

COMPLIANCE SUPPORT GUIDE



# SHELLFISH

CRUSTACEANS INCORPORATING WHELKS

**SEAFISH**



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# 1 / INTRODUCTION



## 1.1 The Responsible Fishing Scheme

The Seafish Responsible Fishing Scheme (RFS) is a voluntary vessel-based programme certifying high standards of crew welfare and responsible catching practices on board fishing vessels.

The RFS is open to all types of fishing vessels and fisheries, and is a 'business-to-business' tool that helps fishermen showcase best practice through independent, third-party auditing. To become certified, applicants must meet the requirements of the RFS Standard. A vessel and its skipper is the 'unit' audited against the Standard.

Certification to the scheme demonstrates that the skipper and vessel operate to best practice in five core areas:

### **Core Principle 1: Safety, health and welfare**

- A commitment to generating a culture of integrity and respect (e.g. no forced labour) will be demonstrated.
- Best practice drawn from other relevant safety management and ethical and welfare initiatives to improve safety of the crew and promote decent working conditions.

### **Core Principle 2: Training and professional development**

- Access to training for the key priority areas, especially safety.
- Focus on improving skills, knowledge and understanding.
- Commitment to raise standards, open up new opportunities and cooperate with management authorities.

### **Core Principle 3: The vessel and its mission**

- The vessel and its gear are in compliance with all current legislation.
- The vessel operates within the legal framework with the right documentation in place.
- Full cooperation with Voluntary Agreements in existence in the fisheries within which they operate.

### **Core Principle 4: Care of the catch**

- Focus on supplying safe, high quality, wholesome product with known provenance.
- Hygienic handling and storage at appropriate temperatures.
- Full traceability from catch to quayside.
- Responsible capture and landing of live products.
- Commitment to maintaining the value of the catch.

### **Core Principle 5: Care for the environment**

- Responsible practice with respect for the environment (management of litter, lost fishing gear recovery, wildlife interaction records).
- Supporting fishery science (e.g. observers, science partnerships etc).
- Tie-in with other voluntary schemes.

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## 1.2 RFS Compliance Support Guides

The RFS Compliance Support Guides (CSGs) underpin the RFS Standard and assist the skipper in understanding all areas that need to be complied with to successfully achieve RFS certification.

There are six CSGs in total - five sector-specific guides that the applicant will work through as appropriate to their own operations, and one cross sector guide that applies to all sectors. **Applicants should read all the applicable CSGs before submitting their RFS application forms.**

### **Sector specific CSGs (applicants must read any which cover their type of fishing operations)**

- Demersal
- Shellfish
- Nephrops
- Pelagic
- Scallops

### **General Cross Sector CSG (all applicants must read this guide)**

- Health and Safety
- Welfare
- Catch safety and traceability
- Onboard food preparation
- The environment

The legal requirements that apply to the operation of a fishing vessel cover basic issues of food safety, fish marketing, fishery controls and health and safety, most of which meet requirements set by the EU. **It is the responsibility of the skipper to ensure that the vessel is operating and catching within the appropriate legal framework.**

The CSGs provide information and support to assist applicants in meeting the conditions of the RFS Standard, and help them prepare for the RFS certification audit. These guides include support on general fishing operations as well as sector specific practices. The Guides direct RFS applicants to relevant documents and explain the conditions which underpin the Scheme, and help in the application and preparation process before a vessel undertakes its certification audit.

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## 2.1 Fishing practices

The size of vessels operating in the shellfish sector varies considerably from the single-handed under 10m day boat vessels to large multiple-crewed trip vessels capable of live holding many tonnes of shellfish until landing. Irrespective of size the capture method is fundamentally the same: baited traps are lowered to the seabed and left to soak before retrieval, emptying, re-baiting and re-shooting. Alternatively, tangle nets are used to capture larger species such as spider crabs and crayfish. Regardless of the size of vessel, crew or number of pots, worked, the principles of stowage fall into two categories: live vivier holding or dry storage.

The following sections set out the recommended best practices for all categories of vessel and recognise that local practices may vary.

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## 2.2 Bait and bait storage

Pot and creel fishing requires the use of baits to attract catch into the pots. A variety of baits can be used dependent upon target species, availability, costs, etc. Irrespective of the bait used, the following examples of best practice should be adhered to:

- Bait should be brought on board the vessel as late as practically possible, unless it can be stowed securely away from pests.
  - Bait should remain covered until used.
  - Bait should only be stowed in dedicated containers so that the possibility of cross contamination is minimised. Containers should be marked as 'for bait only' or be colour coded.
  - Any bait packaging materials should be retained on board for safe shore disposal.
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## 2.3 Catch handling

Because all sizes of crabs, lobsters and Nephrops are attracted to baited pots it is likely that retrieved pots will contain a mixture of both large and small animals. It may be required by law that pots are fitted with escape panels that allow juvenile animals the opportunity to escape prior to pots being retrieved. Even when not required by law, where the fitting of panels will not compromise the capture and retention of smaller target species such as velvet crabs, the fitting of panels (or purchase of new pots with panels) should be considered.

Upon boarding, the catch should be carefully removed from the pots so as to minimise damage to the animals. Brown crab in particular has a tendency to grip the pot with their main pincers or curl their walking legs around the mesh netting, both of which make removal difficult and increase the risk of the limbs being shed in the event of rough handling.

Although there may be a market for brown crabs with one main claw missing, it is recommended that any crabs that lose a main claw at the point of removal from the pots (unless for immediate processing) are returned to the sea as there is a high likelihood of mortality if placed into storage. This could also increase the mortality amongst other crabs stored with them.

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## 2.4 Catch selection

As well as having due regard for minimum landing sizes, care should also be taken to ensure the quality of catch. The following table outlines the quality criteria associated with shellfish and identifies the types of animals that should always be rejected.

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## Generic quality assessment for live crustacea

Parameter	Excellent	Poor	Reject
Freshness	Very lively, moving about, flicking tail, attacking anything and using claws.	Alive, some moving about, tail flicked once or twice and claws nip closed if stimulated.	Blackening of shell margin. Almost dead, slow to move, claws and legs hang down if animal is picked up. Joint between head and tail is gaping.
Moult state	Shell is firm to the touch. Some barnacles. Heavy for its size. Toes worn.	Shell yields to pressure (most animals are in this state during the summer when moulting occurs). Shell is very heavily encrusted with barnacles and worms.	Shell is soft, very clean and may be either intensely coloured or washed out. Animal is light for size.
Breeding state	Female is not carrying eggs under her tail (berried lobster).		Female crab is carrying eggs under her tail. Lobster has a V shaped mark or any mutilation on any of the tail fins.
Shell damage	Shell has no damage and no signs of disease.	Shell has only slight damage or abrasions and no signs of disease.	Shell has damage, snapped rostrum, and signs of shell disease such as discoloration.
Claws and legs	Two claws. Well banded or nicked if appropriate. Eight legs all with no damage.	Only one claw. A few legs missing. Tips of leg damaged (leads to bleeding).	No claws (except in claw-less crawfish). Legs missing, cracked and non- operational, tips to legs are damaged. Animals where one of the claws becomes detached during removal from pots.
Contamination	No evidence of physical or chemical contamination. All mud washed away.		Evidence of physical or chemical contamination. Muddy deposits on shell.

## 2.5 Onboard handling and storage

Shellfish will generally be alive at the point of landing and will have been kept alive either through stowage in onboard seawater tanks (vivier tanks), at sea in holding cages/store pots or, where the catch is to be landed on the day of capture, dry storage on board the vessel.

In all circumstances careful handling of the catch will minimise rates of mortality. Crabs and lobsters should never be dropped or thrown as this will cause stress, potential limb damage, limb loss and even death. Where dry storage is the chosen method the catch should be placed into boxes or bongos shell up and covered with damp cloth or sacking as soon as possible to minimise exposure to wind, rain

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and the sun. (Cloths used to cover bait should not be used to cover catch.) These coverings should be dampened on a regular basis with clean seawater. Once stowed, care should be taken to ensure that the catch is not crushed, for example due to the use of non-stacking containers. Stacking catch too high may also reduce the stability of the vessel.

Where crab and lobster are not landed on the same day as capture, and are held in storage, their claws should be rendered inactive. If this is not done there is a high likelihood of claw and limb damage or loss resultant from fighting which may lead to reduction in value or even mortality.

Typically, lobster claws are rendered inactive by placing a band or cable tie around the claws, taking care to ensure that these are secured on the inside (nearest the body) end of the peg-like protrusions found at the hinged end of the claws.

It is recommended that brown crab claws are disabled by 'nicking' them using the 'French Nick' method. In this procedure a knife is used to cut the tendon between the two black pincers. The French method of nicking is preferred as it results in less bleeding. Fishermen often have a 'nicking bar' consisting of two wedges made of steel that the crab closes its claw onto making nicking much easier.

It is important to know that a nicked crab is vulnerable to infection. It is likely that bacterial infection is a major cause of mortality in stored 'nicked' brown crab. Keeping nicked crabs in store pots for too long (e.g. more than 10 days) means that the claw meat starts to blacken, indicative of infection and necrosis, and quality suffers. All 'nicking' weakens the crab to some extent, but currently most operators consider that there is no commercially viable alternative.

Where catch is to be contained within vivier tanks the following actions are recommended:

- Do not fill the vivier tanks when in harbour or where the water is known to be of poor quality or low salinity.
- After nicking, transfer the catch into the tank at frequent intervals.
- Ensure that the tanks are cleaned on a regular basis and are included on cleaning schedules developed as part of the vessels food safety management system.
- Ensure that when using cleaning chemicals on the pipework servicing the vivier tanks, that they are thoroughly flushed to remove any chemicals before refilling for catch storage.
- Ensure that water circulation systems are turned off prior to entry into harbours and where salinity is known to be low.
- Maintain records of dead loss to identify any increases/decreases in mortality.

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### 2.6 Discharge and landing

To prevent excessive mortality and/or contamination in shellfish, it is important to follow the recommendations below:

- When discharging crabs from vivier tanks do not throw shellfish into boxes or bongs.
- Do not leave the catch open to the elements any longer than is necessary.
- Do not leave the catch unattended.
- Where possible avoid discharging crab at the warmest parts of the day.
- Do not refuel vessels during discharge and landing operations.

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To comply with traceability regulations it is required that landings are identifiable and documentation is kept that records the following information:

- Boat identification.
- Species of shellfish (both common and scientific name).
- Date of capture: this may include several days or a period of time corresponding to several dates of catches.
- Unit weight (or numbers).
- Area of capture e.g. the FAO sub area or code for the North East Atlantic.
- Production method (e.g. caught at sea).
- Fishing method.

If a boat is landing small quantities of shellfish and selling directly to the end consumer, it may not be required that this information is provided on a label. However, it is recommended that records of all catches are kept as this will assist in complying with regional recording requirements (for example IFCA and MMO returns) and with demonstration of a track record in fishing for shellfish.

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### 2.7 Vessel hygiene and cleaning schedules

The use of a simple cleaning schedule can act as a straightforward tool to improve and maintain a high standard of hygiene on board any type of fishing vessel. The use of a cleaning schedule is good practice as it provides a step-by-step instruction as to the systematic cleaning of the working areas to ensure that they are effectively maintained to help preserve the catch and to provide a safe working environment.

A good cleaning schedule should detail:

- What is to be cleaned.
- How often it should be cleaned.
- Any chemicals to be applied, together with their dilutions and contact time.
- The method of cleaning.
- Details of any Chemical Safety Data sheets.

#### Vessel cleaning guidelines

Crews must be made aware of the importance of good basic hygiene practices. This will ensure the overall quality of the catch is maximised and maintained. It is important to make crew members aware of this, as there will be no visible evidence at sea if fish has been excessively contaminated through poor hygiene standards. This set of guidelines explains why certain hygiene practices are important to the fisherman. If crew are aware of, and have an understanding as to what can potentially spoil the catch, then they will be in a better position to prevent this occurring in the first instance.

#### Working areas

An effective 'clean-as-you-go' policy throughout the trip, and once fishing has been completed, will keep the areas in a suitably clean condition.



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### Equipment

The variety of equipment held on board for the handling of the fish and shellfish can be quite extensive, particularly where vessels alternate between demersal, pelagic and shellfish operations. All equipment that comes into direct contact with the catch during the handling process should be given particular attention when cleaning. Each piece of equipment is a potential source of contamination, especially if it is not maintained in a clean state.

### Cutting boards and knives

Vessels engaged exclusively in shell fishing activities will have minimal use of knives and cutting boards other than for cutting up bait and nicking. However many vessels engage in multiple fishing sectors simultaneously so it is important to maintain knives and cutting boards in good, clean condition as would be the case for demersal fishing. For this reason the recommended practices stated below should also be followed when shell fishing.

- Tables, boards and knives should be cleaned regularly and effectively to prevent excessive build-up of residues.
- Cutting boards should be made from a non-porous, readily cleanable material such as polypropylene. Wooden boards in time become waterlogged thus harbouring bacteria, and making them difficult to clean effectively. They are also prone to splintering through wear, which in turn is a potential foreign body risk to the catch; as such they should not be used.
- It is also recommended that plastic-handled knives are used for similar reasons.

### Baskets, boxes, bongos and covers

Unless held in live vivier storage tanks, catch will typically be held live in either boxes or bongos. After discharge all boxes and bongos used in connection with catch storage should be cleaned in accordance with documented cleaning systems and treated in exactly the same way as boxes that are used for fish products.

Any boxes or bongos used for the storage of bait should be thoroughly cleaned in accordance with documented cleaning systems and treated with the same level of attention as boxes used for storing whitefish or pelagic catch.

It is common practice for smaller boats to use either hessian sacks or non-foam backed carpets to cover the catch to keep them cool and damp and protected from contamination. These too should be thoroughly rinsed at the end of fishing trips to ensure that any organic residue that may have become attached to them is removed.

### Cleaning chemicals

It is essential that the correct food safe approved chemicals are used for the applications outlined above.

Vessels are strongly advised to take professional advice when selecting chemicals, for a number of reasons:

- It can make a significant improvement to the boat's hygiene standard, even if the effects of this are not visible.
- Some chemicals may react with certain metals such as aluminium, which may be present in equipment on board.
- The use of the wrong chemical such as an engine room degreasant does not provide any sanitising effect on work contact surfaces.
- The correct dilution rates and application methods will be advised.

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- Chemicals that have a strong residual taint, such as bleach, will more than likely taint some fish at some point on board the boat.
- Always ensure that your supplier provides you with the relevant chemical data sheets for the products you use.

In addition, persons involved in the application of cleaning products must be fully instructed in their safe and correct application. Chemicals must be correctly stored away from working areas.

### Records

As part of a well-managed cleaning schedule, boats should keep a record of the cleaning activity that takes place on board. This provides a record of the 'due diligence' the boat has undertaken to ensure that the fish landed is from a vessel which is operating a regular cleaning programme. The record then forms part of the traceable quality history of the fish landed by the boat.

The record should also incorporate a check on the working and storage areas and equipment of the boat to ensure that once the cleaning activity has taken place that the work has been done to a satisfactory level.

### Methods of application and frequency

The method by which areas and equipment of a vessel should be cleaned will depend upon their use, and how heavily soiled they becomes during use.

- In many cases simple hosing down of work areas at regular intervals to prevent build-up of fish and marine debris is sufficient.
- When it comes to thorough clean-downs, a number of applications can be used: areas can be manually scrubbed down with cleaning solutions, or vessels may utilise the use of a power hose to apply high pressure cleaning with built-in chemical applicators.
- Some items of equipment can be soaked in sanitising dips; rinsing off should be carried out with either clean seawater or fresh water.
- A thorough clean-down at the end of a trip is essential. Failure to clean effectively at this time will result in a high build-up of bacteria.
- It is recommended that a refresh clean is carried out on a vessel before fishing starts at the beginning of the next trip.

It is essential that the correct chemicals are used for the various jobs. There are differences between the function of each chemical that can be used to properly clean a fishing vessel.

### Detergent

These are chemicals that are designed to remove organic matter e.g. fish oil, flesh and inorganic matter, e.g. engine oil, dirt, etc. from items of equipment or surfaces. They can be either alkaline or acid based and will have differing characteristics and abilities to remove materials. A very common detergent is soap.

### Disinfectant

These are chemicals that are designed to kill bacteria and some also kill viruses which create biologically clean surfaces that they are applied to. They cannot clean the surface of dirt and should be used after the surface has been cleaned with a detergent, if not the disinfectant properties will tend to be compromised. A very common disinfectant is bleach.

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## Sanitiser

This is a range of chemicals that have both detergent and disinfectant properties.

Other points skippers may wish to consider include:

- Chemicals that have a strong residual taint such as bleach can if not rinsed off correctly inadvertently taint the catch, which if occurring could have a detrimental impact on any of the quality, value, safety or marketability.
- Always ensure the crew involved in the application of these products during cleaning are instructed in their correct method of application and have the correct suitable protective equipment available and in place, prior to use.
- Always keep chemicals correctly stored away from working areas. Chemicals should never be placed in containers originally used for other chemicals, as this will compromise the safety instructions on the container which could have a potentially harmful effect on the catch and the crew member handling the product.

## Cleaning policy records

In order to approach the cleaning of the vessel and its equipment in a systematic way it is recommended that vessels develop policies, inclusive of cleaning schedules that clearly document activities and responsibilities. As well as ensuring a hygienic vessel it also gives the added benefit of being able to demonstrate commitments to high standards and provides a record of due diligence should issues arise with respect to catch safety and quality. These cleaning policies can additionally form part of a traceable quality history of the fish landed by the vessel.

### An example of a cleaning schedule for use on a shellfish vessel\*

Area or item of equipment	Recommended frequency of clean	Method of application
Working deck area	As necessary. Significant breaks in fishing. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Bait stations	As necessary. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Bait cutting tables/boards	As necessary. Significant breaks in fishing/when not in use. End of trip.	Rinse. Chemical clean, hose down. Chemical clean, leave in sanitising dip till next trip.
Baskets and bongos	As necessary. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Vivier tank and circulation systems	End of trip.	Chemical clean for all surfaces; soak, and rinse off/flush Ensure no residual taint – use clean water.

\* Not all areas or equipment will be present on vessels solely dedicated to shellfish operations.

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- When commencing a trip; any exposed fish handling areas and containers especially on open decked boats, should be re-cleaned before the first fish are taken on board.
- Note that in reference to applications referring to a hose and/or rinse down, clean seawater or, if in harbour, fresh water, should be used.
- Never use harbour water for cleaning applications.

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<b>Ambient</b>	The temperature of the surrounding environment.
<b>Bacteria</b>	A group of single-cell living organisms. Some may spoil food and some may actually cause illness.
<b>Clean seawater</b>	Natural, artificial or purified seawater or brackish water that does not contain micro-organisms, harmful substances or marine plankton in quantities capable of directly or indirectly affecting the health quality of food.
<b>Clean water</b>	Means clean seawater and fresh water of a similar quality.
<b>Cleaning</b>	The removal of food residues, dirt, grease and other undesirable debris.
<b>Cleaning schedule</b>	Written document setting out how a boat is to be kept clean. It will detail each area and piece of equipment to be cleaned; the cleaning product to be used; person/s with responsibility for carrying out cleaning; standard of cleanliness required; frequency; and Health and Safety precautions to be taken. All persons concerned must be aware of their individual responsibilities. A supervisor is responsible for checking the total cleaning process.
<b>Cold store or freezer</b>	Equipment for keeping food at frozen temperatures. Usually set around -18°C.
<b>Compliance</b>	Actions that satisfy the legal requirements.
<b>Contact surface</b>	Any surface which comes, or may come, into contact with fish, either directly or in such close proximity that it could contaminate the food if dirty. Includes work surfaces, containers and equipment.
<b>Contamination</b>	The introduction or occurrence in food of any microbial pathogens, chemicals, foreign material, spoilage agents, taints, unwanted or diseased matter, which may compromise its safety or wholesomeness.
<b>Core temperature</b>	The temperature at the centre of a mass or piece of food.
<b>Disinfection</b>	Reduction in levels of contamination on food equipment or in food premises, normally by the use of chemicals to kill micro-organisms. Disinfectants used must be suitable for use in food premises.
<b>Hygiene</b>	Measures to ensure the safety and wholesomeness of food.
<b>Infestation</b>	Entry and survival of pest animals and insects on board the boat or within equipment or products.
<b>Packaging</b>	Means the placing of one or more wrapped foodstuffs in a second container, and the latter container itself.
<b>Personal cleanliness</b>	Measures taken by food handlers to protect food from contamination.
<b>Pest</b>	Animal life unwelcome in food premises, especially insects, birds, rats, mice and other rodents capable of contaminating food directly or indirectly.
<b>Potable water</b>	Means water meeting the minimum requirements laid down in Council Directive 98/83/EC of 3 November 1998 on the quality of water intended for human consumption.
<b>Primary products</b>	Products of primary production including products of the soil, of stock farming, of hunting and fishing. (EU Definition as 852/2004).

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<b>Processed products</b>	Foodstuffs resulting from the processing of unprocessed products. These products may contain ingredients that are necessary for their manufacture or to give them specific characteristics.
<b>Protective clothing</b>	Clothing – hats, boots, waterproofs – worn by the crew when handling fish to prevent contamination of fish by the individual.
<b>Refrigerated hold</b>	Area of the boat fitted with equipment to keep product cold. Normally between 0°C and 2°C.
<b>Spoilage</b>	Fish deterioration resulting in off flavours, odours and possibly appearance indicating products are unsuitable for sale or to eat.
<b>Taint</b>	Contamination of food with undesirable flavours or odours.
<b>Unprocessed products</b>	Foodstuffs that have not undergone processing, and includes products that have been divided, parted, severed, sliced, boned, minced, skinned, ground, cut, cleaned, trimmed, husked, milled, chilled, frozen, deep frozen or thawed.

**Did you find the information in this guide useful?  
Is there anything we could have done better?**

We would love to hear your feedback so please contact  
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