The Whale Meat Market

Study on Current and Possible Markets and Cost of Operations in Minke Whaling

GJ Financial Consulting, June 2005
Porsteinn Siglaugsson
Summary

- It seems clear that the cost of Iceland’s scientific whaling programme in 2003 and 2004 has exceeded any immediate monetary benefits. Scientific value of the research can not be ascertained, however, so it is not possible to conclude on the benefits obtained.

- Based on the nature and size of possible export markets, it may be expected that even if the moratorium on whaling was lifted by the IWC, but current trade restrictions remained in place, finding a substantial export market for Icelandic whale meat would prove difficult.

- As regards marketing opportunities regardless of the situation with international trade in whale products there seem to be existing niche markets where the meat might be sold if trade restrictions were lifted. Based on information provided by our sources, these markets are likely to sustain relatively high prices. It is, however, difficult to estimate the total size of such markets.

- Experience from marketing efforts in Iceland, Norway and Japan in recent years seem to indicate that the market for whale meat through retail outlets for general consumption, in competition with other meat types, is small and probably shrinking. It should be noted, though, that the current situation can not be used to predict possible future demand.

- The scope of this report is limited to presenting findings regarding current markets for whale meat, given the prevailing trade restrictions. Thus, the data presented can not be used to draw any conclusions regarding general profitability of whaling.
Background

The following study has been commissioned by the International Fund for Animal Welfare and the Iceland Nature Conservation Association and was carried out in May 2005. The purpose of the study is to estimate the general cost and revenue factors affecting minke whaling in Iceland. Due to the fact that almost 20 years have passed since the industry was last active, historical cost and market figures can not be relied on. Instead we have, on one hand, collected figures on the ongoing programme of scientific whaling, being carried out by the Marine Research Institute in co-operation with the Association of Minke Whalers. On the other hand we have obtained estimates regarding possible markets, mostly by interviewing persons with experience and knowledge of the industry.

The absence of reliable experience based data obviously poses problems when it comes to drawing conclusions, especially as regards possible markets. For example, reliable official marketing and consumption figures for the relevant foreign markets can not be obtained, which is understandable for a product in which legal international trade is almost non-existent. The reader has to take this into account when interpreting figures and conclusions.

It is not the purpose of this report to assess whether the current moratorium on whaling should be lifted or continued, nor to conclude on general industry profitability.

Documents and other sources of information are detailed in footnotes.
Introduction

In 1986 the International Whaling Commission (IWC), imposed a moratorium on commercial whaling. However, Iceland continued whaling until 1989 under the provision in the IWC Convention that allows whaling for scientific purposes. At the time Iceland exported whale meat for 185 million ISK, 0.4% of total export value. The majority of the products were traditionally sold to Japan. As seen on Graph 1 below, the significance of whale products in Iceland’s economy was small and declining.

Graph 1: The weight of whale products in Iceland’s exports

![Graph showing whale products as % of total export value 1951-1990](#)

It is now 19 years since whaling was stopped by the IWC and international trade in whale meat abolished. During this period eating habits have changed all over the world and it is likely demand for whale meat has changed considerably.

To answer the question of whether to resume commercial whaling and even if scientific whaling should continue, it may be of value to establish firstly if there is an actual market for whale meat and/or if such a market can be created and at what cost. Secondly, cost of operations and investment in equipment can be taken into account.

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Iceland’s scientific whaling programme – An overview

Since the moratorium was imposed the Icelandic government has been under considerable pressure to resume whaling. Finally in 2003 a decision was made to undertake a research project that involved the hunting of 200 minke whales, 200 fin whales and 100 sei whales, to be carried out within a period of two years. In the same year 37 minkes were caught (36 were landed) and a further 25 taken in 2004.

The stated scientific purpose of the research project is to analyse the feeding habits of minke whales and there are hopes the results will help to determine the impact minkes have on the fish stock around Iceland. However, the MRI has declared it has no intention of proposing culling the minke whale stock.

In order to carry out the research the Ministry of Fisheries rented whaling boats, paying approximately 180.000 ISK per day. In 2003 127 trips were made and 113 in 2004. Thus, total direct cost of whaling amounted to approximately 43 million ISK. Both years the whalers bought the meat - obtained at a price of 300-350 ISK/kg in 2003 and 130 ISK in 2004. In 2003 they sold the meat for a price approximately matching their own purchase price so, assuming rent for boats covered their costs the whalers managed to break even. For 2004 whalers claim to have managed to sell around 15 tonnes of meat, but we do not have information on the average price. This figure has not been verified. Considering the low purchase price in 2004 it may be assumed they have not made a loss in that year either, at least not a considerable one. According to whalers’ representatives it is uncertain if they will buy the meat this season.

Table 1: Breakdown of costs for promoting whaling in thousands ISK

<table>
<thead>
<tr>
<th>Year</th>
<th>PR &amp; lobbying</th>
<th>Travel cost</th>
<th>Employee expenses</th>
<th>Wages</th>
<th>Other</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>12.883</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>12.883</td>
</tr>
<tr>
<td>2001</td>
<td>20.869</td>
<td>8.071</td>
<td>186</td>
<td>4.621</td>
<td></td>
<td>33.747</td>
</tr>
<tr>
<td>2002</td>
<td>19.262</td>
<td>5.888</td>
<td>515</td>
<td>5.572</td>
<td>185</td>
<td>31.422</td>
</tr>
<tr>
<td>2003</td>
<td>16.300</td>
<td>5.613</td>
<td>415</td>
<td>5.825</td>
<td>20</td>
<td>28.173</td>
</tr>
<tr>
<td>Total</td>
<td>69.314</td>
<td>19.572</td>
<td>1.116</td>
<td>16.018</td>
<td>205</td>
<td>106.225</td>
</tr>
</tbody>
</table>

Cost to the Marine Research Institute was 20.7 million ISK in 2003 and 41.8 million in 2004. This is 1.2% of the institute’s total expenditure in 2003. In 2004 the cost amounted to 2.6% of budget.

Excluding overheads and support functions the MRI’s research costs may be assumed to have been approximately 1.400 million ISK in 2003. Thus, scientific whaling costs would have been around 1.4% of research costs. The proportion is similar for 2004.

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2 According to Mr. Vilhjálmur Egilsson, Permanent Secretary, Ministry of Fisheries. (4.5.2005)
3 According to Mr. Vilhjálmur Egilsson, Permanent Secretary, Ministry of Fisheries and Mr. Gunnar Jóhannsson, representative of the Association of Minke Whalers.
4 According to Mr. Gunnar Jóhannsson.
Since the year 2000 government has spent just over 106 million ISK on PR and lobbying efforts related to whaling. The breakdown of this cost can be seen in Table 1 above. According to ministry sources the PR and lobbying cost consists of payments to various government bodies, but none to external consulting firms.

According to the above figures a total of approximately 62 tonnes of whale meat has been obtained through the research programme. According to Ferskar Kjötvörur hf. which bought the meat in 2003, 10-15 tonnes were sold to consumers. Adding the 15 tonnes sold in 2004 according to the Association of Minke Whalers, it may be assumed that 32-37 tonnes remain unsold.

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7 According to Mr. Vilhjálmur Egilsson, Permanent Secretary, Ministry of Fisheries.
8 According to Mr. Leifur Þórsson, General manager of Ferskar Kjötvörur hf. (13.5.2005)
Cost of operations

The operations cost in minke whale hunting would include cost of operating and financing the ships and equipment necessary to hunt the whales and prepare the meat. Also, storage cost would have to be taken into account. These figures are not easy to obtain, especially since the industry is practically non-existent today. According to figures from the Ministry of Fisheries, whalers were paid ISK 180,000/day in 2003-2004 for taking part in the scientific whaling programme. According to MRI figures, 37 whales were killed in 2003 (36 were landed) and 25 in 2004. Meat obtained in 2003 was 37 tonnes.

Based on those figures, payment to whalers was approximately 23M ISK in 2003 and 20M in 2004. Judging from the amount of meat the cost/kg is approximately ISK 700 on average for both years.

### Table 2: Direct cost of whaling in 2003-2004

<table>
<thead>
<tr>
<th>Year</th>
<th>2003</th>
<th>2004</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of days paid for</td>
<td>127</td>
<td>113</td>
<td>240</td>
</tr>
<tr>
<td>Number of whales caught</td>
<td>36</td>
<td>25</td>
<td>61</td>
</tr>
<tr>
<td>Meat (kg)</td>
<td>37.000</td>
<td>25.694</td>
<td>62.694</td>
</tr>
<tr>
<td>Meat per whale</td>
<td>1.028</td>
<td>1.028</td>
<td>1.028</td>
</tr>
<tr>
<td>Cost per day</td>
<td>180,000</td>
<td>180,000</td>
<td>180,001</td>
</tr>
<tr>
<td>Total cost</td>
<td>22,860,000</td>
<td>20,340,000</td>
<td>43,200,240</td>
</tr>
<tr>
<td>Cost per whale</td>
<td>635,000</td>
<td>813,600</td>
<td>708,201</td>
</tr>
<tr>
<td>Days per whale</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Cost per kg</td>
<td>618</td>
<td>792</td>
<td>689</td>
</tr>
</tbody>
</table>

Whalers then bought the meat from the MRI for approximately ISK 300/kg in 2003, but due to difficulties selling the meat the figure was subsequently lowered to ISK 130/kg.

When analysing those cost figures it must, however, be taken into account that whaling as part of a scientific experiment is bound to be less efficient than if it were undertaken purely for commercial purposes. According to industry sources a whaling boat might on average be expected to catch 100 minke whales per year. Based on industry segment cost figures and fleet size an average cost of 30-40 million ISK/year including estimated financing cost seems a reasonable estimate. This gives 300-400 ISK/kg of whale meat.

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9 Interview with Mr. Vilhjálmur Egilsson, Permanent Secretary, Ministry of Fisheries. MRI Annual Reports 2003 and 2004.
10 The payment per day refers to days the boats spent on whaling trips.
11 Calculated figure based on 2003 ratio.
12 The total cost, calculated in this way differs slightly from the cost breakdown according to the document referred to in footnote 6.
13 The scientific programme subjects whalers to conditions and requirements that reduce efficiency.
14 See Iceland Statistics website for cost figures and www.fisheries.is for fleet information.
Current and possible markets for whale meat

The Icelandic market

The history of commercial whaling in Iceland spans over 120 years. The industry peaked in the early 20th Century, whale oil being an important product. The market for whale meat in Iceland has never been considerably strong and most of the meat produced was exported, mainly to Japan in the years preceding the moratorium on whaling. Iceland was never involved in Antarctic whaling which became the mainstay of, for example, the Norwegian and later Japanese industry.

Graph 2: Whaling trends in Iceland\textsuperscript{15}

Experience from the scientific programme in 2003

When the catch from the scientific whaling project entered the market in 2003 minke whale meat had not been generally available in Icelandic supermarkets for some 20 years.\textsuperscript{16} The catch was bought by Ferskar Kjötvörur hf., one of the main meat distributors in the country and sold mainly through Hagkaup hf., a leading supermarket chain. The product enjoyed considerable media attention, chefs were drafted to publish recipes and the product was introduced on television shows. The marketing campaign lasted approximately one month.

To start with sales were good and consumers were willing to try out the product but retailers say repeat sales scarcely took place. According to retailers’ estimates total sales amounted to 10-15 tonnes in 2003 which means 23-27 of the 37 tonnes that went into the market did not sell.

\textsuperscript{15} Figures from Iceland Statistics. Gaps in the graph signify missing data.

\textsuperscript{16} The meat was available, though, in a few speciality fish stores.
The initial price was close to 1000 ISK/kg. In further efforts to market the meat price has gone as low as approximately 500 ISK/kg. Retailers believe price is not a determining factor in sales but the meat might still sell for 100-200 ISK/kg, which is well below the price of chicken.\(^\text{17}\)

The total Icelandic meat market was close to 22.000 tonnes in 2003\(^\text{18}\) so the whale meat sales were not a significant fraction of the total market.

In 2004, 25 minke whales were caught. According to whalers’ representatives around 15 tonnes of the meat went into the market.\(^\text{19}\) None of this meat was sold through food retail chains. Some was sold to restaurants. For example, according to a restaurant owner who has offered whale meat for many years, sales are around 30 kg/week, giving 1.5 tonnes/year.

Based on those figures, the current market for minke whale meat in Iceland might be estimated to be somewhere within the range of 5-15 tonnes/year.

**General market assessment**

Based on their experience in 2003 retailers have not been willing to initiate any further marketing campaigns to promote whale meat. Both the retailers and distributors we have interviewed believe the product is difficult to sell and that investment in promotion in unlikely to be worthwhile. It is their assessment that in order to secure a permanent place in the market for whale meat it would be necessary to invest heavily in advertising and various kinds of PR activities. They point out that among consumers whale meat is traditionally looked upon as a low priced secondary product and thus is at a disadvantage compared to other red meats.

They do not, however, exclude the possibility that the meat might be successfully marketed by means of strong government support.\(^\text{20}\)

**Other existing markets**

Historically, Japan was the main market for Iceland’s whale meat. This market has been closed since scientific whaling ended in 1989 and, when Iceland left the International Whaling Commission in 1992, whale meat could not be sold to Japan. Even though Japanese whalers have been able to market some amount of whale meat domestically, according to our sources eating habits have changed considerably and whale meat is no longer as important as it used to be. According to a recent survey whale meat seems to be losing its popularity quite quickly (see graph below).\(^\text{21}\) Attempts to export whale meat to Japan have not succeeded.

\(^{17}\) Based on interviews with Mr. Leifur Þórsson, General manager of Ferskar Kjötvörur hf. and Mr. Sigurður Reynaldsson, Retail Manager, Hagkaup hf. (19.5.2005)

\(^{18}\) Iceland Statistics (www.hagstofa.is)

\(^{19}\) Morgunblaðið, 27.5.2005

\(^{20}\) Based on interviews with Mr. Leifur Þórsson, General manager of Ferskar kjötvörur hf. and Sigurður Reynaldsson, Retail Manager, Hagkaup hf.

\(^{21}\) Hisashi Hamaguchi: “EATING IS BELIEVING - WHALE DIET CULTURE EXPERIENCE SEMINAR”, ISANA, December 2002, No. 26 (www.whaling.jp). The survey was actually carried out among students on a course on whaling cultures, so probably eating experience is lower among the general public.
Graph 3: A declining market – Results from an annual survey among new students at the Sonoda Women’s College, Japan

The Norwegian market has proved to be difficult as Norwegian whalers have only been able to sell a portion of their catch in any given year. Therefore, while Norway continues whaling this market is not open to Icelandic whalers.

Graph 4: Japanese Whale Meat Market

In 2003 the Icelandic exporter Pelastikk ehf. closed a deal with a Chinese importer to sell 10 tonnes of whale meat into the Chinese market. The meat was to be sold to Japanese restaurants in China for approximately 70 USD/kg. The deal did not go through due to problems with obtaining an export permit. According to Pelastikk management the quantity

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24 See chapter on issues concerning international trade.
of 10 tonnes was meant for market testing purposes and they are very confident much larger quantities could easily be sold into the Chinese market.\textsuperscript{25}

Supposedly, in several East Asian markets, whale meat is considered a delicacy and sold at high prices. For example, our sources claim whale meat is being sold to distributors in Taiwan for 200$\textperthousand kg, the end market being speciality restaurants.\textsuperscript{26} This information has not been verified, however.

**General consumer market**

In general, the possible markets for whale meat may be roughly divided into two sections. The first would be niche markets, such as Japanese restaurants in Peking, Icelandic speciality restaurants or dedicated whale meat connoisseurs in the US. These markets do exist, but their size is highly uncertain. Niche markets are, in general, not created by targeted marketing campaigns, but rather “found” by chance. It is impossible to determine in advance the profitability of exploring such marketing opportunities.

The other avenue is marketing the meat to the general consumer by selling it through retail chains in competition with other meat types.

Regarding marketing whale meat for general consumption we may look at the experience in the Icelandic, Japanese and Norwegian markets. The Icelandic market is very small and judging by retailers’ estimates it is not likely that attempts to increase it would prove profitable. Whale meat sales in Norway are low as well and retailers have been reluctant to stock the meat. The same seems to be the case in Japan.\textsuperscript{27}

We have looked briefly at the prospect of whale meat being introduced into new consumer markets, for example in Europe or the US where the product has no traditional status. The experience from similar projects is that product introduction of this kind might take several years and require a hefty marketing budget.

An example of a similar project might be the marketing of Icelandic lamb in the US:

> In 1997 Áform, a government supported body focused on the marketing of Icelandic lamb, began working with the Whole Foods Markets (WFM) in the US to export and market lamb. To start with the lamb was sold in nine outlets, and total sales were nine tonnes. In 2003 sales had grown to 90 tonnes and in 2004, 110 tonnes were sold. Plans for 2005 estimate sales of 160 tonnes. Price in 2003 was ISK 640\textperthousand ton. According to Áform’s long term planning, sales will have grown to 525 tonnes in 2010.\textsuperscript{28}

> Precise information on total marketing cost is not available. Direct cost was 9.5 million ISK in 2003. In total Áform have spent approximately ISK 25 million/year

\textsuperscript{25}Discussion on www.hlad.is/forums/, Interview with Mr. Gunnar Halldórsson, General manager, Pelastikk ehf. (19.5.2005)

\textsuperscript{26}According to Mr. Gunnar Halldórsson, General manager, Pelastikk ehf. Similar views regarding the East Asian markets were expressed by Mr. Gunnar Jóhannsson, representative of the Association of Minke Whalers.


\textsuperscript{28}IMG Deloitte Consulting, “Áform – Úttæk á útflutningsverkefni um sōlu lambakjöts” (Analysis of Áform’s lamb export project), March 2004.
since marketing to the US began. A considerable part of this money has been spent on projects other than the direct marketing budget.²⁹

If preparation work, work on quality standards, PR and other efforts are taken into account it is not unreasonable to assume an up-front cost of several hundred million ISK to firmly establish the product in the relevant markets. But this figure must be taken as a very rough estimate. According to our sources in the retail and food marketing industry experienced in new product introduction, it is not unreasonable to expect three to six years to pass before the product is established and sustainable in the market.

According to Áform, current price in the US delivers a gross margin of ISK 200/kg.³⁰ In order to determine a break even point for the project we might for example use the 25 million ISK/year as a conservative benchmark figure. Assuming a constant 25% growth/year, peaking in 2000 tonnes/year in 2016 and remaining constant after that, the project would sustain just over a 20% discount rate. Thus, based on this crude estimate, the lamb project would be worthwhile.

We mention this example mainly in order to put into context the issues involved in new product introduction of this kind. The question that remains is to what extent introducing whale meat into new markets may be analogous to the marketing of lamb.

As regards whale meat, even if the current situation regarding international trade is disregarded, exporters would probably be dealing with a vastly different picture. First of all, lamb is, after all, a known product in the American market. Secondly, Icelandic lamb can be marketed as an environmentally-friendly product whereas whale hunting is being strongly opposed by environmentalists. On the other hand, whale meat is more exotic than lamb and might therefore have some appeal as a niche product.

In Table 3 below we have set up some scenarios to determine the net margin to the exporter needed to achieve a positive outcome. We assume up-front investment in marketing will begin four years before sales start. Ongoing spending on marketing is assumed to be 2,5% of margin. The project is assumed to have to deliver a 20% return on investment to be worthwhile. The table shows both first year sales and sales in year 20. Based on those assumptions we calculate the gross margin per kg sold that is needed for the project to deliver the 20% return required.

<table>
<thead>
<tr>
<th>Investment</th>
<th>Sales start in year</th>
<th>Initial quantity</th>
<th>Annual growth</th>
<th>Margin/kg ISK</th>
<th>Market size in year 20</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 million</td>
<td>4</td>
<td>10 tons</td>
<td>20%</td>
<td>870,00</td>
<td>925 tons</td>
</tr>
<tr>
<td>300 million</td>
<td>4</td>
<td>100 tons</td>
<td>20%</td>
<td>240,00</td>
<td>1850 tons</td>
</tr>
<tr>
<td>300 million</td>
<td>4</td>
<td>100 tons</td>
<td>10%</td>
<td>475,00</td>
<td>460 tons</td>
</tr>
<tr>
<td>500 million</td>
<td>4</td>
<td>100 tons</td>
<td>20%</td>
<td>415,00</td>
<td>1850 tons</td>
</tr>
<tr>
<td>500 million</td>
<td>4</td>
<td>100 tons</td>
<td>10%</td>
<td>795,00</td>
<td>460 tons</td>
</tr>
<tr>
<td>2000 million</td>
<td>4</td>
<td>1000 tons</td>
<td>20%</td>
<td>165,00</td>
<td>18500 tons</td>
</tr>
</tbody>
</table>

It is clear that the upfront investment has a strong impact on the margin needed. Thus, scale is an important factor – large quantities are needed to adequately cover marketing investment.

³⁰ According to Mr. Baldvin Jónsson, Project Manager for Áform. (17.5.2005)
In the above examples margin needed to cover marketing investment and costs is in the range of 165 to 795 ISK/kg. Assuming cost of operations to be in the range of 300-400 ISK/kg the price before shipping and handling might be in the range of 500-1200 ISK/kg. It should be noted that the above analysis is intended solely to determine the sensitivity of margin to other factors, not to provide a realistic picture of actual marketing possibilities.

**Whale meat for industrial use**

Apart from the possible marketing opportunities mentioned above, there may, of course, always be an opportunity to sell whale meat at very low prices for industrial use. Considering the hunting and handling costs this is, however, not a realistic option, but might be used to dispose of excess stocks as a short term measure.31

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31 This regards the meat, but does not include the possible use of other whale products.
Issues concerning international trade

A key issue to be taken into account when discussing international trade in whale meat is the legal status of the project, considering the current moratorium on whaling and restrictions to international trade.

Iceland acceded to CITES as the 148th Party on 03.01.2000 and the Convention came into force for Iceland on 02.04.2000. CITES allows Parties to file reservations to decisions to restrict international trade in some species (Appendix II) or prohibit international trade (Appendix I). Iceland maintains reservations to the Appendix I listing of sperm whales, northern minke whales, Antarctic minke whales, sei whales, blue whales, fin whales, humpback whales and bottlenose whales. Thus Iceland is not bound by the prohibition on export of these species provided that Iceland exports to countries which likewise have such reservations.

Implications regarding possible markets

Both China and Russia have been considered by Iceland as possible markets for Icelandic meat. However, neither China nor Russia have reservations to the listing of any of the great whale species, so trade between Iceland and these countries would be illegal under CITES.

Norway maintains reservations to some species (sperm whales, northern minke whales, Antarctic minke whales, sei whales, fin whales) so export of whale meat from Iceland to Norway is legal and therefore technically possible. However, Norway kills sufficient whales to satisfy its own market and at times adjusts its catches downward due to problems selling the meat. So export of whale meat to Norway is unlikely.

The key question is whether Japan will, in the future, issue import permits for whale meat from Iceland (and/or Norway). At present Japan does not issue such permits. It is possible that Japan does not wish to exercise its reservation to CITES for fear that this would provoke an international response. It is also possible that Japan wishes to satisfy its markets with whale products caught through its own scientific whaling programme.

Norway has repeatedly tried to export whale products to Japan, particularly blubber for which there is no market in Norway. Recently Lars Walloe, head of the Norwegian scientific delegation to IWC, returned to Norway from Japan to indicate that there was no chance that Japan would import Norwegian whale products. Iceland has likewise held a number of meetings with Japan. In the absence of a clear answer that Japan will import Icelandic whale products, one can only assume that Japan wishes to satisfy its own market and may be concerned about the international repercussions should international trade resume.

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32 For further information see CITES web site www.cites.org
33 http://fiskeribladet.no/default.asp?lesmer=2090
Future developments

It is clear from the above that even if profitable marketing avenues would be found for whale meat, trade restrictions would bar them from being explored. Therefore, even if hunting minke whales for export might prove economically sound, it is almost impossible in practice.

Recent proposals to overturn the ban on international trade have not achieved a simple majority, let alone the two-thirds majority necessary for adoption.

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