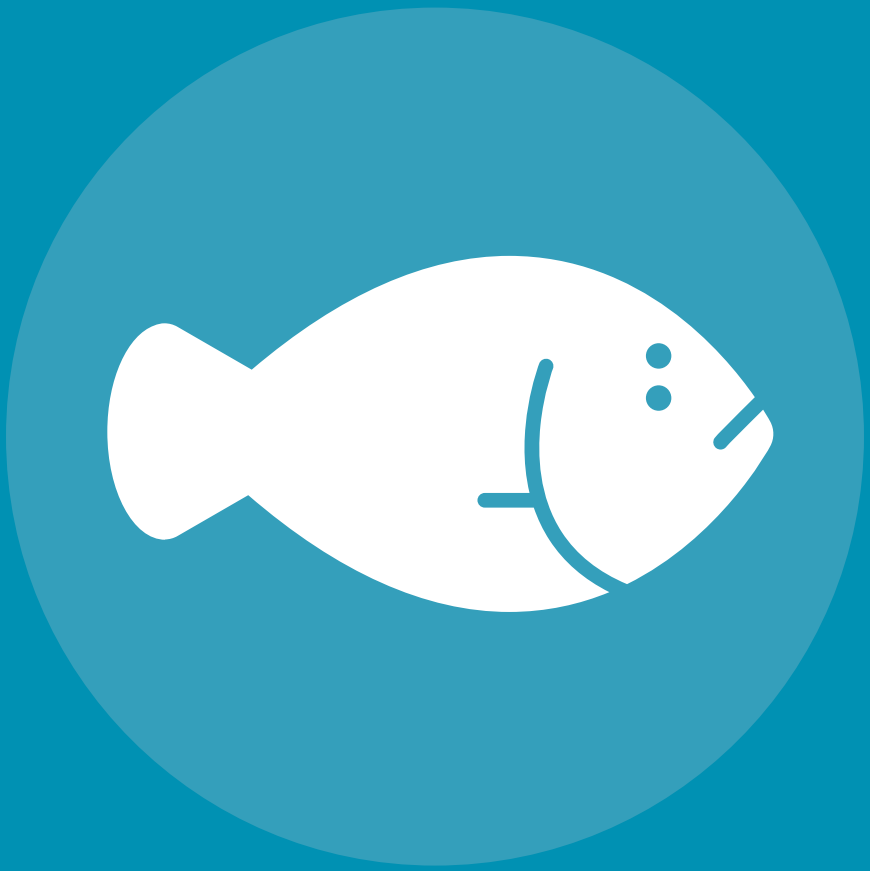
COMPLIANCE SUPPORT GUIDE



DEMERSAL FISH

INCORPORATING CEPHALOPODS

SEAFISH
the authority on seafood

RESPONSIBLE FISHING SCHEME
Certification Mark

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1.1 Background

This RFS Compliance Support Guide (CSG) has been produced for fishermen who are engaged in the capture of Demersal Catching Sector species from fisheries around the UK and the EU. The CSG is intended as a guide for the Demersal catching sector, with regards to applicability of UK and EU regulations concerning Food Safety that will affect the maintenance and preservation of their catch.

This CSG forms part of a suite of CSGs which are designed to deal with the key industry requirements relating to a specific catching sector to help improve the quality of the fish they land and to maintain the value of the catch. Each CSG will have the capacity to be upgraded as required to reflect improvements in good industry practice and any changes in national and international legislation.

The guides will aim to support the industry and to actively promote and encourage better practice. The suite of Seafish CSG cover the following specified sectors and will be added to in future if required:

Catching Sector Specific

- Seafish Demersal CSG.
- Seafish Pelagic CSG.
- Seafish Shellfish CSG.
- Seafish Nephrops CSG.
- Seafish Scallop CSG.

Generic Industry Specific

- Seafish Health and Safety CSG for skippers and crews.
- Seafish Ethical and Welfare CSG for crews and Non EEA Fishing Crews.
- Seafish Environmental CSG.
- Seafish Food hygiene CSG for on board food production and storage.
- Seafish Common Operational Practices CSG for all sectors and vessels.

By the following and adhering to these CSGs the UK Fishing Industry will be able to promote and champion the high standards of care that are necessary when handling fish, which by its nature is a delicate and perishable product, to achieve a consistent level of good product quality that will provide a superb product for their customers to match and even exceed their expectation.

The UK Fishing industry is fully aware that by adopting the “Good care of the catch” described in these guides that if adopted will reduce unnecessary waste and will help to secure a better financial return for their industry from this finite and regulated natural resource.

In addition it is essential that the welfare and safety of the fishermen is also considered as “Fishing is Dangerous” is constantly commented upon within the popular press and throughout the trade which puts the onus on the industry to change to help protect the people working within the industry. The generic industry guides will highlight and give guidance on where the individual fisherman can take steps themselves to ensure that they work in a safe and responsible way that will protect themselves and their fellow crew members. Fishing in a safe manner is essential, as accidents not only have a detrimental effect on the individual and the other crew but will also have an adverse economic impact on the image and viability of the entire fish catching industry.

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1.2 Purpose and scope

The purpose of the CSG is primarily to support and encourage all fishermen to try and adopt recognised industry best practice. The CSG will also take account of the current key legislation that will underpin this sector to ensure that the industry is aware of what the requirements are to help secure the best return for their products by meeting the needs of the market in terms of product specification and supply. This CSG will also underpin the Seafish Responsible Fishing Scheme programme and all vessel applicants applying for this programme will be required to commit to adopting these good practices and to where practically possible incorporate them into their fishing operations. By doing so the requirements of Core Principle 4 (see below) of the RFS standards can be satisfied.

In the sector specific CSG the underpinning legislations are Regulation 852/2004/EC on the Hygiene of Foodstuffs, and Regulation 853/2004/EC laying down specific rules for food of animal origin. Only the requirements applicable to the Demersal catching sector will be covered in this guide.

In the Health and Safety CSG the Health and Safety requirements will relate to only marine health and safety requirements regulation 89/391/EC. The ethical and welfare will relate to the ILO convention specifically directed to the fishing sector and the food safety management system advice will follow the requirements laid out in Codex Alimentarius.

This CSG was produced by Seafish in collaboration with representatives of the trade, NGOs and other official bodies.

1.3 The Responsible Fishing Scheme (RFS)

The revised RFS Programme has been developed by Seafish and the UK Seafood industry to allow the fishing industry to demonstrate compliance with the programme's five Core Principles:

Core Principle 1

Safety, health and welfare (Reduce accidents, injuries & fatalities; promote decent work, respect & integrity).

Core Principle 2

Training and professional development (Improve skills, knowledge and understanding; raise standards and open up new opportunities).

Core Principle 3

The vessel and its mission (Demonstrate due diligence and compliance).

Core Principle 4

Treating fish as food (Focus on supply of safe, wholesome product with known provenance).

Core Principle 5

Care for the environment (Behave responsibly, respecting the environment).

All the listed CSGs have been designed to underpin the RFS Standards and will to encourage fishermen to adopt responsible behaviours to promote long term improvement across all sectors of the UK Fishing Industry. By doing so the requirements of core principle 4 of the RFS standards can be satisfied

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1.4 Guide development and acknowledgements

In the production of the CSGs Seafish called upon the expertise of the key industry stakeholders and acknowledges and thanks all their efforts in the formation on the guides, particularly the RFS Technical Groups and certification experts RS Standards. Each CSG was endorsed by the RFS Technical committee to ensure that it has the correct credibility to under pin this standard and each CSG has been formally approved by the RFS Oversight Board as a key document that will need to be adopted by all vessel applicants wishing to be certified to one of the RFS standards.

Acknowledgement is given to the following industry stakeholders who have participated in reviewing this guide through its development.

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New Under Ten Fishermens Association

Katie Miller
Client Earth

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2.1 Structure of the guide

Section 3 of each guide describes in detail typical fishing methods employed within the sectors prosecuted, and provides best practice guidance as agreed by the UK Fishing industry and representative industry stakeholders that have expertise in all sectors of the Fishing Industry and Supply Chain and covers each stage of the fishing process from capture through to first point of landing.

Some areas covered, whilst not specific to individual sectors are included for ease of reference. Other, topics, such as traceability are covered in the general Compliance Support Guide produced as part of the CSG series.

Section 4 of the CSG is the Glossary which explain any acronyms' that are used in the Fishing Industry to ensure that all users of the CSG understand what each statement means.

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Demersal catching sector operational practice guidance

3.1 Fishing practices

The sizes and diversities of vessels targeting demersal whitefish species varies widely across the fleet. Typically capture methods fall into two categories, active towing of nets or passive setting of nets or traps. Both are equally effective dependent upon the species targeted and dependent upon how the operations are carried out, can significantly affect the quality of the catch.

Both tow and soak times will affect the quality of the catch and the lengths of each should be balanced between commercial viability and catch quality. Similarly length of trip can also affect the catch quality, particularly catch caught at the start of trips, so again a balance needs to be reached where the benefits of extending trips to capture more fish are not offset by poorer prices at point of sale.

In addition to the size and diversity of the fleet, the fisheries they target also vary greatly from predominantly single species fisheries to multiple mixed fisheries and wherever possible gear should be designed in such a way so as to maximize retention of target species with non-target and or juveniles escaping or being excluded prior to gear being boarded.

3.2 Fish handling

Where possible the areas used to receive the catch should be designed in such a way so as to offer maximum protection from the elements and in all cases against any other possible sources of contamination.

In addition to the vessel being free from sources of contamination it is also important that crew handling the catch are also as clean as practically possible. Care must therefore be taken to ensure that all protective equipment worn by the crew is in good condition and cleaned on a regular basis.

As far as practically possible when boarding the catch it should be lowered onto the deck as this will minimise the potential for bruising. Similarly gentle handling when sorting and grading will ensure that quality is not compromised.

On occasions where it is necessary to use a gaff, it should only be used in head or gill cavity as otherwise there is potential for flesh damage which may reduce the value of the catch when landed.

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3.3 On board processing

Gutting and bleeding

Once the catch is boarded and sorted, operations such as heading and/or gutting should be commenced without delay. However where gear is to be shot back it is advisable to do this before the commencement of gutting operations as this will both maximize fishing time and will ensure the gear is well below the water before seabirds flock to the vessel to eat the discarded waste generated from gutting operations. Once gutted, fish should be washed in clean sea water or potable fresh water to remove traces of any gut contents, which if not removed could contaminate the flesh with high loads of spoilage bacteria and ultimately reduce the shelf life and quality of the landed catch. As far as is reasonably practicable the vessel should be designed to allow all fish offal and other waste products to be kept separate from the retained catch and in all circumstances operations should be carried out in such a way so that catch remains separated from waste. Where livers and roes are retained these should be kept separate from the whitefish catch but equally afforded careful handling, washing and storage. In order to maximize catch quality it is recommended that catch should be processed within one hour of boarding. Once all the catch has been processed all equipment and areas should be rinsed down with clean seawater prior to the next haul being taken on board. Where mechanized gutting takes place it is recommended that machinery cleaning, and maintenance is carried out according to documented procedures developed as part of the vessels HACCP food safety management system. More information can be found in the Compliance Support Guide that deals specifically with HACCP.

Good practice

Poor practice

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3.3 On board processing (continued)

Additional advice for the gutting of flatfish species

The following advice reflects the practices commonly cited as best practices but variation may occur dependent upon local market requirements.

Plaice, Lemon Sole, Dab, Halibut and Witch should be gutted on the coloured side, and then washed like other demersal species and stored belly cavity down.

For species such as Megrim, Brill and Turbot it is usual to gut them on the white side and again store them belly cavity down.

In addition to gutting it is recommended that species such as Turbot, Brill and Halibut are also bled as this will minimise bruising which can occur during storage. Typically this is done by making of an incision into the backbone on the white side just above the tail.

For species such as Dover or Sand Sole these should be gutted through a small incision from the gill to the vent along the fin between the top and bottom sides of the fish. In addition they should ideally be boxed with their coloured side upper most.

Cartilaginous species (skates & rays) need to be bled and washed properly as inadequate bleeding of these species can lead to greater problems with the subsequent accumulation of ammonia.

Washing

Once gutted, fish should be washed in clean sea water or potable fresh water to remove traces of blood and any gut contents, which if not removed could contaminate the flesh with high loads of spoilage bacteria and ultimately reduce the shelf life and quality of the landed catch.

In addition for flat fish such as Megrim Sole the crew should visually inspect gill cavities to ensure that all dirt and sand build up has been removed.

Where mechanized washing equipment is used care should be taken not to overload the machine as this could result in both a poor washing process and also bruising. Similarly the length of time that catch is held in washing machines should be carefully monitored so that excessive bleaching does not occur.

Additional considerations for cephalopods

Where vessels are targeting Cuttlefish (*Sepia officinals*) and Squid (*Loligo coindetii* or *L. vulgaris,* or *L. forbesi*) the following practices are also recommended.

These species should be stored in dedicated boxes as their ink can easily contaminate whitefish catch which is very difficult to remove and will likely lower the value of any whitefish landed.

In addition to dedicated storage it is also recommended that these species be stacked separately as again mixed storage could contaminate any whitefish stowed below it.

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3.4 Fish quality

The following fish quality specification is recommended for all white fish species at the point of landing.

Required quality specifications at point of landing

Parameter	Specification
Skin condition	Firm, bright, luster evident, clear mucus, no desiccation.
Blood	Bright red.
Eyes	Normal in appearance, bright and clear.
Gills	Red to pink in colour. No excess cloudy mucus.
Odour	Sea fresh or odourless.
Lice	None present.

The following fish quality specification is recommended for all Cephalopod Species at the point of landing.

Required quality specifications

Parameter	Specification
Skin condition (dorsal side)	**Cuttlefish** Bright, dark brown, iridescent reflexes over the mantle. **Squid** Bright, defined pigments of different sizes and colours, iridescent skin.
Internal bone	**Cuttlefish only** The connection bone/head firmly attached to the upper part of the head region.
Eyes	Normal in appearance, bright and clear.
Odour	Sea fresh or odourless.

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3.5 On board storage

The following points are recommended to ensure maintenance of catch quality.

Direct icing

- In order to improve shelf life and quality it is important to reduce the core temperature of the fish to a temperature of that approaching melting ice as soon as possible. Ideally and where practical this should be done by firstly immersing the catch into a slush ice mixture before laying the fish into containers as described below.
- Containers used for storing fish need to be fit for the purpose of holding product hygienically and capable of being maintained in a clean condition. Other than for slush ice storage they should be constructed with an adequate number of drain holes of a large enough size to allow the free drainage of melt water from the fish.
- To maximize the shelf life of the stored catch there should be a layer of ice placed in the bottom of the container before fish is added, with alternate layers being added until the box is full and topped off with ice.
- The ice must be made from clean seawater or potable fresh water and stowed in conditions that will prevent it from being potentially contaminated by other waste material such as offal or cleaning chemicals etc.
- The top level of ice should not be proud of the upper rim of the container, if it is this may cause crushing damage to the stowed catch.
- The volume of ice should be sufficient to maintain the product at a temperature of between 0°C to +2°C.
- To maximize the quality of the fish the core temperature should be reduced to below +5°C within a time period of 4 hours from the point of the catch is first handled on board.
- The ice to fish ratio should approximately consist of 1 part ice to 3 parts fish.
- To assist further with the cooling effect it would be advisable to place boxes partially filled with ice at the bottom of each stack of fish boxes, as this will raise the bottom box of fish off the floor, which will not only keep the fish free of melt water, it will also allow cooling air to circulate around the stack much more efficiently.
- Unless landed in the round fish should be placed into the container belly-down as this will aid drainage and help to prevent melt water accumulating inside the body cavity which if occurring may have a detrimental effect on the quality of the stowed catch.
- In addition care will be required not to pack the fish in too tightly as this can impede the flow of melt water around the fish. It is essential to allow this melt water to run over the fish as this action will again help to cool the fish more rapidly.
- The stowed catch should always be aligned in the same direction, as this action will help to prevent the risk of distortion, twisting and crushing.
- The placing of non-permeable papers between the ice and fish can reduce the effectiveness of chilling by preventing the ice melt water from draining through the product; therefore if papers are to be used the permeable variety only are recommended.
- Ideally it is recommended that any ice left at the end of a trip be discarded and replaced with new. This will reduce the likelihood of contamination and flesh damage, old ice likely to be harder with larger lumps.

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3.5 On board storage (continued)

Slush icing

- Slush Icing is now recognized as an effective icing method for fish intended for premium fish markets e.g. Flat Fish. The main benefits of slush ice are that it will help to ensure a fast, even chilling of the catch as it affords better contact with the surface of the fish compared to traditional icing methods.
- Slush icing will also help to reduce the amount of pressure damage on the fish flesh as it is a semi liquid medium so is ideal for fish that has a very soft texture.

Bulk storage

- Where boats store fish in bulked form, the same procedures for the icing and packing of boxed product will generally still be applicable. However it would be advisable to insert shelves in large bulk stores in order to help prevent the potential crushing damage that could be inflicted on the stowed fish.

Cartilaginous species stowage advice

- The cartilaginous species (e.g. sharks and rays) should not be stored directly above the other fish species as on degradation they can produce ammoniac compounds which may leech out and contaminate the other white fish.

Fishroom structural condition

- If the vessel is large enough and has a fish hold construction should be such that it will aid cleaning and will not pose any contamination risk to the stowed fish.
- It should be well insulated to minimize the effect of outside temperature influence and it is usually recommended to have at least 50mm of insulation in the walls and 100mm on the bulk heads that separate engine room spaces from the fish hold.
- In addition mechanical refrigeration would be advisable for trip boats that wish to undertake trips of more than 3 days as this will prolong ice life and allow for a reduction in the amount of ice needing to be taken to sea.
- For day boats with no specific fish hold it would be advisable to place fish into insulated containers to help preserve ice and maintain catch temperatures within the required range. This will also provide protection from other sources of contamination.

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3.5 On board storage (continued)

Weight loss during stowage

For trip boats in particular there is a possibility that stowed catch will lose weight throughout the trip. A number of factors can affect this which are listed below.

In order to ensure that declared landed weights are accurate the factors within the control of the skipper and the crew should be taken into consideration.

Factors outside the control of the fisherman:

- Fish species.
- Condition of the fish (season).
- Ambient and seawater temperature.

Factors within the control of the fisherman:

- Fishing method.
- Exposure to the elements.
- Time taken to process the catch.
- Method of packing and the ratio of fish to ice.
- Volume of fish in the box.
- Length of the fishing trip.

Experience will assist with minimizing weight loss management and new crew members in particular should be made aware of the possibility.

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3.6 Temperature monitoring and control

As with any protein based foods and food ingredients, effective temperature monitoring and control are an essential part in ensuring that a safe, quality product is purchased by vessel customers or final consumers.

It is strongly recommended therefore to systematically monitor catch temperatures throughout all fishing trips of more than 4 hours duration to ensure that the catch is suitably chilled and maintained at appropriate temperatures. Holds may have 'hot' and 'cold' locations within them, depending on their design. Therefore it would be advisable to ensure that any temperature sensors or display devices are located in areas which reflect where the warmest temperatures are known or likely to be found.

For vessels with fish holds it is recommended that (if not already fitted) that systems be fitted to relay the hold temperature information to the wheelhouse as this will maximize the likelihood of being alerted to problems early.

Ideally damped temperature sensors should be used. These are types of sensors which are designed to react a little more slowly to fluctuations in temperature, rather than ones which react to variations quickly as would likely be the case upon the addition of more catch to the hold.

The development of documented temperature monitoring and control procedures (inclusive of temperature control recovery procedures and what happens to the catch during the period of unacceptable temperature control) should be built into vessel food safety (HACCP) management systems. For more information on the development and operation of HACCP systems please see the relevant CSG.

For vessels where deck storage is the only option it is essential that if trips are likely to be of 4 or more hours duration that sufficient ice is taken to chill the maximum amount of anticipated catch. Even if trips are expected to be of less than 4 hours duration it is recommended that ice is taken as smaller vessels tend to offer less shade and temperatures in summer can be significantly higher causing increased rates of quality loss.

It is further recommended that vessels with no dedicated holding facilities hold their catch in insulated, lidded containers. These will assist in prolonging the ice taken to sea and will effectively maintain appropriate catch temperatures once immersed in ice and lids are placed back on the containers. Finally with respect to vessel utilizing insulated containers, it is recommended that, where catch is not automatically deposited into containers that regular breaks in fishing are taken to gather, wash and ice the fish so as to minimise the time out of both water and chilled conditions.

If the catch is frozen onboard, then temperatures of fish should be monitored and recorded to ensure that the catch is maintained at or below -18ºC for the entire duration of the fishing trip. Freezing is deemed as secondary processing and skippers and or owners should comply with Local Authority requirements to get vessels registered as food production Authorised Establishments. Prior to landing any fish should be fully frozen before being removed to shore based cold storage as if not it may impact on the product later in the supply chain (quality, yield, shelf life, texture etc).

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3.7 Weighing, labelling and boxing at sea

Where possible, size grading, weighing and boxing of fish at sea is most desirable as it eliminates the need for de-icing, re-weighing and re-boxing before sale.

Ideally the catch should be weighed and labelled in the fish hold as this will minimize the risk of contamination and, where holds are refrigerated place the catch under temperature control sooner.

Some key factors for weighing the catch are listed as follows:

- Ensure that crew working the scales are fully trained in there operation.
- Ensure the scales are correctly tared for the container used to weigh the fish.
- Keep a calibration weight onboard and check the scales daily for accuracy. It is advisable to have a written policy confirming the frequency of checks and actions to be taken in the event that the scale readings deviate from those expected.
- Allow the fish to stand for a suitable time before weighing to allow excess wash water to drain off.
- Target weights must include a drip loss allowance as described earlier in this guide.
- Care must be taken not to make up boxes which are significantly heavier than the desired minimum target weight, as the consequence will be an excessively high give-away of catch and potential for decreased yield due to crushing damage when boxes are stacked.

Recommended labelling practice

It is recommended that if it is at all possible the vessel should label each box/consignment of fish prior to landing, the following section describes these requirements in detail but as yet not all these requirements are mandatory.

As an aid to compliance with **traceability regulations** it is strongly recommended that containers of fish are labelled at sea with the following information:

- Boat identification.
- Species of fish (both common and scientific name).
- Size grade (where applicable).
- Date of capture; this may include several days or a period of time corresponding to several dates of catches.
- Unit weight, if possible.
- Area of capture. For the North East Atlantic the FAO sub area or code.
- Production method (e.g. caught at sea).
- Fishing method.

Any additional information such as haul number, fish code may be applied at the discretion of the individual vessel but this is again not a mandatory requirement.

Labels should be attached or displayed on each container in such a way that all fish label data is clearly visible to the buyer on the marketplace.

If a boat is landing small qualities (*less than Euro 50 per day and per customer*) of fish and selling directly to the end consumer this information does not have to be passed on in the form of a written label.

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3.7 Weighing, labelling and boxing at sea (continued)

Box weight declaration

It is not recommended that labelling statements give any reference to a 'guaranteed' weight. This is due to the fact that the pre-mentioned factors, which have an effect on drip loss, mean that it is not possible to predict accurately box weights 8 to 10 days in advance.

There are two methods of declaring box weights currently in use:

Method 1:

Box labels published with the actual weighed at sea weight.

Each box label displays the actual weight of fish contained in the box at the time it was weighed and packed at sea.

When displaying fish weights in this way the label must incorporate a fixed statement, which clearly indicates that:

i) The weight relates to the weight of fish when it was weighed at sea.

ii) That it will be subject to a degree of drip loss.

Method 2:

Box labels published with the predicted weight of fish offered for sale.

The label displays the weight of fish that is estimated to be in the box after a drip loss factor has been taken into account (as illustrated above).

Weighing systems displaying label information in this way should incorporate a fixed statement that says that the published weight on the label is the 'Target Weight'.

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3.8 Boat 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 onboard 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.

A good cleaning schedule will usually 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

If the crew are aware of the importance of good basic hygiene practices then the overall quality of the catch should be 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 people 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. Nets can be stowed, and fish can be gutted, graded and washed within an environment with minimal bacterial contamination.

Equipment

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

Receiving hopper or pound, conveyors, elevators and chutes

Equipment will become coated with much fish and aquatic debris. If not kept in a good state of cleanliness such debris will build up and dry on to the equipment, making future effective cleaning that much more difficult to achieve.

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3.8 Boat hygiene and cleaning schedules (continued)

Gutting tables, boards, knives, grading bins

This is the most intensive work area on the vessel, where the crew are separating the guts of the fish from the body cavity. Fish entrails and organs have high contents of bacteria and enzymes, which will rapidly contribute to fish spoilage if not removed thoroughly. Equipment too can become badly soiled.

- Tables, boards and knives should be cleaned regularly and effectively to prevent excessive build-up of residues.
- It is recommended that gutting 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.

Gutting machines

Some boats are equipped with small semi-automatic gutting machines. As their action is quite rigorous they will generate a greater breakdown of the entrails in the process of removing them from the fish. This offal will be contained within the guarding and covers of the machine.

- Check internal surfaces regularly and keep clean.
- Failure to do so will result in offal accumulating inside; stale offal will be harder to remove and will become an ideal breeding ground for bacteria which will ultimately contaminate the fish passing through the machine.

Fish washer

- Clean off scum and other fish residues from around the edge of the washer.

Fish baskets and scales

- Fish in these baskets will generally be un-iced. Therefore, given that there is no temperature control, it is essential that they are kept as clean as possible to minimise the effect of contact contamination.
- Boats with weighing systems onboard should not overlook the cleaning of their scales.
- If electronic scales and labelling systems are used onboard, care should be taken in ensuring that the button interface is not water- or chemically-damaged.
- Operate a ‘clean-as-you-go’ system with these items of equipment, cleaning frequently when in continuous use.

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3.8 Boat hygiene and cleaning schedules (continued)

Hold

The catch may be stowed in the fishroom from anywhere between one to eight or more days at a time. The conditions under which fish are maintained in the fishroom are essential in preserving fish quality throughout the trip. The fishroom must be well insulated; it must have good drainage; all contact surfaces must be easily washable and it must be free from taints and odours.

- Ensure that the hold is thoroughly cleaned and rinsed at the end of every trip.

Cleaning chemicals

It is highly recommended that the correct chemicals are used for the applications outlined above. There are a number of companies who specialise in the supply of heavy duty reagents.

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.
- It should be borne in mind that 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.
- 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.
- Always ensure the persons involved in the application of these products during cleaning are instructed in their correct method of application.
- Always keep chemicals 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 onboard. 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 satisfactory level.

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3.8 Boat hygiene and cleaning schedules (continued)

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 freshwater.
- 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. These first fish, it must be remembered, will be the oldest of the following trip and must be preserved well. It is recommended that a refresh clean is carried out on a vessel before fishing starts at the beginning of the next trip.

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3.8 Boat hygiene and cleaning schedules (continued)

A cleaning schedule summary for use on fishing vessels

Area or item of equipment	Recommended frequency of clean	Method of application
Net pounds	When nets are shot away from stowage area. One full clean per trip.	Hose down. Wash down, hose rinse.
Fish working deck area	As necessary. Significant breaks in fishing. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Fish hopper or pound	Between hauls. Significant breaks in fishing. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Fish conveyor/elevator	Between hauls. Significant breaks in fishing. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Gutting 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.
Grading bins	Between hauls. Significant breaks in fishing. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Gutting machine	As necessary. Significant breaks in fishing. End of trip.	Hose out. Chemical clean, hose out. Chemical clean, soak, hose out.
Fish washer	Between hauls. Significant breaks in fishing. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Baskets	Between hauls. Significant breaks in fishing. End of trip.	Hose down. Chemical clean, hose down. Chemical clean, soak, rinse.
Scales	As necessary. End of trip.	Rinse platform. Chemical clean and rinse platform, and wipe down keypad.
Hold	End of trip.	Chemical clean for all surfaces; soak, and rinse off. Ensure no residual taint – use freshwater to rinse.

- When commencing a trip; any exposed fish handling areas and containers especially on open decked boats, should be recleaned before the first fish are taken onboard.
- NB: It must be noted that in reference to applications referring to a hose and/or rinse down, clean seawater or, if in harbour, freshwater, should be used.
- **Never** use harbour water for cleaning applications.

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4.1 Glossary

Ambient

The temperature of the surrounding environment.

Bacteria

A group of single cell living organisms. Some may spoil food and some may actually cause illness.

Clean seawater

Natural, artificial of 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.

Clean water

Means clean seawater and fresh water of a similar quality.

Cleaning

The removal of food residues, dirt, grease and other undesirable debris.

Cleaning schedule

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.

Cold store or freezer

Equipment for keeping food at frozen temperatures. Usually set around -18°C.

Compliance

Actions that satisfy the legal requirement.

Contact surface

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.

Contamination

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.

Core temperature

The temperature at the centre of a mass or piece of food.

Disinfection

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.

Infestation

Entry and survival of pest animals and insects on board the boat or within equipment or products.

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4.1 Glossary (continued)

Hygiene

Measures to ensure the safety and wholesomeness of food.

Packaging

Means the placing of one or more wrapped foodstuffs in a second container, and the latter container itself.

Personal cleanliness

Measures taken by food handlers to protect food from contamination.

Pest

Animal life unwelcome in food premises, especially insects, birds, rats, mice and other rodents capable of contaminating food directly or indirectly.

Primary products

Products of primary production including products of the soil, of stock farming, of hunting and fishing. (EU Definition as 852/2004).

Processed products

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.

Protective clothing

Clothing – hats, boots, waterproofs – worn by the crew when handling fish to prevent contamination of fish by the individual.

Potable water

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.

Refrigerated hold

Area of the boat fitted with equipment to keep product cold. Normally between 0ºC and 2ºC.

Spoilage

Fish deterioration resulting in off flavours, odours and possibly appearance indicating products are unsuitable for sale or to eat.

Taint

Contamination of food with undesirable flavours or odours.

Unprocessed products

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 Mick Bacon on **michael.bacon@seafish.co.uk** with your comments.

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