Survey of the trade flow in the fisheries sector in Asia

Analysis for the Norwegian Ministry of Fisheries and Coastal Affairs
Gunnar Album

Friends of the Earth Norway/WWF Norway
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A report made by

Friends of the Earth Norway
WWF Norway

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Author Gunnar Album

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The author is solely responsible for the accuracy of the contents and the views expressed in the report.

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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.

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 etc, 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 As some of the information comes from unpublished sources not all findings are referenced.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.
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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.](image)

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,

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\(^1\) 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.


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.

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 03035200/03036000) to China, sorted on Country of Departure. 1999 - 31.10. 2007 Source: China Customs Statistics) Information Centre](image)

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.
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(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.

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td></td>
<td>17 154</td>
<td>20 663</td>
<td>22 379</td>
<td>1 715</td>
<td>8%</td>
</tr>
<tr>
<td>Korea</td>
<td></td>
<td>8 961</td>
<td>7 093</td>
<td>8 752</td>
<td>1 650</td>
<td>19%</td>
</tr>
<tr>
<td>North Korea</td>
<td></td>
<td>3 925</td>
<td>896</td>
<td>895</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td>306 206</td>
<td>266 917</td>
<td>293 243</td>
<td>26 326</td>
<td>9%</td>
</tr>
<tr>
<td>USA</td>
<td></td>
<td>28 255</td>
<td>21 953</td>
<td>23 428</td>
<td>1 450</td>
<td>6%</td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td>49 207</td>
<td>38 752</td>
<td>40 038</td>
<td>1 286</td>
<td>3%</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>4 869</td>
<td>6 422</td>
<td>6 422</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Norway</td>
<td></td>
<td>8 261</td>
<td>8 937</td>
<td>9 591</td>
<td>645</td>
<td>7%</td>
</tr>
<tr>
<td>New Zealand</td>
<td></td>
<td>6 962</td>
<td>8 472</td>
<td>9 503</td>
<td>1 031</td>
<td>11%</td>
</tr>
<tr>
<td>Argentina</td>
<td></td>
<td>204</td>
<td>345</td>
<td>344</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>434 004</strong></td>
<td><strong>380 450</strong></td>
<td><strong>414 597</strong></td>
<td><strong>34 147</strong></td>
<td><strong>8 %</strong></td>
</tr>
</tbody>
</table>

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

2.2.1 What is included in “cod” 鳕

I have not been able to identify all species that are imported to China under the HS code 03035200 冻鳕鱼 (大洋鳕鱼, 太平洋鳕鱼, 格陵兰鳕鱼), 鱼肝及鱼卵除外 which is translated “frozen cod”.

The character for cod, 鳕 is also found in pollock 狭鳕 “narrow cod”, in Blue Whiting 蓝鳕 “blue cod” and in Hake 无须鳕 “un-bearded cod”. “New Zealand un-bearded cod” 新西兰无须鳕 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 黑线鳕 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.

<table>
<thead>
<tr>
<th>Country of Origin. Selected Countries</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>115,969,944</td>
</tr>
<tr>
<td>Netherlands</td>
<td>5,148,318</td>
</tr>
<tr>
<td>USA</td>
<td>2,460,827</td>
</tr>
<tr>
<td>Japan</td>
<td>1,883,454</td>
</tr>
<tr>
<td>Norway</td>
<td>697,904</td>
</tr>
<tr>
<td>UK</td>
<td>1,444,474</td>
</tr>
<tr>
<td>Iceland</td>
<td>968,983</td>
</tr>
<tr>
<td>Faeroe</td>
<td>1,569,058</td>
</tr>
<tr>
<td><strong>Sub total selected countries</strong></td>
<td><strong>130,511,445</strong></td>
</tr>
<tr>
<td><strong>Total all countries</strong></td>
<td><strong>140,925,767</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>EU imports of Alaska Pollock filets. HG weight equivalents. Tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Year</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>China</td>
</tr>
<tr>
<td>Russia</td>
</tr>
<tr>
<td>USA</td>
</tr>
<tr>
<td><strong>total</strong></td>
</tr>
</tbody>
</table>

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.
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**Cod import to China January –September 2007**  
*Unit is kg HG*

<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td>73,314,984</td>
<td>293,243,220</td>
</tr>
<tr>
<td>USA</td>
<td>12,564,157</td>
<td>23,428,456</td>
</tr>
<tr>
<td>Norway</td>
<td>6,036,843</td>
<td>9,591,414</td>
</tr>
<tr>
<td>Netherlands</td>
<td>1,783,803</td>
<td>40,037,776</td>
</tr>
<tr>
<td>Korea (rep)</td>
<td>1,720,200</td>
<td>8,751,894</td>
</tr>
<tr>
<td>New Zealand</td>
<td>1,690,493</td>
<td>9,503,513</td>
</tr>
<tr>
<td>Japan</td>
<td>1,134,440</td>
<td>22,378,825</td>
</tr>
<tr>
<td>Germany</td>
<td>755,311</td>
<td>6,421,652</td>
</tr>
<tr>
<td>Korea DPR</td>
<td>724,579</td>
<td>895,654</td>
</tr>
<tr>
<td>Greenland</td>
<td>694,103</td>
<td>1,316,090</td>
</tr>
<tr>
<td>Denmark</td>
<td>527,818</td>
<td>1,847,774</td>
</tr>
<tr>
<td>UK</td>
<td>385,054</td>
<td>506,059</td>
</tr>
<tr>
<td>Spain</td>
<td>371,752</td>
<td>503,405</td>
</tr>
<tr>
<td>Portugal</td>
<td>178,814</td>
<td>236,252</td>
</tr>
<tr>
<td>Faeroe Islands</td>
<td>146,887</td>
<td>148,633</td>
</tr>
<tr>
<td>Uruguay</td>
<td>54,801</td>
<td>290,543</td>
</tr>
<tr>
<td>Iceland</td>
<td>26,602</td>
<td>42,774</td>
</tr>
<tr>
<td>Togo</td>
<td>25,613</td>
<td>25,613</td>
</tr>
<tr>
<td>Canada</td>
<td>21,244</td>
<td>2,674,378</td>
</tr>
<tr>
<td>Ireland</td>
<td>15,736</td>
<td>15,736</td>
</tr>
<tr>
<td>Australia</td>
<td>7,225</td>
<td>7,225</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>102,180,459</strong></td>
<td><strong>421,866,886</strong></td>
</tr>
</tbody>
</table>

**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.

<table>
<thead>
<tr>
<th>25 biggest imp each species/year.</th>
<th>Units in kg HG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Haddock 2006</td>
</tr>
<tr>
<td>Top 25 importers</td>
<td>34 921 604</td>
</tr>
<tr>
<td>total import</td>
<td>37 196 397</td>
</tr>
<tr>
<td>adjusted for 12 months</td>
<td>37 196 397</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>2006</th>
<th>2007- YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groundfish COD NSPF Fillet Frozen</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
<td>790</td>
<td>430</td>
<td>350</td>
<td>605</td>
<td>415</td>
<td>435</td>
<td>225</td>
</tr>
<tr>
<td>China / Hong Kong / Taipei</td>
<td>795</td>
<td>320</td>
<td>485</td>
<td>655</td>
<td>665</td>
<td>1 520</td>
<td>235</td>
</tr>
<tr>
<td>Japan</td>
<td>4 335</td>
<td>920</td>
<td>1 230</td>
<td>135</td>
<td>330</td>
<td>2 030</td>
<td>5</td>
</tr>
<tr>
<td>SKorea</td>
<td>380</td>
<td>420</td>
<td>305</td>
<td>100</td>
<td>25</td>
<td>-</td>
<td>70</td>
</tr>
<tr>
<td>Asia</td>
<td>90</td>
<td>25</td>
<td>35</td>
<td>160</td>
<td>60</td>
<td>110</td>
<td>80</td>
</tr>
<tr>
<td>Europe</td>
<td>1 750</td>
<td>2 750</td>
<td>2 110</td>
<td>405</td>
<td>425</td>
<td>1 260</td>
<td>4 260</td>
</tr>
<tr>
<td>Russia</td>
<td>25</td>
<td>40</td>
<td>1</td>
<td>5</td>
<td>-</td>
<td>25</td>
<td>35</td>
</tr>
<tr>
<td>Others</td>
<td>280</td>
<td>350</td>
<td>339</td>
<td>410</td>
<td>355</td>
<td>285</td>
<td>15</td>
</tr>
<tr>
<td>TOTAL</td>
<td>8 445</td>
<td>5 255</td>
<td>4 855</td>
<td>2 475</td>
<td>2 275</td>
<td>5 665</td>
<td>4 925</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Groundfish COD NSPF Frozen</th>
<th>2 001</th>
<th>2 002</th>
<th>2 003</th>
<th>2 004</th>
<th>2 005</th>
<th>2 006</th>
<th>2007- YTD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>8 345</td>
<td>10 850</td>
<td>9 840</td>
<td>9 055</td>
<td>4 365</td>
<td>2 090</td>
<td>895</td>
</tr>
<tr>
<td>China / Hong Kong / Taipei</td>
<td>3 155</td>
<td>4 835</td>
<td>10 205</td>
<td>16 290</td>
<td>15 525</td>
<td>20 725</td>
<td>10 135</td>
</tr>
<tr>
<td>Japan</td>
<td>29 120</td>
<td>23 800</td>
<td>20 960</td>
<td>25 580</td>
<td>20 085</td>
<td>14 960</td>
<td>5 310</td>
</tr>
<tr>
<td>SKorea</td>
<td>4 345</td>
<td>6 100</td>
<td>8 270</td>
<td>6 520</td>
<td>7 080</td>
<td>6 770</td>
<td>11 980</td>
</tr>
<tr>
<td>Asia</td>
<td>175</td>
<td>155</td>
<td>115</td>
<td>600</td>
<td>2 290</td>
<td>1 560</td>
<td>160</td>
</tr>
<tr>
<td>Europe</td>
<td>15 405</td>
<td>12 470</td>
<td>16 220</td>
<td>25 725</td>
<td>33 490</td>
<td>34 040</td>
<td>23 235</td>
</tr>
<tr>
<td>Others</td>
<td>925</td>
<td>335</td>
<td>110</td>
<td>175</td>
<td>225</td>
<td>115</td>
<td>5</td>
</tr>
<tr>
<td>TOTAL</td>
<td>61 470</td>
<td>58 545</td>
<td>65 720</td>
<td>83 945</td>
<td>83 060</td>
<td>80 260</td>
<td>51 720</td>
</tr>
</tbody>
</table>

*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)
### Trade flow in the Asian seafood business

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

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
Trade flow in the Asian seafood business

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.

<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlantic Cod</td>
</tr>
<tr>
<td>Russia</td>
</tr>
<tr>
<td>Norway</td>
</tr>
<tr>
<td>Repacked Russian Atlantic Cod</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Filets of cod in HG equivalents. Tonnes Import to EU 25</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>China</td>
</tr>
<tr>
<td>Russia</td>
</tr>
<tr>
<td>Norway</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>


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.

25
Trade flow in the Asian seafood business

<table>
<thead>
<tr>
<th>Filets of cod in HG equivalents. tonnes Import to EU 25</th>
<th>2004</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>46000</td>
<td>65714</td>
</tr>
<tr>
<td>Russia</td>
<td>15000</td>
<td>21857</td>
</tr>
<tr>
<td>Norway</td>
<td>27714</td>
<td>29286</td>
</tr>
<tr>
<td>total</td>
<td>88714</td>
<td>116857</td>
</tr>
</tbody>
</table>


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.
Trade flow in the Asian seafood business

### Chinese imports of Barents Sea cod

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

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.

<table>
<thead>
<tr>
<th></th>
<th>Third Country</th>
<th>Russia</th>
<th>Norway</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>transport vessel</td>
<td>63 381</td>
<td>25 892</td>
<td>0</td>
<td>89 273</td>
</tr>
<tr>
<td>fishing vessel</td>
<td>3 194</td>
<td>1 991</td>
<td>56 907</td>
<td>62 091</td>
</tr>
<tr>
<td>total</td>
<td><strong>66 575</strong></td>
<td><strong>27 883</strong></td>
<td><strong>56 907</strong></td>
<td><strong>151 364</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Country</th>
<th>1999</th>
<th>2001</th>
<th>2003</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>119 856</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korea Rep</td>
<td>826 020</td>
<td>328 760</td>
<td></td>
<td>17 642</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>358 167</td>
<td>1 688 006</td>
<td>5 860 041</td>
<td>8 464 257</td>
<td>10 520 113</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>4 155 883</td>
<td>12 343 721</td>
<td>16 512 740</td>
<td>25 587 974</td>
<td>28 470 059</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>43 331</td>
<td>75 167</td>
<td>343 362</td>
<td>1 407</td>
<td></td>
<td></td>
</tr>
<tr>
<td>New Zealand</td>
<td>396 400</td>
<td></td>
<td></td>
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<td>Malaysia</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Canada</td>
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<td>66 780</td>
<td>5</td>
<td>7</td>
<td>23 126</td>
<td>229</td>
</tr>
<tr>
<td>Belgium</td>
<td>7 620</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
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<td>336 184</td>
<td></td>
<td></td>
<td></td>
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<td>276 198</td>
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<tr>
<td>Germany</td>
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<td>893 004</td>
<td>762 444</td>
<td></td>
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<td>126 345</td>
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<td>Netherlands</td>
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<td>1 393 284</td>
<td>960 658</td>
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<td>2 189 538</td>
</tr>
<tr>
<td>Iceland</td>
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<td>187 632</td>
<td>339 233</td>
<td>928 441</td>
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</tr>
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<td>Australia</td>
<td>102 271</td>
<td></td>
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<td>Portugal</td>
<td>100 701</td>
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<td></td>
<td>49 340</td>
<td>215 752</td>
<td></td>
</tr>
<tr>
<td>Dominican Rep</td>
<td>3 164</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Africa</td>
<td></td>
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<td></td>
<td></td>
<td>71 971</td>
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<tr>
<td>Faeroe Islands</td>
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<td>12 680</td>
<td>11 691</td>
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<tr>
<td>Uruguay</td>
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<td></td>
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<td>1 132</td>
<td></td>
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<tr>
<td>Spain</td>
<td></td>
<td></td>
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<td></td>
<td>108 474</td>
<td>196 939</td>
</tr>
<tr>
<td>total</td>
<td>619 823</td>
<td>5 966 437</td>
<td>15 250 925</td>
<td>25 922 448</td>
<td>37 196 397</td>
<td>42 984 473</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2001</th>
<th>2003</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
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<td>135 418</td>
<td>17 642</td>
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<td></td>
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<tr>
<td>Denmark</td>
<td>53 338</td>
<td>141 442</td>
<td>436 190</td>
<td></td>
<td>265 785</td>
<td></td>
</tr>
<tr>
<td>U.K.</td>
<td>45 176</td>
<td>573 211</td>
<td>1 701 876</td>
<td>2 884 212</td>
<td>732 668</td>
<td></td>
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<tr>
<td>Germany</td>
<td>1 248 964</td>
<td>18 540</td>
<td>3 491 431</td>
<td>6 463 046</td>
<td>6 644 089</td>
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</tr>
<tr>
<td>Netherlands</td>
<td>785 867</td>
<td>124 660</td>
<td>7 017 912</td>
<td>15 738 421</td>
<td>25 178 581</td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>308 085</td>
<td>1 688 006</td>
<td>3 950 167</td>
<td>3 934 752</td>
<td>3 626 787</td>
<td></td>
</tr>
<tr>
<td>Russia</td>
<td>1 371 926</td>
<td>12 343 721</td>
<td>8 537 625</td>
<td>6 425 918</td>
<td>5 038 253</td>
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<tr>
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<td>66 780</td>
<td>287 554</td>
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<td>26 500</td>
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<td>7 620</td>
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<tr>
<td>Iceland</td>
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<td>24 960</td>
<td>172 318</td>
<td>254 124</td>
<td>224 534</td>
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<td>48 150</td>
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<tr>
<td>Dominican Rep</td>
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<td></td>
<td></td>
<td>3 164</td>
<td></td>
<td></td>
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<td>83 924</td>
<td>110 962</td>
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<td>56 712</td>
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<td>2 730</td>
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<tr>
<td>Faroe Islands</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>268 560</td>
<td></td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>619 823</strong></td>
<td><strong>5 966 437</strong></td>
<td><strong>15 250 925</strong></td>
<td><strong>25 922 448</strong></td>
<td><strong>37 196 397</strong></td>
<td><strong>42 984 473</strong></td>
</tr>
</tbody>
</table>

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](image)

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.

<table>
<thead>
<tr>
<th>Filets of haddock imports to EU 25. HG weight equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>China</td>
</tr>
<tr>
<td>Russia</td>
</tr>
<tr>
<td>Norway</td>
</tr>
<tr>
<td><strong>total</strong></td>
</tr>
</tbody>
</table>

*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.

<table>
<thead>
<tr>
<th>Imports of Haddock through Qingdao Harbour. First half 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>volume (kg)</td>
</tr>
<tr>
<td>RUSSIA</td>
</tr>
<tr>
<td>NORWAY</td>
</tr>
<tr>
<td>FEROE</td>
</tr>
<tr>
<td>ICELAND</td>
</tr>
<tr>
<td>PORTUGAL</td>
</tr>
<tr>
<td>WHITE RUSSIA (Belarus)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Comparing two sources on imports through Qingdao Harbour. First half 2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qingdao harbour records</td>
</tr>
<tr>
<td>RUSSIA</td>
</tr>
<tr>
<td>NORWAY</td>
</tr>
<tr>
<td>FEROE</td>
</tr>
<tr>
<td>ICELAND</td>
</tr>
<tr>
<td>PORTUGAL</td>
</tr>
<tr>
<td>WHITE RUSSIA (Belarus)</td>
</tr>
<tr>
<td>SPAIN</td>
</tr>
<tr>
<td>UK</td>
</tr>
<tr>
<td>GERMANY</td>
</tr>
<tr>
<td>NETHERLANDS</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

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 through 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, focusing 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 Mumrinsky. 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.
### Trade flow in the Asian seafood business

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

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.

<table>
<thead>
<tr>
<th>Top five cod harbours 2005</th>
<th>HG weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>cod</td>
</tr>
<tr>
<td>Eemshaven</td>
<td>21 00</td>
</tr>
<tr>
<td>Grimsby</td>
<td>14 70</td>
</tr>
<tr>
<td>Velsen</td>
<td>10 000</td>
</tr>
<tr>
<td>Bremerhaven</td>
<td>7 000</td>
</tr>
<tr>
<td>Kirkenes</td>
<td>5 900</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Top five cod harbours 2007</th>
<th>HG weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>cod</td>
</tr>
<tr>
<td>Velsen</td>
<td>34 100</td>
</tr>
<tr>
<td>Kirkenes</td>
<td>18 000</td>
</tr>
<tr>
<td>Tromsø</td>
<td>8 900</td>
</tr>
<tr>
<td>Båtsfjord</td>
<td>8 700</td>
</tr>
<tr>
<td>Hammerfest</td>
<td>8 600</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>sep.08</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>32 304</td>
<td>36 068</td>
<td>45 375</td>
<td>47 687</td>
</tr>
<tr>
<td>Norway</td>
<td>21 337</td>
<td>55 413</td>
<td>55 207</td>
<td>44 960</td>
</tr>
<tr>
<td>Russia</td>
<td>228</td>
<td>6 353</td>
<td>5 867</td>
<td>4 448</td>
</tr>
<tr>
<td>UK</td>
<td>18 611</td>
<td>7 722</td>
<td>2 537</td>
<td>2 081</td>
</tr>
<tr>
<td>Spain/Portugal</td>
<td>933</td>
<td>3 947</td>
<td>104</td>
<td>491</td>
</tr>
<tr>
<td>Germany</td>
<td>7 145</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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 Netherlands 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.
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
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
Trade flow in the Asian seafood business

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. Landing papers and movement intelligence from Lloyd’s MIU indicate that the reefer Smolninskiy went all the way from the Barents Sea to Qingdao landing cod there in October 2007. The fish was landed at the Eimskip bonded warehouse and was never registered with NEAFC or Russian authorities. The fish must therefore be regarded as IUU fish. As of yet this 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.

As far as I can see, 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**

<table>
<thead>
<tr>
<th>Importer Name</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shandong Jinyi Textile Co Ltd</td>
<td>4 565 661</td>
<td>10 140 507</td>
<td>17 668 275</td>
</tr>
<tr>
<td>Shandong Orient Ocean Technologies Stock Co Ltd</td>
<td>3 974 097</td>
<td>6 621 704</td>
<td>8 196 015</td>
</tr>
<tr>
<td>(tom)</td>
<td>0</td>
<td>334 266</td>
<td>6 889 942</td>
</tr>
<tr>
<td>Rushan Huagreat Aquatic Products Co Ltd</td>
<td>4 236 068</td>
<td>3 661 808</td>
<td>6 018 368</td>
</tr>
<tr>
<td>Longkou Samning Seafood Co Ltd</td>
<td>0</td>
<td>2 942 474</td>
<td>6 012 864</td>
</tr>
<tr>
<td>Qingdao Sanyang Aquatic Product Co Ltd</td>
<td>1 410 204</td>
<td>3 006 120</td>
<td>5 122 299</td>
</tr>
<tr>
<td>Rongcheng Taixiang Aquatic Food Products Co Ltd</td>
<td>3 256 416</td>
<td>2 773 548</td>
<td>4 967 843</td>
</tr>
<tr>
<td>Rongcheng Hai Dou Food Co Ltd</td>
<td>4 186 887</td>
<td>2 583 283</td>
<td>4 933 485</td>
</tr>
<tr>
<td>Weihai Weidongri Comprehensive Food Co Ltd</td>
<td>2 271 711</td>
<td>3 698 203</td>
<td>4 562 721</td>
</tr>
<tr>
<td>Qingdao Da Xi Yang Yong Jia Food Co Ltd</td>
<td>0</td>
<td>3 703 707</td>
<td>3 799 197</td>
</tr>
<tr>
<td>Qing Dao Combined Hua Tong Trade Co Ltd</td>
<td>1 878 256</td>
<td>1 752 981</td>
<td>3 170 821</td>
</tr>
<tr>
<td>Laizhou Fangyuan Food Co Ltd</td>
<td>681 585</td>
<td>1 410 186</td>
<td>3 090 655</td>
</tr>
<tr>
<td>Rongcheng Jiarong Foods Co Ltd</td>
<td>2 010 445</td>
<td>2 686 230</td>
<td>2 548 095</td>
</tr>
<tr>
<td>Rongcheng Nan Guang Food Co td</td>
<td>1 052 828</td>
<td>1 706 362</td>
<td>2 451 340</td>
</tr>
<tr>
<td>Yan Tai Lian Fa Fishery Co Ltd</td>
<td>2 267 140</td>
<td>2 877 905</td>
<td>2 418 935</td>
</tr>
<tr>
<td>Rong Cheng City Mu Ze Food Co Ltd</td>
<td>207 954</td>
<td>868 967</td>
<td>2 277 502</td>
</tr>
<tr>
<td>Qingdao Qilin Food Co Ltd</td>
<td>3 073 578</td>
<td>4 147 156</td>
<td>1 510 462</td>
</tr>
<tr>
<td>Dalian Kowa Foodstuffs Co Ltd</td>
<td>0</td>
<td>0</td>
<td>1 498 048</td>
</tr>
<tr>
<td>Qing Dao Zhu Di Fishery Co Ltd</td>
<td>0</td>
<td>224 280</td>
<td>1 227 996</td>
</tr>
<tr>
<td>Dalian Zhudao Foodstuffs Co Ltd</td>
<td>3 561 058</td>
<td>941 270</td>
<td>1 177 744</td>
</tr>
<tr>
<td>Qingdao Guoxing Food Co Ltd</td>
<td>13 851 266</td>
<td>8 420 232</td>
<td>0</td>
</tr>
<tr>
<td>Qingdao Zhengjin Grop Imp &amp;Exp Co Ltd</td>
<td>8 260 502</td>
<td>8 260 502</td>
<td>123 354</td>
</tr>
<tr>
<td>Qingdao Zhengjin Haiqing Aquatic Products Co Ltd</td>
<td>1 646 820</td>
<td>5 585 531</td>
<td>42 022</td>
</tr>
<tr>
<td>Qingdao Unibond-Zhengjin Aquatics Products Co Ltd</td>
<td>3 380 971</td>
<td>5 319 155</td>
<td>0</td>
</tr>
<tr>
<td>Qing Dao Da Xi Yang Yong Xin Food Co Ltd</td>
<td>3 977 223</td>
<td>3 186 232</td>
<td>785 496</td>
</tr>
<tr>
<td>Yan Tai An Xin Food Co Ltd</td>
<td>2 708 937</td>
<td>2 913 225</td>
<td>0</td>
</tr>
<tr>
<td>Qingdao Yashijia Food Co Ltd</td>
<td>2 237 181</td>
<td>2 751 416</td>
<td>36 400</td>
</tr>
<tr>
<td>Qingdao Zhongjia Food Co Ltd</td>
<td>8 965 257</td>
<td>2 598 637</td>
<td>0</td>
</tr>
<tr>
<td>Qingdao Fusheng Food Co Ltd</td>
<td>1 089 525</td>
<td>299 109</td>
<td>532 870</td>
</tr>
</tbody>
</table>

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 is 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 refers 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 Smolninsky. 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 Entrepôt 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 is by far the largest buyer of cod and haddock from the Barents Sea. The company 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. In May 2008, Gunnar Mannsfield took over the post of CEO from Thomas Zachrisson.
Ocean Trawlers was built up as a bare-boat company in the late/mid 1990’ies. According to the company itself, they buy 50 000 tonnes of HG cod yearly. The original Ocean Trawler bare boats are among those with the highest quotas in the Barents Sea (table 15).

Some of the original bare boat vessels are still registered as operated by MPM according to the Lloyd’s register. (Amerloq, Izumrud, Kapitan Gromtsev, Korund, and Rubin) Ocean Trawlers controls or has a close relationship\(^2\) with Karelian Shipping, which owns and runs two refrigerated cargo ships, the PETROZAVODSK and the BELOMORYE.

<table>
<thead>
<tr>
<th>Vessel linked to Ocean Trawlers.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vessel</strong></td>
</tr>
<tr>
<td><strong>MPM managed/operated vessels</strong></td>
</tr>
<tr>
<td>AMERLOQ (Solborg)</td>
</tr>
<tr>
<td>IZUMRUD (Ole Saetermyr )</td>
</tr>
<tr>
<td>KAPITAN GROMTSEV (Bjørnøy)</td>
</tr>
<tr>
<td>KORUND (Topas)</td>
</tr>
<tr>
<td>RUBIN (Aliza Glacial)</td>
</tr>
<tr>
<td>TOPAZ A (John Longva) total loss 09</td>
</tr>
<tr>
<td><strong>Ex MPM Managed/operated vessels and OT linked vessels based on landing data</strong></td>
</tr>
<tr>
<td>AQUAMARINE( Orcades Viking III)(^3)</td>
</tr>
<tr>
<td>GEORGIYEVSK</td>
</tr>
<tr>
<td>MALAKHIT (Alida Glacial) total loss</td>
</tr>
<tr>
<td>SAIDA (Nonhamar)</td>
</tr>
<tr>
<td>VITYAZ (Okaynyay)</td>
</tr>
<tr>
<td>OBELYAY</td>
</tr>
<tr>
<td>LEONID NOVOSPASSKIY (Not cod )</td>
</tr>
<tr>
<td>NES</td>
</tr>
<tr>
<td>ZAPOLARYE</td>
</tr>
<tr>
<td>KAPITAN DURACHENKO</td>
</tr>
<tr>
<td>SAPPHIR 2 (Labrador)</td>
</tr>
<tr>
<td>NORILSK Krasnolesye</td>
</tr>
<tr>
<td>NOVATOR</td>
</tr>
</tbody>
</table>

Table 24: Vessels linked to Ocean Trawlers. Based on a combination of personal communication with OT, information from other industry sources and Directorate of Fisheries.

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\(^2\) Ocean Trawlers is given as operator of the vessel Petrozavodsk in landing papers from Velsen

\(^3\) The Aquamarine has no cod/haddock quota. She is fishing herring and blue whiting.
Ocean Trawlers has several trading subsidiaries/related companies:

**Anglia Trading** is their main procurement company for HG fish. Most purchases are booked directly into Ocean Trawlers International, but handled by Anglia.

**Bay Trading** is “related” to Ocean Trawlers. It is, according to Ocean Trawlers used mainly for purchases of IQF fillets from factories in Murmansk and H/G from non-associated fishing companies. But we also see incidents where OT buys the cod and Bay the haddock from the same shipment.

**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. No fish trading activities in this company. The company is registered as buying fish landed in Velsen.

**Nederlandse Vishandelsmaatschappeij (NVM)** is a fish trading subsidiary of OT.

### 4.2.1 Volume

Ocean Trawlers say that they buy 50 000 tonnes of HG cod in the Barents Sea per year and that half of this is transported to China for filleting.

They are also processing fish at three factories in Murmansk and they have factory vessels, producing filets on board. In 2005 they 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.

### 4.2.2 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; they imported 304 tonnes of cod from Norway and Russia in 2007.

4.2.3 Imports

Below is an overview of imports of cod 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 on price or country, and may contain pollock.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Routing Country</th>
<th>volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chile</td>
<td></td>
<td>27 487</td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
<td>69 529</td>
</tr>
<tr>
<td>Germany</td>
<td></td>
<td>195 858</td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td>50 013</td>
</tr>
<tr>
<td>Norway</td>
<td></td>
<td>1 528</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td>29 130 534</td>
</tr>
<tr>
<td>Uruguay</td>
<td></td>
<td>364 956</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>29 839 905</td>
</tr>
</tbody>
</table>

Table 25: Ocean Trawlers cod import 2005 Source China Customs Data.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Routing Country</th>
<th>volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russia</td>
<td></td>
<td>21 245 132</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>21 245 132</td>
</tr>
</tbody>
</table>

Table 26: Ocean Trawlers cod import 2006 Source China Customs Data.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Routing Country</th>
<th>volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denmark</td>
<td>Denmark</td>
<td>47 569</td>
</tr>
<tr>
<td>Greenland</td>
<td>Germany</td>
<td>168 596</td>
</tr>
<tr>
<td>Netherlands</td>
<td>Netherlands</td>
<td>607 467</td>
</tr>
<tr>
<td>Norway</td>
<td></td>
<td>647 863</td>
</tr>
<tr>
<td>Russia</td>
<td></td>
<td>26 495 955</td>
</tr>
</tbody>
</table>

Table 27: Ocean Trawlers cod import 2007 Source China Customs Data.
### Trade flow in the Asian seafood business

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spain</td>
<td>220 082</td>
</tr>
<tr>
<td>The Faroe Islands</td>
<td>97 146</td>
</tr>
<tr>
<td>Total</td>
<td>28 284 678</td>
</tr>
</tbody>
</table>

Table 27: Ocean Trawlers cod import 2007 Source China Customs Data.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iceland</td>
<td>24 024</td>
</tr>
<tr>
<td>Norway</td>
<td>315 184</td>
</tr>
<tr>
<td>Russia</td>
<td>6 386 475</td>
</tr>
<tr>
<td>Total</td>
<td>6 725 683</td>
</tr>
</tbody>
</table>

Table 28: Ocean Trawlers haddock import 2005 Source China Customs Data.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Norway</td>
<td>415 162</td>
</tr>
<tr>
<td>Russia</td>
<td>7 208 853</td>
</tr>
<tr>
<td>Total</td>
<td>7 624 015</td>
</tr>
</tbody>
</table>

Table 29: Ocean Trawlers haddock import 2006 Source China Customs Data.

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>576 823</td>
</tr>
<tr>
<td>Norway</td>
<td>25 874</td>
</tr>
<tr>
<td>Russia</td>
<td>7 426 286</td>
</tr>
<tr>
<td>Spain</td>
<td>168 891</td>
</tr>
<tr>
<td>Total</td>
<td>8 197 874</td>
</tr>
</tbody>
</table>

Table 30: Ocean Trawlers haddock import 2007 Source China Customs Data.
4.2.4 Processing factories

Ocean Trawlers is processing cod and haddock at five different sites in China:

- **Gain Seafood s** has two workshops and is built for OT.
- **Yiyuan Cold storage** with one workshop. This is a joint venture with Espersen
- **Shimeian**, Licang District, Qingdao. One workshop
- **Chang Yong**. Two workshops from 2006
- **Sanhe** in Rushan. One workshop

The processing factories are not owned by Ocean Trawlers, but are run on long term agreements. At Gain Seafood, it is Gain, which is a part of the Hiking group that owns the factory. They also employ the workers and are responsible for the running of the factory. Ocean Trawlers pay a certain amount per tonne of processed fish. It is not clear whether the other factories have the same arrangement.

OT is leasing process capacity at Hiking Group processing plants:

![Figure 6: Part of Hiking Group Structure – importers for Ocean Trawlers](image)

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.
Trade flow in the Asian seafood business

<table>
<thead>
<tr>
<th>Plant</th>
<th>Opened</th>
<th>Products</th>
<th>EU Plant Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>XinXing Foodstuff (Qingdao) Co, Ltd.</td>
<td>OCT, 2000</td>
<td>Mainly pink and chum salmon. Alaska Pollock, redfish</td>
<td>3700/02649</td>
</tr>
<tr>
<td>Aqua Foodstuff (Qingdao) Co, Ltd.</td>
<td>OCT,1998</td>
<td>Pollock, Flounder</td>
<td>3700/02659</td>
</tr>
<tr>
<td>Pacificandes Foodstuff (Liuting) Co,Ltd.</td>
<td>OCT, 2005</td>
<td>Apo, Salied Apo, P. Cod, Saithe, GHL</td>
<td>3700/02951</td>
</tr>
<tr>
<td>Qingdao Canning &amp; Foodstuff Co, Ltd</td>
<td>MAY, 1993</td>
<td>Apo, Red fish, Orange roughy</td>
<td>N/A</td>
</tr>
<tr>
<td>Hongdao</td>
<td>2008?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 31: 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.
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.
Trade flow in the Asian seafood business

<table>
<thead>
<tr>
<th>Location</th>
<th>Hammerfest</th>
<th>Honningsvåg</th>
<th>Kirkenes</th>
<th>Senjaphopen</th>
<th>Måløy</th>
<th>Tromsø</th>
<th>Netherlands</th>
<th>England</th>
<th>Faeroe Islands</th>
<th>Demark</th>
<th>Russia</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>45,8</td>
<td>47</td>
<td>574,6</td>
<td>811,3</td>
<td>9</td>
<td>187,7</td>
<td>932.8</td>
<td>296</td>
<td>102</td>
<td>0</td>
<td>491,5</td>
<td>3707.8</td>
</tr>
<tr>
<td></td>
<td>47</td>
<td>19,7</td>
<td>811,3</td>
<td>122,6</td>
<td></td>
<td>1014,1</td>
<td>1766,5</td>
<td>307,1</td>
<td></td>
<td>76,5</td>
<td>0</td>
<td>4668,5</td>
</tr>
</tbody>
</table>

Table 33: 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\(^4\). 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 3,100 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 8,000 tonnes of Atlantic cod annually, the company must have one more importer not included in the tables below.

---

\(^4\) Personal communication, November 2007
Trade flow in the Asian seafood business

Table 34: Unibond cod imports 2005, 2006 and 2007 Source China Customs Data.

<table>
<thead>
<tr>
<th>Importer Name</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qingdao Unibond-Zhengjin Aquatics Products Co Ltd</td>
<td>5 393 990</td>
<td>5 319 155</td>
<td></td>
</tr>
<tr>
<td>Qing Dao Da Xi Yang Yong Xin Food Co Ltd</td>
<td>3 977 223</td>
<td>3 184 672</td>
<td>785 496</td>
</tr>
<tr>
<td>Qingdao Da Xi Yang Yong Jia Food Co Ltd</td>
<td>3 703 707</td>
<td>3 799 197</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>9 371 213</strong></td>
<td><strong>12 209 540</strong></td>
<td><strong>4 586 700</strong></td>
</tr>
</tbody>
</table>

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.

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

<table>
<thead>
<tr>
<th>Importer Name</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qingdao Unibond-Zhengjin Aquatics Products Co Ltd</td>
<td>9 072</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Qing Dao Da Xi Yang Yong Xin Food Co Ltd</td>
<td>643 631</td>
<td>1 249 340</td>
<td>1 022 706</td>
</tr>
<tr>
<td>Qingdao Da Xi Yang Yong Jia Food Co Ltd</td>
<td>404 657</td>
<td>587 483</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>652 703</strong></td>
<td><strong>1 653 997</strong></td>
<td><strong>1 610 189</strong></td>
</tr>
</tbody>
</table>

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.


<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>10 171 342</td>
<td>4 806 442</td>
<td></td>
</tr>
<tr>
<td>France</td>
<td>2 101 292</td>
<td>2 501 856</td>
<td></td>
</tr>
<tr>
<td>UK</td>
<td>1 527 832</td>
<td>1 111 934</td>
<td></td>
</tr>
<tr>
<td>Germany</td>
<td>237 896</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>50 600</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14 089 162</strong></td>
<td><strong>8 420 232</strong></td>
<td><strong>8 420 232</strong></td>
</tr>
</tbody>
</table>
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\(^5\).

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.\(^6\)

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.\(^7\) Caiano sold its fleet of refrigerated cargo vessels to Green Reefers in 2007.\(^8\)

4.5.1 Sjøvik – Karelia

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

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\(^5\) [http://cymfcapp.en.china.cn/](http://cymfcapp.en.china.cn/)
\(^6\) [www.sirena.dk](http://www.sirena.dk)
\(^7\) [www.bizweb.no](http://www.bizweb.no)
\(^8\) [www.sea-web.com](http://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.  

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.

<table>
<thead>
<tr>
<th>Qingdao Qilin Food Co Ltd. Cod imports 2005</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country or Origin</strong></td>
<td><strong>Volume</strong></td>
</tr>
<tr>
<td>Norway</td>
<td>26 084</td>
</tr>
<tr>
<td>Russia</td>
<td>3 047 494</td>
</tr>
<tr>
<td>Total</td>
<td>3 073 578</td>
</tr>
</tbody>
</table>

Table 37: Nowaco/Qingdao Qilin cod imports 2005 Source China Customs Data.

<table>
<thead>
<tr>
<th>Qingdao Qilin Food Co Ltd. Cod imports 2006</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country of Origin</strong></td>
<td><strong>Volume</strong></td>
</tr>
<tr>
<td>Greenland</td>
<td>226 639</td>
</tr>
<tr>
<td>Netherlands</td>
<td>50 328</td>
</tr>
<tr>
<td>Norway</td>
<td>83 273</td>
</tr>
<tr>
<td>Russia</td>
<td>3 786 916</td>
</tr>
<tr>
<td>Total</td>
<td>4 147 156</td>
</tr>
</tbody>
</table>

Table 38: Nowaco/Qingdao Qilin cod imports 2006. Source China Customs Data.

<table>
<thead>
<tr>
<th>Qingdao Qilin Food Co Ltd. Cod imports 2007</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Country of Origin</strong></td>
<td><strong>Volume</strong></td>
</tr>
<tr>
<td>Greenland</td>
<td>572 137</td>
</tr>
<tr>
<td>Norway</td>
<td>54 163</td>
</tr>
<tr>
<td>Russia</td>
<td>858 188</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>25 974</td>
</tr>
<tr>
<td>Total</td>
<td>1 510 462</td>
</tr>
</tbody>
</table>


9 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 i.a. cod and haddock in the US under the brand “Fjord Fresh” and “Blue Fjord” – twice frozen “product of China.”

![Figure 7: Blue Fjord; Twice-frozen product of China](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.\(^\text{10}\)

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.

---

\(^{10}\) Intrafish, February 2008
### Rongcheng Taixiang Aquatic Food Products Co Ltd. Cod 2007

<table>
<thead>
<tr>
<th>Country of Origin</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>3,577,537</td>
</tr>
<tr>
<td></td>
<td>599,575</td>
</tr>
<tr>
<td></td>
<td>2,977,962</td>
</tr>
<tr>
<td>New Zealand</td>
<td>531,714</td>
</tr>
<tr>
<td>Russia</td>
<td>858,592</td>
</tr>
<tr>
<td>Total</td>
<td>4,967,843</td>
</tr>
</tbody>
</table>

Table 40: 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. 11 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.

---

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) is 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.
Trade flow in the Asian seafood business

<table>
<thead>
<tr>
<th>Company</th>
<th>Volume (kg)</th>
<th>Value (US$)</th>
<th>Unit Price (US$/MT)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qingdao Hongfu for Blue Ice + Bloomsbury</td>
<td>720 757</td>
<td>789 856</td>
<td>1 096</td>
<td>1.6%</td>
</tr>
<tr>
<td>Trident</td>
<td>11 212 559</td>
<td>14 227 718</td>
<td>1 269</td>
<td>24.7%</td>
</tr>
<tr>
<td>China I&amp;E Corp. Of State Farms – for Icelandic and Joe Qiao (mainly EU market)</td>
<td>408 676</td>
<td>1 939 506</td>
<td>4 746</td>
<td>0.9%</td>
</tr>
<tr>
<td>Longyuan – for EU market</td>
<td>438 527</td>
<td>1 957 966</td>
<td>4 465</td>
<td>1.0%</td>
</tr>
<tr>
<td>Nowaco</td>
<td>1 715 728</td>
<td>729 654</td>
<td>425</td>
<td>3.8%</td>
</tr>
<tr>
<td>Ocean Trawlers Asia</td>
<td>9 333 669</td>
<td>30 325 499</td>
<td>3 249</td>
<td>20.6%</td>
</tr>
<tr>
<td>Yantai M&amp;K - for Saltfish.</td>
<td>73 854</td>
<td>273 260</td>
<td>3 700</td>
<td>0.2%</td>
</tr>
<tr>
<td>Pacific Andes</td>
<td>3 252 543</td>
<td>9 251 359</td>
<td>2 844</td>
<td>7.2%</td>
</tr>
<tr>
<td>Qingdao Hainuo Foodstuffs - Simon Sui - for Saltfish</td>
<td>4 901 344</td>
<td>7 113 372</td>
<td>1 451</td>
<td>10.8%</td>
</tr>
<tr>
<td>Unibond</td>
<td>4 191 935</td>
<td>7 370 771</td>
<td>1 758</td>
<td>9.2%</td>
</tr>
<tr>
<td>Qingdao Tianyuan / Jing International for USA market</td>
<td>76 247</td>
<td>76 247</td>
<td>1 000</td>
<td>0.2%</td>
</tr>
<tr>
<td>Zhengjin</td>
<td>400 281</td>
<td>855 987</td>
<td>2 138</td>
<td>0.9%</td>
</tr>
<tr>
<td>Haifeng</td>
<td>1 106 683</td>
<td>4 102 314</td>
<td>3 707</td>
<td>2.4%</td>
</tr>
<tr>
<td>Qingdao Huaqin</td>
<td>81 728</td>
<td>337 107</td>
<td>4 125</td>
<td>0.2%</td>
</tr>
<tr>
<td>Chang International</td>
<td>257 085</td>
<td>528 759</td>
<td>2 057</td>
<td>0.6%</td>
</tr>
<tr>
<td>New Continental Seafood</td>
<td>569 607</td>
<td>2 785 491</td>
<td>4 890</td>
<td>1.3%</td>
</tr>
<tr>
<td>China Starfish - Sirena</td>
<td>398 573</td>
<td>1 436 239</td>
<td>3 603</td>
<td>0.9%</td>
</tr>
<tr>
<td>unknown</td>
<td>6 229 257</td>
<td>11 410 745</td>
<td>1 832</td>
<td>13.7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>45 369 053</strong></td>
<td><strong>95 511 850</strong></td>
<td><strong>2 105</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Table 42: 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.

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

Table 43: 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 Import Certificate. Note that field 1.28 identifies Latin name.
Attachment 2. Customs Import Declaration
### Trade flow in the Asian seafood business

**Attachment 3: Chinese HS codes for fish**

<table>
<thead>
<tr>
<th>HS code</th>
<th>Name</th>
<th>English Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>030411000</td>
<td>鲜或冷的剑鱼(Xiphias gladius)鱼片或鱼肉（不论是否绞碎）</td>
<td>swordfish - fresh or chilled, fillet or meat</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030412000</td>
<td>鲜或冷的南极犬牙鱼(Toothfish, Dissostichus spp.)鱼片或鱼肉（不论是否绞碎）</td>
<td>toothfish - fresh or chilled, fillet or meat</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030419001</td>
<td>其他鲜或冷的濒危鱼片及其他鱼肉（不论是否绞碎）</td>
<td>other endangered - fresh or chilled, fillet or meat</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030419009</td>
<td>其他鲜或冷的鱼片及其他鱼肉（不论是否绞碎）</td>
<td>other - fresh or chilled, fillet or meat</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030421000</td>
<td>冻剑鱼(Xiphias gladius)片（不论是否绞碎）</td>
<td>frozen swordfish fillet</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030422000</td>
<td>冻南极犬牙鱼(Toothfish, Dissostichus spp.)片（不论是否绞碎）</td>
<td>frozen toothfish fillet</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030429100</td>
<td>冻罗非鱼片（不论是否绞碎）</td>
<td>frozen tilapia fillet</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030429210</td>
<td>冻斑点叉尾鲳鱼片（不论是否绞碎,斑点叉尾鲳鱼亦称沟鲳,属于鲳形目、叉尾鲳科、叉尾鲳属）</td>
<td>frozen [catfish or other farmed] fillet</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030429290</td>
<td>冻的其他叉尾鲳鱼片（不论是否绞碎）</td>
<td>frozen [catfish or other farmed] fillet</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030429901</td>
<td>冻的其他濒危鱼类鱼片（不论是否绞碎）</td>
<td>other endangered frozen fillets</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030429909</td>
<td>其他冻鱼片（不论是否绞碎）</td>
<td>other frozen fillets</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030491000</td>
<td>其他冻剑鱼(Xiphias gladius)肉（不论是否绞碎）</td>
<td>frozen swordfish meat</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030492000</td>
<td>其他冻南极犬牙鱼(Toothfish, Dissostichus spp.)肉（不论是否绞碎）</td>
<td>frozen toothfish meat</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030499001</td>
<td>濒危鱼类其他冻鱼肉（不论是否绞碎）</td>
<td>frozen meat of endangered species</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>030499009</td>
<td>其他冻鱼肉（不论是否绞碎）</td>
<td>other frozen fish meat</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03031100</td>
<td>冻红大马哈鱼（鱼肝及鱼卵除外）</td>
<td>frozen sockeye</td>
</tr>
<tr>
<td>03031900</td>
<td>其他冻大马哈鱼（鱼肝及鱼卵除外）</td>
<td>frozen other salmon</td>
</tr>
<tr>
<td>03032100</td>
<td>冻鳟鱼（鱼肝及鱼卵除外）</td>
<td>frozen trout</td>
</tr>
<tr>
<td>03032210</td>
<td>冻大西洋鲑鱼（鱼肝及鱼卵除外）</td>
<td>frozen Atlantic salmon</td>
</tr>
<tr>
<td>03032220</td>
<td>冻多瑙哲罗鱼（鱼肝及鱼卵除外）</td>
<td>frozen Danube salmon</td>
</tr>
<tr>
<td>030329001</td>
<td>冻川哲罗鲑鱼（鱼肝及鱼卵除外）</td>
<td>frozen river fish [from Western China]</td>
</tr>
<tr>
<td>030329002</td>
<td>冻秦岭细Whitespace:中文</td>
<td>中文细鲑鱼（鱼肝及鱼卵除外）</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>-------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>000000</td>
<td>Other frozen salmon</td>
<td></td>
</tr>
<tr>
<td>000001</td>
<td>Frozen Greenland halibut</td>
<td></td>
</tr>
<tr>
<td>000002</td>
<td>Other frozen halibut</td>
<td></td>
</tr>
<tr>
<td>000003</td>
<td>Frozen plaice</td>
<td></td>
</tr>
<tr>
<td>000004</td>
<td>Frozen sole</td>
<td></td>
</tr>
<tr>
<td>000005</td>
<td>Frozen flatfish nes</td>
<td></td>
</tr>
<tr>
<td>000006</td>
<td>Frozen albacore (or longfinned) tunas</td>
<td></td>
</tr>
<tr>
<td>000007</td>
<td>Frozen yellowfin</td>
<td></td>
</tr>
<tr>
<td>000008</td>
<td>Frozen skipjack or striped belied bonito</td>
<td></td>
</tr>
<tr>
<td>000009</td>
<td>Frozen bigeye</td>
<td></td>
</tr>
<tr>
<td>000010</td>
<td>Frozen bluefin</td>
<td></td>
</tr>
<tr>
<td>000011</td>
<td>Frozen southern bluefin</td>
<td></td>
</tr>
<tr>
<td>000012</td>
<td>Frozen tunas nes</td>
<td></td>
</tr>
<tr>
<td>000013</td>
<td>Frozen Al or Pac herring</td>
<td></td>
</tr>
<tr>
<td>000014</td>
<td>Frozen cod</td>
<td></td>
</tr>
<tr>
<td>000015</td>
<td>Former code for cod</td>
<td></td>
</tr>
<tr>
<td>000016</td>
<td>Frozen swordfish</td>
<td></td>
</tr>
<tr>
<td>000017</td>
<td>Frozen toothfish</td>
<td></td>
</tr>
<tr>
<td>000018</td>
<td>Frozen sardines, bristling or sprat</td>
<td></td>
</tr>
<tr>
<td>000019</td>
<td>Frozen haddock</td>
<td></td>
</tr>
<tr>
<td>000020</td>
<td>Frozen saithe</td>
<td></td>
</tr>
<tr>
<td>000021</td>
<td>Frozen mackerel</td>
<td></td>
</tr>
<tr>
<td>000022</td>
<td>Frozen endangered species of shark</td>
<td></td>
</tr>
<tr>
<td>000023</td>
<td>Other frozen sharks</td>
<td></td>
</tr>
<tr>
<td>000024</td>
<td>Some kind of frozen eel</td>
<td></td>
</tr>
<tr>
<td>000025</td>
<td>Other kinds of frozen eel</td>
<td></td>
</tr>
<tr>
<td>000026</td>
<td>Frozen seabass</td>
<td></td>
</tr>
<tr>
<td>Code</td>
<td>Description</td>
<td>English Description</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------------------------------------------------------------</td>
<td>--------------------------------------</td>
</tr>
<tr>
<td>03037800</td>
<td>冻狗舷鱼(无须舷鱼、长舷鱼；鱼肝及鱼卵除外)</td>
<td>frozen hake</td>
</tr>
<tr>
<td>03037910</td>
<td>冻带鱼(鱼肝及鱼卵除外)</td>
<td>frozen ribbonfish</td>
</tr>
<tr>
<td>03037920</td>
<td>冻黄鱼(鱼肝及鱼卵除外)</td>
<td>frozen yellow croaker</td>
</tr>
<tr>
<td>03037930</td>
<td>冻鲳鱼(鱼肝及鱼卵除外)</td>
<td>frozen butterfish</td>
</tr>
<tr>
<td>03037940</td>
<td>冻罗非鱼(鱼肝及鱼卵除外)</td>
<td>frozen tilapia</td>
</tr>
<tr>
<td>030379900</td>
<td>其他冷冻鱼(鱼肝及鱼卵除外)</td>
<td>other frozen seabas</td>
</tr>
<tr>
<td>030379901</td>
<td>其他未列名濒危冻鱼(鱼肝及鱼卵除外)</td>
<td>other frozen [unnamed] endangered species</td>
</tr>
<tr>
<td>030379909</td>
<td>其他未列名冻鱼(鱼肝及鱼卵除外)</td>
<td>other frozen [unnamed]</td>
</tr>
<tr>
<td>030380001</td>
<td>冻濒危鱼种的肝及鱼卵</td>
<td>frozen livers and eggs of endangered species</td>
</tr>
<tr>
<td>030380009</td>
<td>其他冻鱼肝及鱼卵</td>
<td>frozen livers and eggs</td>
</tr>
</tbody>
</table>
Trade flow in the Asian seafood business

<table>
<thead>
<tr>
<th>Attachment 4: 25 biggest Cod and Haddock importers 2006 and 2007 (01-08)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>SHANDONG JINXI TEXTILE CO. LTD</td>
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<td>DILIAN OCEAN FISHERY IMP &amp; EXP CORP.</td>
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<tr>
<td>DILIAN XINING SEA PRODUCT CO LTD</td>
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<tr>
<td>RUSSIAN MUHARGET AQUATIC PRODUCTS CO. LTD</td>
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<tr>
<td>DILIAN JIA LIAN FOOD CO LTD</td>
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<td>QINGDAO DA XI YANG YONG XIN FOOD CO LTD</td>
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<td>YANTAI FANG DAI FOOD CO LTD</td>
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<td>DILIAN XIN HAI YANG FOOD CO LTD</td>
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<td>QINGDAO QI HAI FOOD CO LTD</td>
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<tr>
<td>RIZHAO CHANGHUA AQUATIC FOODSTUFF CO LTD</td>
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<td>QINGDAO RONG YAO INDUSTRY CO LTD</td>
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<td>LIAONING WANGHONG TRADING CO LTD</td>
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<tr>
<td>XINGHAI FOOD (QINGDAO) CO LTD</td>
</tr>
<tr>
<td>QINGDAO MIA SHI FOOD CO LTD</td>
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<td>YANTAI SHEN XIN FOOD CO LTD</td>
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<td>DILIAN CITY WANG YI FISH CO LTD</td>
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<td>QINGDAO HAI MEI CO LTD</td>
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<td>SHANDONG OCEAN TECHNOLOGIES STOCK CO LTD</td>
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<tr>
<td>QINGDAO LONG YUAN AQUATIC PRODUCTS CO LTD</td>
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| DALIAN XU HAI LIAN YANG FOOD CO LTD | 1,044,703 | 476,952 |
| QINGDAO ZHI HONG IMPORT & EXPORT COMPANY | 830,970 | 312,547 |
| QINGDAO HAI CRU FOOD CO LTD | 622,208 |
| QINGDAO ZHENG GUO GROUP IFT CO LTD | 609,310 | 379,211 |
| QINGDAO RUI YU FOOD CO LTD | 609,112 | 283,546 |
| QINGDAO FISHING FOOD CO LTD | 305,004 |
| QINGDAO YUAN BIP & EXP CO LTD | 411,096 | 231,548 |
| LIANGYANG WANGHONG TRADING CO LTD | 381,914 |
| DALIAN LONG YUAN FOOD CO LTD | 245,550 | 286,729 |
| DALIAN YUFENG FOOD CO LTD | 285,380 | 285,383 |
| YANTAI TUNG YU AQUATIC PRODUCTS CO LTD | 311,024 |
| SHANDONG MEER BEI TRADING CO LTD | 339,673 |
| YAN TAI LIAN JIA FISHERY CO LTD | 1,826,636 |
| QINGDAO HUAI XIA AQUATIC PRODUCT CO LTD | 626,505 |
| QINGDAO LIAN YANG FOOD PROCESSING CO LTD | 586,750 |
| QINGDAO MIA SHI AQUATIC PRODUCT CO LTD | 429,521 |
| PI ZHANG RONG XING FOOD CO LTD | 330,739 |
| FUSHAN JIHAIYUAN FOOD CO LTD | 318,172 |
| QINGDAO GUANING FOOD CO LTD | 2,528,854 | 1,259,120 |
| DALIAN XIACHENG AQUATIC PRODUCTS CO LTD | 530,118 |
| PENGLA HU MING SEA FOOD CO LTD | 2,108,096 |
| WEIHAI DONGYUAN FOOD CO LTD | 1,808,620 |
| DA LIAN FU HAI CHANG AQUATIC PRODUCTS CO LTD | 1,757,137 |
| WEIHAI WEIDONGHUA COMPREHENSIVE FOOD CO LTD | 1,640,914 |
| QINGDAO DAE XI YANG YONG XIN FOOD CO LTD | 2,003,000 |

sum of above (28 biggest imp each species/year) | 34,932,004 | 26,808,006 | 64,141,731 | 68,140,393 |

adjusted for 12 months | 37,196,097 | 27,089,097 | 127,811,546 | 89,980,952 |

adjusted for 12 months | 37,196,097 | 41,814,081 | 127,811,546 | 124,836,428 |
# Trade flow in the Asian seafood business

## Attachment 5: Individual imports of Cod over Qingdao harbour Jan-June 2007

<table>
<thead>
<tr>
<th>Chinese name, company</th>
<th>Receiver</th>
<th>Buyer</th>
<th>重量(kg)</th>
<th>Country</th>
<th>货物总值 (US$)</th>
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<td>QING DAO HONG FU AQUATIC PRODUCTS CO LTD</td>
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<td>DK</td>
<td>166 113</td>
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<td>Blue Ice + Bloomsbury</td>
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<td>Norway</td>
<td>17 929</td>
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<td>青岛红福海洋食品有限公司</td>
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<td>Greenland</td>
<td>72 120</td>
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<td>UK</td>
<td>104 255</td>
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<td>QINGDAO ZHONGKENG IMPORT &amp; EXPORT COMPANY</td>
<td>China I&amp;E of State Farms - Icelandic for EU market</td>
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<td>Norway</td>
<td>594 522</td>
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<td>White Russia</td>
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<td>新华龙集团山东纺织股份有限公司</td>
<td>HIKING GROUP SHANDONG GANTEX CO, LTD</td>
<td>OT Group</td>
<td>77 105</td>
<td>Norway</td>
<td>128 535</td>
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<tr>
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<td>OT Group</td>
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<td>Faeroe</td>
<td>437 157</td>
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<td>Russia</td>
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<td>Norway</td>
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<td>520 820</td>
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<td>青岛长荣食品有限公司</td>
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<td>51 412</td>
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## Trade flow in the Asian seafood business

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<th>Company</th>
<th>MulLin</th>
<th>Country</th>
<th>Amount</th>
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<tr>
<td>Qingdao Canning &amp; Foodstuff Co Ltd</td>
<td>PA</td>
<td>USA</td>
<td>1,251</td>
</tr>
<tr>
<td>Shandong Machinery &amp; Imp. Co Ltd</td>
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<td>USA</td>
<td>111,163</td>
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<tr>
<td>Yu Fu Foodstuff (Qingdao) Co Ltd</td>
<td>PA</td>
<td>USA</td>
<td>52,246</td>
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<tr>
<td>Xin Xin Foodstuff (Qingdao) Co Ltd</td>
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<td>USA</td>
<td>256,310</td>
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<tr>
<td>Pacific Andes</td>
<td>PA</td>
<td>USA</td>
<td>262,635</td>
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<tr>
<td>Yu Fu Foodstuff (Qingdao) Co Ltd</td>
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<td>Russia</td>
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## Pacific Cod

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## Trade flow in the Asian seafood business

### Haddock

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<tr>
<th>Chinese name, company</th>
<th>Receiver</th>
<th>Buyer</th>
<th>重量 (kg)</th>
<th>Country</th>
<th>货物总值 (US $)</th>
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<tr>
<th>Chinese name, company</th>
<th>Receiver</th>
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<th>重量 (kg)</th>
<th>Country</th>
<th>货物总值 (US $)</th>
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