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Food & Rural Affairs

Call for evidence outcome

Summary of responses

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Contents

This publication is available at https://www.gov.uk/government/calls-for-evidence/future-management-of-sandeel-and-norway-pout-in-uk-waters-call-for-evidence/outcome/summary-of-responses

Foreword

The UK Marine Strategy and the Fisheries Act 2020 highlight the importance of taking an ecosystem-based approach to the management of fisheries and the wider marine environment.

Many commercial fish stocks and vulnerable marine species including seabirds, cetaceans, and seals, rely on forage fish (sandeels and Norway pout) as a food source. The increased effects of climate change are negatively impacting on the health of the forage fish. The continued removal of sandeels through industrial fishing methods could result in further declines of threatened and vulnerable species in the wider marine environment. For example, there is evidence that increased fishing pressure on certain North Sea sandeel stocks is linked to a reduction of breeding success of kittiwakes.

For 2021, the UK did not allocate sandeel or Norway pout quotas. Despite the introduction of management measures aimed at increasing the resilience of the stocks, there is limited evidence of either the recovery of the relevant stocks or the wider ecosystem. This is hindering the UK's ability to reach Good Environmental Status of seabirds and marine food webs within the UK Marine Strategy. The UK will keep the scientific advice on these stocks under close review.

As an independent coastal state, the UK fisheries policy authorities (Defra, Marine Scotland, Welsh Government and Department of Agriculture, Environment and Rural Affairs (DAERA)) recognise that urgent actions are needed to protect sandeel and Norway pout stocks and the wider marine ecosystem. We have concluded our call for evidence to gather further evidence to consider whether new management measures are needed for these stocks based on the interaction between the stocks and the ecosystem. This summary of responses to the call for evidence was conducted in line with the Cabinet Office Consultation Principles (https://www.gov.uk/government/publications/consultation-principles-guidance).

Summary of Responses

Introduction

The purpose of the call for evidence was to seek input on four key areas:

- the value of sandeels and Norway pout to the marine ecosystem

- ecological - economic and social impact of the sandeel and Norway pout fisheries
- change of management approaches for sandeel and Norway pout stocks
- ecological - economic, and social impact of introduction of restrictions in these fisheries

The call for evidence ran for four weeks, from 22 October 2021 to 19 November 2021. We are grateful to all the individuals and organisations that took the time to respond to this consultation. Given the number of responses, this document provides only summary of factual responses and not details of each response. A copy of the original call for evidence is available at:

Call for Evidence on future management of sandeels and Norway pout (https://consult.defra.gov.uk/future-sandeels-strategy/sandeel-norway-pout-callforevidence/)

Overview of responses

In total, 36 responses were received (30 unique responses), 15 via Citizen Space and 21 via e-mails. 5 responses were identical but submitted by 5 separate organisations, and 1 response was submitted twice by the same organisation via different addresses. 5 representatives wished to keep their responses confidential. The breakdown of responses by stakeholder types is given in the chart below.

Method used to analyse responses

Due to the qualitative nature of responses, a thematic analysis was conducted. This approach allows for flexibility when creating meaningful themes as it reflects upon all responses gained from stakeholders. Commonalities between stakeholder responses are identified to present overall thoughts and opinions regarding the subject matter. To reduce confirmation bias, if differing opinions arise, they are presented alongside one another. To aid in transparency and robustness of research, researcher bias was controlled for by having multiple analysts explore the data. We have also captured views and remarks raised that did not include supporting evidence.

Summary of main themes

The main themes and points raised by respondents to the call for evidence are summarised below.

Respondents acknowledged that sandeels and Norway pout have high ecological value to the entire marine ecosystem:

- they form the base of many food webs - being an important food source for predatory fish, seabirds and marine mammals
- they convert energy from primary producers into fish biomass - allowing this energy to travel up the trophic levels

Respondents also noted that sandeel and Norway pout fishing have high economic value to some EU nations, who rely on UK waters to access these fisheries, to support their fishmeal and fish oil industries. However, many respondents felt that these fisheries bring little economic value to the UK.

Many respondents believe a change in management approaches for sandeels and Norway pout is required. Opinions varied on the constitution of such management measures but broadly consisted of:

- a total closure of the UK exclusive economic zone (EEZ) to sandeel and Norway pout fishing or Total Allowable Catches (TACs) reduced to zero or near zero
- taking an ecosystem-based approach to the management of sandeels and Norway pout, incorporating ‘set-aside’ and reducing catch limits downwards
- implementation of, or ideas taken from, the Norwegian model (including in season monitoring and adaptative management and late start of the season) of sandeel stock management while keeping the fisheries open

Respondents noted that the introduction of new restrictions in these fisheries could lead to:

- positive ecological impacts by allowing these stocks to recover and support the health of the rest of the marine ecosystem
- negative economic impacts on some nations, who have previously fished in UK waters, which may therefore lead to negative impacts for the fishmeal and fish oil industries
- positive social impacts for tourism and recreational angling opportunities with the bounce back of healthy fish, seabird, and marine mammal populations
- negative social impacts for those involved in these fisheries either recreationally or industrially, through lack of employment and opportunities

Responses by question

Question 1 to Question 4 in the call for evidence covered administrative questions (name, organisations, contact details and confidentiality).

Section 1: Sandeels

Part 1: The Ecological Value of sandeels

Question 5: Please provide evidence on the role of sandeels:

a) in the marine environment

b) in relation to other fish stocks (including as bycatch) and other marine species

c) in the marine ecosystem generally

This question received twenty-eight individual responses. There were two sets of identical responses (six responses in total), submitted by five different organisations.

Twenty respondents expressed their views on the significance of sandeels to the wider marine ecosystem including to other fish stocks and marine species. Eight responses (six identical, submitted by five different organisations) did not comment on the ecological value of sandeels but referred the reader to International Council for the Exploration of the Sea (ICES), Cefas, or Marine Scotland advice for this information.

Some responses provided evidence on the life history of sandeels to explain their role in the marine environment.

Twenty responses discussed the ecological value of sandeels in relation to other fish stocks and marine species, outlining the importance of sandeels as a major food source for other commercially important fish stocks such as haddock, whiting and cod, as well as critically endangered species, such as the European sturgeon.

Many outlined that multiple species of seabirds such as kittiwakes and puffins, as well as marine animals such as the grey seal and harbour porpoise, are reliant on sandeels as a highly nutritious food source. Responses discussed how sandeel abundance has been linked with breeding and population success of these dependent marine species, showing what a vital role sandeels play. One response also noted the

inherent ecological value of sandeels themselves, not just in relation to other species.

A number of respondents commented on the high ecological value of sandeels to the entire marine ecosystem. They noted that not only are sandeels an important feed fish but, found at the base of complex food webs, they play a vital role in the transfer of energy from plankton up the trophic levels to seabirds and marine mammals, and support the entire ecosystem. Further to this, the role of sandeels in the carbon cycle was discussed. Respondents outlined that sandeel predators store carbon (which sandeels have converted from plankton) in their tissues, for many years in some cases, and transport it back down to important carbon sinks in the deep ocean when they die.

Part 2: Sandeel fishing in UK waters

Question 6: Please provide evidence of the effect of sandeel fishing on the marine environment and ecosystem.

This question received twenty-five individual responses. There were two sets of identical responses (six responses in total), submitted by five different organisations.

Eighteen responses provided evidence on the negative effects of sandeel fishing on the marine environment and ecosystem. The majority of these responses discussed the decline and damage to seabird populations as a result of sandeel fishing, as well as the decline in other commercial fish stocks. In particular, that seabirds such as kittiwakes and terns rely heavily on a sandeel diet and that sandeel fishing reduces the food available, leading to lower breeding success and declining populations. This was also discussed in the same way for predatory fish and marine mammals such as porpoises and seals.

Five responses also discussed the impact of sandeel fishing gear on the marine environment and ecosystem, outlining that bottom trawlers used in sandeel fishing can lead to localised depletion and long-term damage to the seabed. Furthermore, responses discussed how disturbance of the seabed in this manner releases carbon stores locked away in marine sediments.

Seven responses (six identical, submitted by five different organisations) did not outline any negative impacts of sandeel fishing in UK waters. Some of these responses referred the reader to the annual ICES advice for information on the sustainability and effects of sandeel fishing.

Part 3: The social and economic impacts of sandeel fishing

Question 7: Identifying the sectors involved or impacted, please provide any evidence on the social and economic impacts of sandeel fishing.

This question received twenty-five individual responses. There were two sets of identical responses (five responses in total), submitted by four different organisations.

Nine responses (three identical, submitted by two different organisations) provided evidence on the economic importance of sandeel fishing to Denmark, both through the fishing itself and through the production of fishmeal and fish oil. They outlined that Denmark is reliant on UK waters to target sandeels, and that the Danish economy would be impacted by a change in regulation, both economically but also socially with this industry providing employment in Danish coastal communities. It was also discussed that the use of sandeels for fishmeal is essential as feed in aquaculture and agriculture, so these industries (and resulting animal proteins) may also be impacted by any change in regulation.

Seventeen responses (two identical, submitted by two different organisations) discussed the economic and social impact of sandeel fishing in the UK. Eleven responses focussed on sandeel fishing bringing no economic benefit to the UK, and how stopping this fishery could benefit the UK socially and economically. Some of the reasons included boosting other fish stocks, sea bird populations and marine mammals via increased food availability, thus increasing the UK's commercial fisheries, as well as the sea angling industry and tourism opportunities.

Six responses (two identical, submitted by two different organisations) focussed on the loss of UK revenue and skills which would occur if sandeel fishing was to be completely banned. It was commented that sandeel fishing is a culturally and socially important artisan activity to some small coastal communities[footnote 1]. It was also suggested that sandeel fishing could bring economic benefit to the UK via catching, processing, and aquaculture supply, if quotas were raised. A final point raised was that sandeel quota has been historically important as trading quota for other fish stocks, which benefit the UK economically.

Part 4: Future management of the sandeel fishery in UK waters

Question 8a: Please provide any evidence you have on the effect of the current management measures in place to limit the sandeel fisheries in UK waters.

This question received twenty-six individual responses. Fifteen responses were in favour of restricting the current fishery considering the current management measures ineffective. Eleven responses to this question were neutral. Of the twenty-six responses, there were two sets of identical responses (six responses in total), submitted by five different organisations.

Eight respondents discussed current spatial closures and coastal catch limits. While some respondents felt that spatial closures can be effective as a management measure, this was countered by some with the issue of

fishing displacement. Currently, TACs are calculated based on the total management area, without considering any spatial closures such as the ‘sandeel box’ in ICES management area 4. This could mean that fishing effort is displaced and concentrated into a smaller geographic area, achieving no net benefit overall.

The Dogger Bank area was mentioned by five respondents. Some respondents believed that management measures to close this area would be beneficial to sandeel populations. However, the majority of these five respondents believed these measures would have no overall benefit. Respondents stated that closing the Dogger Bank area to sandeel fishing may displace fishing effort, leading to further depleted sandeel stocks.

Twelve respondents reported that the current measures fail to take an ecosystem-based approach, stating that sandeels are vitally important to the marine ecosystem and sustain large populations of protected sea birds, as well as marine mammals and piscivorous fish. These respondents reported that current TACs fail to consider predator requirements, resulting in reduced food availability for dependent predator species.

Some respondents also reported that the UK is yet to achieve good environmental status (GES) for fish, breeding seabirds and food webs. They also commented that spawning Stock Biomass (SSB) also remains below sustainable levels despite restrictions and that these factors indicate that the current management measures are ineffective.

Some respondents mentioned bycatch in sandeel fisheries, reporting high bycatch levels of juvenile fish, such as cod, haddock, and whiting, stating that monitoring methods are not robust enough. Some respondents stated that sandeel fishing is not regulated enough, citing more than 66 non-UK vessels off the Northumberland coastline in May and June 2021.

Of the eleven neutral responses, seven (six identical, submitted by five different organisations) referred the reader to the annual ICES advice for evidence on the effect of current management measures. The remaining neutral respondents were reluctant to get involved with fisheries management.

Question 8b: Please provide evidence on what measures could be introduced to improve the resilience of North Sea sandeel stocks and the wider ecosystem.

This question received twenty-six individual responses. Of which, two were identical, submitted by two different organisations.

Sixteen responses were in favour of implementing measures to further restrict the current fishery.

Five responses were in favour of continuing the fishery but with the implementation of new management measures.

Eleven respondents stated that UK sandeel fisheries should be closed completely, with the TAC set to zero, to improve the resilience of North Sea sandeel stocks. Eight respondents called for an ecosystem-based approach to improve the resilience of North Sea sandeel stocks and the wider ecosystem, which might include:

- incorporating the concept of ‘set-aside’ sandeel biomass for seabirds and other wildlife, before TACs are calculated - thus, ensuring enough sandeel are left for predators
- identification and protection of essential fish habitat (EFH) capable of supporting sandeels
- consideration of the impacts of activities such as offshore wind and aggregate dredging on marine environments and wildlife

Ten respondents suggested new management measures to improve the resilience of North Sea sandeel stocks, such as:

- as low a TAC as possible (if zero TAC is not possible), set below maximum sustainable yield (MSY) and based on the precautionary approach
- spatial closures within 100km of seabird breeding colonies, combined with reducing catch limits to avoid fishing displacement
- a reduction or ban on bottom-towed fishing gear

There were also multiple calls for improvements in scientific advice for sandeels in the North Sea, as well as research to better understand how spatial closures and fishing displacement interact. One respondent suggested a number of measures such as closing specific management areas rather than the whole of the North Sea. Two respondents suggested (if not closing entire UK EEZ) to close the Dogger Bank area and Scottish EEZ segment.

Three respondents (two identical, submitted by two different organisations) were against closing the current fishery and offered the Norwegian model of sandeel stock management as a way to continue it, including:

- cooperation between scientists, managers, and the industry
- using acoustic abundance surveys to set precautionary catch levels, and spatial management
- involving the fleet in monitoring the stock and adapting in-season
- fishing starting later and stopped in an area if over 10% of the catch is juvenile

These respondents reported this method as successful, rebuilding populations from very low levels and offered it as way to continue the fishery in a sustainable and efficient way. The development and use of new selective gears were also mentioned, to minimise bycatch.

Question 8c: Would measures to further limit or manage the sandeel fisheries in UK waters be beneficial? What would be the impacts of these measures on the wider marine ecosystem or coastal communities? For example, which of these measures (such as spatial restrictions) would be most beneficial to the wider marine ecosystem?

This question received twenty-six individual responses. Of which, fifteen responses found further measures to limit or manage sandeel fisheries in UK waters to be beneficial. Nine responses did not find further measures to be beneficial and two responses were neutral. Of the twenty-six responses, there were two sets of identical responses (five responses in total), submitted by four different organisations. Many of the responses to this question were similar to the previous question (Q: 8b).

Twelve respondents recommended to significantly reduce or close the sandeel fishery as the most beneficial measure. There was also a common emphasis on taking an ecosystem-based management approach. Furthermore, respondents argued that closing the fishery would help provide resilience against the effects of climate change, which they reported is negatively impacting sandeel populations. The main benefit discussed was for the wider marine ecosystem, particularly for fish & seabird populations via increased food availability. It was also suggested that closure measures could benefit tourism opportunities in the area.

Seven responses (three identical, submitted by two different organisations) did not find further measures to be beneficial on account of the negative impact these would have on the fishing industry and associated stakeholders. Some respondents were also against further measures on account of the scientific data that would be lost if the fisheries closed, resulting in a data deficiency.

Section 2: Norway pout

Part 1: The ecological value of Norway pout

Question 9: Please provide evidence on the role of Norway pout:

a) in the marine environment

b) in relation to other fish stocks (including as bycatch) and other marine species

c) in the marine ecosystem generally

There were eighteen individual responses to this question. Eleven respondents expressed their views on the significance of Norway pout to the wider ecosystem including to other fish stocks and marine species. Seven responses (four identical, submitted by three different organisations) expressed a neutral opinion on the ecological value of Norway pout. Four of these responses (four identical, submitted by three different organisations) referred to the ICES advice for evidence on the ecological value of Norway pout.

Seven respondents provided evidence on the life history of Norway pout to explain their role in the marine environment.

Responses discussed Norway pout as an important forage fish and prey item for commercially important fish species such as cod, whiting, saithe, and haddock. Additionally, it was explained that Norway pout larvae are also a key food source for herring and mackerel and that they are also predated by seabirds and some marine mammals, such as bottlenose dolphins and grey seals.

It was outlined that Norway pout are taken as bycatch in the haddock and whiting fisheries, but these bycatch levels are considered low according to ICES. It was discussed that the Norway pout fishery previously used to record relatively large bycatches of herring, saithe, cod, haddock, whiting and monkfish. However, the ‘Norway pout box’ instated in 1977 and new technical measures have helped to bring bycatch down to low levels (5-10%) in recent years.

Responses also discussed how Norway pout play an important role in the marine ecosystem by transferring energy from plankton to higher trophic levels, creating a link between lower and higher trophic levels. They also noted the species’ contribution to the carbon cycle of the ocean by transporting carbon from primary producers to predators. These larger predators in turn die and take the carbon down to deep water habitats which are important carbon sinks. They discussed how Norway pout play an important role in the wider marine ecosystem by acting as a prey species for larger fish, seabirds and marine mammals, by transporting nutrients from plankton up the trophic levels, and by blue carbon cycling.

Part 2: The Ecological impacts of Norway pout fishing

Question 10: Please provide any evidence you have that demonstrates the ecological impact of Norway pout fishing.

There were twenty-one individual responses to this question. Fourteen respondents expressed their views on the ecological impact of Norway pout fishing on the wider ecosystem including other fish stocks and marine species. Seven responses (four identical, submitted by three different

organisations) did not discuss or find there to be any significant ecological impacts of Norway pout fishing.

Fourteen respondents highlighted the importance of Norway pout in the wider ecosystem. The responses took the view that fishing for Norway pout would have an adverse effect on other commercial fish stocks, including saithe, haddock, cod, whiting and mackerel. It was viewed that reducing the availability of Norway pout as a prey species could lead to a reduction in other, more widely fished, commercial species.

Five respondents provided evidence on the industry's fishing practices and its ecological impact. Respondents highlighted Norway pout's preference to form shoals near the seabed, therefore allowing the stock to be targeted by bottom trawlers. Respondents reported that this type of fishing can lead to disturbing the seabed and the other marine habitats that reside within and around the seabed. Respondents believed that this practice could have a negative influence on the wider marine ecosystem.

The final impact flagged by respondents was the levels of bycatch within the Norway pout fishery. Shoals of Norway pout are known to mix with juveniles from other fish stocks, therefore leading to bycatch of these juveniles. It was viewed that although levels are relatively low, bycatch of juveniles will have an adverse effect of the future population of those stocks.

Part 3: The social and economic impacts of Norway pout fishing in UK waters

Question 11: Identifying the sectors involved or impacted, please provide any evidence on the social and economic impacts of the Norway pout fishing.

There were nineteen individual responses to this question. Six responses (three identical, provided by two different organisations) provided evidence highlighting the importance of Norway pout to the Danish economy, with the majority of Norway pout landed by Danish vessels being caught within the UK's EEZ. Respondents commented that these activities bring business to Danish coastal communities through the fishing vessels themselves as well as the processing plants needed to turn Norway pout into fishmeal and fish oil.

There were five responses that commented on the economic impact of the UK's Norway pout fishery. The responses focused on the current lack of benefit that the UK catching sector experiences through Norway pout fishing. These responses suggested that there would be benefits for the UK catching sector if Norway pout fishing was reduced or banned.

Part 4: Future management of the UK Norway pout fishery

Question 12: Please provide any evidence on ecological benefits that could be delivered by new measures or limits on the Norway pout fishery in UK waters.

This question received nine individual responses. Five responses discussed the ecological benefits that could be delivered by new measures or limits on the Norway pout fishery in UK waters. The majority of responses did not directly answer the question, with these focused largely on the ecological and economical value of Norway pout.

Five responses discussed the ecological benefits of new measures or limits proposed in relation to high levels of juvenile bycatch attributed to the Norway pout fishery. Respondents provided evidence on the industry's fishing practices, like small mesh net sizes, rigid grids, and the ecological impact on juvenile Norway pout. The responses also covered the impact on other species such as juvenile cod, whiting, and haddock. These respondents believed that whilst the levels of bycatch are low at this time, the amount of bycatch is a cause for concern in regard to the ecological sustainability of the fishery. They took the view that it would be ecologically beneficial to the local juvenile fish stock to preserve the population of Norway pout.

One respondent in favour of new measures or limits advocated for an ecosystem-based approach to the management of the fishery. This was based on the fact that Norway pout play a significant role in marine food webs as a key prey species for a variety of fish and seabirds. This response highlighted the ecological benefit of limiting the Norway pout fishery, to give threatened seabirds the ability to recover from their recent population decline.

Five responses were against the closure of the Norway pout fishery. Two responses were from an ecological position and two took an economic perspective. Three responses cited the use of Norway pout for fishmeal and oil; important ingredients in aquaculture and agricultural feeds. The economic views flagged the dependency of Danish fleets on access to UK waters to target Norway pout, as they have done so for a significant historic period.

Question 13: Which forms of management could deliver the greatest ecological benefits? For example:

a) a ban on Norway pout fishing in UK waters

b) a phased reduction of Norway pout fishing in UK waters

c) area closures of the Norway pout fishery

There were eleven individual responses. Of which, there was one set of identical answers submitted by the same organisation.

Four responses recommended additional technical measures as the most ecologically beneficial management of the Norway pout.

- one suggested the use of Norway pout (quota and access) as currency in bilateral fishery exchanges for one or two years - monitoring and reviewing the impact of this new system
- one respondent called for the UK to offer the quota as swap currency in the annual negotiations with Norway
- two advocated for the development of selective gear to manage and minimize bycatch of all species, particularly cod, whiting, saithe and herring
- all four responses emphasised the ecological benefit of adopting an ecosystem and precautionary management

Three responses were in favour of the complete closure of the Norway pout fishery to ensure the sustainability of a healthy ecosystem. These responses stated that by removing fishing pressure, the Norway pout stocks will have greater resilience against changing climate conditions. They also discussed Norway pout being an integral food source in marine food webs, seeking to avoid fishing that can disrupt the availability of these prey species.

Two respondents were against any form of management changes and instead wanted to keep the fishery open without any additional measures. Both responses highlighted the potential negative socio-economic consequences for Danish fishing communities.

One response preferred a phased reduction on Norway pout fishing. Concerned with the catching and retention of significant quantities of juvenile bycatch species, such as cod, haddock and whiting, they are supportive of restrictive management measures to reduce fishing activity. They suggested the use of CCTV and direct observation by fisheries observers or compliance officers as an ecologically beneficial management style. The view is that these measures will minimise bycatches of juvenile species.

Next steps

The UK fisheries policy authorities have given careful consideration to all the call for evidence responses and will take them into account for future management of sandeel and Norway pout fish stocks and their wider impacts. The Administrations are grateful to all respondents for participating and note that the thirty-six responses received may not represent a comprehensive cross-section of all opinions, evidence, and science available across all stakeholders.

The International Council for the Exploration of the Sea (ICES) released its scientific advice for sandeel in the North Sea on 25 February 2022. The UK and EU will consider sandeel fishing opportunities for 2022 to ensure that a total allowable catch has been set by 1 April 2022.

Noting that the majority of responses were in favour of implementing new management measures for the sandeel and Norway pout stocks, the UK fisheries policy authorities will further consider the impact of such measures on the stocks. Consideration will be given to possible measures at both a UK and Authority level. Decisions on the introduction of any new management measures, including any public consultations on potential measures, will take place following the conclusion of sandeel TAC setting with the EU for 2022.

List of organisations that did not request confidentiality

- Blue Marine Foundation
- The Danish Fishermen PO
- Danish Pelagic Producers Organisation
- European Fishmeal
- Fair Morn Fish
- The Fish Producers' Organisation Ltd
- Joint Nature Conservation Committee (JNCC)
- Marine Ingredients Denmark
- North Atlantic Fish Producer Organisation
- Northumberland IFCA
- The Norwegian Fishing Vessel Owners Association
- Oceana
- The Pew Charitable Trust
- RSPB
- Save Our Sea Bass
- Scotland's Nature Agency
- Scottish Pelagic Fishermen's Association
- Scottish Renewables / RenewableUK
- Scottish White Fish Producers Association Limited and Mallaig and North West Fishermen's Association
- Scottish Wildlife Trust
- Seal Research Trust
- South Devon & Channel Shellfishermen Ltd

- SSE Renewables
- Sunbeam Fishing Ltd
- University of Liverpool
- The Wildlife Trusts

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1. The response suggested that this was on a small scale using small vessels in small fishing communities, with fishers taught by their fathers/grandfathers etc. Also, catching very small amounts per trip compared to industrial fishing.
