



Code of **good** practice: Introduction

Introduction

Salmonids are an excellent source of dietary protein and they also provide a broad range of important nutrients for human consumers. They are digestible and tasty, and as they are oily fish they contain components such as the omega-3 fatty acids that cannot easily be supplied by other foods. Salmon is a UK national favourite, representing around 30% of all seafood sales, and as of the publication of this version of the Code of Good Practice, it is all produced on the beautiful west coast of Scotland and the rugged islands of the Western Isles, Shetland and Orkney.

The production of farmed fish in the 21st century is a very efficient and sophisticated process. Alongside its sophistication, fish farmers remain innovative and the tools and technologies utilised by the sector develop rapidly to tackle new challenges and iteratively improve performance.

Salmonids are highly efficient converters of food into flesh; they are cold-blooded, so they do not require lots of energy to maintain a high body temperature; and they are ‘neutrally buoyant’, so do not have to expend much energy in maintaining position and in moving through the water. All of this means that less goes in to making more. Salmonid farmers are able to regularly achieve Food Conversion Ratio’s (FCR’s) of between 1.1-1.3, meaning that each kg of salmon requires only 1.1-1.3 kg of salmon feed. Because of these impressive efficiencies, farming fish is one of the most naturally productive ways of producing food and has become essential in addressing our needs for global food security.

“Aquaculture has a crucial role to play in contributing to our food security and meeting our commitment to becoming a Good Food Nation, producing healthy, nutritious food, with a greenhouse gas emissions profile that is lower than many other farmed sources of animal protein, for people in Scotland and around the world.”

Mairi Gougeon,
Cabinet Secretary for Rural Affairs, Land Reform and Islands
(Scottish Government Vision for sustainable aquaculture, 2023)

The farming of finfish, especially Atlantic salmon and trout, is at the heart of Scottish food production and is one of Scotland’s most important rural industries. The large and small businesses that produce high quality Scottish farmed fish as well as the myriad of supply chain companies (from equipment supply to sales and export logistics) make a vitally important contribution to rural economies across the country and, of course, to the Scottish economy as a whole.

The professionalism surrounding Scottish salmonid farming is encapsulated in the Code of Good Practice for Scottish Salmonid Aquaculture. The Code underpins the world class standards that surround all aspects of the farming process. Scottish fish farming is already amongst the most highly regulated food production businesses in the world, with over a dozen regulatory bodies having responsibility for administering and policing many hundreds of pieces of EU, UK and Scottish legislation. Additional to this, fish farmers in Scotland have agreed that it is important that members of the public should be able to understand that good practice extends well beyond the scope of statutory regulation and that the Code should be the means to explain the farming process and the professionalism with which fish are farmed. First launched in 2006, as the production standard for the farming of all finfish species in Scottish waters, the Code has been widely adopted by fish farming businesses, and its world-leading reputation has been acknowledged across the international fish farming community and beyond. It contains the most comprehensive set of provisions of its kind, with numerous compliance points across all aspects of fish production. It is continually reviewed to ensure that it remains at the cutting edge of scientific and technological progress.

Since its introduction, the Code’s provisions have been inspected and audited by independent bodies specialising in fisheries, aquaculture and other aspects of seafood production. A number of countries, including a number in the developing world, are looking at the Code as a model for the self-regulation of their own aquaculture industries.

Previously, the Code had a broader scope. The Code of Good Practice for Scottish Finfish Aquaculture was developed in 2006, when the structure of the Scottish finfish sector was materially different. A range of species were established and their needs each needed to be met by the landmark Code. Currently, the sector is more focussed on the production of Salmonids – that is Trout and Atlantic Salmon. Refocussing this version of the Code allows for the resultant guidance and compliance points to be streamlined, whilst still providing stakeholders an unparalleled vision of practice on the 200+ farms across Scotland.

This version of the Code maintains the previous version’s structure; setting out good practice by area of activity. This presentation style is intended to set out logically all the different elements of good practice involved in the production of broodstock (adult fish from which eggs and sperm are derived); in freshwater hatcheries, tanks, ponds and raceways; in pens in freshwater lochs; in inshore seawater; in seawater tanks; and in the final stages of production where harvested fish are processed for the marketplace. This format makes the Code more accessible to the general reader. Furthermore, it makes it easier for farmers to keep up to date and use the Code to best effect, allowing them to show, through independent auditing, that they are complying with good practice.

This version of the Code sees a change in the way compliance points are presented and numbered. The previous version created chapter specific sequential numbering, and whilst this made reading each chapter clear it created other challenges. There are commonalities across areas of activity, meaning that the same compliance points can often be found in many chapters. With the previous structure, this meant the same compliance point would have a different number depending on the chapter it was in - making management and comparison difficult. Similarly, this created space for differentiation of terminology as updates were rolled out across chapters. This version homogenises compliance points across chapters and provides them with a single number which is designed to map out the codes overarching structure.

Example ID: “2.1.4”

- “**2**.1.4”: Here 2 represents the section.
- “2.**1**.4”: Here 1 represents the sub-section.
- “2.1.**4**”: Here 4 represents the compliance point.

Previous codes have utilised an explanatory notes section, which provided useful additional context for readers. This code maintains that section, whilst also adding citations linking to it throughout the body of the text.

Example citation use:

3.29.1	3.29.1 VHWP’s and BMP’s should include relevant aspects of medicine and vaccine use. ^{4k, 4m}
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Where ^{4k, 4m} denote explanatory note ^{4k} and ^{4m} in the explanatory notes. The CoGP Management Group hope that the inclusion of these signposts increases the readers understanding of the sectors activities.

Fish farming is a complex and highly technical business, and the Code assumes a certain level of understanding of the detail surrounding each of the areas set out in the following text. Should any further detail be required, it may be obtained through the CoGP Management Group or from the Scottish aquaculture industry organisations.

The Code is available to all salmonid farmers operating in Scotland and it is the intention that it should be adopted by all producers.

Reflecting nature

The stages and steps involved in the farming of fish use scientific knowledge and state of the art technology to ensure that the fish enjoy the highest standards of health and welfare and that they are able to grow and thrive. Fish produced in this way is safe and nutritious, and is available all year round, whether as fresh fish, processed, smoked, or as one of the many different cuts available throughout the world in fishmongers, supermarkets and restaurants.

Farming in freshwater

According to the Scottish Aquaculture database, as of the time of publishing, there are around 100 freshwater fish farms in Scotland, primarily producing young salmon for ongrowing in the sea or market-sized trout for the table. These hatcheries and farms are located in areas where the water is pristine and in good supply all year round. Batches of fish are fully traceable throughout their time in freshwater farms, allowing traceability throughout their whole life and, ultimately, to the fishmonger’s counter.

As for all the stages in the production of Scottish farmed salmonids, the health and wellbeing of the fish is a major consideration, and both the fish and the water in which they live are constantly monitored to ensure they meet the required high standard. In addition, all farms are required by the Code to have Veterinary Health and Welfare Plans and Biosecurity Management Plans which identify the most important areas of fish health and welfare, and both are kept under continuous review.

As in the wild, finfish farmed can be exposed to naturally occurring disease agents and parasites; proactively preventing health problems is therefore paramount. Health management includes routinely vaccinating the fish to make sure that they are protected against common diseases, in a way corresponding to that adopted for humans and other farmed animals. Many tens of millions of fish are vaccinated every year.

Farming in seawater

According to the Scottish Aquaculture database, as of the time of publishing, there are around 210 seawater finfish farms in Scotland. The great majority are salmon farms that consist of arrays of large net pens moored to the seabed.

These are mainly the home for post-smolt salmon which spend between 10 and 22 months swimming in the natural, pristine waters until they have grown to harvest size. Some are marine trout farms which are broadly similar in nature to salmon farms and used to produce large trout, as distinct from the portion-sized table trout that are mainly produced in land-based facilities.

Full traceability is carried through from fresh water, with records for each batch of fish transferred from fresh water and grown on in sea water being maintained.

As in fresh water, maintaining the health and wellbeing of fish is a priority and the Code promotes and empowers farmers to:

- develop Veterinary Health and Welfare Plans and Biosecurity Management Plans and continuously keep these under review;
- farm their fish within designated Farm Management Areas (FMAs);
- communicate with neighbouring farms inside the FMA and co-ordinate their farming activities to support high levels of fish health and welfare;
- ensure that predators, such as seals, are not able to attack or stress the fish.

Because of the importance attached to excellent fish health and welfare, and environmental stewardship, farming companies employ specialist vets, fish health experts and environment managers whose job it is constantly to monitor the farm environment and the health of the fish. Each year, thousands individual fish health checks are carried out, based on the provisions of the Code.

The fish farming environment

Our freshwater and seawater farms are located in areas with optimum growing conditions and pristine water quality allowing farmed fish to thrive throughout their life cycle. Given the reliance that is placed on having such excellent growing conditions, it is vital that fish farmers respect and protect the environment on which they and their fish so heavily depend.

As with other aspects of the Code, environmental provisions extend beyond simple legal compliance. The Code requires all salmon farms to have an Environmental Management Plan, which underpins their sustainability. Environmental Management Plans normally include important aspects such as predator exclusion and deterrence, waste management and disposal and other matters, including wildlife and habitat policies. Companies employ qualified and experienced environment managers who are responsible for carrying out frequent checks of water quality and loch bed sampling to ensure that any unavoidable impacts of the farms operation remain localised and within acceptable limits.

Throughout the course of a normal production cycle, on each site environmental samples are taken and analysed to ensure that any effects on the environment are within designated limits, confined closely to the vicinity of the farm and transient, being reversed through the natural biological processes of dispersion and assimilation.

Preparing fish for the market

Once Scottish farmed fish have reached market size, they are humanely harvested, rapidly chilled and transported in hygienic containers to state-of-the-art facilities where they are prepared for further processing and, ultimately, for sale. This final part of the production cycle is critically important and, to maintain the high quality of the fish, it is carried out quickly and with great care.

As with all of the other stages in the production of farmed fish, processing is independently inspected and audited, thus ensuring quality, continuity and traceability from egg to plate. The Code and the independent auditing process that runs in parallel with it underpin the responsible and professional approach adopted throughout the farming process. The standards set out within the Code reinforce the rigour and discipline that are fundamental to the production of Scotland's premier food export.

Behind the code

The Code was developed by a panel of fish health, welfare and environment specialists, fish production managers and independent advisors. In establishing the Code in 2006, the fish farming industry sought contributions from a wide range of stakeholders, including environmental NGOs, angling organisations, Scottish Government, regulatory agencies, feed companies, equipment suppliers, fish processors and retailers of Scottish finfish.

The management and review of the Code, and the interface with independent auditing and certification body, are now overseen by the CoGP Management Group. From time to time it is necessary to update the Code's provisions and approaches in light of developing knowledge and experience. The web-based publication of the Code allows that process to be undertaken quickly and efficiently.

The key objectives of the code

The Code is additional to the provisions of the very substantial body of legislation and regulation relating to Scottish aquaculture. Fish farming in Scotland is already subject to extensive statutory regulation. This regulation encompasses each stage in the fish farming process, from the initial planning and approval of a fish farm site, through to the fine detail of day-to-day fish farming operations, including the safeguarding of fish health, protection of the marine and freshwater environments and avoidance of adverse impacts on habitats and wildlife. The Code fully recognises the existence of regulatory requirements, and builds on them. The resulting approach is comprehensive, high-quality and strongly based on the management of risk. It embraces the principles of auditable standards, including relevant BS EN standards.

The Code is designed to meet three clear objectives:

- Firstly, a robust, well-constructed and closely observed Code of Good Practice plays an important part in helping to achieve balanced and proportionate regulation of the industry's activities, without overwhelming preoccupation with regulatory detail or bureaucracy;
- Secondly, through its adoption and independent auditing, the Code provides assurance to all stakeholders, consumers and the general public that Scottish finfish aquaculture is a highly responsible food sector, producing a range of products of which Scotland can be justifiably proud;
- Thirdly, the Code establishes a high minimum standard of practice for every participating farmer and provides a framework for industry development through continuous improvement, which reflects the Scottish industry's desire to remain at the forefront of good practice.

