

The Industry Benchmark on Decapod Crustacean Welfare Report 2022



Crustacean Compassion is a not-for-profit animal welfare organisation which campaigns for the legislative protection and humane treatment of decapod crustaceans such as lobsters, crabs, prawns and nephrops, based on the scientific evidence of their sentience. Crustacean Compassion does not campaign against the use of decapod crustaceans as food. Instead, it welcomes good practice in the food industry and believes that all decapod crustaceans should have their species-specific needs met.

For more information visit

www.crustaceancompassion.org

Crustacean Compassion commissioned Chronos Sustainability to develop The Snapshot.



Chronos Sustainability was established in 2017 to deliver transformative, systemic change in the social and environmental performance of key industry sectors. Chronos is involved in a wide range of global transformation projects across the sustainability spectrum and develops tools and strategies to enable its clients to accelerate action and effect real-world outcomes at scale.

For more information visit www.chronossustainability.com

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Foreword

In April 2022 decapod crustaceans, a group of animals including crabs, lobsters, nephrops and prawns, were recognised as sentient in UK law. This legal acknowledgement of their ability to feel pain and to suffer has prompted many discussions about the welfare impact of practices throughout the sea to plate journey for decapods in the UK seafood industry.

Many of these industry practices can result in suffering as they were not designed with decapod welfare in mind. However, companies have shared that expectations are unclear around how to implement, manage and report on decapod crustacean welfare, whilst consumers and wider stakeholders have no real way of credibly understanding how well companies are approaching this subject. It became clear to Crustacean Compassion, that a tool was needed to address these issues and to drive higher animal welfare standards for decapods across the UK seafood industry, resulting in the creation of this benchmark with Chronos Sustainability.

Through a consultative process with industry, the benchmark provides a set of criteria to assess a company's commitment to decapod crustacean welfare. This inaugural report was designed to establish a muchneeded baseline of data to reflect the current status of decapod crustacean welfare within the UK seafood industry across the supply chain. We are aware there are other exciting projects in development elsewhere in the sector including industry-led codes of practice. These can be recognised, and where appropriate incorporated within, the benchmark as they become available, so they complement each other and provide effective tools to monitor and drive change. Furthermore, the baseline data from this report can be used to measure and celebrate the success of companies and wider initiatives in improving the welfare outcomes for decapods.

Whilst improving transparency will be an important part of the benchmark, in acknowledgement of the emerging nature of this topic, we have chosen not to publish the score and rankings of companies this year. This is a reflection of the genuine ambition of the benchmark to help businesses understand what welfare standards are necessary and to assist in their effective implementation. It provides an opportunity to highlight the positive changes being made, whilst enabling consumers to make conscious food choices that align with their values.

The findings within this report show that a significant number of companies are already making strides in recognising and improving the welfare of these animals. Business, legislation and animal welfare are therefore already heading in the same direction. There is much we can achieve together and we hope this benchmark, to be published annually, will become a vital, collaborative asset.

We know this is a challenging time for some areas of the industry and we want to help companies maximise the opportunities that are created by increasingly higher animal welfare standards. The standards cited in this report are underpinned by extensive scientific evidence. As demonstrated in other farm animal industries, whilst companies will always face competing priorities, when live sentient animals are involved there is a responsibility to ensure that they are humanely treated and their welfare is taken into consideration.

The benchmark will be published annually to ensure the latest best practice is shared and that companies can see how they are doing, where further work on improvements is needed and to promote examples of industry-led innovation and developments. We wish to thank all the companies who have collaborated on both the welfare criteria and their own company reviews and look forward to continuing to work together with businesses to drive welfare improvements.

While we are at the start of the journey, the progress and innovation we have already seen within the sector is cause for much optimism. Together, we can help ensure that decapod crustacean welfare can be yet another animal welfare area led globally by UK business, resulting in benefits for companies, consumers and decapods alike.

Claire Howard

Director

Crustacean Compassion

A corporate benchmark is a tool used to evaluate how companies are approaching and managing a particular issue, whilst also providing a clear set of expectations for companies as to how to improve their policies and performance on the issue.

Introduction

Decapod crustaceans are recognised as sentient animals in UK law following their inclusion in the Animal Welfare (Sentience) Act 2022. This decision was taken following an extensive review of the scientific evidence of their sentience¹, commissioned by the UK government.

Each year in the UK over 420 million crabs, lobsters, nephrops (langoustines) and prawns/shrimp are landed by UK vessels into UK ports². A further five billion prawns and other decapod crustaceans are also imported into the UK annually³. An indicator of the financial value of this trade is the over 48 thousand tonnes of prawns, shrimps, nephrops and crabs sold by UK retailers alone each year, which has a corresponding retail sales value of over £670 million⁴. Millions of these animals are subjected to cruel practices including inhumane capture, handling, storage, transport and slaughter.

In this context, the seafood industry – namely, producers, processors and retailers – are starting to address decapod welfare in their supply chains in response to consumer, Non-Governmental Organisations (NGO), and the recent legislative update. There is a desire from the food industry to follow best practice in this area but, with limited guidance available to companies on decapod welfare, it is a challenge for food companies to understand how to adequately address the business risks associated with poor animal welfare and improve transparency on this issue.

This inaugural benchmark on decapod crustacean welfare ('the benchmark') has been designed to objectively assess leading seafood producers, processors and retailers in the UK on their management practices and reporting on decapod crustacean welfare. The assessment criteria, which follows an established approach to analysing companies' management of environmental, social and governance risks and opportunities, has been informed by input from industry and other stakeholders. It provides a clear set of expectations for companies looking to strengthen their management of decapod welfare.



Crustacean Compassion commissioned this benchmark and works to encourage and enable food retailers to sell higher welfare products across their decapod crustacean product ranges. It does not campaign against the use of decapod crustaceans as food. Instead, it welcomes good practice in the food industry and believes that all decapod crustaceans – including crabs, lobsters, prawns and nephrops (langoustines) – should be treated humanely, determined by their species-specific needs.

The benchmark provides companies, consumers and other stakeholders with a clear account of current practice among UK seafood producers and retailers, highlighting areas where progress is being made as well as areas where improvement is needed.

The benchmark focuses on both wild-caught and farmed decapod crustaceans, including crabs, lobsters, prawns and nephrops. It is focused on their welfare at the following stages of the supply chain: capture and handling, holding and storage, transport, mutilations, stunning, slaughter and killing.



Aims of The Snapshot

The goal of the benchmark is to improve the welfare of decapods, by ensuring that all decapods are humanely captured, handled, transported and slaughtered. Its objectives are:



1

To ensure that decapod crustacean welfare becomes an integral part of food companies' procurement policies.



2

To define key expectations of food companies on decapod crustacean welfare.



3

To drive transparency on the welfare of decapod crustaceans through regular reporting by seafood producers and retailers.



4

To encourage company efforts to continuously improve decapod crustacean welfare while eliminating inhumane practices from the supply chain.



5

Measure and report annually on key decapod welfare issues to equip consumers and other stakeholders with information allowing them to identify companies with the best practices aimed at improving decapod crustacean welfare.

Methodology and approach

In March 2022 Crustacean Compassion commissioned Chronos Sustainability ('Chronos') to design and implement an industry benchmark on decapod crustacean welfare. Chronos and Crustacean Compassion reviewed the academic and industry literature and drafted the assessment criteria prior to 'road-testing' the criteria in pilot assessments of five companies. A public consultation via an online survey was held to invite views on the benchmark objectives, draft assessment criteria and the scope of companies to be covered by the benchmark. Interviews with industry bodies and companies were also held to gather more detailed feedback.

The most significant change made to the methodology following the consultation was the decision to assess companies on both published and non-published data, to help build a more complete picture of current company practices and to give companies more time to publish information on their management approaches. However, in line with the benchmark's objective to drive transparency on this issue, future benchmark reports will include company rankings and will focus exclusively on published information.

The changes made to the benchmark scope and criteria are explained in more detail in Appendix II and in the formal response to the consultation⁵.

The benchmark assessed 30 UK seafood producers and processors ('producers') and retailers and wholesalers ('retailers') on their policies, management and disclosure of decapod crustacean welfare. When defining the company scope, we were guided by three key characteristics: influence, impact and innovation. Companies were selected on the basis of one or more of the following factors: their market size (i.e. revenue), on the estimated proportion of their business related to decapod crustaceans, on the scale of their influence within the UK industry or on how innovative they appeared to be in addressing decapod crustacean welfare.

In this iteration of the benchmark, companies were assessed on both published and non-published evidence. Companies were initially assessed on the basis of information published on their corporate websites and in annual reports, and a draft score was generated for each company. Companies were then invited to comment on their preliminary assessment to highlight any information which they felt had been missed or misinterpreted. At this stage, companies

were also invited to share additional evidence relevant to the assessment which was not in the public domain. This helped the assessors to build a more accurate picture of company practice whilst giving companies more time to publish information on their approach to managing decapod welfare.

Following a review of company comments and additional evidence, company scores were adjusted. The final confidential company reports, showing individual scores against the criteria and responses to any comments from the company, were shared with the participating companies prior to the launch of the report. The full assessment criteria and notes clarifying how certain questions were assessed can be found in Appendix III.



Defining 'humane' handling and slaughter practices

Where references are made to 'humane' handling, stunning and slaughter practices, these are taken from Crustacean Compassion welfare policies⁶. These welfare policies and positions are based on scientific evidence, including those referenced in the 2021 London School of Economics and Political Science report on the 'Review of the evidence of sentience in cephalopod molluscs and decapod crustaceans'¹. For example, based on the currently available evidence, Crustacean Compassion concludes that electrical stunning prior to mechanical killing is the only humane method of stunning and slaughter for decapod crustaceans. While acknowledging the importance of setting species-specific parameters for all welfare policy areas, such as long-distance transport and holding conditions, the first benchmark will establish baseline data on existing company practices and assess any company efforts to address welfare during transport and storage. The benchmark will include clearer definitions in future iterations as knowledge develops and as best industry practice comes to light.

We would like to thank the participating companies of the benchmark for their engagement with the process.

Benchmark structure

Companies are assessed on their management of decapod welfare using 22 distinct criteria organised across four key pillars: Management Commitment and Policy; Governance and Management; Innovation and Leadership; and Performance Reporting and Impact. A total of 165 points is available.



80 points available (49% of overall score)

Management Commitment and Policy

Acknowledgment of the welfare of decapod

An explicit commitment to the welfare of decapod crustaceans within an animal welfare policy or within an overarching corporate sustainable sourcing policy, with a clear explanation of geographic, decapod crustacean species and product scope.

A clear commitment to reduce the negative effects of capture method on decapod crustacean welfare.

A clear commitment to reduce bycatch associated with decapod crustacean fishing.

A clear position on the avoidance of non-therapeutic mutilations of decapod crustaceans

A clear position on appropriate species-specific holding conditions (during post-capture, holding for processing and retail stage) that takes account of each species' physical, physiological and behavioural needs.

A clear position on appropriate species-specific conditions during transport that takes account of each species' physical, physiological and behavioural needs.

A clear position on the avoidance of long-duration live transportation of decapod crustaceans.

A clear position requiring all decapod crustaceans to be humanely stunned and slaughtered.

A clear position on the avoidance of live sale of decapod crustaceans to the public or untrained handlers.



50 points available (30% of overall score)

Governance and Management

Defined day-to-day management as well as senior management responsibility for the welfare of decapod crustaceans.

Objectives and targets for the management of decapod crustacean welfare, including reporting on their progress.

A description of internal processes for ensuring that a policy on decapod crustacean welfare is effectively implemented.

A description of how a policy on decapod crustacean welfare (or equivalent) is implemented through the supply chain.



15 points available (9% of overall score)

Innovation and Leadership

Company involvement in projects dedicated to advancing the welfare of decapod crustaceans within the industry.

Promotion of decapod crustacean welfare to consumers through education and/or awareness-raising activities.



20 points available (12% of overall score)

Performance Reporting and Impact

Reporting on the proportion of decapod crustaceans in the company's supply chain that are humanely stunned and slaughtered.

Reporting on the proportion of decapod crustaceans in the company's supply chain that are free from non-therapeutic mutilations.

Reporting on the proportion of decapod crustaceans in the company's supply chain transported within specified transport times.

Reporting on the proportion of decapod crustaceans captured using specified capture methods.

Key findings

Key Finding

1

Decapod crustacean welfare is advancing up the business agenda, but many companies have yet to implement formal management systems and processes

While 15 companies (50%) have developed formal policies on decapod welfare, only nine of these (30%) have measures in place to ensure their policies are effectively implemented.

Retailers have tended to score higher than seafood producers in the Governance and Management section, with average scores of 26% and 14% respectively.

Key Finding

2

Companies are prioritising the welfare of farmed decapod crustaceans over that of wild-caught decapods

While 50% of companies have formal policies on decapod welfare, most of these policies are limited in scope. For example, only two of the companies assessed (7%) have a universal decapod policy that applies to all geographies, species and products.

In contrast, most companies' decapod welfare policies apply to warm water prawns only.

Key Finding

3

Companies are investing in research and development aimed at improving decapod crustacean welfare

Seven of the companies assessed (23%) are involved in research and development projects aimed at improving the welfare of decapods, while five (17%) take part in industry initiatives, all aimed at improving decapod welfare.

Producers and processors achieved an average score of 16% in the Innovation and Leadership section, with retailers and wholesalers scoring 13% on average.

Key Finding

4

Companies are beginning to report on their performance on decapod crustacean welfare

Some companies are in the early stages of performance reporting on decapod crustacean welfare, but overall, reporting levels are low.

Only eight companies (27%) report on their performance, six of whom share this data publicly on their websites.

Five companies (17%) have set objectives and targets for the management of decapod welfare.

Key Finding

5

Companies are not yet communicating to consumers on decapod crustacean welfare

While the results of the benchmark show that companies are beginning to address decapod welfare in their supply chains, companies are not yet communicating about this to their consumers. Only one company (a producer) appears to promote decapod crustacean welfare to consumers.

Decapod crustacean welfare is advancing up the business agenda, but many companies have yet to implement formal management systems and processes

Whilst 70% of the companies assessed recognise decapod welfare as a relevant business issue to some degree (on their webpages, in sustainability reports or in animal welfare policies, either through explicit inclusion of decapods or a lack of obvious exclusion from policies covering their product ranges), only 15 companies (50%) have developed formal policies on decapod welfare. Of these 15 companies, only nine (30%) describe the measures in place to ensure that their policies are effectively implemented.

Companies cite various business drivers for addressing decapod welfare, which include consumer concerns, ethical considerations, wider sustainability considerations, economics and product quality. Of the 21 companies who acknowledge decapod welfare as a business issue, a majority refer specifically to decapod or crustacean welfare, and a smaller number refer to animal welfare in the context of sustainable seafood and aquaculture. Although this is a positive finding, many companies have yet to formalise their approach to managing the issue. Whilst the overall average score for companies assessed within the benchmark is just

range from 0% to 69%, highlighting wide variances in how effectively companies are managing the issue, with some companies demonstrating an established approach to decapod welfare. The overall average scores are presented in Figure 1. The results show that companies have begun to formalise their approach to managing decapod welfare, but there is more work to be done to integrate these commitments into their formal governance and management systems and processes. The overall average score based on published information only was just 14%, showing that while some companies are beginning to address decapod welfare, most companies are not yet communicating on their approach. Figure 2 shows the overall average scores based on published information only and based on both published and unpublished information.

20%, it is important to highlight that company scores

When looking at the overall average scores across the two company sub-sectors (Figure 3) it is clear that retailers are performing more strongly than seafood producers, with the overall average scores for these sectors being 26% and 15% respectively.

Figure 1: Overall average score (%)

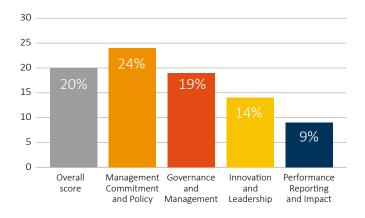
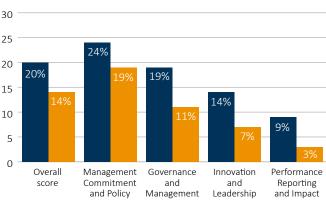
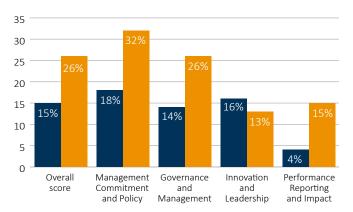


Figure 2: Overall average scores based on published and unpublished information (%)



Scores based on published and unpublished information
Scores based on published information only

Figure 3: Average score by sub-sector (%)



Producers & Processors Retailers & Wholesalers

Examples of companies acknowledging decapod crustacean welfare as a business issue

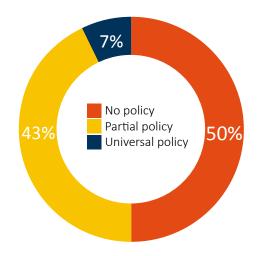
- (We are) bringing premium, natural and great tasting shellfish options to the UK whilst focusing on better animal welfare and environmental care." [UK Producer]
 - (We are) committed to ensuring the welfare of the animals we handle. We endeavour to employ practices designed to reduce stress to the animal and to maximise the survival of crabs and lobsters as they move through the supply chain. Keeping animals alive and in good condition is important for economic and food quality reasons and, as the London School of Economics (LSE) 2022 sentience report shows, also for the welfare of these animals. Therefore, this policy applies to all geographies, species and products handled by the company." [UK Producer]
- As members of the Sustainable Seafood Coalition (SSC), we follow the SSC codes of conduct and we'll work only with fisheries and aquaculture farms that share our commitment to responsible sourcing and animal welfare." [UK Retailer]
- (We) believe that fish and crustacea are sentient beings and that consideration of their welfare is an important aspect of raising and dispatching them for human food purposes... the best way to deliver and define adequate welfare conditions is by using the 'five freedoms framework.'" [UK Producer]



Companies are prioritising the welfare of farmed decapod crustaceans over that of wild-caught decapods

While 50% of companies have formal policies on decapod welfare, a majority of these policies are limited in scope. Thirteen companies (43%) have policies that lack universal coverage, with their scope being either poorly defined or limited to specific geographies, species or products. Only two companies (7%) have a universal decapod welfare policy which applies to all geographies, species and products (Figure 4). Looking more closely at species scope, most companies have policies that apply to farmed, warm water prawns only. To illustrate this, of the eight retailers with formal policies on decapod welfare, six have policies that apply to warm water prawns, one company has a policy with an unclear species scope and one has a policy that applies universally to all decapod species. In practice, companies tend to prioritise those species and issues on which they can have the most significant impact, where they can have the most influence and where there is the greatest level of public or consumer attention. The emphasis on farmed crustacean welfare may reflect the priority being placed on farm animal welfare by companies and consumers, and the greater influence that companies can have on the conditions in which farmed crustaceans are reared, handled and slaughtered. It may also reflect the greater value of warm water prawns to the UK market, compared to cold water prawns, nephrops e.g., langoustines and other species (see Box 1).

Figure 4: Scope of decapod welfare policies (%)



The number of companies with published positions on key decapod welfare issues is low, with policies to ensure humane (electrical) stunning being the most widely addressed issue (seven companies or 23%). This may reflect the fact that slaughter is an area that companies can have more direct influence over than for example, capture methods. The technology being developed for electrical stunning of decapods may also make it easier for companies to introduce policies on pre-slaughter stunning compared to other issues. It is important to note that decapod crustaceans should only be stunned using electrical stunning. Thermal stunning by chilling in ice or water, chemical anaesthetics and CO₂ gassing are not considered humane methods. For more information on humane stunning and slaughter of decapods please see Crustacean Compassion's website⁷.

Box 1: Relative value of decapod species to the UK retail market

According to Seafish's report 'Seafood in Multiple Retail (2022 update)', farm-raised, warm water prawns were the most significant decapod species on the UK market with the value sold in the UK amounting to approximately £390 million in 2021. This compared to an approximate sale value of £188 million for wild-caught, cold water prawns, £68 million for nephrops and £20 million for crabs⁴.

The warm water species market has experienced an increase in consumption in the UK and is expected to expand further, driven in part by growing global production. The availability and affordability of cold water prawn are expected to lead to a reduction in availability of these species in the UK market⁸.

High levels of bycatch can be associated with decapod crustacean fishing, including undersized individuals of the target species and other non-target species of decapod crustacean. Six companies (20%) have policies to reduce bycatch associated with decapod crustacean fishing, including specifying measures to retrieve lost pots and design of pots and creels to allow some animals to escape. Six companies have policies to avoid the sale of live crustaceans to the public or untrained handlers in retailer outlets and restaurants, ensuring that animals are not subject to the stress of live sale in retail outlets or poor handling and inhumane slaughter. Five companies (17%) have policies to avoid mutilations such as declawing of crabs and lobsters and eyestalk ablation of farmed prawns and similarly, five companies

have policies to reduce the negative effect of capture method on decapod welfare by adapting the capture method and handling practices during and immediately following capture to minimise stress and trauma to the animals. The majority of these company policies related to capture, handling and slaughter are limited in scope, applying to specific geographies, species or products. Although five companies have a universal policy on the sale of live crustaceans, only two companies have a universal commitment to reducing bycatch associated with decapod crustacean fishing and only one company has a universal commitment to ensuring appropriate species-specific handling conditions or to the avoidance of long-duration live transportation.

Examples of company policies on decapod welfare issues

Reducing the negative effects of capture method on decapod crustacean welfare

The capture method and handling practices during and immediately following capture must be such as to minimise trauma to the animal. All crab and lobster (animals) must be creel or pot caught... creels and pots should be designed to enable escape of juvenile animals and allow eventual escape of all over time." [UK Producer]

Ensuring appropriate species-specific holding conditions

Storage must be monitored in order to maintain the correct conditions. Crab held dry should be held under chilled conditions (avoiding large changes in temperature) and kept damp by wet sacking placed on top of each container. For crab held in sea water, ensure the aeration system is operating and the original water temperature is maintained. Crab if held overnight or through the weekend must be monitored closely." [UK Producer]

The avoidance of non-therapeutic mutilation of decapod crustaceans

(We) do not allow the removal of claws from crab, lobster or crayfish while the animals are alive and not stunned."

[UK Producer]

The avoidance of long-duration live transportation of decapod crustaceans

Minimising livestock travel times is critical to reduce discomfort, risk of injury and distress for transported animals. Our objective is to keep travel times to a minimum and never to exceed 8 hours."

And: "The transport of live aquatic animals are all within controlled water systems and are as short and direct as possible. In many examples, harvest and slaughter is done pen side with no transport times, for those that undertake travel, we require additional data to verify maximum transport times." [UK Producer]

The avoidance of live sale of decapod crustaceans to the public or untrained handlers

3

[The company] does not sell any live crustaceans either to consumers or other businesses." [UK Producer]

Companies are investing in research and development aimed at improving decapod crustacean welfare

Decapod welfare remains an immature issue but a positive sign is that a number of companies are investing in innovation projects to improve the welfare of both farmed and wild-caught decapods. Seven companies (23%) describe their involvement in research and development projects aimed at improving decapod welfare and five companies (17%) report that they are involved in industry initiatives directed at improving decapod welfare. Whilst the overall average score for this section (Innovation and Leadership) is low, producers show a marginally stronger performance than retailers, scoring 16% of overall points versus 13% for retailers.

The number of producers and processors in the benchmark is slightly higher than the number of retailers and wholesalers (17 and 13 companies respectively), but the difference in scores may reflect the fact that producers are directly responsible for implementing improvements or changes in their supply chains and are therefore more likely to invest in innovation projects. Examples of research projects described by companies are listed in Box 2.

Box 2: Examples of research initiatives aimed at improving decapod welfare, reported by companies

- Projects trialling electrical stunning of farmed prawns.
- A project to phase out eyestalk ablation of farmed prawns.
- A project to reduce bycatch and investigate the use of modified gear type.

Examples of company involvement in projects dedicated to advancing the welfare of decapod crustaceans within the industry

- Together with Seafish and the Shellfish Association of Great Britain, (we are) developing industry Codes of Practice for the handling and despatch of crustacea. The Codes of Practice will operate across the key stages of the supply chain; catching, processing, wholesale and live imports and exports." [UK Producer]
- This was a two-year project which resulted in the first commercial trial and the adoption of an electric stunner in warm water prawns (*P. vannamei*). The electric stunner for finfish had to be modified to fit prawn production."

 [UK Producer]
- (The company) is sponsoring innovative research into humane culling of shrimp and... into the welfare of shrimp in shrimp farms." [UK Producer]
- (We have) co-funded a research project which demonstrated that eyestalk ablation in prawns was not only unnecessary but also potentially counterproductive. We are continuing to work together to influence our supply chains to make these changes, so that ablation of prawns supplied (to us) is ended by December 2023." [UK Retailer]



Companies are beginning to report on their performance on decapod crustacean welfare

The majority of companies are clearly at an early stage of formalising their approach to decapod welfare management, and few are reporting on their decapod welfare performance. Nonetheless, four companies (13%) report on progress towards objectives and targets they have set to improve decapod welfare (see Box 3) and eight companies (27%) report on their performance related to decapod welfare. Whilst the benchmark assessed companies on both published and non-published information, it is encouraging to see that six of the eight companies that report performance data do so publicly on their websites. Public reporting on companies' own websites includes reporting on the proportion of warm water prawns not subjected to eyestalk ablation, the proportion of decapods humanely (electrically) stunned and transport duration for farmed crustaceans (warm water prawns). Of the eight companies reporting performance data, five of them are retailers.

Box 3: Examples of objectives and targets set by companies to improve decapod crustacean welfare:

- A target of 100% humane (electrical) slaughter of all farmed decapods.
- A target to end all eyestalk ablation of farmed warm water prawn broodstock.
- A target for transport duration to be less than 12 hours for all crabs, lobsters and crayfish.
- A target to train an additional five animal welfare specialists in decapod crustacean welfare and other animal welfare issues.

The most commonly reported performance metric is the proportion of decapods not subjected to routine mutilations, with five companies (17%) reporting data on the proportion of warm water prawns not subject to eyestalk ablation. Four companies (13%) report on the proportion of decapods humanely stunned, with only one of these reporting on all species in its supply chain. Similarly, four companies report on the capture methods used for all decapods in their supply chains, although this reporting is through the Ocean Disclosure Project website as well as additional evidence provided by the companies, rather than through companies' own websites. Two companies (7%) report on transport duration for farmed crustaceans (warm water prawns). There is a clear opportunity for companies to improve their disclosure in this area.

Examples of performance reporting on decapod welfare:



100% of wild-caught crab and lobster were electrically stunned prior to cooking."

[UK Producer]



52% of prawns are free from eyestalk ablation." [UK Retailer]



All transport of live crab, lobster and crayfish must be direct and as short as possible. Our aim would be for less than 12 hours. In 2022 we achieved this for over 95% of our supply." [UK Producer]



Companies are not yet communicating to consumers on decapod crustacean welfare

While the results of the benchmark show that companies are beginning to address decapod welfare in their supply chains, companies are not yet communicating about this to their consumers. Only one company (a producer) appears to promote decapod crustacean welfare to consumers, reflecting the infancy

of this issue. Companies have an important role to play in raising awareness of decapod crustacean welfare among their consumers and business customers. This, over time, should contribute to increases in demand for higher welfare products.



Results in detail

Management Commitment and Policy

This section assesses companies' policies on decapod crustacean welfare, including specific commitments on ensuring appropriate species-specific handling conditions, avoiding mutilations, avoiding long-distance live transportation and ensuring humane slaughter. It is the highest scoring section of the benchmark, with companies scoring on average 24%, reflective of the fact that companies are at an early stage of addressing decapod crustacean welfare.

Although 21 companies (70%) recognise decapod crustacean welfare as a business issue to some degree, only 50% of companies have published a formal policy on decapod crustacean welfare. Of the 15 companies with formal policies, six companies (20%) have a commitment to decapod crustacean welfare in a policy statement (or equivalent) but no description of how the policy is to be implemented. Nine companies (30%) publish a policy with a description of the processes in place to ensure that the policy is effectively implemented. Whilst the existence of a policy may not provide a guarantee of implementation, the absence of a policy is a clear sign that the welfare of decapod crustaceans is not on the business agenda.

As well as measuring the proportion of companies publishing formal policies on decapod crustacean welfare, the benchmark criteria also assess the scope of company policies; whether they cover all decapod crustacean species, all geographies in which the company operates and all products, including own-brand and other brand products. While 50% of companies have formal policies on decapod welfare, the majority of these policies are limited in scope. Thirteen companies (43%) have policies that lack universal coverage, with their scope being either poorly defined or limited to specific geographies, species or products. Only two companies (7%) have a universal decapod welfare policy which applies to all geographies, species and products.

Looking in more detail at the scope of companies' commitments on key welfare issues reveals some clear differences in how companies are addressing the welfare of different decapod species. There are also key differences in how the different sectors – producers and retailers – are addressing the key welfare issues.

Decapod welfare during capture, holding and transport

Overall, relatively few companies have policies addressing the welfare of decapods during capture, holding and transport. Seven companies have policies on the avoidance of long-duration live transportation of decapods and five companies have policies on ensuring appropriate species-specific conditions during transport, although the majority of these are limited in scope. Company policies on maximum transport times (including loading and unloading) ranged from eight hours to a maximum of 24 hours for wild-caught species. Company policies on ensuring appropriate transport conditions include measures to ensure the original water temperature is maintained during transport and use of aeration systems to maintain oxygen levels. Producers outperform retailers on these two issues, which may reflect the fact that they have greater influence over this stage of production.

Avoidance of non-therapeutic mutilations

Retailers outperform producers in having policies on the avoidance of routine mutilations of decapods – four out of the five companies scoring points on the question addressing this issue are retailers. All four of these policies focus on ending the practice of eyestalk ablation of warm water prawns. One company also scored points for a policy banning declawing of crabs and lobsters.

Humane slaughter

Of the seven companies with policies on the humane, electrical stunning of decapods, four have policies on the electrical stunning of brown crabs and lobsters and two have policies on electrical stunning of warm water prawns. Use of ice slurry appears to be a relatively common method of stunning of warm water prawns among the companies assessed, however, there is evidence that companies are investing in development of electrical stunning as a more humane solution (see Box 2). Further, some companies are setting targets for a transition to electrical stunning (see Box 3). Retailers outperform producers in this area, with five of the seven companies with policies on this issue being retailers.

The humane stunning and slaughter of nephrops and cold water prawns appear to receive less focus in companies' policies compared to that of other species. None of the companies assessed have policies on the humane stunning of these wild-caught species, suggesting that investment in innovation is required to find practical solutions for the humane stunning of cold water prawns and nephrops. Stunning systems are available for some wild-caught species and are in development for other species.

Avoidance of sale of live crustaceans to the public or untrained handlers

The companies who score points on this question are retailers and processors who state that they do not sell any live crustaceans i.e. they do not include companies directly involved in decapod fishing. Of the six companies with policies in place on the avoidance of sale of live crustaceans to the public or untrained handlers, four are retailers.

Governance and Management

This section of the benchmark assessed companies on their internal governance and management processes for ensuring the effective implementation of company policies, including a description of management responsibility for decapod welfare, setting targets or objectives, reporting on progress and specifying decapod welfare as part of supplier auditing. Companies on average score 19% on this section, with seafood producers scoring an average of 14% and retailers scoring an average of 26%.

Although overall scores are low in this section, it is encouraging to see that 11 companies (37%) specify decapod welfare as part of supplier auditing or certification programmes and that eight companies (27%) incorporate decapod welfare into contractual obligations for suppliers, although this is limited by geography and/or certain products or species for all eight companies. Retailers and producers performed similarly on these issues.

Another positive finding is that nine companies (30%) describe who is responsible for the day-to-day management of decapod crustacean welfare and seven companies (23%) describe the senior management responsibility for decapod crustacean welfare, again with retailers and producers performing similarly on this issue. However, it is important to note that it wasn't clear in all cases that management responsibility covered the welfare of all species, including wild-caught and farmed decapods.

While the majority of companies are at an early stage of formalising their approach to decapod welfare, four companies report on progress towards objectives and targets they have set to improve decapod welfare in their supply chains.

Innovation and Leadershin

Food companies can play an important role in advancing the welfare of decapods in the industry and, in particular, in identifying commercially viable solutions to pressing welfare issues. In this section of the benchmark, companies were assessed on their involvement in research and development projects and industry initiatives directed at improving the welfare of decapod crustaceans, and on their promotion of decapod welfare to consumers.

A positive finding is that companies are investing in innovation projects to improve the welfare of both farmed and wild-caught decapods. Seven companies (23%) describe their involvement in research and development projects aimed at improving decapod welfare and five companies (17%) report that they are involved in industry initiatives directed at improving decapod welfare.

Only one company (a producer) appears to promote decapod crustacean welfare to consumers, reflecting the immaturity of this issue.

Performance Reporting and Impact

In addition to having clear policy commitments and management practices, companies are expected to maintain measurement criteria for decapods in their supply chain and to report on their performance.

While the majority of companies are clearly at an early stage of formalising their approach to decapod welfare, it is encouraging to see that eight companies (27%) report on some elements of their performance related to decapod welfare, and of these, six companies currently report performance data publicly on their websites. Public reporting on companies' own websites includes reporting on the proportion of warm water prawns not subjected to eyestalk ablation, the proportion of decapods humanely (electrically) stunned and transport duration for farmed crustaceans (warm water prawns).

If we consider both publicly and non-publicly disclosed data, the most commonly reported performance metric amongst the eight companies is the proportion of decapods not subject to routine mutilations. Five companies (17%) report the proportion of decapods not subject to routine mutilations, all of these reporting data on the proportion of warm water prawns not subject to eyestalk ablation. Four companies (13%) report on the proportion of decapods humanely stunned and slaughtered, with only one of these reporting on all species in their supply chain. Similarly, four companies report on the capture methods used for all decapods in their supply chain. Only two companies (7%) report on duration of transport, for farmed decapods (warm water prawns).

*Percentages are rounded to the nearest whole number and may therefore not add up to 100%

Number •

Number of companies

Management Commitment and Policy

Is the welfare of decapod crustaceans recognised as a business issue?

Companies recognising decapod welfare as a business issue

welfare as a business issue

Companies not recognising decapod

21

70%

Do companies publish an explicit commitment to the welfare of decapod crustaceans within an animal welfare policy or within an overarching corporate sustainable sourcing policy?

Companies publishing a commitment to decapod crustacean welfare within a policy statement (or equivalent) along with a description of the processes in place to ensure that the policy is effectively implemented

y 9



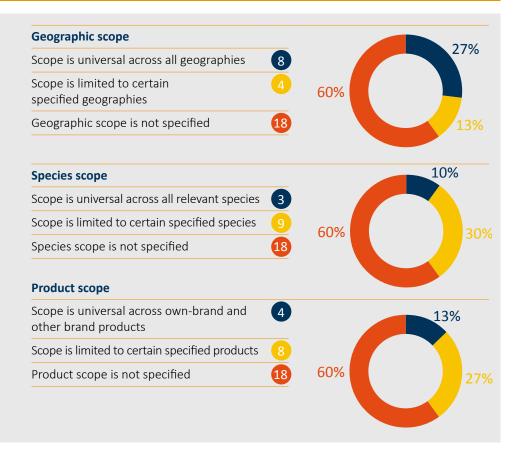
Companies publishing a commitment to decapod crustacean welfare in a policy statement (or equivalent) but no description of how the policy is to be implemented

15

Companies not publishing a decapod welfare policy

Management Commitment and Policy

Do these policies provide a clear explanation of geographic, decapod crustacean species and product scope?



Do companies publish clear commitments to reduce the negative effects of capture method on decapod crustacean welfare by adapting equipment, fishing and handling practices during and immediately following capture?

Companies publishing a universal commitment 0 to reduce the negative effects of capture method on decapod crustacean welfare

commitment with clearly defined scope

Companies not publishing a commitment

Companies publishing a partial

Companies publishing a partial

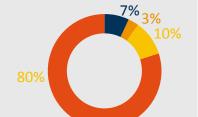
commitment with unclear scope



Do companies publish clear commitments to reduce bycatch associated with decapod crustacean fishing?

Companies publishing a universal commitment to reduce bycatch associated with decapod crustacean fishing

2

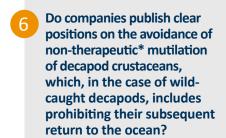


Companies publishing a partial commitment with clearly defined scope

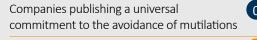
Companies publishing a partial commitment with unclear scope

Companies not publishing a commitment

Management Commitment and Policy



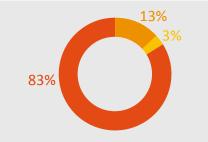
*Defined as not having a direct welfare benefit for the animal



Companies publishing a partial commitment with clearly defined scope

Companies publishing a partial commitment with unclear scope

Companies not publishing a commitment



Do companies publish clear positions on appropriate species-specific holding conditions (during post-capture, holding for processing and retail stage) that take account of each species' physical, physiological and behavioural needs?

Companies publishing a universal commitment ensuring appropriate species-specific holding conditions

Companies publishing a partial commitment with clearly defined scope

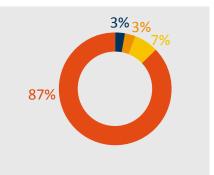
Companies publishing a partial commitment with unclear scope

Companies not publishing a commitment

26

1

1



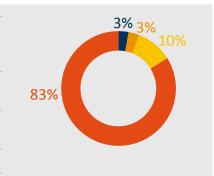
Do companies publish clear positions on appropriate species-specific conditions during transport that take account of each species' physical, physiological and behavioural needs?

Companies publishing a universal commitment ensuring appropriate species-specific conditions during transport

Companies publishing a partial commitment with clearly defined scope

Companies publishing a partial commitment with unclear scope

Companies not publishing a commitment



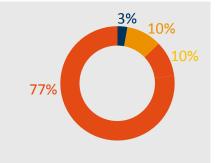
Do companies publish clear positions on the avoidance of long-duration live transportation of decapod crustaceans?

Companies publishing a universal commitment to avoid/reduce long-duration live transportation

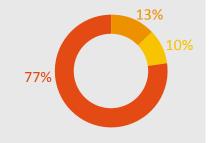
Companies publishing a partial commitment with clearly defined scope

Companies publishing a partial commitment with unclear scope

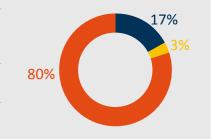
Companies not publishing a commitment



- Do companies publish clear positions requiring all decapod crustaceans to be humanely stunned and slaughtered, using methods that result in instantaneous insensibility to pain and distress or where insensibility is induced without causing pain and distress and is maintained until death occurs?
- Companies publishing a universal commitment orequiring all decapod crustaceans to be humanely stunned and slaughtered
- Companies publishing a partial commitment with clearly defined scope
- Companies publishing a partial commitment with unclear scope
- Companies not publishing a commitment 23



- Do companies publish clear positions on the avoidance of live sale of decapod crustaceans to the public or untrained handlers?
- Companies publishing a universal commitment to avoid the live sale of decapod crustaceans to the public or untrained handlers
- Companies publishing a partial commitment with clearly defined scope
- Companies publishing a partial commitment with unclear scope
- Companies not publishing a commitment



Governance and Management

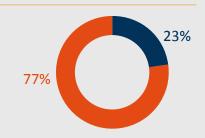
- Do companies define management responsibility for the welfare of decapod crustaceans?
- Companies describing day-to-day management responsibility
- Companies not describing day-today management responsibility





- Companies describing senior management responsibility
- Companies not describing senior management responsibility







X Number of companies

3%

Governance and Management

Do companies set objectives and targets for the management of decapod crustacean welfare?

Companies setting objectives or targets, together with information on the actions to be taken to achieve these

Companies setting objectives or targets, with no or limited information on how these are to be achieved

Companies not setting objectives or targets

Do companies report on their progress against improvement objectives or targets linked to improving the welfare of decapod crustaceans?

Companies reporting on progress against multiple objectives and targets

against at least one objective or target

Companies not reporting on progress

Companies reporting on progress

0



Do companies describe their internal processes for ensuring that their policies on decapod crustacean welfare are effectively implemented?

Companies providing specific training to employees in decapod crustacean welfare

Companies not describing provision

of training for employees in

decapod crustacean welfare

6



Companies describing action taken in event of non-compliance with decapod welfare policies

6

20% 80%

Companies not describing action taken in event of non-compliance with decapod welfare policies

Governance and Management

Do companies describe how they implement their policies on decapod crustacean welfare (or equivalent) through their supply chains?

Companies incorporating decapod crustacean welfare into contractual obligations for all suppliers (across all species, products and geographies)

Companies incorporating decapod crustacean welfare into contractual obligations for some suppliers (limited by geography and/or certain products or species)

Companies providing no information on decapod crustacean welfare being incorporated into contractual obligations for suppliers



0

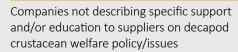
Companies specifying decapod crustacean welfare as part of supplier auditing or certification programme

Companies not specifying decapod crustacean welfare as part of supplier auditing or certification programme





Companies providing specific support and/or education to suppliers on decapod crustacean welfare policy/issues









Number of companies

Are companies currently investing in projects dedicated to advancing the welfare of decapod crustaceans within the industry?

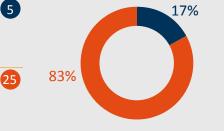
Companies describing involvement in research and development programmes to improve decapod crustacean welfare

Companies not describing involvement in research and development programmes to improve decapod crustacean welfare

23%

Companies describing involvement in industry or other initiatives directed at improving the welfare of decapod crustaceans

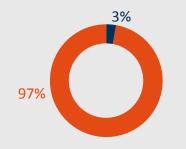
Companies not describing involvement in industry or other initiatives directed at improving the welfare of decapod crustaceans



Do companies promote decapod crustacean welfare to consumers through education and/ or awareness-raising activities?

Companies promoting decapod crustacean welfare to consumers

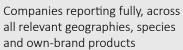
Companies providing no evidence of promoting decapod crustacean welfare to consumers

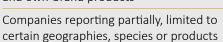


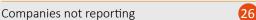


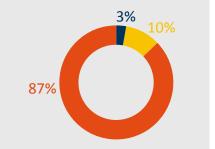
Performance Reporting and Impact



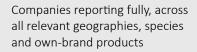




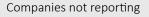


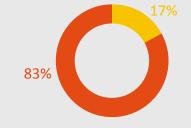






Companies reporting partially, limited to certain geographies, species or products









Companies reporting partially, limited to certain geographies, species or products

Companies not reporting





Companies reporting fully, across all relevant geographies, species and own-brand products

Companies reporting partially, limited to certain geographies, species or products

Companies not reporting

2

(1)

0



2

Recommendations for companies

Companies can start to formalise their approach to decapod crustacean welfare by taking the following steps:



1

Publish an overarching policy on decapod welfare setting out the reasons why the issue is important to the business and describing the processes in place to ensure the policy is effectively implemented.



Publish policy commitments on key decapod crustacean issues.

For example, reducing bycatch and the negative effects of capture methods on welfare, ensuring species-appropriate holding conditions during storage and transport, and by avoiding the sale of live decapods to untrained handlers, among others.



3

Define responsibilities for the implementation of the company's policy or policies on decapod crustacean welfare.



4

Set objectives for the company's efforts to improve decapod crustacean welfare and report progress against these.



5

Measure and report annually on key decapod welfare issues.

Next steps

The benchmark will be repeated in 2023 with the assessment criteria remaining unchanged, with the exception of minor changes to clarify the criteria or related guidance notes. In the next iteration of the benchmark, assessments will be based exclusively on published information and company rankings will be published in the final report.

Crustacean Compassion understands the iterative nature of benchmarking and that the methodology will need to be reviewed on a regular basis to ensure that it remains aligned with and reflects current scientific knowledge. For each iteration, the benchmark will publish a methodology paper as necessary, explaining its assessment approach and commenting on how companies are currently reporting on decapod crustacean welfare.

If you would like your company to be considered for future iterations or for more information on The Snapshot or Crustacean Compassion's work please contact us on:

info@crustaceancompassion.org





Appendix I

List of companies covered by the benchmark

	Company	Sector	Ownership	Headquarters (Country)*
1.	Aldi UK (Aldi Süd)	Retailers & Wholesalers	Private	Atherstone, England (HQ in Essen, Germany)
2.	Amazon	Retailers & Wholesalers	Public	London, England
3.	ASDA Stores Ltd	Retailers & Wholesalers	Private	Leeds, England
4.	Brakes (subs. of Sysco)	Retailers & Wholesalers	Public	Ashford, England
5.	Iceland Foods	Retailers & Wholesalers	Private	Deeside, Wales
6.	J Sainsbury PLC	Retailers & Wholesalers	Public	London, England
7.	Lidl GB	Retailers & Wholesalers	Private	Tolworth, England (HQ in Neckarsulm, Germany)
8.	Marks & Spencer Group PLC	Retailers & Wholesalers	Public	London, England
9.	Ocado Group	Retailers & Wholesalers	Public	Hatfield, England
10.	Tesco PLC	Retailers & Wholesalers	Public	Welwyn Garden City, England
11.	The Co-operative Group Ltd	Retailers & Wholesalers	Cooperative	Manchester, England
12.	Waitrose Ltd	Retailers & Wholesalers	Private	Bracknell, England
13.	Wm Morrison Supermarkets Ltd	Retailers & Wholesalers	Private	Bradford, England
14.	Andrew Marr International	Producers & Processors	Private	Hassle, England
15.	Associated Seafoods	Producers & Processors	Private	Buckie, Scotland
16.	Bidfresh (subs. of Bidvest)	Producers & Processors	Public	Southport, England
17.	Charoen Pokphand Foods (CPF)	Producers & Processors	Private	Bangkok, Thailand
18.	Hilton Food Group	Producers & Processors	Public	Huntingdon, England
19.	Iceland Seafood International	Producers & Processors	Public	Reykjavik, Iceland
20.	Lyons Seafoods (subs. of Labeyrie Fine Foods Group)	Producers & Processors	Private	Warminster, England
21.	Macduff Shellfish Group (subs. of Clearwater Seafoods)	Producers & Processors	Private	Mintlaw, Scotland
22.	MacNeil Shellfish	Producers & Processors	Private	Larkhall, Scotland
23.	Northcoast Seafoods (part of Kangamuit Seafood Group)	Producers & Processors	Private	Grimsby, England
24.	Orkney Fishermen's Society	Producers & Processors	Private	Orkney, Scotland
25.	Sykes Seafood (incl. Ruskim Seafoods)	Producers & Processors	Private	Knutsford, England
26.	Thai Union	Producers & Processors	Public	Samut Sakhon, Thailand
27.	The Big Prawn Co.	Producers & Processors	Private	Melton Constable, England
28.	The Blue Sea Food Company	Producers & Processors	Private	Paignton, England
29.	Whitby Seafoods	Producers & Processors	Private	North Yorkshire, England
30.	Young's Seafood	Producers & Processors	Private	Grimsby, England

^{*}The benchmark looked at UK operations, as at the time of the assessment.

Appendix II

Methodology and approach (in full)

In March 2022 Crustacean Compassion commissioned Chronos Sustainability ('Chronos') to design and implement an industry benchmark on decapod crustacean welfare. Chronos and Crustacean Compassion reviewed the academic and industry literature and drafted the assessment criteria prior to 'road-testing' the criteria in pilot assessments of five companies.

Between 25 July and 19 August 2022, a public consultation via an online survey was held to invite views on the benchmark objectives, draft assessment criteria and the scope of companies to be covered by the benchmark. In total, fifteen responses were received to the public consultation. These included responses from five of the companies proposed for inclusion in the benchmark, five from NGOs working on animal welfare, three from industry associations and two from consultants working on animal welfare.

Alongside the public consultation, Chronos conducted interviews with seven seafood producers and retailers proposed for inclusion in the benchmark, one industry association, one non-departmental public body, one certification scheme and one NGO. The industry association interviewed represented companies and individuals across the seafood supply chain.

Based on the feedback received, there is widespread acknowledgement of the need to effectively manage the welfare of decapods as well as broad support for the benchmark as a tool to help drive improvement in company practices. Additionally, some modifications were made to the benchmark criteria and scope. The most significant change made to the methodology was the decision to assess companies on both published and non-published data, to help build a more complete picture of current company practices and to give companies more time to publish information on their management approaches. It was further decided that individual company rankings will not be published in the first iteration of the benchmark, to enable Crustacean Compassion to collaborate with the industry on its expectations and to learn from the industry about the practical challenges experienced by seafood producers and retailers. However, in line with the benchmark's objective to drive transparency on this issue, future benchmark reports will include company rankings and will focus exclusively on published information. The changes made to the benchmark criteria and scope are explained in more detail in the formal response to the consultation⁵.

Assessment approach

The benchmark assessed 30 UK seafood producers, processors and retailers on their policies, management and disclosure of decapod crustacean welfare. Companies were selected on the basis of one or more of the following factors: their market size (i.e. revenue), the estimated proportion of their business related to decapod crustaceans, the scale of their influence within the UK industry or how innovative they appeared to be in addressing decapod crustacean welfare.

The focus of the assessment was the corporate entity, rather than subsidiary companies, although evidence available at the subsidiary level was also considered. Whilst the benchmark is focused on the key producers and retailers of decapod crustaceans within the UK market, companies were nonetheless assessed on their global supply chains, i.e. the benchmark assessed companies on products imported into the UK, products exported from the UK and live decapod crustaceans exported from the UK. This was to ensure the same expectations are placed on imported products as on UK products.

In this iteration of the benchmark, companies were assessed on both published and non-published evidence. Each company was initially assessed based on information that was publicly available at the time of the assessment (September 2022). Companies were then invited to share non-published evidence directly with the company assessment team at Chronos Sustainability on a confidential basis. This helped the assessors to build a more accurate picture of company practice whilst giving companies more time to publish information on their approach to managing decapod welfare.

Assessment process

The first step in the assessment process involved a desktop review of company information and the generation of a draft score for each company. This included a detailed review of the content on companies' corporate websites, in annual reports and sustainability reports, and other relevant publications, press releases and social media published by the company directly. The assessment involved a review of parent companies' websites as well as those of their subsidiaries.

Each company assessment report was peer reviewed by the assessment team to ensure consistency in the assessment and scoring approach. Companies were then invited to comment on their preliminary assessment to highlight any information which they felt had been missed or misinterpreted. At this stage, companies were also invited to share additional evidence relevant to the assessment which was not in the public domain. Comments from 14 (47%) of the 30 companies were received. The scores of nine companies were adjusted following comments from companies. The assessments were then shared with Crustacean Compassion for a final technical review prior to finalising the reports. The final confidential company reports, showing individual scores against the criteria and responses to any comments from the company, were shared with the participating companies prior to the launch of the report. The full assessment criteria can be found in Appendix III.

Comments on the assessment approach

The following high-level comments provide explanations on how company information was assessed against the criteria. The aim of this section is to clarify what the assessors are looking for and to help companies to understand how data is interpreted and scored.

Acknowledgment of decapod welfare as a business issue (Q1)

This question was looking for an acknowledgment from the company that the welfare of decapod crustaceans is a relevant business issue. This could be a statement on the company's webpage, in a sustainability or annual report or as part of a wider animal welfare policy (either through explicit inclusion of decapods or a lack of obvious exclusion from policies covering their product ranges). Of the 21 companies who acknowledge decapod welfare, 14 companies referred specifically to decapod or crustacean welfare and four companies referred to animal welfare in the context of sustainable seafood and aquaculture. Three companies referred to animal welfare more generally. Companies referring to animal welfare were awarded points for Q1 but were encouraged to state more clearly in future that these statements include decapod crustaceans.

Policies on decapod crustacean welfare (Q2)

This question was looking for evidence of companies formalising their approach to animal welfare, and specifically to decapod crustacean welfare in a policy (or equivalent document such as a statement of guiding principles, a code of practice or a sourcing charter). Companies were only awarded points for this question if they had also scored points in Q1 (acknowledging decapod welfare as a business issue).

Policy commitments on key decapod welfare issues (Q4-11)

These questions were looking for a clear company policy on key decapod welfare issues. Statements referring to legislative requirements were not awarded points unless they also made it clear that this was company policy.

Performance reporting on decapod crustacean welfare (Q19-22)

These questions looked for evidence of specific reporting of the proportion of decapods in a company's supply chain that were humanely stunned, not subjected to mutilations, transported within specified transport times and captured using specified capture methods. Companies were only awarded points if they reported on the proportion of decapods, statements such as 'our decapods' did not qualify for points.

Appendix III

Assessment criteria

Management Commitment and Policy

Question 1.	Does the company acknowledge the welfare of decapod crustaceans as a business issue?	
Rationale	Acknowledging the welfare of decapod crustaceans as a business issue is an important first step towards implementing a comprehensive approach to the responsible sourcing of nephrops, shrimps, crabs and lobsters. It is good practice for food companies to identify whether and why the welfare of decapod crustaceans is a relevant issue for the business.	
Scoring	No evidence that the welfare of decapod crustaceans is regarded as a relevant business issue.	0
	The company identifies decapod crustacean welfare as a relevant business issue.	10
	(Max Score 10)	

Question 2.	Does the company publish an explicit commitment to the welfare of decapod crustace within an animal welfare policy or within an overarching corporate sustainable source		
Rationale	It is good practice for companies to formalise their approach to animal welfare, and specifically to decapod crustacean welfare in a policy (or equivalent document such as a statement of guiding principles, a code of practice or a sourcing charter). While the existence of a policy may not provide a guarantee of implementation, the absence of a policy is a clear sign that the welfare of decapod crustaceans is not on the business agenda.		
Scoring	No evidence of a formal policy statement (or equivalent) on decapod crustacean welfare.	0	
	The company has a commitment to decapod crustacean welfare in a policy statement (or equivalent) but no description of how the policy is to be implemented.	5	
	The company has a commitment to decapod crustacean welfare within a policy statement (or equivalent) and a description of the processes in place to ensure that the policy is effectively implemented.	10	
	(Max Score 10)		

Question 3.	Does the policy statement provide a clear explanation of geographic, decapod crus species and product scope?	stacean
Rationale	Understanding the scope of a policy is important to understand the breadth of a com	ipany's
	commitment to action on decapod crustacean welfare.	
Scoring	3a. Geographic scope	
	Geographic scope is not specified.	0
	Scope is limited to certain specified geographies.	2
	Scope is universal across all geographies.	5
	3b. Species scope	
	Species scope is not specified.	0
	Scope is limited to certain specified species.	2
	Scope is universal across all relevant species.	5
	3c. Product scope	
	Product scope is not specified.	0
	Scope is limited to certain specified products (such as own-brand products).	2
	Scope is universal across own-brand and other brand products.	5
	(Max Score 15)	

Question 4.	Does the company have a clear commitment to reduce the negative effects of capture on decapod crustacean welfare by adapting equipment, fishing and handling practice and immediately following capture?	
Rationale	The extent of welfare compromise experienced during capture using trawling, pots, creels or gill nets is significantly affected by the method used but can include exposure to shifts in barometric pressure, salinity and temperature as well as physical trauma/injury/crushing, exhaustion, fear and death. Pots and traps can also cause serious problems if lost or discarded as the lost gear may continue to capture aquatic animals. Some of the challenges posed to the animals can be reduced to some extent through adapting equipment, fishing and handling practices during and immediately following capture, for example, by adjusting mesh size, changing the frequency that pots are checked, or adjusting the design of pots to enable escape.	
Scoring	No stated position.	0
	The company makes a partial commitment to reduce the negative effects of capture method on decapod crustacean welfare but the scope (in terms of geography, species or products) is not clearly defined.	1
	The company makes a partial commitment to reduce the negative effects of capture method on decapod crustacean welfare and the scope of the commitment (in terms of geography, species or products) is clearly defined.	3
	The company makes a universal commitment to reduce the negative effects of capture method on decapod crustacean welfare across all relevant species, own-brand and other brand products and geographies.	5
	(Max Score 5)	

Question 5.	Does the company have a clear commitment to reduce bycatch associated with decay crustacean fishing?	ood
Rationale	High levels of bycatch can be associated with decapod crustacean fishing, including undersized individuals of the target species and other non-target species of decapod crustacean. Even when returned to the sea alive, many unintentionally caught animals suffer morbidity and mortality as a result of the stressors experienced during the catching and sorting processes. Changes to fishing practices and equipment, for example retrieval of lost pots or the design and materials used for nets and pots, can facilitate a reduction in the level of bycatch. Refinement- and reduced duration- of onboard handling and sorting practices can also help improve the ability of discarded bycatch to survive and thrive on return to the sea.	
Scoring	No stated position.	0
	The company makes a partial commitment to reducing bycatch associated with decapod crustacean fishing but the scope (in terms of geography, species or products) is not clearly defined.	1
	The company makes a partial commitment to reducing bycatch associated with decapod crustacean fishing and the scope of the commitment (in terms of geography, species or products) is clearly defined.	3
	The company makes a universal commitment to reducing bycatch associated with decapod crustacean fishing across all relevant species, own-brand and other brand products and geographies.	5
	(Max Score 5)	

Question 6.	Does the company have a clear position on the avoidance of non-therapeutic* mutila decapod crustaceans, which, in the case of wild-caught decapods, includes prohibitin subsequent return to the ocean? *Defined as not having a direct welfare benefit for the animal	
Rationale	Decapod crustaceans are subjected to mutilation procedures in farmed/brood stocks and post-capture that alter their bodies, causing unnecessary pain and distress. These include eyestalk ablation, claw nicking and declawing. Mutilation of decapod crustaceans is only permitted if undertaken by a veterinary surgeon for direct benefit to the welfare of the animal.	
Scoring	No stated position.	0
	The company has made a partial commitment to the avoidance of mutilations but the scope (in terms of geography, species or products) is not clearly defined.	1
	The company has made a partial commitment to the avoidance of mutilations and the scope (in terms of geography, species or products) is clearly defined.	3
	The company makes a universal commitment to the avoidance of mutilations across all relevant species, own-brand and other branded products and geographies.	5
	(Max Score 5)	

Question 7.	Does the company have a clear position on appropriate species-specific holding cond (during post-capture, holding for processing and retail stage) that takes account of easpecies' physical, physiological and behavioural needs?	
Rationale	Large numbers of decapod crustaceans are subjected to some form of holding or storage at various stages from the time they are captured in the wild or 'harvested' on farms until they are killed. This includes on-board storage post-capture, during pre-and post-transport periods, prior to killing/processing and while on live display in retail outlets, restaurants and live markets. The duration of storage can vary, sometimes being for several months. The conditions - and associated welfare challenges - are hugely variable. Depending on the species and duration of storage, the animals may be held in water tanks with or without water recirculation, in air at various levels of humidity/moisture and sometimes directly on ice. Hence, the welfare risks to which the animals are exposed during holding/storage include inappropriate and fluctuating temperature, poor water quality (including salinity), exposure to air, light and noise, food deprivation/starvation, overcrowding, mixing with conspecifics and other species, behavioural restrictions (including through claw banding), inability to hide and rough/careless handling, including when 'graded' for size and quality. As a result, the animals can suffer significant stress, physiological and immunological disturbances, hunger, muscle depletion, injury, morbidity and mortality.	
Scoring	No stated position.	0
	The company makes a partial commitment to ensuring appropriate species-specific holding conditions but the scope (in terms of geography, species or products) is not clearly defined.	1
	The company makes a partial commitment to ensuring appropriate species-specific holding conditions and the scope of the commitment (in terms of geography, species or products) is clearly defined.	3
	The company makes a universal commitment to ensuring appropriate species-specific holding conditions across all relevant species, own-brand and other brand products and geographies.	5
	(Max Score 5)	

Question 8.	Does the company have a clear position on appropriate species-specific conditions du transport that takes account of each species' physical, physiological and behavioural	
Rationale	Decapod crustaceans are subjected to a broad range of conditions on journeys of widely differing duration, some lasting several days. Common transport practices expose decapod crustaceans to multiple stressors, including inappropriate and/or fluctuating temperatures and other environmental conditions (e.g., water quality), unsuitable packaging/containment, overcrowding, stacking, air exposure, vibration, noise, light and manual handling. Confinement in close proximity to others of the same or sometimes different species also poses welfare challenges. The loading and the unloading processes also involve exposure to stressors such as temperature change, and air and sun exposure. Transport is defined as including loading and unloading.	
Scoring	No stated position.	0
	The company makes a partial commitment to ensuring appropriate species-specific transport conditions but the scope (in terms of geography, species or products) is not clearly defined.	1
	The company makes a partial commitment to ensuring appropriate species-specific transport conditions and the scope of the commitment (in terms of geography, species or products) is clearly defined.	3
	The company makes a universal commitment to ensuring appropriate species-specific transport conditions across all relevant species, own-brand and other brand products and geographies.	5
	(Max Score 5)	

Question 9.	Does the company have a clear position on the avoidance of long-duration live trans of decapod crustaceans?	portation
Rationale	When being transported, animals can experience hunger, discomfort, pain, frustration, fear and distress, as well as physical welfare problems including injury, disease and death. For the reasons, transport of live decapod crustaceans should be minimised wherever possible and journeys should be kept as short as possible.	
Scoring	No stated position.	0
	The company makes a partial commitment to avoid/reduce the duration of live transport of decapod crustaceans but the scope (in terms of geography, species or products) is not clearly defined.	1
	The company makes a partial commitment to avoid/reduce the duration of live transport of decapod crustaceans and the scope of the commitment (in terms of geography, species or products) is clearly defined.	3
	The company makes a universal commitment to avoid/reduce the duration of live transport of decapod crustaceans across all relevant species, own-brand and other brand products and geographies.	5
	(Max Score 5)	

Question 10.	Does the company have a clear position on requiring all decapod crustaceans to be his stunned and slaughtered, using methods that result in instantaneous insensibility to distress or where insensibility is induced without causing pain and distress and is maintil death occurs?	pain and
Rationale Decapod crustaceans should only be stunned using electrical stunning, resulting in in insensibility to pain and distress or where insensibility is induced without causing pair distress. This insensible state must be maintained until death occurs. Stunning methon not supported include: chilling, wet/ice chilling, chemical anaesthetics, CO2 gassing.		
	Following effective stunning, slaughter/killing should be performed immediately and usi method where the insensible state persists until death occurs, without pain or distress. *within one second	ng a
Scoring	No stated position.	0
	The company makes a partial commitment to requiring all decapod crustaceans to be humanely stunned and slaughtered but the scope (in terms of geography, species or products) is not clearly defined.	2
	The company makes a partial commitment to requiring all decapod crustaceans to be humanely stunned and slaughtered and the scope of the commitment (in terms of geography, species or products) is clearly defined.	6
	The company makes a universal commitment to requiring all decapod crustaceans to be humanely stunned and slaughtered across all relevant species, own-brand and other brand products and geographies.	10
	(Max Score 10)	

Question 11.	Does the company have a clear position on the avoidance of live sale of decapod crus to the public or untrained handlers?	taceans
Rationale	The displaying of live decapod crustaceans in retailer outlets and restaurants presents significant welfare and ethical issues. The welfare concerns are further exacerbated by uncertainties about the competency and methodology surrounding the subsequent killing of the animals in such outlets or in consumer homes (in the case of retail outlets).	
Scoring	No stated position.	0
	The company makes a partial commitment to avoid live sale of decapod crustaceans to the public or untrained handlers but the scope (in terms of geography, species or products) is not clearly defined.	1
	The company makes a partial commitment to avoid live sale of decapod crustaceans to the public or untrained handlers and the scope of the commitment (in terms of geography, species or products) is clearly defined.	3
	The company makes a universal commitment to avoid live sale of decapod crustaceans to the public or untrained handlers across all relevant species, own-brand and other brand products and geographies.	5
	(Max score 5)	

Governance and Management

Question 12.	Has the company assigned management responsibility for the welfare of decapod crust to an individual or specified committee?	aceans
Rationale	When looking at the management of decapod crustacean welfare, both oversight and impler responsibilities are important. Oversight is necessary to ensure that senior management is at of the business implications of animal welfare and is prepared to intervene when needed (e. there are tensions between the organisation's animal welfare policy and other business objectively, it is often the case that those charged with oversight know relatively little about the specific details of how to effectively manage animal welfare. It is, therefore, important that the individual(s) responsible for ensuring that the animal welfare policy is implemented and that welfare is effectively managed.	
Scoring	12a. Management responsibility	
	No clearly defined management responsibility.	0
	The company has published details of the management position with responsibility for decapod welfare on a day-to-day basis.	5
	12b. Board or senior management responsibility	
	No clearly defined board or senior management responsibility.	0
	The company has published details of how the board or senior management oversees the implementation of the company's decapod crustacean welfare policy.	5
	(Max score 10)	

Question 13.	Has the company set objectives and targets for the management of decapod crustacear welfare?	1
Rationale	Objectives and targets are the point where policy commitments are translated into substartant action, and where resources and responsibilities are allocated for the delivery of these object and targets.	
Scoring	No published objectives and targets.	0
	The company has published objectives and targets but with no or limited information on how these are to be achieved.	5
	The company has published objectives and targets together with information on the actions to be taken to achieve these, the resources allocated and the schedule for the delivery of these objectives and targets.	10
	(Max score 10)	

Question 14.	Does the company report on its progress against its improvement objectives or targets linked to improving the welfare of decapod crustaceans?	
Rationale	Companies should provide an explanation of progress against their objectives and targets.	
Scoring	The company does not provide an explanation of progress against its objectives and targets.	0
	The company provides an explanation of progress against at least one objective or target.	3
	The company provides an explanation of progress on how it has performed against its multiple objectives and targets.	5
	(Max score 5)	

Question 15.	Does the company describe its internal processes for ensuring that its policy on decaporarustacean welfare is effectively implemented?	d
Rationale	The effective implementation of an animal welfare policy relies on employees who are competent to oversee the implementation of the policy, and on controls that allow the company to respond quickly and effectively in the event of non-compliance with the policy. Evidence-based training of employees and refresher training of crew/staff on decapod crustacean welfare, based on the latest knowledge of species-specific needs, is important in ensuring knowledge transfer and implementation of the company's policies.	
Scoring	15a. Employee training	
	No information provided on employee training in decapod crustacean welfare.	0
	The company provides specific training to employees in decapod crustacean welfare.	5
	15b. Actions taken in the event of non-compliance	
	The company provides no information on the actions to be taken in the event of non-compliance with its policy on decapod crustacean welfare.	0
	The company describes the actions it takes in the event of non-compliance with its policy on decapod crustacean welfare.	5
	(Max score 10)	

Question 16.	Does the company describe how it implements its policy on decapod crustacean welfa equivalent) through its supply chain?	re (or
Rationale	Many of the business risks and opportunities associated with animal welfare relate to consupply chains. Companies have the ability to influence their suppliers' performance both (e.g., through contracts, auditing processes) and informally (e.g., through capacity buildineducation).	formally
Scoring	16a. Does the company describe how it implements its policy (or equivalent) on decapod crustacean welfare through its supply chain via supplier contracts?	
	No information on how decapod crustacean welfare is included in supplier contracts.	0
	The company incorporates decapod crustacean welfare into contractual obligations for suppliers, but this is limited by geography and/or certain products or species.	3
	The company incorporates decapod crustacean welfare into contractual obligations for suppliers across all species, products and geographies.	5
	16b. Does the company describe how it implements its policy (or equivalent) on decapod crustacean welfare through its supply chain via monitoring, auditing or certification?	
	No information provided on how supplier compliance with contract conditions is monitored.	0
	The company specifies decapod crustacean welfare as part of supplier auditing or certification programme.	5
	16c. Does the company describe how it implements its policy (or equivalent) on decapod crustacean welfare through its supply chain via education and support?	
	No information on support and/or education provided to suppliers on decapod crustacean welfare.	0
	The company provides specific support and/or education to suppliers on decapod crustacean welfare policy/issues.	5
	(Max score 15)	

Innovation and Leadership

Question 17.	Is the company currently investing in projects dedicated to advancing the welfare of decrustaceans within the industry?	capod
Rationale	Decapod crustacean welfare is a collective issue for the food industry as well as being an individu issue for each company in the industry. Making progress and raising standards across the industry requires individual companies to support research and development programmes to improve decapod crustacean welfare, to share their knowledge and expertise with their suppliers and with their industry peers, to play a supportive role in public policy debates, and to support industry an stakeholder initiatives directed at improving decapod crustacean welfare.	
	Only those industry initiatives and research that are explicitly related to improving decapor crustacean welfare and that the company has played a significant role in are eligible to be sold industry initiatives can include roundtables or working groups dedicated to decapod crustate welfare.	scored.
Scoring	17a. Involvement in research and development	
	No evidence of company involvement in research and development programmes to improve the welfare of decapod crustaceans.	0
	Evidence of current company involvement in research and development programmes to improve the welfare of decapod crustaceans.	5
	17b. Involvement in industry or other initiatives	
	No evidence of active company involvement in industry or other initiatives directed at improving the welfare of decapod crustaceans.	0
	Evidence of active company involvement in industry or other initiatives (e.g., working groups, supporting NGO activities, responding to government consultations) directed at improving the welfare of decapod crustaceans.	5
	(Max score 10)	

Question 18.	Does the company promote decapod crustacean welfare to consumers through education awareness-raising activities?	on and/	
Rationale	Companies have an important role to play in raising awareness of decapod crustacean welfare among their customers and clients. This, in turn, should contribute to increases in demand for higher welfare products.		
	In order to receive a score of 5 or 10, the focus of activities should be on decapod crustace welfare. The activities that can be considered in this question include:	ean	
	 The provision of information about decapod crustacean welfare on the company's web an integral part of customer communications and engagement). On-pack or on-shelf labelling – provided this is evidenced on the company's website, in published reports or on social media platforms. Information leaflets or information packs. Media promotions. Supporting third party campaigns or programmes on decapod crustacean welfare. Social media campaigns. 	decapod crustacean welfare on the company's website (as unications and engagement). vided this is evidenced on the company's website, in its a platforms. packs.	
Scoring	No evidence of promoting decapod crustacean welfare to consumers.	0	
	At least one example of promoting decapod crustacean welfare to consumers.	5	
(Max score 5)			

Performance Reporting and Impact

Question 19.	Does the company report on the proportion of decapod crustaceans in the company's s chain that are humanely stunned and slaughtered?	upply
Rationale	Companies making public commitments to humane stunning and slaughter of decapod crushould report on the proportion that are humanely stunned and slaughtered.	ustaceans
	Decapod crustaceans should only be stunned using electrical stunning, resulting in instantant insensibility to pain and distress or where insensibility is induced without causing pain and distribution that are not sinclude: chilling, wet/ice chilling, chemical anaesthetics, CO2 gassing.	stress.
	Following effective stunning, slaughter/killing should be performed immediately and using method where the insensible state persists until death occurs, without pain or distress. *within one second	a
Scoring	No reporting on the proportion of decapod crustaceans that are humanely stunned and slaughtered.	0
	The company reports on the proportion of decapod crustaceans that are humanely stunned and slaughtered, but this reporting is limited to certain geographies, species or products.	3
	The company reports fully on the proportion of decapod crustaceans that are humanely stunned and slaughtered, covering all relevant geographies, species and products.	5
	(Max score 5)	

Question 20.	Does the company report on the proportion of decapod crustaceans in the company's s chain that are free from non-therapeutic mutilations?	upply
Rationale	Companies making public commitments to avoidance of mutilations of decapod crustacea should report on the proportion that are free from non-therapeutic mutilations. Non-thera mutilations include eyestalk ablation, claw nicking and declawing.	
Scoring	No reporting on the proportion of decapod crustaceans that are free from non-therapeutic mutilations.	0
	The company reports on the proportion of decapod crustaceans that are free from non-therapeutic mutilations, but this reporting is limited to certain geographies, species or products.	3
	The company reports fully on the proportion of decapod crustaceans that are free from non-therapeutic mutilations, covering all relevant geographies, species and products.	5
	(Max score 5)	

Question 21.	Does the company report on the proportion of decapod crustaceans in the company's s chain transported within specified transport times?	upply
Rationale	In addition to having clear policy commitments and management practices, companies are expected to maintain strict measurement criteria for animals in their supply chain. This qu is looking specifically at measures linked to the live transportation of decapod crustaceans supply chains.	estion
Scoring	No reporting on the proportion of decapod crustaceans transported within specified transport times.	0
	The company reports on the proportion of decapod crustaceans transported within specified transport times, but this reporting is limited to certain geographies, species or products.	3
	The company reports fully on the proportion of decapod crustaceans transported within specified transport times, covering all relevant geographies, species and products.	5
	(Max score 5)	

Question 22.	Does the company report on the proportion of decapod crustaceans captured using specapture methods?	cified
Rationale	In addition to having clear policy commitments and management practices, companies are expected to maintain measurement criteria for decapod crustaceans in their supply chain. question is looking specifically at measures linked to the capture method used for different of decapod crustaceans. The many, often severe challenges faced by decapod crustaceans capture or harvesting are the cause of very significant welfare issues. These are suffered by the time and also in the longer term, having an impact on the welfare and survival during of travel and storage. Measuring and reporting on capture method is an important step in ad welfare during capture and moving to less harmful methods of capture.	This t species during oth at onward
Scoring	No reporting on the proportion of decapod crustaceans captured using specified capture methods.	0
	The company reports on the proportion of decapod crustaceans captured using specified capture methods, but this reporting is limited to certain geographies, species or products.	3
	The company reports fully on the proportion of decapod crustaceans captured using specified capture methods, covering all relevant geographies, species and products.	5
	(Max score 5)	

Glossary

Animal/decapod crustacean welfare	The physical and mental wellbeing of animals/decapod crustaceans and the freedom to express behaviours that are innate to them.
Aquaculture	The farming of aquatic animals, including crustaceans, fish and molluscs.
Benchmark	A corporate benchmark is a tool used to evaluate how companies are approaching and managing a particular issue, for example, animal welfare or human health. It helps stakeholders (who may include companies, investors, consumers and NGOs) to understand corporate practice on a particular issue by providing a ranking or rating of company performance, whilst also providing a clear set of expectations for companies as to how to improve their policies and performance on the issue.
Bycatch	The incidental capture and morbidity and/or mortality of non-target marine animals during fishing. This includes undersized individuals of the target species and other non-target species of decapod crustacean.
Cold water prawns	Wild-caught prawns originating from the cold water of the North Atlantic and Arctic Ocean.
Claw nicking	The process of claw nicking involves the fracturing of the apodemes and the cutting of tendons in the dactyls of claws to prevent functioning. It is performed on large decapod crustaceans such as crabs and lobsters. Claw nicking is done in preparation for the transport and storage of decapods. Research has shown that the process of claw nicking is extremely harmful to the animals as the painful wounds can lead to blood loss, infection, death. Claw nicking also prohibits freedom to express natural behaviour as claws are essential for natural movement and activity for these animals ⁶
Creels and pots	Baited pots, traps and creels are commonly used types of fishing gear for capturing decapod crustaceans. They are designed to enable the target species to enter but not to leave the catching chamber.
Decapod / Decapod crustacean	An order of crustaceans from the Greek meaning '10-limbed'. They include crabs, lobsters, nephrops, prawns, shrimps and crayfish.
Declawing	The practice of manually removing one or both claws from live crabs or other decapod crustaceans. There is clear evidence that declawing causes trauma, stress and pain to the animals. There is also evidence that declawed animals show increased morbidity and mortality if returned to the sea following declawing, as they are less able to feed, defend themselves or compete for resources ⁶ .
Eyestalk ablation	A widespread practice of removing one or both eyestalks of (farmed) breeding female shrimps or prawns, often without anaesthetic, in order to increase egg production and reproductive success. There is clear evidence that the practice causes trauma, stress and pain to the animals. Alternative methods to increase reproductive success are available ⁶ .

Food companies	Food businesses including producers, processors, manufacturers and food retailers.
Non-therapeutic mutilations	Mutilations are procedures that destroy, remove or irreparably damage the limbs or other body parts of animals. Decapod crustaceans are subjected to mutilation procedures in farmed/broodstock and post-capture that alter their bodies, causing unnecessary pain and distress. These common practices include eyestalk ablation, claw nicking and declawing ⁶ . Non-therapeutic mutations are defined as those not having a direct welfare benefit for the animal.
Sentience	To be sentient is to have positive or negative experiences, such as experiences of pain, pleasure, comfort, warmth, hunger, anxiety or joy.
Stunning	A process ensuring that an animal is (instantaneously) unconscious and insensible to pain before being slaughtered. Following effective stunning, the slaughter/killing should be performed immediately and using a method where the insensible state persists until death occurs, without pain or distress. Effective stunning, which is guaranteed to last throughout the entire process, must take place prior to slaughter, regardless of the slaughter method used ⁶ .
Electrical stunning	A method of stunning which involves an electrical current being passed through the animal, rendering them insensible prior to slaughter. Evidence indicates that electrical stunning can deliver a quick, effective and humane stun to decapod crustaceans including crabs, lobsters, crayfish and shrimp, when appropriate electrical parameters are applied for the species ⁶ .
Thermal stunning/ice chilling	A process of placing live crustaceans in ice slurry post-capture as a method of stunning and killing. Evidence indicates that use of wet/ice chilling as a stunning method is associated with both welfare concerns and doubts regarding its efficacy. Whilst this process may make the animal appear still, evidence suggests this is due to a paralytic state rather than induction of instantaneous insensibility, therefore it is not considered to be a humane method of stunning or slaughter ⁶ .
Warm water prawns	Prawns, most commonly farmed, originating from warm waters across the world, mostly coming from Asia and Latin America. They include the Black Tiger (<i>Panaeus monodon</i>) and Vannamei or Whiteleg shrimp (<i>Litopanaeus vannamei</i>) species.

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