

# Consultation on new Management Measures for Crab and Lobster Landings into Orkney

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## **Executive Summary**

This consultation seeks views on:

- increasing the minimum landing size (MLS) for velvet crab (*Necora puber*) landed into Orkney from 65 mm to 70 mm carapace width
- increasing the MLS for lobster (*Homarus gammarus*) landed into Orkney from 87 mm to 90 mm carapace length over a three year period
- introducing a MLS for green crab (*Carcinus maenas*) landed into Orkney of 70 mm carapace width
- prohibiting the landing of berried velvet crab (*Necora puber*) caught in the six nautical miles around Orkney
- whether there should be new restrictions on carriage in the six nautical miles around Orkney to accompany these measures

Landings of these species were worth £2.5 million to the economy of Orkney in 2013, and more when processing and other related activities are included.

The velvet crab and lobster stocks around Orkney are both currently assessed to be fished at levels close to or above the  $F_{MSY}$  proxy.  $F_{MSY}$  is the fishing mortality consistent with the largest average yield that can continuously be taken from a stock under prevailing environmental conditions. When a stock is fished above  $F_{MSY}$ , it is advisable that measures be introduced to reduce fishing mortality to achieve a higher yield and biomass in the long term. There is currently no assessment of the green crab stock around Orkney.

These measures were developed and proposed by Orkney Sustainable Fisheries Ltd, which is part of the Inshore Fisheries Group network, and are intended to help improve the sustainability of these fisheries through the regulation of harvesting controls.

## **Background on the Consultation Process**

The purpose of this consultation document is to seek the views of those with an interest in shellfish fisheries in Orkney, in order to inform policy decisions. The consultation will last for 12 weeks, commencing on **Friday 20 February 2015** with a deadline of **Friday 15 May 2015** for responses.

The views and suggestions received in consultation responses will be analysed and fed into the decision making process. Final decisions on the issues under consideration will also take account of a range of other factors, including any other available information and research evidence.

Please send your returns or address any queries to:

**orkneyconsultation@scotland.gsi.gov.uk**

or

### **Orkney Consultation**

Marine Scotland  
Area 1B South  
Victoria Quay  
Edinburgh  
EH6 6QQ

If you have any queries contact the Inshore Fisheries and Coastal Communities Team on 0131 244 6214.

The Scottish Government may make the responses to this consultation paper available to the public and to the Scottish Parliament. We will acknowledge responses and may publish an analysis of the responses after the consultation. If you respond to this consultation you are requested to complete the enclosed Respondent Information Form attached at Annex A. This will ensure that we handle your response appropriately.

## **Consultation Document**

### **Background on fisheries management in Orkney**

The management proposals contained in this document were developed by Orkney Sustainable Fisheries Ltd (OSF) which is part of the Inshore Fisheries Group network.

Inshore Fisheries Groups (IFGs) are non-statutory bodies that have been established around the Scottish coast, whose purpose is to help improve the management of Scotland's inshore fisheries out to six nautical miles. They aim to put commercial fishermen, assisted by government agencies and others with an interest in the marine environment, at the heart of developing initiatives for sustainable and profitable fisheries.

Orkney already has well-developed management of its fisheries, and OSF has been recognised by Marine Scotland as the IFG equivalent for the area. OSF was established as a Company Limited by Guarantee in 2006 with the aim of running the Orkney Lobster Hatchery and taking forward various other initiatives relating to the sustainability of the local shellfisheries. OSF has representatives from all local fisheries sectors as members and directors, with directors being recruited through an open and widely-advertised process.

After reaching consensus among its membership and the wider Orkney inshore fishing community, OSF has asked Marine Scotland to legislate to help secure the long-term sustainability of Orkney's shellfish fisheries by increasing the minimum landing size for velvet crab and lobster, introducing a minimum landing size for green crab, and prohibiting the landing of berried velvet crab caught in the six nautical miles around Orkney.

## Background on fisheries in Orkney

Shellfish is by far the largest sector of Orkney's fishing industry, accounting for over 99 per cent of the area's total catch in 2013, with a value of almost £7.3 million.<sup>1</sup>

While whitefish vessels once made up the backbone of the local fleet – over a dozen large trawlers targeted that fishery at its peak in the 1980s – only a few such vessels now remain. The fleet now consists mainly of a hundred or so under 10 metre vessels fishing for crab and lobster, along with a dozen boats dredging or diving for scallops.

Shellfish landings into Orkney makes up a sizeable portion of the national catch, responsible on average for six per cent of total shellfish landed into Scotland each year. This includes 30 per cent of velvet crab, 21 per cent of brown crab and 12 per cent of lobster landed into Scotland each year.

Fishing is a significant employer in Orkney: 2.5 per cent of the working age population are fishermen, as compared to 0.2 per cent for the total Scottish workforce. Two cooperatively-owned crab processors also provide onshore employment for over 120 staff, and purchase some £5.5 million of local shellfish each year to process for sale to UK and export markets.<sup>2</sup>

The species involved in this consultation are some of the most profitable landed into Orkney. In 2013 they accounted for a third of all landings by value:

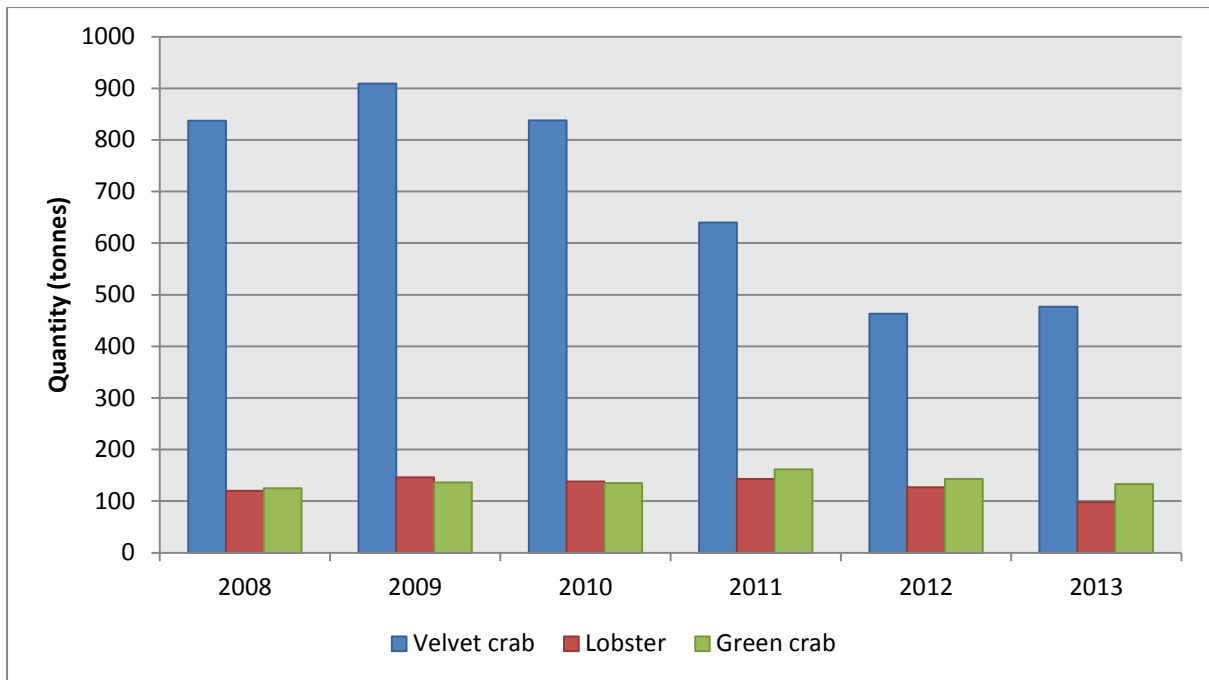
- Velvet crab (landings worth £1.3 million)
- Lobster (landings worth £1.1 million)
- Green crab (landings worth £87,000)

The following page shows both the tonnage and value of these species landed into Orkney from 2008 to 2013.

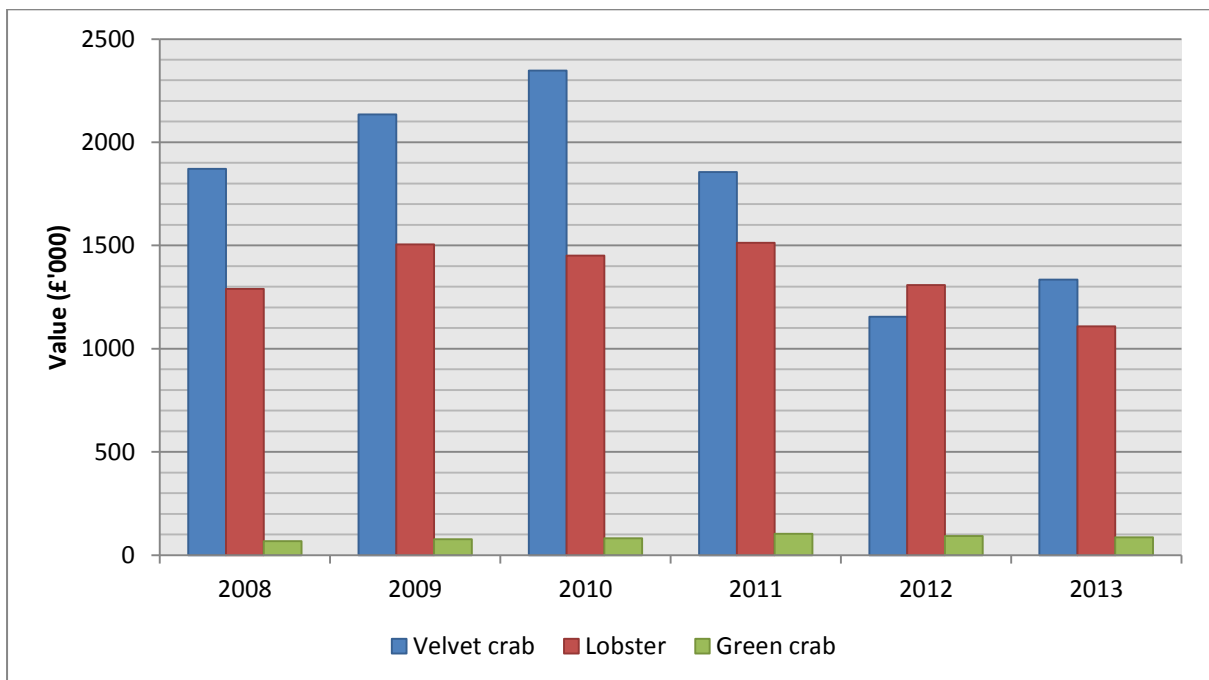
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<sup>1</sup><http://www.scotland.gov.uk/Publications/2014/09/7931>

<sup>2</sup>[http://www.emec.org.uk/?wpfb\\_dl=64](http://www.emec.org.uk/?wpfb_dl=64)



Quantity (tonnes) of velvet crab, lobster and green crab landed into Orkney, 2008 to 2013.



Value (£'000) of velvet crab, lobster and green crab landed into Orkney, 2008 to 2013.

These species are managed under a broadly similar framework in Scotland:

- They are not subject to quota control under the EU Total Allowable Catch system
- Vessels fishing commercially for these species must have a shellfish entitlement associated with their licence

Landings of velvet crab and lobster into Orkney must currently comply with an EU-set minimum landing size, and landings of female lobster must comply with a Scotland-specific maximum landing size.

### State of the stocks in Orkney region

Marine Scotland Science assesses Scotland’s fish stocks using  $F_{MSY}$ .  $F_{MSY}$  is the fishing mortality consistent with the largest average yield that can continuously be taken from a stock under prevailing environmental conditions.

$F_{MSY}$  can be difficult to estimate, and proxies to it are often used. As it is not possible to directly estimate the maximum sustainable yield ( $Y_{MSY}$ ) for velvet crab and lobster,  $F_{MAX}$  (the fishing mortality rate that maximizes yield per recruit) is used as a proxy to  $F_{MSY}$  for these stocks.

When a stock is fished above  $F_{MSY}$ , the scientific advice is that a higher yield and biomass in the long term could potentially be obtained from the stock by introducing measures to reduce the level of fishing mortality (effort).

### Velvet Crab

The latest stock assessment from Marine Scotland Science shows that both male and female velvet crab continue to be fished above the  $F_{MSY}$  proxy.

Velvet crab		F (Fishing Mortality)		
		2002 - 2005	2006 - 2008	2009 - 2012
Orkney	Males	X	X	X Above $F_{MSY}$
	Females	X	X	X Above $F_{MSY}$

Velvet crab stock status for Orkney, 2002-2005, 2006-2008 and 2009-2012. <sup>3</sup>

<sup>3</sup><http://www.scotland.gov.uk/Publications/2014/09/5642/25>



## Lobster

The latest stock assessment from Marine Scotland Science shows that male lobster continues to be fished above the  $F_{MSY}$  proxy. Female lobster is now fished at  $F_{MSY}$ , while in previous assessments it was fished below  $F_{MSY}$ .

Lobster	F (Fishing Mortality)		
	2002 - 2005	2006 - 2008	2009 - 2012
Orkney	Males	X	X Above $F_{MSY}$
	Females	✓	○ At $F_{MSY}$

Lobster stock status for Orkney, 2002-2005, 2006-2008 and 2009-2012. <sup>4</sup>

## Green Crab

Marine Scotland Science does not currently perform an assessment of the green crab stocks in Scotland.

## **Benefits of MLS**

The aim of introducing a minimum landing size for a species is to prevent the landing of juvenile individuals, allowing them the opportunity to grow and reproduce before being harvested. For species that already have a MLS, an increase allows more individuals the opportunity to reproduce before capture, potentially decreasing fishing mortality and increasing long term yield and biomass.

A 2009 study on the effectiveness of management measures adopted by the English Sea Fisheries Committees (the bodies responsible for regional inshore management in England prior to the Inshore Fisheries and Conservation Authorities) supported the adoption of regionally specific MLS provisions for shellfish. It stated that:

“In all cases regionally specific MLS byelaws have served the purpose for which they were designed and can be considered best practice for shellfisheries management.”<sup>5</sup>

## **Staggering the increase in MLS for lobster**

OSF has proposed that the MLS increase for lobster be staggered over a three year period. This would see an immediate increase from 87 mm to 88 mm, followed by further increases to 89 mm and then 90 mm over the subsequent two years. This would give fishermen the opportunity to adjust over the course of three years to the 90 mm limit.

A study of the benefits of various lobster management measures found that within two years of an increase in MLS to 90 mm those newly undersized lobsters could be harvested.<sup>6</sup>

<sup>4</sup><http://www.scotland.gov.uk/Publications/2014/09/5642/27>

<sup>5</sup>[http://www.shellfish.org.uk/files/22622best\\_practice\\_guide.pdf](http://www.shellfish.org.uk/files/22622best_practice_guide.pdf)

<sup>6</sup><http://webarchive.nationalarchives.gov.uk/20130123162956/http://www.defra.gov.uk/marine/pdf/fisheries/cefasclobsteradvice.pdf>

## **Prohibiting the landing of berried velvet crab**

In addition to a MLS increase for velvet crab, OSF proposes that there also be a prohibition on the landing of berried (egg-carrying) females of the species that have been caught in the six nautical miles around Orkney.

A review of management measures for Welsh crustacean fisheries explains that the purpose of this measure is to “provide temporary protection to reproductive individuals from the fishery and thus improve recruitment to that stock by increasing egg production.”<sup>7</sup> Introducing this measure along with a MLS increase could therefore potentially see an increase in both the egg production and yield per recruit in the velvet crab fishery.

## **Carriage Restrictions**

The new MLS measures outlined above would apply only to those vessels *landing into* the Orkney area. In order to improve compliance it may also be appropriate to introduce restrictions on the carriage of non-compliant shellfish to accompany these new measures.

We therefore seek views on the possibility of introducing new restrictions which could make it illegal to retain on-board animals that are not compliant with these new MLS measures in the six nautical miles around Orkney.

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<sup>7</sup><http://fisheries-conservation.bangor.ac.uk/documents/CrustaceanBylawReviewEvidenceReportFinal.pdf>

### **Consultation Questions**

Do you support increasing the MLS for velvet crab landed into Orkney from 65 mm to 70 mm carapace width?

Do you support increasing the MLS for lobster landed into Orkney from 87 mm to 90 mm carapace length over a three year period?

Do you support introducing a MLS for green crab landed into Orkney of 70 mm carapace width?

Do you support prohibiting the landing of berried velvet crab caught in the six nautical miles around Orkney?

Would you support new restrictions on carriage in the six nautical miles around Orkney to accompany these measures?

## Annex A: Consultation on new Management Measures for Crab and Lobster Landings into Orkney

### RESPONDER INFORMATION FORM

Please Note this form **must** be returned with your response to ensure that we handle your response appropriately

#### 1. Name/Organisation

Organisation Name

Title Mr  Ms  Mrs  Miss  Dr  *Please tick as appropriate*

Surname

Forename

#### 2. Postal Address

<input type="text"/>		
<input type="text"/>		
<input type="text"/>		
<input type="text"/>		
Postcode	Phone	Email

### 3. Permissions - I am responding as...

**Individual** / **Group/Organisation**   
*Please tick as appropriate*

**(a)** Do you agree to your response being made available to the public (in Scottish Government library and/or on the Scottish Government web site)?

*Please tick as appropriate*  Yes  No  
**(b)** Where confidentiality is not requested, we will make your responses available to the public on the following basis

*Please tick ONE of the following boxes*

Yes, make my response, name and address all available

*or*

Yes, make my response available, but not my name and address

*or*

Yes, make my response and name available, but not my address

**(c)** The name and address of your organisation **will be** made available to the public (in the Scottish Government library and/or on the Scottish Government web site).

Are you content for your **response** to be made available?

*Please tick as appropriate*  Yes  No

**(d)** We will share your response internally with other Scottish Government policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for Scottish Government to contact you again in relation to this consultation exercise?

*Please tick as appropriate*  Yes  No

#### **4. Consultation Questions**

**Q1.** Do you support increasing the MLS for velvet crab landed into Orkney from 65 mm to 70 mm carapace width?

**Q2.** Do you support increasing the MLS for lobster landed into Orkney from 87 mm to 90 mm carapace length over a three year period?

**Q3.** Do you support introducing a MLS for green crab landed into Orkney of 70 mm carapace width?

**Q4.** Do you support prohibiting the landing of berried velvet crab caught in the six nautical miles around Orkney?

**Q5.** Would you support new restrictions on carriage in the six nautical miles around Orkney to accompany these measures?

## Annex B: Partial Business and Regulatory Impact Assessment

### Title of Proposal

Consultation on new Management Measures for Crab and Lobster Landings into Orkney

### Purpose and intended effect

- **Background**

The Inshore Fisheries Strategy was launched by the Cabinet Secretary for Rural Affairs, Food and the Environment in 2012. One of its key objectives was to improve the management of Scotland's inshore fisheries (from 0 to 6 nautical miles) and continued support for Inshore Fisheries Groups (IFGs).

Six IFGs are in existence in Scotland, covering the entire mainland coast, Orkney and the Outer Hebrides. Their aim is to put commercial fishermen, assisted by government agencies and others with an interest in the marine environment, at the heart of developing initiatives for sustainable and profitable fisheries.

Part of the IFG Remit is the "development and implementation of measures designed to better conserve and sustainably exploit stocks of shellfish and sea fish". The IFGs have taken forward a number of projects in the last three years into the sustainability of their local fisheries and are now approaching Marine Scotland to implement legislative measures to protect these stocks.

Orkney already has well-developed management of its fisheries, and Orkney Sustainable Fisheries Ltd (OSF) has been recognised by Marine Scotland as the IFG equivalent for the area. OSF was established as a Company Limited by Guarantee in 2006 with the aim of running the Orkney Lobster Hatchery and taking forward various other initiatives relating to the sustainability of the local shellfisheries. OSF has representatives from all local fisheries sectors as members and directors, with directors being recruited through an open and widely-advertised process.

As part of fulfilling its remit, OSF has developed new management measures for Orkney's inshore shellfish fisheries. After reaching consensus among its membership and the wider Orkney inshore fishing community, OSF has asked Marine Scotland to legislate on these proposals.

- **Objective**

The purpose of the consultation is to seek views on management measures that will afford additional protection for Orkney's commercial shellfish stocks, above those already in effect.

A minimum landing size (MLS) is designed to prevent the landing of juvenile individuals of a species, allowing a proportion of them to grow and reproduce before they can be legally caught. The majority of Scotland's commercial fish stocks have a MLS set at an EU level by Council Regulation (EC) No 850/98.

Member States are able to go beyond these measures, or introduce new measures for local stocks not covered by existing EU regulations, for conservation and management purposes. In the UK, the MLS for lobster and velvet crab are set by the Undersized Lobsters Order 2000 and Undersized Velvet Crabs Order 1989 respectively.

Marine Scotland Science performs regular assessments of Scotland's fish stocks. The results of the most recent assessments of Orkney's velvet crab and lobster stocks have shown that both are currently fished at levels close to or above the  $F_{MSY}$  proxy.  $F_{MSY}$  is the fishing mortality consistent with the largest average yield that can continuously be taken from a stock under prevailing environmental conditions.

The current management advice from Marine Scotland Science is that a higher yield and biomass in the long term could potentially be obtained by reducing the level of fishing mortality (effort) on stocks that are fished above  $F_{MSY}$ .

- **Rationale for Government intervention**

Orkney's fishing industry depends on shellfish. In 2013, over 99 per cent of the area's landings were shellfish, valued at almost £7.3 million. The species in the consultation – lobster, velvet crab and green crab – account for over a third of this value at £2.5 million.

By introducing management measures that will help to reduce the fishing mortality and increase the long-term average yield from the fishery, the Scottish Government will be supporting local management initiatives which are conservative and can contribute positively to the management of the stocks and the economic returns from the fishery.

This contributes to the Scottish Government's National Performance Framework objective of valuing and enjoying our built and natural environment and protecting it and enhancing it for future generations.

## Consultation

- **Within Government**

Discussions have taken place with Marine Scotland Compliance, Marine Scotland Science and the Scottish Government Legal Directorate, as part of the development of the consultation's management proposals.

- **Public Consultation**

This Partial BRIA will accompany the consultation, which will be issued on 20 February 2015. The consultation documents will be sent electronically and/or by post to all interested parties registered with the Scottish Government. An electronic copy will also be placed on the Scottish Government website. No informal consultation has taken place.



- **Business**

Marine Scotland will meet with a cross-section of the Orkney fishing industry during the consultation period. Around 6 to 12 individuals or companies will be invited to attend interviews in order for Marine Scotland to establish what these proposed changes will mean to their business.

## Options

- **Option 1 – Do Nothing**

Maintain the current management arrangements for Orkney's shellfish stocks.

- **Option 2 – Introduce new management measures**

- Increase the minimum landing size (MLS) for velvet crab from 65 mm to 70 mm carapace width
- Increase the MLS for lobster from 87 mm to 90 mm carapace length over a three year period
- Introduce a MLS for green crab of 70 mm carapace width
- Prohibit the landing of berried velvet crab caught in the six nautical miles around Orkney
- Consider whether there should be new restrictions on carriage in the six nautical miles around Orkney to accompany these measures

## Sectors and groups affected

Licensed fishermen, fish merchants and fish processors in Orkney will be those most directly affected by the introduction of new management arrangements. Marine Scotland Compliance, who will be responsible for the enforcement of these arrangements, will also be directly affected.

## Costs and Benefits

- **Option 1 – Do Nothing**

### Benefits

Orkney fishermen can continue to land lobster, velvet crab and green crab that comply with existing fisheries legislation.

### Costs

Stock assessments by Marine Scotland Science show that both the velvet crab and male lobster stocks around Orkney are fished above the  $F_{MSY}$  proxy. If these stocks continue to be fished at this level, the yield and the economic returns from the fishery will be less than could be achieved.

- **Option 2 – Introduce new management measures**

### **Velvet crab**

#### Benefits

Stock assessments carried out by Marine Scotland Science show that both male and female velvet crab are fished above  $F_{MSY}$  in Orkney. Increasing the MLS from 65 mm to 70 mm carapace width will allow those newly-undersized individuals – 30% of current annual landings, according to sampling done by

Marine Scotland Science – the opportunity to grow and reproduce before being caught, potentially increasing the stock’s long term yield and biomass.

As velvet crab of 65-69 mm carapace width can grow on average by 13-16 mm and by 24% in weight per year, those newly-undersized individuals that could no longer be landed in year one would grow large enough to be landed in the subsequent year.

If the 30% of annual landings that are currently under 70 mm were allowed a year to grow by 24% before being caught, this would increase the tonnage of the following year’s landings by an estimated 7.2%. As velvet crab over 70 mm can be worth up to £0.50/kg more than the average market price, this would mean additional annual value of over £300,000, based on 2013 prices.

Prohibiting the landing of berried velvet crabs will also provide additional protection to mature individuals and could increase the reproductive potential of the stock.

#### Costs

Increasing the MLS from 65 mm to 70 mm carapace width would mean a 30% decrease in tonnage landed in the first year after being introduced. As velvet crab under 70 mm are worth up to £0.50/kg less than the average market price, this would mean a one-off reduction in the value of landings of £329,000, based on 2013 prices.

### **Lobster**

#### Benefits

Stock assessments carried out by Marine Scotland Science show that male lobster is fished above  $F_{MSY}$  and female lobster is fished at  $F_{MSY}$  in Orkney. Increasing the MLS from 87 mm to 90 mm carapace length will allow those newly-undersized individuals – 19% of current annual landings, according to sampling done by Marine Scotland Science – the opportunity to grow and reproduce before being caught, potentially increasing the stock’s long term yield and biomass.

As lobster of 87-89 mm carapace length can grow on average by 7.7-9.0 mm and by 11.25% in weight per year, those newly-undersized individuals that could no longer be landed in year one would grow large enough to be landed in the subsequent year.

If the 19% of the annual landings that are currently under 90 mm were allowed a year to grow by 11.25% before being landed, this would increase the tonnage of the following year’s landings by an estimated 2.1%. This would mean additional annual value of nearly £24,000, based on 2013 prices.

#### Costs

Increasing the MLS from 87 mm to 90 mm carapace length within one year would mean an immediate 19% decrease in tonnage landed, which would result in a one-off reduction in the value of landings of £210,000, based on 2013 prices.

However, a staggered introduction (1 mm increase per year) would minimise the reduced tonnage/value to 16.9% / £187,000, and would spread this reduction over a three year period.

This is because lobster that could not be landed in each year of a staggered introduction would grow in size and weight to meet the new MLS and be landed in the subsequent year.

### **Green crab**

#### Benefits

There is currently no MLS for green crab. Landings in Orkney are not routinely sampled and green crab achieves the same market price irrespective of size. OSF estimates that 30% of green crab landed is under 70 mm. Introducing a MLS for green crab would afford new protection to the spawning stock, along with an increase in weight, and could help to ensure a consistent market price in subsequent years.

#### Costs

An estimated decrease in green crab landings of 30% in the first year following the introduction of a 70 mm MLS would result in a one-off reduction in the value of landings of £26,000, based on 2013 prices.

### **Scottish Firms Impact Test**

This section will be completed after conducting interviews with industry, providing a full analysis of the questions asked, responses received and how this engagement will feed into the development of the proposals.

### **Competition Assessment**

We do not anticipate any impact on competition. However, this section will be updated after conducting interviews with industry.

### **Test run of business forms**

No new business forms will be introduced.

### **Legal Aid Impact Test**

The proposed new management measures have been discussed with the Scottish Government Access to Justice Team, who have agreed that they should have no impact on the legal aid fund.

### **Enforcement, sanctions and monitoring**

Marine Scotland Compliance is responsible for the monitoring and enforcement of marine and fishing laws. Fishery Officers have the power to perform inspections of fishing vessels at sea or in ports, fish markets and processing factories, in order to ensure compliance with legislation. Where a breach of fisheries regulations has been detected, it will be reported as appropriate to the prosecuting authorities. This can result in a fine of up to £50,000.

### Implementation and delivery plan

The proposals will go out to consultation on 20 February 2015, running for 12 weeks and closing to responses on 15 May 2015. The proposed management measures would be introduced through new secondary legislation, using the powers conferred by the Sea Fish (Conservation) Act 1967. The legislation would come into force later in 2015.

- **Post-implementation review**

Marine Scotland will monitor the impact of new management arrangements on the Orkney fishing industry, and consider any practical or unforeseen consequences should they arise. Any areas of concern are likely to become quickly apparent through representations made by local fishing interests (either individually or through OSF), the Inshore Fisheries Management and Conservation (IFMAC) group, or Marine Scotland Compliance.

### Summary and recommendation

Marine Scotland recommends Option 2. Introducing new management measures for Orkney's lobster, velvet crab and green crab stocks will help to reduce the fishing mortality and potentially increase the long term average yield and recruitment to the fishery. These are conservative measures that can contribute positively to management of the stocks and economic returns from the fishery.

- **Summary costs and benefits table**

<b>Option 1 – Do Nothing</b>	
Total benefit per annum: - economic, environmental, social	Total cost per annum: - economic, environmental, social - policy and administrative
Maintaining the current management arrangements for lobster, velvet crab and green crab would allow fishing to continue as before.	No additional policy or administrative costs are associated with maintaining the status quo. Continued fishing at a rate above $F_{MSY}$ implies less than maximal yield and income from the fishery in the long term, and associated environmental and social costs.
<b>Option 2 – Introduce new management measures</b>	
Total benefit per annum: - economic, environmental, social	Total cost per annum: - economic, environmental, social - policy and administrative
Increasing MLS for lobster & velvet crab and introducing a MLS for green crab will afford those newly-undersized individuals further opportunity to grow and reproduce before being harvested, potentially reducing fishing mortality and increasing long term yield from the stocks.  The growth rates (size and weight) for lobster and velvet crab mean the proposed	Introducing new management measures for lobster, velvet crab and green crab would lead to a one-off decrease in the tonnage of each species that could be landed, estimated as follows:  – 16.9% for lobster over a three year period – 30% for velvet crab over a one year period

MLS increases could add an additional total tonnage of 2.1% and 7.2% to their respective fisheries in the longer term.

– 30% for green crab over a one year period

Prohibiting the landing of berried velvet crabs will provide additional protection to mature individuals and increase the reproductive potential of the stock.

**Declaration and publication**

I have read the Business and Regulatory Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options. I am satisfied that business impact has been assessed with the support of businesses in Scotland.

**Signed:**



**Date:**



**Richard Lochhead**  
**Cabinet Secretary for Rural Affairs, Food and the Environment**

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