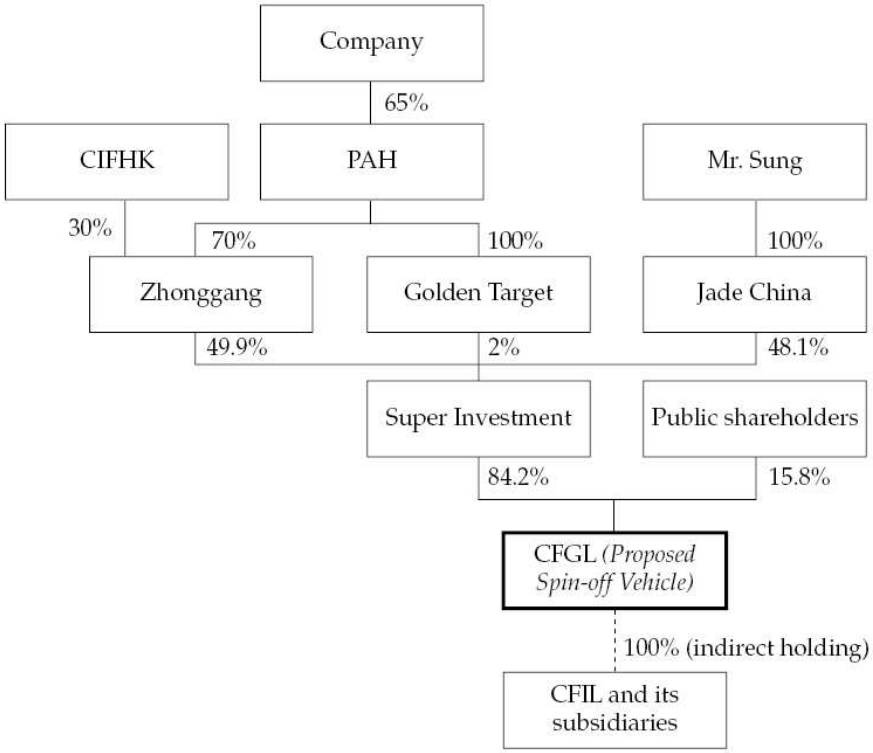


Table 33: Pacific Andes China company structure. "Company" is Pacific Andes Holding International. CIFHK is China International Fisheries Hong Kong.

The company has specialised subsidiaries for different parts of the seafood business. PAH is purely supply chain management – it only buys and distributes the products. It supplies 20% of China's seafood import. Pacific Andes is said to be growing at a rate of 50% per annum and their new processing plant at Hoandao has a processing capacity of 60 000 MT.

According to the company, they buy about 4 000 tonnes of Atlantic cod annually. They buy their cod from various suppliers, amongst them Kangamiut, and at Norwegian auctions. They do not buy haddock.

Pacific Andes purchases of Atlantic cod 2006 and 2007			
	Port of discharge	**2006**	**2007**
Norway		**1987,5**	**2416,4**
	Aalesund	939,9	224,9
	Andenes	26	
	Båtsfjord	90,9	290,4

	Hammerfest	45,8	47
	Honningsvåg		19,7
	Kirkenes	574,6	811,3
	Senjahopen	122,6	
	Måløy		9
	Tromsø	187,7	1014,1
Netherlands		**932,8**	**1766,5**
	Eemshaven	701,9	1312,9
	Ijmuiden		77,1
	Velsen	230,9	376,5
England		**296**	**307,1**
	Grimsby	296	307,1
Faeroe Islands			**102**
	Kollarfjordur		102
Demark		**0**	**76,5**
	Hirtshals		76,5
Russia		**491,5**	**0**
	Murmansk	491,5	
total		**3707,8**	**4668,5**

Table 34: Pacific Andes purchases of Barents Sea cod. Landing distribution. Source: Pacific Andes

4.3.1 Brands

Pacific Andes produces and packs for several brands in the US and Europe, among them Matlaw's, (National Fish and Seafood, Gloucester US) Ocean Deli, Fisherboy, Sea Queen, Harbour and Farmfresh.

4.4 Unibond and Young's Bluecrest and Findus

Unibond is one of the bigger processors of cod in China. According to the company (interview), they process 10 000 tonnes of HG cod a year at three plants – of which 8 000 tonnes is Atlantic cod[3]. The Qingdao Harbour import list for the first half of 2007 (source 7), shows a total of just about 4 000 tonnes import to Unibond, of which 3100 is Atlantic cod, imported from Norway, Russia, the UK and Portugal. They also process about 500 tonnes of Haddock and 6 000 tonnes of pollock. (Source 7). Unibond has two processing factories in Qingdao.

- Qingdao Unibond Premium Seafood Processing Ltd, Jinling Industrial Park,
- Qingdao UZP Foods Processing Ltd.

In addition they have processed at one of Zhengjin's plants, also in Qingdao. Zhengjin is Unibond's main partner in China. Zhengjin is a consortium with many branches.

Unibond provides fish for, among others, Young's in the UK and Findus – both are part of the Foodvest group together with The Seafood Company in the UK. In the Foodvest Group purchasing and supply chain are part of the group functions and thus common for all of the above companies. Also the Nordic Group says they use Unibond as their Chinese processor.

Unibond is importing their fish into China under three names Qingdao Da Xi Yang Yong Jia Food Co Ltd, Qing Dao Da Xi Yang Yong Xin Food Co Ltd and Qingdao Unibond-Zhengjin Aquatics Products Co Ltd. The latter stopped importing in 2006. If Unibond's own information that they import 8000 tonnes of Atlantic cod annually, the company must have one more importer not included in the tables below.

[3] Personal communication, November 2007

Imports of Cod to Unibond plants in China 2005, 2006 and 2007			
	2005	2006	2007
Qingdao Unibond-Zhengjin Aquatics Products Co Ltd	5 393 990	5 319 155	
Qing Dao Da Xi Yang Yong Xin Food Co Ltd	3 977 223	3 184 672	785 496
Qingdao Da Xi Yang Yong Jia Food Co Ltd		3 703 707	3 799 197
Total	**9 371 213**	**12 209 540**	**4 586 700**

Table 35: Unibond cod imports 2005, 2006 and 2007 Source China Customs Data.

Import figures show imports in 2005 of large volumes of cod from Ireland routed through the Netherlands (1 700 tonnes) and in 2006 from Lithuania routed through Germany, (820 tones), from Germany routed through Belgium (209 tonnes) and from Ireland routed through the Netherlands (112 tonnes). They also imported 50 tonnes from Guinea routed through Spain. Young's Seafood has been contacted on several occasions and asked for a description of these shipments, but has not answered. The Irish and Lithuanian fish is of low value, about 450 US$ per tonne, and may very well be blue whiting.

Imports of Haddock to Unibond plants in China 2005, 2006 and 2007			
	2005	2006	2007
Qingdao Unibond-Zhengjin Aquatics Products Co Ltd	9 072		
Qing Dao Da Xi Yang Yong Xin Food Co Ltd	643 631	1 249 340	1 022 706
Qingdao Da Xi Yang Yong Jia Food Co Ltd		404 657	587 483
Total	**652 703**	**1 653 997**	**1 610 189**

Table 36: Unibond haddock imports 2005, 2006 and 2007 Source China Customs Data.

4.5 Sirena – China Starfish - Qingdao Guoxing Food Co Ltd

China Starfish, Guoxing in mandarin, used to be one of the biggest importers of cod from Europe. Their imports have dropped from 14 000 tonnes in 2005 to nothing in 2007.

Country of Origin	2005	2006	2007
Netherlands	10 171 342	4 806 442	
France	2 101 292	2 501 856	
UK	1 527 832	1 111 934	
Germany	237 896		
Norway	50 600		
Total	**14 089 162**	**8 420 232**	

Table 37: *China Starfish/Qingdao Guoxing cod imports 2005-2007* Source China Customs Data.

China Starfish produces for Sirena, according to other companies in the business. Sirena/China Starfish have not confirmed this. It is not clear whether China Starfish produces for other companies as well. They have three processing plants: Two in Qingdao and one in Yantai - China National Fisheries Corporation branch in Yantai[4].

Sirena is a large Danish company which also has a branch in Norway. The company controls through long terms agreements and part ownership a group of Greenland and Canada registered factory trawlers.[5]

Sirena Norway AS is owned 85% by Sirena Salmon in Denmark and 15 % by Steinar Magne Bakka. Bakka was part of Dovod Norge As. One of the board members of Dovod was Kristian Eidesvik of, among other companies Caiano and Sjøvik.[6] Caiano sold its fleet of refrigerated cargo vessels to Green Reefers in 2007.[7]

4.5.1 Sjøvik – Karelia

Sjøvik controls the Karelia II, the former Norwegian vessel Hopen and one of the biger quota owners in the Russian fleet. Keralia II lands most of its fish in Kristiansund, but do also do transhipments, lately to the Viyaevo for landing in Murmansk.

[4] http://cymfcapp.en.china.cn/
[5] www.sirena.dk
[6] www.bizweb.no
[7] www.sea-web.com

4.6 Nowaco

Nowaco is a Danish fish trading firm which has expanded steadily and rapidly over the last 10 years or so. They claim to be one of the biggest importers of Chinese processed food in Europe. According to their web-page, they have three processing factories in China. [8]

They import their cod and haddock under the name of Qingdao Qilin Food Co Ltd. Ocean Trawlers claim to supply the raw material for Nowaco and it is not clear to me whether the Qilin imports are fish purchased by Ocean Trawlers in Europe and sold to Nowaco or whether this is separate. Nowaco are now importing more and more of their cod from Greenland and less from Russia.

Qingdao Qilin Food Co Ltd. Cod imports 2005	
Country or Origin	**Volume**
Norway	26 084
Russia	3 047 494
Total	3 073 578

Table 38: Nowaco/Qingdao Qilin cod imports 2005 Source China Customs Data.

Qingdao Qilin Food Co Ltd. Cod imports 2006	
Country of Origin	**Volume**
Greenland	226 639
Netherlands	50 328
Norway	83 273
Russia	3 786 916
Total	4 147 156

Table 39: *Nowaco/Qingdao Qilin cod imports 2006* . Source China Customs Data.

Qingdao Qilin Food Co Ltd. Cod imports 2007	
Country of Origin	**Volume**
Greenland	572 137
Norway	54 163
Russia	858 188
United Kingdom	25 974
Total	1 510 462

Table 40: Nowaco/Qingdao Qilin cod imports 2007. Source China Customs Data.

[8] www.nowaco.com

4.7 Nordic Group

The Trondheim based Nordic Group is supplying the American market with North-Atlantic fish –cod, haddock farmed salmon and European Lakefish. Terje Korsnes is chairman of the board. The other members of the board are Kjell Olaf Larsen, Sigurd Larsen. Yngve Myhre, and Morten Hyldborg Jensen. Richard Stien is the CEO. Nordic Group is owned by Transatlantic Partners (69%) and Verdane Capital V B K/S (11%). Transatlantic Partners is owned by Korsnes' investment company, Transatlantic Invest AS. In March 2006, Aker entered an agreement with Korsnes and Stien to sell them their shares in Nordic Group.

Nordic Group markets cod and haddock in the US under the brand "Fjord Fresh" and "Blue Fjord" – twice frozen "product of China. "

Figure 8: Blue Fjord; Twice-frozen product of China Source Terje Korsnes: http://www.seafood.no/page?id=226

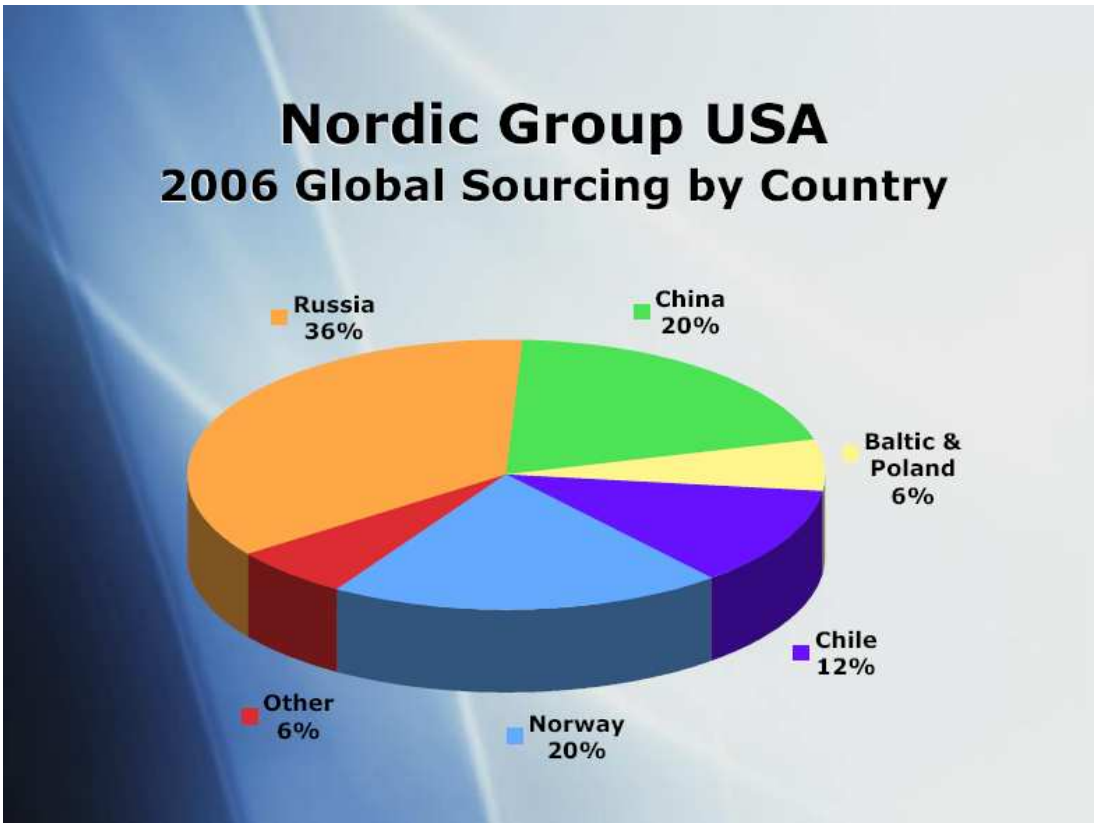


Figure 9"Nordic Group Sourcing". Source Terje Korsnes: http://www.seafood.no/page?id=226

4.8 Taixiang Group

Taixiang group is located in Rongcheng, in China's Shandong Province. The group began in 1994 and presently employs nearly 4,000. It operates several enterprises, including Rongcheng Taizhen Food Co., Rongcheng Aiyuan Food Co., and Rongcheng Taiguang Import and Export Co. The parent company of the group is Taixiang Aquatic Food Co. Ltd.[9]

The company has increased their imports of Atlantic cod and imported 5 000 tonnes of HG cod in 2007. The cod imports from 2007 were as seen below. The New Zealand import is most probably Hoki and some or all of the Dutch cod may be blue whiting. Most of the company's imports are of the "Processing with Imported Materials" category - they buy the fish, process it and sell it again.

[9] Intrafish, February 2008

Rongcheng Taixiang Aquatic Food Products Co Ltd. Cod 2007	
Country of Origin	Volume
Netherlands	**3 577 537**
	599 575
	2 977 962
New Zealand	**531 714**
Russia	**858 592**
Total	**4 967 843**

Table 41: Rongcheng Taixiang Aquatic cod imports 2007. Source China Customs Data.

4.9 Huangdao Island and Sanyang Aquatic

The Huangdao is a development area across the Jiaozhou Bay from Qingdao and Eimskip seems to be one of the major developers. More or less at the same time as the landing of Smolninskiy, on Oct, 6th, 2007, Eimskip signed a contract with the Huangdao government. The Icelandic president, Mr Olafur Ragnar Grimson and the Acting Governor of Shandong Province, Mr. Jiang Daming were present at the ceremony. According to the agreement, Eimskip will heavily invest about $1 billion in Huangdao Area (where logistics and warehousing business is mainly developed) in the future. Meanwhile, Eimskip also signed Letter of Intent with Shandong Luyi Container Transportation Co., Ltd to acquire her 60% shares. [10] Although the area is not yet much developed there are enough facilities to unload the Smolninskiy.

There are three processing companies with address Huangdao. The biggest is Qingdao Sanyang Aquatic. They have more than doubled their cod import from year to year. In 2005 they imported 1 500 tonnes, in 2006 3 000 tonnes and in 2007 they imported 5 100 tonnes of cod from Chile, Denmark, Germany, Greenland, Netherlands, Norway, Spain and Russia in 2007. The Russian fish was routed through the Netherlands and Spain.
They also import quite substantial volumes of haddock –1 200 tonnes in 2005, 2 200 in 2006 and 1 400 in 2007.

[10] http://www.eimskipcoldstore.com/eimskipnin.aspx?id=12&type=1

Qingdao Sanyang Aquatic Product Co Ltd	5 122 299
Chile	24 990
Denmark	457 291
Germany	267 227
Greenland (through Denmark)	838 241
Netherlands	842 644
New Zealand (Hoki)	1 862 845
Norway (through the Netherlands)	104 535
Russia (through the Netherlands and Spain)	571 733
Spain (through Belgium and Spain)	152 793
Total	**5 122 299**

Table 42: Sanyang Aquatic cod imports 2007. Source China Customs Data.

The Qingdao Sanyang runs three processing factories; Huangdao processing factory, Qingdao refrigeration factory and Huanghai refrigeration factory. The company is not found in the list of imports through Qingdao Harbour first half of 2007 (source 7), which strengthens the supposition that they import through Huangdao.

The other two companies, Qingdao Weite and Qingdao Futicco are not registered with cod nor haddock imports.

4.10 Qingdao Hainuo Foodstuff Co Ltd

Qingdao Hainuo Foodstuff Co. is a Sino-Japanese joint venture founded in 1999. The company produces mainly saltfish based on pollock and cod. Most of the cod is Pacific cod, but do also import Atlantic cod, mainly from Norway – about 250 tonnes per year. Their cod imports through Qingdao Harbour (source 7) are higher than the official customs record figures. The company does not import haddock.

4.11 Unit prices

The importance of unit price in sorting out the different species of cod fish in the import statistics merits a short chapter on the issue. The Qingdao harbour figures give volume and value for the different imports. The value of cod exported from Norway can serve as a comparison; it was US$ 4 162/MT for the same period according to export statistics from Norway Statistics (SSB).

Of the imports through Qingdao harbour, 11 of 82 are registered with a unit price above US$ 4000/MT and 30 above US$ 3000/MT. The average is US$ 2 105/MT. On average the Atlantic cod prices are higher than that of Pacific cod, but the variety of unit prices e.g. cod from Norway at 1000 or 1500 US$/kg is about a quarter of the real price.

Some companies are vertically integrated and buy fish from themselves. They are in a position to decide where (in which tax regime, for example) they want to make their profits.

The pollock shipments registered in the Qingdao harbour, show unit prices from 10 000 US$ per tonne for fish from France, to 500 for fish from the Faroe Islands. Pollock from Norway is imported at 3 000 US per tonne as does pollock from other Atlantic countries. These shipments would be within the range ascribed to cod if sorting imports on unit price. Essentially, the unit prices reviled in the Qingdao harbour files show that unit price is not a very accurate parameter for indentifying fish species.

Company	volume (kg)	value (US$)	unit price (US$/MT)	%
Qingdao Hongfu for Blue Ice + Bloomsbury	720 757	789 856	1 096	1,6 %
Trident	11 212 559	14 227 718	1 269	24,7 %
China I&E Corp. Of State Farms – for Icelandic and Joe Qiao (mainly EU market	408 676	1 939 506	4 746	0,9 %
Longyuan – for EU market	438 527	1 957 966	4 465	1,0 %
Nowaco	1 715 728	729 654	425	3,8 %
Ocean Trawlers Asia	9 333 669	30 325 499	3 249	20,6 %
Yantai M&K - for Saltfish.	73 854	273 260	3 700	0,2 %
Pacific Andes	3 252 543	9 251 359	2 844	7,2 %
Qingdao Hainuo Foodstuffs - Simon Sui - for Saltfish	4 901 344	7 113 372	1 451	10,8 %
Unibond	4 191 935	7 370 771	1 758	9,2 %
Qingdao Tianyuan / Jing International for USA market	76 247	76 247	1 000	0,2 %
Zhengjin	400 281	855 987	2 138	0,9 %
Haifeng	1 106 683	4 102 314	3 707	2,4 %
Qingdao Huaqin	81 728	337 107	4 125	0,2 %
Chang International	257 085	528 759	2 057	0,6 %
New Continental Seafood	569 607	2 785 491	4 890	1,3 %
China Starfish - Sirena	398 573	1 436 239	3 603	0,9 %
unknown	6 229 257	11 410 745	1 832	13,7 %
total	**45 369 053**	**95 511 850**	**2 105**	**100,0 %**

Table 43: Cod imports to China Jan-June 2007. Sorted on importing company. Source 7

4.12 Imports from Norway

It is worth taking a look at the imports from Norway - firstly because the Russian landings in Norway are increasing and secondly because it is useful to prepare for future traceability challenges.

The cod import from Norway over Qingdao harbour first half 2007 was 1 144 tonnes. The total import to China was 4 549 808 in the same period. The Norwegian export to China in the same period was, according to Statistics Norway, 2 293 tonnes. There seems to be a lot of confusion in the various data sources on country of origin and country of departure. Norwegian export figures may include Russian cod landed in Norway and re-exported to China.

The imports from Norway range in price from US$ 3 500/MT to 1000. There are several imports listed with a unit price of US$ 1 000/MT which might be a spelling mistake or price not being given in the import documents.

Country of origin	volume (kg)	value (US$)	unit price (US$/MT)	%
Russia	36 770 512	77 428 389	2 106	81,0 %
USA	5 407 385	12 558 197	2 322	11,9 %
Norway	1 144 640	2 495 452	2 180	2,5 %
Netherlands	568 360	311 208	548	1,3 %
New Zealand	38 000	15 200	400	0,1 %
Japan	389 655	1 036 955	2 661	0,9 %
Greenland	199 154	120 009	603	0,4 %
Denmark	166 113	166 113	1 000	0,4 %
UK	315 875	285 763	905	0,7 %
Portugal	80 024	126 812	1 585	0,2 %
Faeroe Islands	97 146	437 157	4 500	0,2 %
Uruguay	51 412	51 412	1 000	0,1 %
Togo	25 613	112 697	4 400	0,1 %
France	41 063	41 063	1 000	0,1 %
Byelorussia	74 101	325 423	4 392	0,2 %
Total	**45 369 053**	**95 511 850**	**2 105**	**100 %**

Table 44: Cod imports over Qingdao harbour Jan-June 2007. Sorted on exporting country. Source 7.

5. Description of control mechanisms and private control

A key condition for exposing illegal fishing and illegal trade is to have good control and description of the legal trade. It is against the background of the legal trade that the illegal becomes visible. The other point to make at the introduction of this chapter is that the control primarily needs to be conducted close to the fishing. Without good records and good control on what is fished, transhipped and landed, no control further down the chain can repair it.

There are control mechanisms and/or sources for tracking at all the points in the chain described; the fishing ground, the transhipment, the landing in port, the export and import and the re-export and re-import.

Today there are sever problems in using this chain of control, partly because some controls are missing and partly because the reporting systems from these do not follow compatible formats (e.g. there is no agreement on what a cod is or what a country of origin is).

The NEAFC port state control regime is a major improvement, but has the weakness that fish transports that are not landings are not recorded. It also has the weakness that it is not open information.

I have not been able to get any interviews with Chinese officials regarding control mechanisms. My impressions of the control systems thus stems from industry players and academics.

The main concern of the Chinese control system has to do with tax. Fish imported for the sole purpose of processing are exempt from custom duties. There are standard yields for different species and products. To avoid paying the tariff, (26%) you must stay above that standard yield. When asked what yield you could have upwards before there was any reaction, on processor said that "*as long as you are below 100% it is ok."* This control system, thus, works

on the opposite side than what you need to see if IUU fish enters the process. It is possible that really high yields are being claimed to camouflage IUU fish. This would be necessary if the IUU fish was not counted in the imports. But if the customs process is corrupt and IUU fish are entering China and receiving legal paperwork, e.g. through forged certificates of origin or bribing customs officials to provide legal import paperwork, falsely claiming a high yield wouldn't be necessary.

The fish from the Smolninskiy was imported with papers and the buyers will not have any problem with Chinese controls as long as the fish is not sold in China, but is re-exported. (The fish is imported as "Customs Warehousing Trade"). The only problem would be if a retailer in Europe demanded papers to show that the fish was legally caught since the landings would not be found in the NEAFC port state control regime. But if the processor in China processes maybe 10 000 tonnes of cod per year, it is no problem adding 400 tonnes of IUU fish.

Mixing different sources or batches of raw materials is prohibited under the CIQ (China Inspection and Quarantine) regulations and is controlled quite rigorously, according to the processors. The reason is that there have been several instances of "food scandals" over the last few years and Chinese authorities are eager to avoid more of these. In some larger factories, the CIQ is more or less present all the time or control at a daily basis. In others there is video surveillance. It is said that the control is better in Shandong (Qingdao) than in Dalian.

5.1 The EU regulations

New EU regulations to prevent IUU fishing are expected to come into force in 2010. The regulations are partly inspired by the NEAFC Port State Control Regime (and the other way around) in its dealing with transhipments and landings. Non-EU vessels must give a 72 hour notice before landing in an EU port, and transhipments in EU waters will be prohibited as will transhipment to EU vessels in other waters.

The provisions most important to China are that fish from non-EU countries must come with catch documentation. Chinese processors must thus get the catch documentation with the fish they import and provide it to the buyer when the processed product is exported. For most cod processors, this should not be a problem. Firstly because, as mentioned earlier, they usually process the fish for the one they bought it from. If Findus wants Pacific Andes to process cod,

they buy it from a vessel or trader in Europe, send it to China and get it back again, with the paperwork attached. If the CIQ regulations already in place in China are followed and documented, this should be sufficient to make the China processed fish comply with the EU-regulations.

5.2 Private control and audit systems

The bigger players have their own, internal control systems and some of these are audited by external agents. The following is a short description of some of these.

5.2.1 Det Norske Veritas – Ocean Trawlers

"Ocean Trawlers has had DNV (Det Norske Veritas) to audit their control system. ***Sustainability in practice*** *can be seen as the art of doing business in an interdependent world. Mr. Lagerqvist and Mr. Mansfeld then proceeded to look at how the Group has made the issue of sustainability an integral part of its business model and what results had been achieved. One of the examples that were shared with the audience was of course the Traceability System that was now also audited and verified by DNV" (Ocean Trawlers newsflash)*

The scope of verification for the DNV audit was:

To verify the accuracy, integrity and reliability of OTI's internal quota control system by reviewing the underlying purchasing documentation to confirm that the Cod & Haddock purchased by OTI during quota year 2006 was within the quotas issued to the relevant fishing companies by Murmanrybvod and that the system was so accurate and reliable and had such integrity so as to form the basis for continued service in OTI's operations.

a) Review quota control procedures developed by OTI to ensure that:

- Cod and Haddock were purchased within the legal quotas of each relevant fishing company.

b) Review of the evaluation and selection processes of the suppliers to ensure that:

- fishing vessels used to harvest and transport vessels used to transport catches were not on either of the black lists set up by NEAFC, NAFO or the Norwegian Directory of Fishery.
- that each fishing vessel used by the relevant fishing companies was entrusted with legal and sufficient quotas to supply OTI.
- there was always a designated individual responsible and accountable for continuous monitoring and controlling all purchases against issued quotas.
- there were reliable and transparent records kept ensuring the evaluations.

c) Review of the procurement process

- Review of the procurement route of the purchased catches to verify that OTI had not received catches exceeding the issued quotas for the relevant fishing companies in OTI's ordinary business routines and the circumstance in general
- Review of which quota control system was used to ensure that purchased quantities were within the issued quotas (Before the order releases)
- Control of documentation, e.g. invoice, goods delivery note, and etc.
- Traceability and record keeping requirements

2. To verify the documentation that Cod & Haddock were purchased within the quota issued by Murmanrybvod:

a) Review of the summary reports on the purchased quantities within relevant quotas (These reports were prepared by OTI)

- List of approved quota given to fishing companies for 2006 by Murmanrybvod
- A complete invoice list with all purchased fish in 2006 by OTI
- List of the invoices for purchased fish quantities during quota year 2006 by OTI
- OTI's purchasing orders and Suppliers' delivery documents or invoice
- Summary report specifying total purchased quantities against issued quotas for each relevant quota holder, so as to confirm that total purchased volumes are all caught on issued quotas

b) Complete check of all documentation to verify the accuracy of the summary reports, including invoices, goods delivery evidence, approval quota of each fishing company and summary reports for proofing the purchased Cod & Haddock within the given quota

DNV concluded that the company's internal quota control system has proven its accuracy, integrity and reliability. What this verifies is that OT would most probably find out, if a fishing company was trying to sell them IUU fish. It does not, however, verify that OT cannot have bought IUU fish and integrated it in their processing industry or resold it to other companies.

The audit verifies that the fish bought by OTI, through its regular channels is not IUU fish. As seen above, OT has several trading subsidiaries and traders related to OT. Processing factories in China may have received fish from one of these related companies or they may have bought fish in China and inserted it in their filet production. There is, e.g., nothing in DNVs audit that prevents OT from buying the fish form Smolninskiy and adding it to their legal fish in one of the processing plants in Qingdao.

5.2.2 Pacific Andes

Pacific Andes has a similar control system, although it is not, as far as I understand, linked to the relevant countries quota information for the relevant vessel, as the DNV audit for Ocean Trawlers is.

The audit is performed quarterly by Deloitte Touche Tohmatsu in Hong Kong. The report says that:

The procedures were performed solely to assist you in evaluating whether the Purchase Transactions were substantiated by proper certification and documentation issued by the relevant governments or other relevant authorities to ensure that illegally caught fish do not enter the supply chain of the Pacific Andes (Holdings) Group and are summarised as follows:

(i) In respect of the Purchase Transactions set out in the Company's purchase log book provided by the management of the Company, we compared the details set out therein with the following documents:

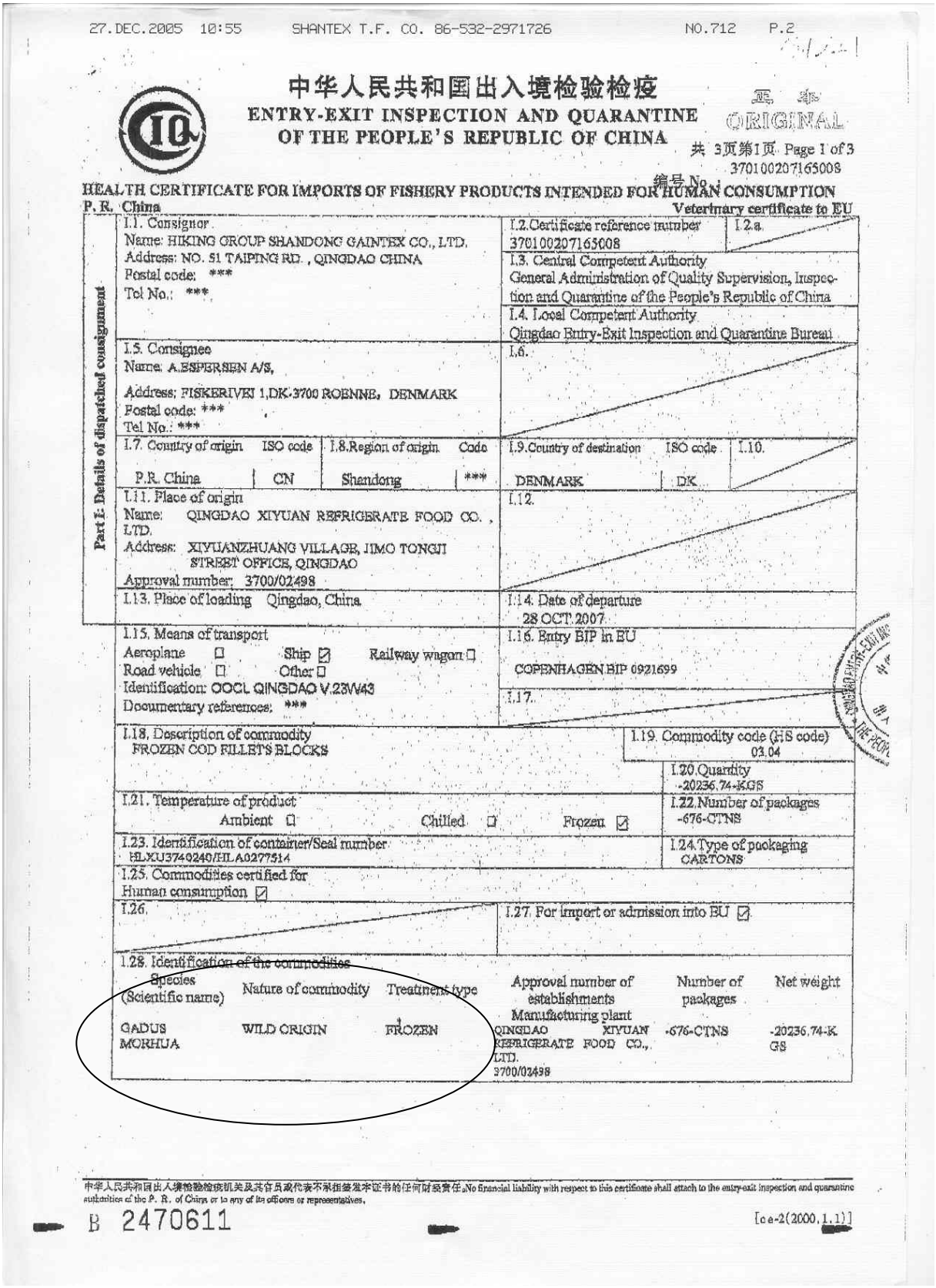
- *Purchase order or suppliers' sales contract*
- *Supplier's invoice*
- *Packing list (if available)*
- *Bill of lading or mate receipt*
- *Photocopy of certificate of origin issued by respective regulated bodies*
- *Photocopy of health certificate issued by respective regulated bodies*

(ii) For each of the Purchase Transactions, we checked to copies of the certificates of origin and health certificates, certified as true copies of the originals by the Company's in-house legal counsels.

5.3 Discussion and conclusions

The private verification systems may guarantee that the fish they have officially bought is not IUU fish. It does not guarantee that the end product is IUU-free. Both companies are eager to get MSC certification for the cod and haddock fisheries. With today's control system an MSC certificate will guarantee the sustainability of the official source of fish, like the audits above, but it has been questioned if it can guarantee that no other fish has been sourced into the production line.

Attachment 1. CIQ I import Certificate. Note that field 1.28 identifies Latin name.



27.DEC.2005 10:55 SHANTEX T.F. CO. 86-532-2971726 NO.712 P.2

中华人民共和国出入境检验检疫

ENTRY-EXIT INSPECTION AND QUARANTINE OF THE PEOPLE'S REPUBLIC OF CHINA

正 本 ORIGINAL

共 3页第1页 Page 1 of 3

编号 No.: 370100207165008

HEALTH CERTIFICATE FOR IMPORTS OF FISHERY PRODUCTS INTENDED FOR HUMAN CONSUMPTION

P. R. China — Veterinary certificate to EU

Part I. Details of dispatched consignment

I.1. Consignor
Name: HIKING GROUP SHANDONG GAINTEX CO., LTD.
Address: NO. 51 TAIPING RD. , QINGDAO CHINA
Postal code: ***
Tel No.: ***

I.2. Certificate reference number: 370100207165008 — I.2.a

I.3. Central Competent Authority: General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China

I.4. Local Competent Authority: Qingdao Entry-Exit Inspection and Quarantine Bureau

I.5. Consignee
Name: A.ESPERSEN A/S,
Address: FISKERIVEJ 1,DK-3700 ROENNE, DENMARK
Postal code: ***
Tel No.: ***

I.6.

I.7. Country of origin: P.R. China — ISO code: CN

I.8. Region of origin: Shandong — Code: ***

I.9. Country of destination: DENMARK — ISO code: DK

I.10.

I.11. Place of origin
Name: QINGDAO XIYUAN REFRIGERATE FOOD CO., LTD.
Address: XIYUANZHUANG VILLAGE, JIMO TONGJI STREET OFFICE, QINGDAO
Approval number: 3700/02498

I.12.

I.13. Place of loading: Qingdao, China

I.14. Date of departure: 28 OCT 2007

I.15. Means of transport
Aeroplane ☐ Ship ☑ Railway wagon ☐
Road vehicle ☐ Other ☐
Identification: OOCL QINGDAO V.23W43
Documentary references: ***

I.16. Entry BIP in EU: COPENHAGEN BIP 0921699

I.17.

I.18. Description of commodity: FROZEN COD FILLETS BLOCKS

I.19. Commodity code (HS code): 03.04

I.20. Quantity: -20236.74-KGS

I.21. Temperature of product: Ambient ☐ Chilled ☐ Frozen ☑

I.22. Number of packages: -676-CTNS

I.23. Identification of container/Seal number: HLXU3740240/HLA0277514

I.24. Type of packaging: CARTONS

I.25. Commodities certified for Human consumption ☑

I.26.

I.27. For import or admission into EU ☑

I.28. Identification of the commodities

Species (Scientific name)	Nature of commodity	Treatment type	Approval number of establishments Manufacturing plant	Number of packages	Net weight
GADUS MORHUA	WILD ORIGIN	FROZEN	QINGDAO XIYUAN REFRIGERATE FOOD CO., LTD. 3700/02498	-676-CTNS	-20236.74-KGS

中华人民共和国出入境检验检疫机关及其官员或代表不承担签发本证书的任何财经责任。No financial liability with respect to this certificate shall attach to the entry-exit inspection and quarantine authorities of the P. R. of China or to any of its officers or representatives.

B 2470611

[ce-2(2000.1.1)]

Attachment 2. Customs Import Declaration

2-32

Customs Import Declaration

中华人民共和国海关进口货物报关单

进料加工专用

预录入编号: 海关编号: (Customs Code) 0043253-4

进口口岸 (Port of Import)	备案号 (Manual No.)	进口日期 (Date of Import)	申报日期 (Declaration Date)
经营单位 (Processer)	运输方式 (Method of Transportation) / 运输工具名称 (Vessel Name)	提运单号 (B/L No.)	
收货单位 (Consignee)	贸易方式	征免性质	征税比例
许可证号 (Certificate No.)	起运国(地区) (Country of Origin)	装货港 (Port of Loading)	境内目的地 (Destination)
批准文号 (Authorization No.)	成交方式 (Trade Terms)	运费 (Transportation Cost)	保费 (Insurance) / 杂费 (Misc. Cost)
合同协议号 (Contract No.)	件数 (No. Package)	包装种类 (Type of Package)	毛重(公斤) (Gross Weight) / 净重(公斤) (Net Weight)
集装箱号 (Container No.)	随附单据 (Attached Documents)		用途 (Purpose)

标记唛码及备注

(Remark)

项号	商品编号 (HS Code)	商品名称、规格型号 (Product Description)	数量及单位 (Quantity)	原产国(地区) (Country of Origin)	单价 (Price)	总价 (Amount)	币制	征免

税费征收情况

(Duty Declaration)

录入员 录入单位	兹声明以上申报无讹并承担法律责任	海关审单批注及放行日期(签章)
报关员	申报单位(签章)	审单 审价
单位地址		征税 统计
邮编 电话	填制日期	查验 放行

Sample

Attachement 3: Chinese HS codes for fish

Chinese HS codes

HS code	Name	Engish Name
0304110000	鲜或冷的剑鱼(Xiphias gladius)鱼片或鱼肉(不论是否绞碎)	swordfish - fresh or chilled, fillet or meat
0304120000	鲜或冷的南极犬牙鱼(Toothfish,Dissostichus spp.)鱼片或鱼肉(不论是否绞碎)	toothfish - fresh or chilled, fillet or meat
0304190010	其他鲜或冷的濒危鱼片及其他鱼肉(不论是否绞碎)	other endangered - fresh or chilled, fillet or meat
0304190090	其他鲜或冷的鱼片及其他鱼肉(不论是否绞碎)	other - fresh or chilled, fillet or meat
0304210000	冻剑鱼(Xiphias gladius)片(不论是否绞碎)	frozen swordfish fillet
0304220000	冻南极犬牙鱼(Toothfish,Dissostichus spp.)片(不论是否绞碎)	frozen toothfish fillet
0304291000	冻罗非鱼片(不论是否绞碎)	frozen tilipia fillet
0304292100	冻斑点叉尾鮰鱼片(不论是否绞碎;斑点叉尾鮰鱼亦称沟鲶,属于鲇形目、叉尾鮰科、叉尾鮰属)	frozen [catfish or other farmed] fillet
0304292900	冻的其他叉尾鮰鱼片(不论是否绞碎)	frozen [catfish or other farmed] fillet
0304299010	冻的其他濒危鱼类鱼片(不论是否绞碎)	other endangered frozen fillets
0304299090	其他冻鱼片(不论是否绞碎)	other frozen fillets
0304910000	其他冻剑鱼(Xiphias gladius)肉(不论是否绞碎)	frozen swordfish meat
0304920000	其他冻南极犬牙鱼(Toothfish,Dissostichus spp.)肉(不论是否绞碎)	frozen toothfish meat
0304990010	濒危鱼类其他冻鱼肉(不论是否绞碎)	frozen meat of endangered species
0304990090	其他冻鱼肉(不论是否绞碎)	other frozen fish meat
03031100	冻红大马哈鱼(鱼肝及鱼卵除外)	frozen sockeye
03031900	其他冻大马哈鱼(鱼肝及鱼卵除外)	frozen other salmon
03032100	冻鳟鱼(鱼肝及鱼卵除外)	frozen trout
03032210	冻大西洋鲑鱼(鱼肝及鱼卵除外)	frozen Atlantic salmon
03032220	冻多瑙哲罗鱼(鱼肝及鱼卵除外)	frozen Danube salmon?
0303290010	冻川陕哲罗鲑(鱼肝及鱼卵除外)	frozen river fish [from Western China]
0303290020	冻秦岭细鳞鲑(鱼肝及鱼卵除外)	frozen river fish [from

0		Western China]
030329009 0	其他冻鲑鱼(鱼肝及鱼卵除外)	Other frozen salmon
03033110	冻格陵兰庸鲽鱼(鱼肝及鱼卵除外)	frozen Greenland halibut
03033190	其他冻庸鲽鱼(鱼肝及鱼卵除外)	other frozen halibut
03033200	冻鲽鱼(鱼肝及鱼卵除外)	frozen plaice
03033300	冻鳎鱼(鱼肝及鱼卵除外)	frozen sole
03033900	其他冻比目鱼(鱼肝及鱼卵除外)	frozen flatfish nes
03034100	冻长鳍金枪鱼(鱼肝及鱼卵除外)	frozen albacore (or longfinned) tunas
03034200	冻黄鳍金枪鱼(鱼肝及鱼卵除外)	frozen yellowfin
03034300	冻鲣鱼(鱼肝及鱼卵除外)	frozen skipjack or striped bellied bonito
03034400	冻大眼金枪鱼(鱼肝及鱼卵除外)	frozen bigeye
03034500	冻蓝鳍金枪鱼(鱼肝及鱼卵除外)	frozen bluefin
03034600	冻南金枪鱼(鱼肝及鱼卵除外)	frozen southern bluefin
03034900	其他冻金枪鱼(鱼肝及鱼卵除外)	frozen tunas nes
030351000 0	冻鲱鱼(大西洋鲱鱼、太平洋鲱鱼),但鱼肝及鱼卵除外	frozen Atl or Pac herring
030352000 0	冻鳕鱼(（大西洋鳕鱼、太平洋鳕鱼、格陵兰鳕鱼），鱼肝及鱼卵除外	frozen cod
03036000		former code for cod
030361000 0	冻剑鱼(Xiphias gladius)，鱼肝及鱼卵除外	frozen swordfish
030362000 0	冻南极犬牙鱼(Toothfish,Dissostichus spp.)，鱼肝及鱼卵除外	frozen toothfish
03037100	冻沙丁鱼、黍鲱鱼(鱼肝及鱼卵除外)	frozen sardines, bristling or sprat
03037200	冻黑线鳕鱼(鱼肝及鱼卵除外)	frozen haddock
03037300	冻绿青鳕鱼(鱼肝及鱼卵除外)	frozen saithe
03037400	冻鲭鱼(鱼肝及鱼卵除外)	frozen mackerel
030375001 0	冻鲸鲨、噬人鲨、姥鲨(鱼肝及鱼卵除外)	frozen endangered species of shark
030375009 0	其他冻角鲨及其他鲨鱼(鱼肝及鱼卵除外)	other frozen sharks
030376001 0	冻花鳗鲡(鱼肝及鱼卵除外)	some kind of frozen eel ?
030376009 0	其他冻鳗鱼(鱼肝及鱼卵除外)	other kinds of frozen eel
03037700	冻尖吻鲈鱼(鱼肝及鱼卵除外)	frozen seabass

03037800	冻狗鳕鱼(无须鳕鱼、长鳍鳕鱼；鱼肝及鱼卵除外)	frozen hake
03037910	冻带鱼(鱼肝及鱼卵除外)	frozen ribbonfish (Trichurus)
03037920	冻黄鱼(鱼肝及鱼卵除外)	frozen yellow croaker
03037930	冻鲳鱼(鱼肝及鱼卵除外)	frozen butterfish
03037940	冻罗非鱼(鱼肝及鱼卵除外)	frozen tilipia
0303799001	其他冻鲈鱼(鱼肝及鱼卵除外)	other frozen seabas (?)
0303799010	其他未列名濒危冻鱼(鱼肝及鱼卵除外)	other frozen [unnamed] endangered species
0303799090	其他未列名冻鱼(鱼肝及鱼卵除外)	other frozen [unnamed]
0303800010	冻濒危鱼种的肝及鱼卵	frozen livers and eggs of endangered species
0303800090	其他冻鱼肝及鱼卵	frozen livers and eggs