Complaint submitted by WildFish to the CMA as part of its investigation into misleading green claims made in relation to Fast Moving Consumer Goods (FMCG)

Concerning statements made by Salmon Scotland in relation to Scottish farmed salmon

WildFish.

Coastal Communities Network Scotland

Complaint submitted to misleadinggreenclaims@cma.gov.uk

26 October 2023

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1.1 This complaint is submitted to the CMA to inform its investigation into misleading green claims made in relation to Fast Moving Consumer Goods (FMCG). Fast Moving Consumer Goods (FMCG) - GOV.UK (www.gov.uk) misleadinggreenclaims@cma.gov.uk.

1.2 WildFish, formerly Salmon & Trout Conservation, has long campaigned for stronger regulatory oversight of the Scottish salmon farming industry and has been directly and closely involved in discussions with the industry, with regulators and with enquiries and legislative procedures in the Scottish Parliament.

1.3 WildFish therefore has a strong legitimate interest in salmon farming in Scotland.

1.4 In the absence of sufficient Scottish Government progress to put in place proper controls, WildFish currently runs the *Off the table* campaign[1] to persuade consumers not to purchase Scottish farmed salmon.

1.5 WildFish has highlighted the damage caused by Scottish salmon farming to wild Atlantic salmon and sea trout populations for well over two decades, including, for example, giving evidence to the (then) Rural Affairs, Climate Change and the Environment (RACCE) Committee of the Scottish Parliament considering the impact of sea lice and escapes from Scottish salmon farms on wild fish, during the passage of the Aquaculture and Fisheries (Scotland) Bill in 2012[2] - see Stage 1 Report on the Aquaculture and Fisheries (Scotland) Bill | Scottish Parliament

1.6 More recently, in 2015, WildFish lodged a formal Petition[3] with the Scottish Parliament, calling on the Scottish Government to strengthen Scottish legislative and regulatory control of marine fish farms to protect wild salmonids of domestic and international conservation importance.

1.7 WildFish's 2015 Petition triggered two more Scottish Parliamentary Committees, both the Environment Climate Change and Land Reform Committee (ECCLR) and Rural Economy and Connectivity Committee (REC), to conduct enquiries and issue reports[4] [5], both published in 2018, both concluding that regulatory control of salmon farms was needed to protect wild salmonids as a priority – "the status quo is not an option".

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[1] Wildfish | Off the table
[2] Scottish Parliament | Stage 1 Report on the Aquaculture and Fisheries (Scotland) Bill | 2013
[3] Scottish Parliament | Protecting wild salmonids from sea lice from Scottish salmon farms | 2015
[4] Scottish Parliament | Environmental impacts of salmon farming - Parliamentary Business | 2018
[5] Scottish Parliament | Salmon farming in Scotland | 2018

From Rural Economy and Connectivity Committee Report “Salmon farming in Scotland”, published 27 November 2018, emphasis added

RECOMMENDATION 1

However, the industry also creates a number of economic, environmental and social challenges for other businesses which rely on the natural environment and the Committee recognises this impact. Therefore, if the industry is to grow, the Committee considers it to be essential that it addresses and identifies solutions to the environmental and fish health challenges it faces as a priority.

RECOMMENDATION 2

The Committee strongly agrees with the view of the Environment, Climate Change and Land Reform Committee (ECCLR) Committee that if the industry is to grow, the “status quo” in terms of regulation and enforcement is not acceptable. It is of the view that urgent and meaningful action needs to be taken to address regulatory deficiencies as well as fish health and environmental issues before the industry can expand.

RECOMMENDATION 60

The Committee is therefore of the view that maintaining the status quo in terms of the regulatory regime in Scotland is not an option. It considers that there is a need to raise the bar in Scotland by setting enhanced and effective regulatory standards to ensure that that fish health issues are properly managed and the impact on the environment is kept to an absolute minimum. The Committee therefore recommends that a comprehensively updated package of regulation should be developed by Marine Scotland and other regulatory bodies, both to ensure the sector will be managed effectively and to provide a strong foundation on which it can grow in a sustainable manner.

From Environment, Climate Change and Land Reform Committee (5 March 2018) Report to the Rural Economy and Connectivity Committee on the Environmental Impact of Salmon Farming, 2018, emphasis added

Overall, the Committee concluded:

It is clear to the Committee that the same set of concerns regarding the environmental impact of salmon farming exist now as in 2002 but the scale and impact of these has expanded since 2002. There has been a lack of progress in tackling many of the key issues previously identified and unacceptable levels of mortality persist.

Over that period there appears to have been too little focus on the application of the precautionary principle in the development and expansion of the sector.

Scotland is at a critical point in considering how salmon farming develops in a sustainable way in relation to the environment. The planned expansion of the industry over the next 10-15 years will place huge pressures on the environment. Industry growth targets of 300,000 - 400,000 tonnes by 2030 do not take into account the capacity of the environment to farm that quantity of salmon. If the current issues are not addressed this expansion will be unsustainable and may cause irrecoverable damage to the environment.

The Committee is deeply concerned that the development and growth of the sector is taking place without a full understanding of the environmental impacts. The Committee considers an independent assessment of the environmental sustainability of the predicted growth of the sector is necessary[6].

There are significant gaps in knowledge, data, monitoring and research around the adverse risk the sector poses to ecosystem functions, their resilience and the supply of ecosystem services. Further information is necessary in order to set realistic targets for the industry that fall within environmental limits. There should be a requirement for the industry to fund the independent and independently verified research and development needed.

The role, responsibilities and interaction of agencies requires review and agencies need to be appropriately funded and resourced to fully meet their environmental duties and obligations. Scotland's public bodies have a duty to protect biodiversity and this must be to the fore when considering the expansion of the sector. We need to progress on the basis of the precautionary principle and agencies need to work together more effectively.

There need to be changes to current farming practice. The industry needs to demonstrate it can effectively manage and mitigate its impacts.

1.8 It is therefore uncontested, even by the Scottish salmon farming industry, that there are multiple environmental impacts and controversies associated with the farming of salmon in Scotland, which include:

The impact of salmon farm-derived parasites on wild salmonids

The impact of escapees farmed salmon (largely from Norwegian salmon genetic stock) on the genetics of Scottish wild salmon

Farmed salmon mortalities

Organic pollution of the sea-bed under and near to salmon farms

Pollution of the sea-bed and water column with toxic sea lice treatment chemicals and the impact on non-target organisms

[6] For completeness, no such assessment has yet been undertaken

Use of wild-caught wrasse as cleaner fish on Scottish salmon farms
Production of feed for farmed fish using fish meal and oils derived from poorly managed wild fisheries
Use of antibiotics including those used in human medicine
Carbon footprint of Scottish salmon farming

1.9 These are addressed in more detail below.

1.10 Following the REC Committee report in 2018, the Scottish Government and its regulators are currently bringing forward some very limited changes to regulation and control of the industry, but, as detailed in our recently published response to SEPA's sea lice framework proposal[7], WildFish is far from being persuaded that what is being proposed will be sufficient.[8]

1.11 Many of the environmental issues listed above have in fact become more serious since the 2018 Parliamentary Committees reported (see below).

1.12 Allied to this complaint, WildFish is also currently objecting to an application for a proposed so-called 'non-minor amendment' to the Scottish Farmed Salmon Protected Geographical Indication (PGI) being made by Salmon Scotland[9] [10], which, if granted, will lead to the removal of the word "farmed" from the PGI itself. The proposed change from "Scottish Farmed Salmon" to "Scottish Salmon" is highly relevant in the context of the CMA's investigation of 'greenwashing' and the provision of misleading information to consumers and traders.

1.13 A formal Notice of Objection was submitted to the UK PGI authorities by WildFish on 9th October 2023.

1.14 The CMA is also referred to recent work carried out by WildFish on the use of certification schemes for Scottish farmed salmon, which concludes that schemes such as Aquaculture Stewardship Council (ASC) and RSPCA Assured are potentially misleading consumers on the environmental and welfare credentials of certified farmed salmon. The WildFish report, *Responsibly farmed?*[11], investigates certification bodies ASC, RSPCA Assured and Soil Association Organic, and finds numerous examples of how

[7] Scottish Environment Protection Agency | Detailed proposals for a risk-based, spatial framework for managing interaction between sea lice from marine finfish farm developments and wild salmonids in Scotland | 2023
[8] WildFish | Open letter on SEPA sea lice framework proposal | 2023
[9] Salmon Scotland | Our Members
[10] Salmon Scotland | Application for approval of an amendment to the product specification of Scottish Farmed Salmon PGI which is not minor | 2023
[11] Wildfish | Investigating the certification of Scottish farmed salmon | 2023

certification of Scottish salmon in fact only requires lower environmental and welfare standards than could reasonably be expected by consumers.

2 Claims made by Salmon Scotland about sustainability

2.1 Salmon Scotland[12] is the body representing the entire farmed salmon industry in Scotland.

2.2 Its purpose is to promote the benefits of farmed salmon in the UK and internationally and to represent Scotland's salmon producers and companies from across the wider Scottish salmon supply chain:

> "At Salmon Scotland, we take on the responsibility of fostering long-term, sustainable growth in the salmon sector. Our mission is to make sure that more consumers, both at home and abroad, get the chance to relish the exceptional taste of Scottish salmon.
>
> Representing every company involved in salmon farming in Scotland, as well as other key players along the Scottish salmon supply chain, we are committed to championing the sector's interests. By collaborating with our members, the UK and Scottish governments, and regulators, we actively contribute to shaping a regulatory environment that allows both Scotland and our members to prosper"[13].

2.3 There have been various claims made in recent months by Salmon Scotland that the current production of Scottish farm salmon is 'sustainable'.

2.4 WildFish believes that such claims are inaccurate, not supported by evidence and are highly likely to misinform and mislead both suppliers and ultimately consumers, both in the UK and globally.

2.5 Salmon Scotland assert their claims on their website and promote them in news articles and interaction with organisations and projects.

2.6 These claims are publicly available, meaning they are designed to reach consumers as well as intermediaries, such as supermarkets, exporters, catering companies and restaurants.

2.7 Inter alia, in November 2022, Salmon Scotland's own website[14] claimed the industry's current operations amount to sustainable development, at What was the outcome of the 2003 Strategic Framework for Scottish Aquaculture? | Salmon Scotland:

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[12] Salmon Scotland | The voice of Scottish farm raised salmon
[13] Salmon Scotland | About
[14] Salmon Scotland | What was the outcome of the 2003 Strategic Framework for Scottish Aquaculture?

> "Standards in the industry go well beyond the basic regulatory requirements and ensure not only that the sector continues in its shared development of good practice, but also that Scottish aquaculture products meet the high-quality standards consistent with current and future sustainable development".

2.8 Salmon Scotland's press releases[15] make similar claims: "Scottish salmon is raised sustainably in the Atlantic Ocean, in cold, fast-moving water across the Highlands and islands of Scotland."….CEO Tavish Scott saying that: "Chefs and customers enjoy Scottish salmon in the knowledge that we have world-leading sustainability measures in place from egg to plate, producing nutritious food in the most responsible way." See Salmon Scotland Press Release, 22 November 2022 Salmon Scotland joins world's leading body for chefs | Salmon Scotland.

2.9 In October 2022, Tavish Scott, chief executive of Salmon Scotland, has also been reported in Salmon Scotland materials[16] as making claims of the industry's purported current sustainability and promising further sustainable growth:

> "We put the best-tasting and healthiest protein product on people's plates and deliver the highest environmental and welfare standards. Our sector supports more than 2,500 direct and 10,000 indirect jobs, most of which are in some of the country's most fragile coastal communities, generating hundreds of millions of pounds for our economy. All this has been achieved despite the challenges of Covid and Brexit. With the right government support - streamlined regulation, a more business-friendly approach to immigration, and action to tackle rural housing shortages - we can deliver further sustainable growth."
>
> See Salmon Scotland Press Release, 27 October 2022 Annual survey shows record level of Scottish salmon | Salmon Scotland

2.10 Of Scottish farmed salmon exports, Tavish Scott has also claimed[17] Scottish farmed salmon to be grown sustainably, predicting continued sustainable growth:

> "The first half of the year has been another period of incredible success for Scottish salmon, reflecting the hard work and dedication of our farmers and the growing demand internationally for our nutritious fish.

[15] Salmon Scotland |Salmon Scotland joins world's leading body for chefs
[16] Salmon Scotland | Annual survey shows record level of Scottish salmon
[17] Salmon Scotland | Scottish salmon export sales leap 9% with growth in Asian and US markets

Grown sustainably in the waters off our west coast, with animal welfare a top priority for farmers and vets, the quality of Scottish salmon is recognised worldwide which is why it is the UK's top food export.

As well as providing hundreds of millions of pounds for the UK economy and creating thousands of jobs, Scottish salmon also ensures that remote coastal communities can thrive.

Both the UK and Scottish governments rightly recognise the potential for continued sustainable growth, so that Scotland can lead the world in the blue economy and grow one of the most nutritious foods we can eat. While we face the same challenges as many sectors – including too much red tape, labour shortages, housing supply issues and the impact of climate change – the extraordinary success of our sector is something to be incredibly proud of".

See Scottish salmon export sales leap 9% with growth in Asian and US markets | Salmon Scotland

and

"Scottish salmon is an extraordinary global success story that we can all be immensely proud of, supporting thousands of jobs and contributing hundreds of millions of pounds to the UK economy.

With such pressure on public services during the cost-of-living crisis, the revenue generated by our farmers has never been more important.

Scottish salmon, grown sustainably in the cold waters off our west coast, is recognised as the best in the world - which is why it is in such high international demand"[18].

See Scottish salmon was UK's biggest food export in 2022 - new HMRC figures | Salmon Scotland

2.11 Salmon Scotland is also reported in national and trade media in 2023 making claims related to the purported sustainability of how Scottish farmed salmon is currently grown:

"Tavish Scott, the chief executive of Salmon Scotland, said: "Scottish salmon, grown sustainably in the cold waters off our west coast, is recognised as the best in the world which is why it is in such high international demand. Through responsible growth of the blue economy we can help feed the world, rearing one of the most nutritious foods that we can eat."

[18] Salmon Scotland | Scottish salmon was UK's biggest food export in 2022

The Times, 11th February 2023[19].

2.12 In trade press, Tavish Scott, Chief Executive of Salmon Scotland, is reported[20] as saying:

> "We have enjoyed an excellent relationship with Mairi [the Cabinet Secretary] and we look forward to continuing our positive engagement. "She fully understands the vital importance of our sector, which contributes £760m to the economy, and knows how hard our farmers work to prioritise fish welfare and produce one of the most nutritious products we can eat. "We have a number of issues we want the Scottish government to prioritise, including the rural housing shortage and the need for a more streamlined licensing regime, so that we can deliver further sustainable growth in Scotland".

See Fish Farmer April 23 by Fish Farmer Magazine - Issuu – at page 9

2.13 Dr Iain Berrill, Head of Technical at Salmon Scotland has also said recently: ".....Like all food-producing sectors, we must adapt to climate change and the aquaculture sector will continue to lead the world in healthy, **sustainable** salmon for decades to come."

See https://www.heraldscotland.com/news/23834070.salmon-farm-deaths-keep-rising-2022-harvest-drop-revealed/

2.14 Salmon Scotland has recently joined the world's leading body for chefs, the Worldchefs group, it being reported[21] that: "Scottish salmon is raised sustainably in the Atlantic Ocean, in cold, fast-moving water across the Highlands and islands of Scotland".

See Salmon Scotland joins World's Leading Body for Chefs (fishfocus.co.uk)

2.15 To that catering audience, Salmon Scotland chief executive Tavish Scott is reported to have said: "Reared in the cold, clear waters of Scotland's northern and west coasts, Scottish salmon is unique in its taste, texture, provenance and nutritional value. Top chefs across the globe want to cook with the very best ingredients and that's why they love cooking with Scottish salmon and serving it to their customers. Chefs and customers enjoy Scottish salmon in the knowledge that we have world-leading sustainability measures in place from egg to plate, producing nutritious food in the most responsible way".

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[19] The Times | Salmon is the top export but sales take a dive | 2023
[20] Fish Farmer Magazine | April 23
[21] Fish Focus | Salmon Scotland joins World's Leading Body for Chefs

2.16 In a blog produced by Salmon Scotland for wider public consumption, as sponsor of the Tall Ships visit to the Shetland Islands in 2023, Salmon Scotland repeats its claims of sustainability[22]:

> "Nestled amidst the rich fishing grounds and stunning natural beauty of the Shetland Islands, the Scottish salmon sector has emerged as a champion of sustainability that's also powering the local economy…
>
> The farmed salmon sector in Shetland highlights shining examples of sustainable aquaculture practices, which drive economic growth while preserving the region's natural beauty. By prioritizing sustainability, innovation, and community engagement, the sector has established itself as a global leader in salmon production".
>
> See Scottish Salmon – Fuelling Shetland's Success | Tall Ships Races Lerwick (tallshipslerwick.com)

2.17 In relation to the launch in November 2020 of Salmon Scotland's own Sustainability Charter[23] [24], Tavish Scott, is reported to have hailed the document as "momentous" and "ground-breaking":

> "We already have an incredibly good environmental story to tell with a low carbon footprint, low freshwater use and great feed conversion rates. But, by publishing this document today, we declare our commitment to go further and meet even more exacting standards in the years to come."
>
> "We lead the world in many aspects of farming salmon. We also enjoy a well-deserved global reputation for producing the world's best salmon. But this document shows our commitment to stay out in front, evolving the way we farm to make sure our environmental and sustainability credentials remain the best in the world."
>
> See Scottish Salmon Sector Publishes Sustainability Charter | Salmon Scotland and sspo_pdf_betterfutureforusall_0.pdf (salmonscotland.co.uk)

3 Environmental and welfare issues associated with Scottish salmon farming

3.1 There are, in fact, a significant number and wide range of environmental and welfare issues associated with salmon farming in Scotland, as highlighted by the REC and ECCLR Committee enquiries in 2018 and subsequently, by many relevant organisations and academics.

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[22] Tall Ships Races Lerwick | Scottish Salmon – Fuelling Shetland's Success
[23] Salmon Scotland | Scottish Salmon Sector Publishes Sustainability Charter
[24] Scottish Salmon | A better future for us all

3.2 Direct claims are also made by Salmon Scotland in relation to some of these environmental and welfare issues, but, when considered as a whole, these environmental and welfare issues, and the statements Salmon Scotland makes about them, have significant influence over whether any general claims can be made truthfully for the industry as to the sustainability of Scottish farmed salmon, or whether they are false or misleading.

3.3 **The impact of Scottish salmon farm-derived parasites on protected wild salmonids**

3.3.1 The impacts of sea lice, ecto-parasites that breed very successfully on the high density of farmed fish on Scottish salmon farms, leading to the release of huge numbers of juvenile lice that then infest wild salmonids outside the farms, leading to high mortality rates in those wild salmonids, is one of the most contentious issues connected with the Scottish salmon farming industry.

3.3.2 Research commissioned by Salmon and Trout Conservation Scotland from the renowned Norwegian Institute for Nature Research[25] summarised the issue and recently concluded that:

"Considerable evidence exists that that there is a link between farm-intensive areas and the spread of salmon lice to wild Atlantic salmon and sea trout. Several studies have shown that the effects of salmon lice from fish farms on wild salmon and sea trout populations can be severe; ultimately reducing the number of adult fish due to salmon lice induced mortality, resulting in reduced stocks and reduced opportunities for fisheries. Depending on the population size, elevated salmon lice levels can also result in too few spawners to reach conservation limits".

3.3.3 The situation in Norway, per the "Status of wild Atlantic salmon in Norway 2023" report by the highly respected Norwegian Scientific Advisory Committee for Atlantic Salmon is that "salmon lice, escaped farmed salmon, and infections related to salmon farming are the greatest anthropogenic threats to Norwegian wild salmon."[26]. That is also highly likely to be the case for Scotland. In 2021, the Scottish Government published a literature review of the 'Impacts of lice from fish farms on wild Scottish sea trout and salmon: summary of science'. In summary, the research found that 'In Scotland, salmon farms have been shown to be a much more important contributor than wild fish to the total numbers of sea lice in the Scottish coastal zone'. Furthermore, the report concluded that

[25] Thorstad, E.B. & Finstad, B. | Impacts of salmon lice emanating from salmon farms on wild Atlantic salmon and sea trout | NINA Report 1449: 1-22. Trondheim, Norway | 2018
[26] Vitenskapsrade | Status of wild Atlantic salmon in Norway | 2023

'The body of scientific information indicates that there is a risk that sea lice from aquaculture facilities negatively affect populations of salmon and sea trout on the west coast of Scotland.'[27]

3.3.4 Following the REC Committee report in 2018, the Scottish Environment Protection Agency has been charged with bringing forward proposals to address the damage being caused in Scotland by sea lice emanating from Scottish salmon farms[28].

3.3.5 However, as Salmon and Trout Conservation Scotland's response to SEPA's proposals for a risk-based spatial framework for managing interactions between sea lice from marine fish farm developments and wild Atlantic salmon in Scotland, argued [29]:

"The proposals fall far short of what is required because they:

- ignore the damage already caused by fish farming to wild salmon populations in Scotland;
- fail to recognise the urgency of the situation faced, that populations of wild salmonids are at critically low levels (as per the SIWG[30]), and that "urgent" (per the REC and ECCLR Committees) and "swift" (per SIWG) action to provide enhanced and effective regulation is needed, adopting the precautionary approach (per REC and ECCLR Committees);
- fail to recognise or apply the principles laid down in the UK Withdrawal from the European Union (Continuity) (Scotland) Act 2021, in particular, the precautionary principle as it relates to the environment and the principle that preventative action should be taken to avert environmental damage;
- fail completely to deal with impacts on sea trout, a UK Biodiversity Action Plan priority fish species;
- fail to address the continued impacts of existing farms, instead being politically focussed on facilitating the expansion of fish farming;
- fail to deal with impacts on wild salmon beyond a very short time window (April/May);

[27] Scottish Government | Impacts of lice from fish farms on wild Scottish sea trout and salmon: summary of science | 2021

[28] Scottish Environmental Protection Agency | Proposals for a risk-based framework for managing interaction between sea lice from marine finfish farm developments and wild Atlantic salmon in Scotland | 2022

[29] WildFish | Conservation and community groups blast Scottish Government for its "smoke and mirrors" proposals to protect iconic wild salmon from sea lice parasites.

[30] SIWG – the Salmon Interactions Working Group, involving NGOs, regulators and the industry, set up by Scottish Government acknowledged in 2020 "the potential hazard that farmed salmonid aquaculture presents to wild salmonids (Atlantic salmon and sea trout) and agreed to examine measures to minimise the potential risk". Despite "all members of the SIWG agree[ing] that actions taken forward from these recommendations should be implemented as soon as possible and encourag[ing] Ministers to act in a swift manner to provide clarity and direction for regulators, the aquaculture sector and all interested stakeholders", the very modest sea lice regulatory changes now proposed by SEPA are yet to be implemented.

- fail even to attempt to meet the NASCO[31] objective that "100% of farms to have effective sea lice management such that there is no increase in sea lice loads or lice-induced mortality of wild salmonids attributable to the farms" to which Scotland is signed up;
- are vague in delivery, built on largely untested models and numerous assumptions on the interactions between farmed-derived lice and wild fish;
- rely excessively on self-monitoring, self-assessment and indeed, self-design of both the regulatory tools and models by the fish farmers themselves;
- are very far from the "robust, transparent, enforceable and enforced" regulatory system that the SIWG sought;
- and in any event, would take years to develop and implement properly, with outcomes remaining extremely uncertain, therefore not providing any prospect of effective regulation in the foreseeable future".

3.3.6 This was and remains the view shared by many Scottish eNGOs and Scottish west coast and island community groups, members of the Coastal Communities Network, a community-led network comprising local groups committed to the preservation and safeguarding of Scotland's coastal and marine environment. See Home Page - CCN Scotland (communitiesforseas.scot).

3.3.7 In any event, at today's date, SEPA's final proposals have yet to be put into effect and so the situation with respect to sea lice impacts from Scottish salmon farms has not improved since the time of the REC and ECCLR Committee reports in 2018 and has worsened as the industry has expanded in the interim years.

3.3.8 On the sea lice issue, Salmon Scotland states that

"Keeping fish healthy is of primary importance to Scottish salmon farmers. The sector has invested heavily in recent years to develop a diverse and effective array of management methods, including the use of cleaner fish[32], that enable it to effectively control the numbers of wild sea lice".

See What are sea lice? | Salmon Scotland

and that

[31] The North Atlantic Salmon Conservation Organization (NASCO) enables six Governments and the European Union to co-operate to conserve wild Atlantic salmon. It is an international organization, established by the Convention for the Conservation of Salmon in the North Atlantic Ocean, in 1984 with the objective is to conserve, restore, enhance and rationally manage Atlantic salmon through international co-operation taking account of the best available scientific information.

[32] See below for sustainability issues related to the sourcing form the wild and keeping of cleaner fish.

"average sea lice levels have been low for the last three years. Scotland's salmon farmers continue to invest in maintaining these low numbers and continue to provide increasing transparency and publication rates of data".

See What are the health and welfare standards of Scottish farmed salmon? | Salmon Scotland

3.3.9 Contrary to Salmon Scotland's above statement, in 2022, more than two thirds of active open-net farms (130 out of 192) breached the industry's own Code of Good Practice (CoGP) limits at least once[33] and almost 1/3 (31.3%) of active Scottish salmon farms reported an average adult sea lice count above the CoGP limit of 0.5 adult sea lice per fish during May 2023. Not only does this raise a welfare concern for the farmed fish, but risks spreading lice to out-migrating wild Atlantic salmon, with potentially serious consequences in terms of increased mortality of wild fish and overall wild fish population decline.[34]

3.4 The impact of escapee Scottish farmed salmon (largely from Norwegian salmon genetic stock) on the genetics of Scottish wild salmon

3.4.1 Escapes of Scottish farmed salmon cause acute threats to wild salmonids from competition during large scale escapes. Escapes cause chronic threats from outbreeding depression and hybridisation. Wild salmon are already experiencing enough of a decline that populations do not have the resilience to recover genetic fitness following episodes of interbreeding, especially when exposed regularly. In other words, academics suggest that interbreeding of farmed and wild salmon could be leading to an 'extinction vortex' in wild populations, which would lead to permanent loss of wild Scottish salmon populations[35].

3.4.2 Since 2018, a total of 353,246 farmed Atlantic salmon have been reported to have escaped from Scottish marine salmon farms. This includes 52,463 farmed Atlantic salmon from two escape incidents in 2022, the most recent year for which data is published.[36]

3.4.3 Scottish Government research has reported that "interbreeding between escaped farmed Atlantic salmon and wild indigenous salmon (hybridisation) introduces genetic material from farmed stocks into wild

[33] Wildfish | How the Scottish salmon farming industry is failing to contain sea lice parasites on open net farms | 2023
[34] SEPA | Sea lice data
[35] McGinnity, Philip, Paulo Prodöhl, Andy Ferguson, Rosaleen Hynes, Niall Ó. Maoiléidigh, Natalie Baker, Deirdre Cotter, et al. | Fitness Reduction and Potential Extinction of Wild Populations of Atlantic Salmon, Salmo Salar, as a Result of Interactions with Escaped Farm Salmon | *Proceedings: Biological Sciences* 270, no. 1532 | 2003
[36] Marine Directorate | Scottish fish farm production Surveys | 2023

populations (introgression) with resulting disruption of the adaptive genetic composition of individuals and populations" and that, in 2018-2019, "signs of introgression were found in salmon at 55 (23.2%) of the sites" sampled in a study by Marine Scotland Science, the Government's marine science agency.

See Scottish Marine and Freshwater Science (SMFS) Vol 12 No 12 - A national assessment of the influence of farmed salmon escapes on the genetic integrity of wild Scottish Atlantic salmon populations.pdf

3.4.4 This long-term irreversible disruption of wild Scottish salmon genetics by interbreeding with escaped Norwegian-stock farmed salmon escaping from Scottish salmon farms is fundamentally unsustainable, the ECCLR Committee concluding in 2018 that;

"197. Wild Salmon and Trout are PMF's [Priority Marine Features] and as such are marine nature conservation priorities in Scottish waters. The Committee has significant concerns that genetic mixing of farmed stocks with wild stocks may have negative consequences.

198. The Committee was told the majority of salmon that escape from farms will not survive to interact with wild fisheries populations. However the Committee considers the overall numbers of escapes and the possibility that a significant minority of these could be interacting with wild fisheries populations is of great concern".

3.5 Scottish farmed salmon mortalities

3.5.1 Mortality rates on Scottish salmon farms are shockingly high and are increasing, meaning many farmed salmon die before they can be harvested and are disposed of as waste. Despite some more recent innovations, such as vaccines, the Scottish salmon farming industry continues to report a large proportion of infectious diseases as the cause of mortalities. These include viruses such as cardiomyopathy syndrome (CMS) and pancreas disease (PD) and bacterial diseases such as furunculosis. Fish Health Inspectorate mortality data shows that 121,155 farmed salmon were reported to have died due to viral CMS and bacterial furunculosis on Bakkafrost's Greanamul farm in June 2023[37].More recently an increasing proportion of mortality incidences have been attributed to jellyfish blooms[38]. In particular micro-jellyfish, known as hydrozoans, can enter the farms and cause acute and severe gill damage, rendering the farmed salmon unable to regular bloom salts, exchange gases or excrete

[37] Marine Directorate | Fish Health Inspectorate: mortality information | 2023
[38] The Herald | Why tiny jellyfish are such a big threat to salmon farming

waste products effectively through their gills. The CEO of Bakkafrost, Regin Jacobsen, stated that “over the past ten years, microjellyfish incidents have become more severe”. However, there is some evidence to suggest that open-net salmon farming is contributing directly to increasing incidences of algal and jellyfish blooms. Advances in Aquaculture Hatchery Technology (2013) declares: “Ironically, aquaculture may be inadvertently exacerbating the problems with jellyfish blooms. Increased nutrients around farms, due to excess fish food and waste food, it said, “could create eutrophic conditions that may favour jellyfish over fish”.

3.5.2 In 2018 the REC Committee made the following recommendation on mortalities: “Recommendation 9 - However, the Committee considers the current level of mortalities to be too high in general across the sector and it is very concerned to note the extremely high mortality rates at particular sites. It is of the view that no expansion should be permitted at sites which report high or significantly increased levels of mortalities, until these are addressed to the satisfaction of the appropriate regulatory bodies”.

3.5.3 These impacts have not been addressed. Since 2018, mortalities have increased in Scottish salmon farming, with the annual number of reported mortalities showing a near doubling trend from 2020 to 2022. Monthly mortality rates, as reported by Salmon Scotland, has also seen an increasing trend, with 2023 reporting some significant monthly highs.

3.5.4 Salmon Scotland reports that “the annual average survival rate achieved for post-smolt farmed Scottish salmon is 85.5%, or 17 out of every 20 farmed salmon (14.5% mortality)”. See What is the mortality rate of Scottish salmon? | Salmon Scotland

3.5.5 The 2022 Scottish Finfish Production Survey reports the following on production mortality rates:

“In 2020, the last year for which survival can be calculated, the survival rate from smolt input to harvest increased [from 74.6] to 75.9%”, equivalent to a 1 in 4 production mortality rate. As of 2003, the first year in which this data is calculated, there has been no significant improvement in the approx. 25% production mortality rate, despite the numerous Scottish Parliamentary enquiry recommendations.[39]

3.5.6 Under a voluntary agreement with Scottish Government, Aquaculture Production Businesses (APBs) report instances of mortality above specified thresholds. The Scottish salmon farming industry reported a total of 16.7 million mortalities in 2022 as part of this agreement. This was a

[39] Cabinet Secretary for Rural Affairs, Land Reform and Islands, Scottish Government | Scottish Fish Farm Production Survey 2022

significant increase on that of the previous two years (9 million and 5.6 million respectively).[40]

3.5.7 Between 1st January 2023 and 31st August 2023, the Scottish salmon farming industry has reported mortalities totalling 10.3 million farmed salmon to the Fish Health Inspectorate under the above agreement. That is 2.7 million more than that over the same period in 2022, signalling a continued increasing mortality trend.

3.5.8 Salmon Scotland report average monthly mortality rates across the Scottish salmon farming industry online. Six of the eight published average monthly mortality rates for 2023 (January to August) are above that of corresponding months in 2022, with every monthly average mortality rate in 2023 being above that of corresponding months in 2021. The average monthly mortality rate for August 2023, the most recent to be published, is 3.61%, far higher than the 1.99% and 2.46% reported in August 2021 and 2022 respectively.[41]

3.5.9 In 2023, the British Veterinary Association has stated: "One major challenge is the mortality rate on fish farms. High levels will have serious impacts on the ethical, economic and environmental sustainability of fish farms, so it is vital that they are addressed." British Veterinary Association Sustainable Aquaculture policy, April 2023.

3.5.10 There have been repeated calls for the Scottish farmed salmon industry to mitigate their mortality rates, with Sainsburys Supermarkets Ltd stating:

"Data from Marine Scotland… reports average industry mortality levels in excess of 20% in recent years reflecting significant environmental and health associated challenges for which mitigation measures have not been sufficiently developed or available at a cross industry level, an unsustainable position."

3.5.11 This 'unsustainable position' remains, as over three times the number of salmon died in 2022 than in 2018 when the Sainsbury's statement quoted above was made.

3.6 Organic pollution of the seabed under and near to salmon farms

3.6.1 The discharge of organic wastes from Scottish salmon farms has a detrimental effect on the seabed and fauna both directly underneath and at some distance from the cages.

[40] Fish Health Inspectorate, Scottish Government | Mortality Information | 2023
[41] Salmon Scotland | Reports – Monthly Mortality rate: August 2023

3.6.2 SEPA is charged with regulating that aspect of the Scottish salmon farming industry and has long recognised[42] that the organic pollution created by fish-farms will inevitably cause the

"deterioration of the physical and chemical conditions in the sediments [that] progressively eliminates the larger deeper burrowing and longer lived forms favouring smaller rapidly growing opportunistic species" …

"with increasing inputs the surface sediments become anoxic and only a small number of specialist taxa can survive, mainly small annelid and nematode worms, which may flourish in huge numbers. Where anaerobic processes occur close to the sediment surface, this may become covered in dense white mats of sulphide oxidising bacteria …ultimately increasing levels of sedimentary oxygen demand bring about anoxia in the lower levels of the overlying water column leading to the elimination of all higher life."

3.6.3 SEPA seeks to regulate this impact by limiting salmon production (biomass) and in that way limiting the quantity of uneaten food pellets and fish faeces that are discharged. SEPA's stated objective is "to minimise accumulation of organic matter on the seabed which would otherwise cause sediments to become anoxic and sulphidic or impact the invertebrate fauna adversely and so prevent the necessary aeration and reworking of sediment".

3.6.4 SEPA recognises that "some deposition in the Allowable Zone of Effects is acceptable as long as sediment reworking animals remain in sufficient diversity and density to maintain a turnover of carbon in the system. Gross effects such as accumulations of food pellets and bacterial mats are not acceptable out with the Allowable Zone of Effects and should be minimised even below the cages."

3.6.5 As the REC Committee noted in 2018:

"The Committee heard that waste feed and faeces from fish farms can collect on the seabed under fish cages. This increase in organic matter can have an impact on an area called the 'benthic zone'. This is the lowest layer of water closest to the sea bed and includes the sediment, surface and some sub surface layers. The impact of the waste may negatively affect the nature and chemistry of sediments and can potentially reduce the diversity of animals living there"[43].

[42] SEPA | Regulation and monitoring of marine cage fish farming in Scotland Annex H methods for modelling in-feed anti-parasitics and benthic effects | Fish Farm Manual – Annex H | 2005

[43] At para 253

3.6.6 The ECCLR Committee too voiced concerns about the lack of research and the long-term sustainability of sites affected by organic waste. The ECCLR Committee stated that further sustained and long-term research is needed in a number of areas, including –

• how waste is recycled in inshore areas;
• the relationship between waste and pathogenic organisms;
• the cumulative effect of fish farms, including in inshore areas, which have different hydrodynamics to lochs and voes;
• environmental impacts in freshwater environments;
• acceptable levels of sediment loading for different sediment types; and
• resolving lack of recently synthesised data on the conditions of the benthos near fish farms.

3.6.7 In its evidence to the REC Committee, Scottish Natural Heritage (now NatureScot) called for analysis of post consent surveys and monitoring to develop the understanding of benthic impacts, particularly focussing on Priority Marine Features (PMFs) and protected features, including those outside the modelled impact zone.

3.6.8 In summary, the typical Scottish sea loch sea-bed biota is completely destroyed by the presence of a salmon farm above and replaced, assuming regulation works, by a denuded community dominated by oligochaete worm sufficient to 'rework' the organic detritus deposited on the sea bed by the salmon farming operations above.

3.6.9 There is no work available to indicate whether the practice of permitting high levels of organic deposition on the seabed below Scottish salmon farms, for many years if not decades, is in any conceivable way 'sustainable'.

3.7 Pollution of the seabed and water column with toxic sea lice treatment chemicals and the impact on non-target organisms near Scottish salmon farms

3.7.1 The Scottish salmon farming industry remains reliant on veterinary medicines and chemicals, such as parasiticides, disinfectants and antifoulants, containing active ingredients with known toxicities for a diverse range of wildlife species.

3.7.2 As with organic discharge, SEPA regulates chemical discharges from finfish farms, issuing permits that limit the levels of chemicals that finish farms can discharge into the water environment. SEPA sets controls or limits on the quantities that are allowed to be used and discharged by finfish farms[44]. Once released these substances can decrease water

[44] SEPA | Regulations, Water, Aquaculture

quality, accumulate in sediments and bioaccumulate up the food chain. They also have detrimental effects on non-target species such as bivalves and lobsters.[45]

3.7.3 Permitted veterinary medicines, parasiticides and additional permitted substances include the following substances:

- Emamectin benzoate
- Deltamethrin
- Azamethiphos
- Hydrogen peroxide
- Bronopol
- Formaldehyde
- Amoxycillin trihydrate
- Oxolinic acid
- Oxytetracycline hydrochloride
- Sulphadiazine
- Trimethoprim
- Florfenicol
- Ethyl-amino benzoate
- 2-Phenoxyethanol
- Tricaine methyl sulphonate

3.7.4 The most commonly-used veterinary medicines are those licenced for the treatment of sea lice. These include in-feed treatments, where the medicine is incorporated into food pellets, and bath treatments, where the medicine is mixed with the seawater in which the fish swim.

3.7.5 These include veterinary medicines in which the active ingredients are also used as insecticides but are highly toxic to marine crustaceans. As such, as well as being toxic to sea lice, these products are also toxic to a number of non-target species, such as crabs, lobsters and prawns. This may pose a threat to the health and long-term stability of other Scottish seafood industries, namely the creel fishing industry. These include the following licenced veterinary medicines:

Emamectin benzoate – licenced in-feed veterinary medicine for the treatment of sea lice (SLICE, MSD Animal Health). Given as a seven day in-feed treatment course, emamectin benzoate is subsequently released into the surrounding environment via excretion in fish faeces and directly as uneaten food pellets. An investigation by SEPA found that emamectin benzoate does not break down (degrade) in sediment, suggesting it may persist in the environment indefinitely under certain

[45] Urbina, M. A., Cumillaf, J. P., K.Paschke, & P.Gebauere | Effects of pharmaceuticals used to treat salmon lice on non-target species: Evidence from a systematic review | Science of the Total Environment, 649(1), 1124-1136 | 2018

conditions.[46] This chemical, commonly used as a pesticide, is toxic to a wealth of species, none more so than benthic crustacean communities. This group of invertebrates, including burrowing species to which emamectin benzoate is especially toxic, play a vital role the health and ecosystem of the seabed. Similar to the role of worms in a terrestrial ecosystem, these invertebrates play an invaluable role in the food chain, break down organic matter and fertilize the seabed; in doing so, significantly enhancing ecological biodiversity and health. Emamectin benzoate is also known to be toxic to fish and other marine organisms as well as birds and mammals.[47]

Deltamethrin – licenced veterinary medicine solution for the bath treatment of Atlantic salmon suffering with sea lice (AMX, PHARMAQ Limited). SEPA has reported a 3.8-fold and 4.3-fold increase in deltamethrin use on Scottish salmon farms in 2023 compared to the same period (January to June) in 2022 and 2021 respectively, suggesting an increased reliance on this veterinary medicine. SEPA has described it as 'potentially highly toxic to marine organisms'. Indeed, research has shown that it is acutely toxic to European lobster larvae in Norway and can impact areas up to 39km2 around salmon farms.[48] Research has demonstrated 1-hour (h) LC50s (i.e., lethal thresholds) for lobster and shrimp ranging from 3.4 to 142 ng/L of Deltamethrin, which is well below the prescribed aquaculture treatment concentration.[49] This can therefore have a profound impact on European lobster population health and size surrounding the farms.

Azamethiphos – licenced veterinary medicine solution for the bath treatment of Atlantic salmon suffering with sea lice (Salmosan, Benchmark Animal Health). Azamethiphos is thought to degrade within approximately five days once released into the environment but, in practice, serial treatment over days of the many cages at any one Scottish salmon farm, as well as treatments at neighbouring farms, means that exposure of wildlife can be prolonged, over many days, even weeks. Azamethiphos is highly toxic to birds and marine life, including the salmon it is used to treat.[50] Short term exposure to

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[46] SEPA | Review of Environmental Quality Standard for Emamectin Benzoate | 2017

[47] Bloodworth, J. W., Baptie, M. C., Preedy, K. F., & Best, J. | Negative effects of the sea lice therapeutant emamectin benzoate at low concentrations on benthic communities around Scottish fish farms | Science of the Total Environment, 669, 91-102 | 2019

[48] Aoife E. Parsons, Rosa H. Escobar-Lux, Pål Næverlid Sævik, Ole B. Samuelsen, Ann-Lisbeth Agnalt | The impact of anti-sea lice pesticides, azamethiphos and deltamethrin, on European lobster (Homarus gammarus) larvae in the Norwegian marine environment | En

[49] L.E. Burridge, M.C. Lyons, D.K.H. Wong, K. MacKeigan, J.L. VanGeest | The acute lethality of three anti-sea lice formulations: AlphaMax®, Salmosan®, and Interox®Paramove™50 to lobster and shrimp | Aquaculture, Volumes 420–421 | 2014

[50] The European Agency for the Evaluation of Medicinal Products Veterinary Medicines Evaluation Unit | Azamethiphos Summary Report | 1999

azamethiphos causes reduced immune responses in marine mussels and it has been found to be acutely toxic to lobster larvae.[51] [52]

Hydrogen peroxide - licenced veterinary medicine solution for the bath treatment of Atlantic salmon suffering with sea lice (Paramove 50, Solvay). Treatment with hydrogen peroxide has been linked to post-treatment mass mortality events and has been found to be lethal to all larval stages of lobster in Norway, at concentrations between 10% to 43% of those recommended for sea lice treatment on salmon farms. Temporary effects on the shelter seeking behaviour of adult lobster have also been observed.[53] More recently, a report commissioned by Salmon Scotland concluded that the levels of hydrogen peroxide in salmon cages could be 28 times higher than those considered safe for swimmers.[54] In 2020, more than five million litres of hydrogen peroxide were used by the Scottish salmon farming industry.[55]

3.8 Use of wild-caught wrasse as cleaner fish on Scottish salmon farms

3.8.1 Wild wrasse, a 'cleaner' fish, are caught and used in salmon farming to control sea lice on Scottish farmed salmon. The cleaner fish selectively eat the sea lice from the skin of the farmed salmon.

3.8.2 Concerningly, this group of fish, comprised of several species of wrasse (and sometimes also lumpfish), experience high mortality rates in Scottish salmon farms.

3.8.3 Farms commonly report cleaner fish mortality rates of up to 100% across the production cycle. Any that do survive to the end of a production cycle are typically culled, as per the industry's CoGP recommendations "Cleaner fish should be reused no more than once".

3.8.4 In a recent farm investigation by the Fish Health Inspectorate, Bakkafrost's RSPCA Assured Plocrapol salmon farm was found to have lost 99.71% of its cleaner fish in one week, due to its use of freshwater treatments in October 2022. Freshwater treatments are designed to remove sea-lice by

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[51] Canty MN, Hagger JA, Moore RT, Cooper L, Galloway TS | Sublethal impact of short term exposure to the organophosphate pesticide azamethiphos in the marine mollusc Mytilus edulis | Mar Pollut Bull | 2007

[52] Parsons, A. E., Escobar-Lux, R. H., Sævik, P. N., Samuelsen, O. B., & Agnalta, A.-L. | The impact of antisea lice pesticides, azamethiphos and deltamethrin, on European lobster (Homarus gammarus) larvae in the Norwegian marine environment | Environmental

[53] Escobar-Lux, R. H., Parsons, A. E., Samuelsen, O. B., & Agnalt, A.-L. | Short-term exposure to hydrogen peroxide induces mortality and alters exploratory behaviour of European lobster (Homarus Gammarus | Ecotoxicology and Environmental Safety | 2020

[54] The Ferret | Fish farm pesticide risk for swimmers, says industry report | 2022

[55] Marine Directorate | Information relating to the use of hydrogen peroxide in salmon farming: EIR release | 2021

sudden immersion of the farmed salmon in freshwater before their return to sea water. The weight of dead cleaner fish reported was equivalent to over 9000 lumpfish.[56]

3.8.5 The wrasse used in Scottish salmon farms are most often wild-caught fish. However, the wrasse wild fishery industry is largely unregulated and increasing demand for the capture of wild wrasse to be used as cleaner fish in the Scottish farmed salmon industry is associated with damage to the wild wrasse population in Scotland, and in England and Northern Ireland.

3.8.6 Local wrasse populations frequently collapse[57]. Due to their unique slow-breeding life cycle, wrasse species are unusually vulnerable to overexploitation and local depletion.

3.8.7 Salmon Scotland states that "in order to protect the wild fishery [for wrasse] and ensure it remains sustainable the industry has created voluntary measures to monitor and preserve wild population levels to ensure a viable fishery is maintained". See What are cleaner fish? | Salmon Scotland

3.8.8 However, Marine Scotland (Scottish Government) has proposed compulsory measures to control the wrasse fishery. See Wild Wrasse harvesting - proposed mandatory fishing measures: consultation analysis - gov.scot (www.gov.scot)

3.8.9 As of 1st May 2021, Scottish Ministers introduced mandatory controls over the harvesting of wild wrasse, requiring fishing vessels to obtain a Letter of Derogation under specified licence criteria in order to fish for or harvest wild wrasse of any species within the Scottish zone. While including criteria relating to minimum and maximum landing size, there is no set maximal quota specified within this licencing.[58]

3.8.10 However, it is clear that the current wild wrasse fishery, to provide cleaner fish for Scottish salmon farms, is highly unsustainable. SIFT-Wrasse-Fishery-Briefing-2019.pdf (arrancoast.com)

3.9 Production of feed for farmed fish using fish meal and oils derived from poorly managed wild fisheries

3.9.1 As a carnivorous species, farmed salmon are fed a diet of feed that contains fishmeal and fish oil (FMFO).

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[56] Fish Health Inspectorate | Fish Health Inspectorate Case information, October 2022
[57] SIFT | Save the Scottish Wrasse
[58] Marine Directorate | Fishing – wild wrasse: application for a letter of derogation | 2022

3.9.2 FMFO is derived from wild capture 'reduction' fisheries around the world, such as the anchoveta fishery in Peru and, increasingly, the sardinella fisheries off West Africa (Mauritania. Senegal and the Gambia), as well as other such fisheries.

3.9.3 Krill too is harvested and used in feed for farmed salmon, which raises concerns over the unregulated impact on marine wildlife of the global fishery for krill.[59] Researchers have indicated that "the European salmon-supply chain is characterised by a particular lack of transparency, since feed ingredients do not have to be listed on retail packaging. This makes it impossible for consumers to avoid krill products and make ethical purchasing decisions".[60] The expansion of sourcing krill for fish feed is a major source of concern from a sustainability perspective: "Krill is a key species in the Antarctic marine food web that plays a fundamental role in the transfer of energy between the lower and the upper trophic levels"[61]

3.9.4 It is estimated that it takes 20 million tonnes of 'forage fish' to make around 5 million tonnes of fishmeal and 1 million tonnes of fish oil[62].

3.9.5 An estimated 90% of this wild-caught 'forage' fish could however be eaten directly by people[63].

3.9.6 As of 2022, Atlantic salmon production consumed 60% of global supplies of fish oil destined for aquaculture, despite representing just 4.5% of global aquaculture by volume.[64]

3.9.7 In recent years, the salmon aquaculture industry has sought to reduce the amount of FMFO used in its feed and increase the use of trimmings and by-products.

3.9.8 However, the industry remains overall a strong net consumer of fish protein.[65] The high rate of mortalities means a significant proportion of that consumption is wasted.

3.9.9 Despite the global salmon farming industry seeking to reduce the amount of wild caught fish for feed, some Scottish farmed salmon producers have

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[59] Changing Markets Foundation | Fishing the Feed

[60] Changing Markets Foundation | Krill baby krill: The corporations profiteering off plundering Antarctica

[61] Piñones, A., & Fedorov, A. V. | Projected changes of Antarctic krill habitat by the end of the 21st century. *Geophysical Research Letters*, *43*(16), 8580-8589 | 2016

[62] SAMAS | Review of the environmental impacts of salmon farming in Scotland | 2018

[63] Cashion, T., Le Manach, F., Zeller, D., & Pauly, D. | Most fish destined for fishmeal production are food-grade fish | *Fish and Fisheries*, *18*(5), 837-844 | 2017

[64] Willer, D. F., Robinson, J. P., Patterson, G. T., & Luyckx, K. | Maximising sustainable nutrient production from coupled fisheries-aquaculture systems | *PLOS Sustainability and Transformation*, *1*(3), e0000005 | 2022

[65] Feed Conversion ratio estimated to be 1.2-1.5

recently reported an increasing reliance of wild-caught fish for feed. Bakkafrost, the third largest farmed salmon producer in Scotland, reported a fishmeal dependency ratio of 1.43 in its 2022 Sustainability Report; higher than in 2021 (1.29), indicating increasing quantities of wild fish from small pelagic fisheries were required to produce the amount of fishmeal needed to produce a unit of farmed salmon in 2022 compared to 2021.[66] Mowi uses the most fish oil per kg of production in its Scottish operations[67].

3.10 Use of antibiotics including those used in human medicine

3.10.1 The World Health Organisation (WHO) has declared that antimicrobial resistance (AMR) is one of the top 10 global public health threats facing humanity, requiring urgent multisectoral action in order to achieve the Sustainable Development Goals.[68]

3.10.2 Guidelines on use of medically important antimicrobials in food-producing animals were subsequently published by WHO, recommending reductions in the overall use of medically important antimicrobials in food-producing animals.[69]

3.10.3 Contrary to the recommendations of the WHO, Scottish salmon farming is the only animal industry to report increasing antibiotic usage trends since data first published, reporting a 168% increase since 2017, as reported by the UK Government's Veterinary Medicines Directorate (graphic reproduced below).[70]

[66] GSI | 2022 Sustainability Report: Data deep dive
[67] Mowi | Integrated annual report | 2022
[68] WHO | Antimicrobial resistance | 2023
[69] WHO | Guidelines on use of medically important antimicrobials in food-producing animals | 2017
[70] Veterinary Medicines Directorate | UK Veterinary Antibiotic Resistance and Sales Surveillance Report | 2022

Antibiotic usage refers to the amount of antibiotics prescribed and/or administered per sector. The data have been collected and provided to the VMD by the animal industry on a voluntary basis.

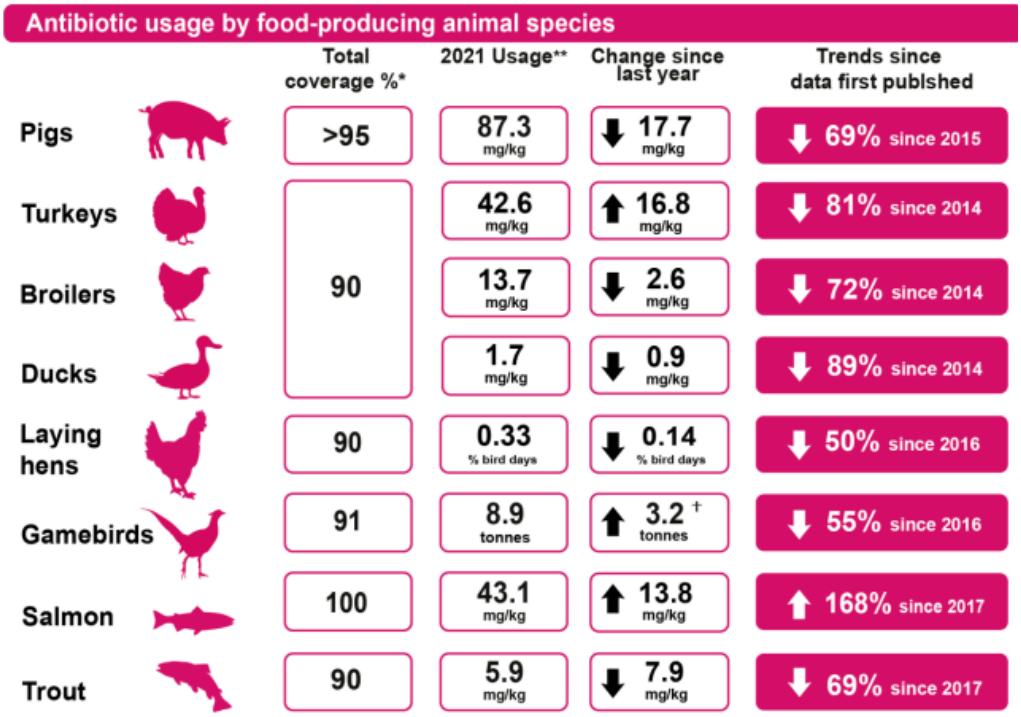

Figure 1. Veterinary Medicines Directorate UK Veterinary Antibiotic Resistance and Sales Surveillance Report. Antibiotic Usage

3.10.4 The Veterinary Medicines Directorate's UK Veterinary Antibiotic Resistance and Sales Surveillance Report, published Nov 2022, also shows that 8.9 tonnes of antibiotic active ingredient were used by the Scottish salmon farming industry in 2021.

3.10.5 This represented an antibiotic usage of 43.1 mg/kg of farmed salmon produced, which is 13.8 mg/kg higher than antibiotic usage reported in 2020, and more than two times (27.0mg/kg) higher than when data was first published in 2017.

3.10.6 According to the same VMD Report "oxytetracycline remains the most used antibiotic class [within the UK salmon farming sector] (accounting for 86% of total use in 2021)". However, the WHO classify the antibiotic oxytetracycline as a highly important antimicrobial for human health and it is widely used for the treatment of human conditions[71] [72]. Despite this, the quantity of oxytetracycline used by the UK salmon farming industry has increased annually since 2018 (graphic reproduced below).

[71] WHO | Critically important antimicrobials for human medicine: 6th revision | 2019

[72] EMC, Datapharm | Medicines, Oxytetracycline | 2023

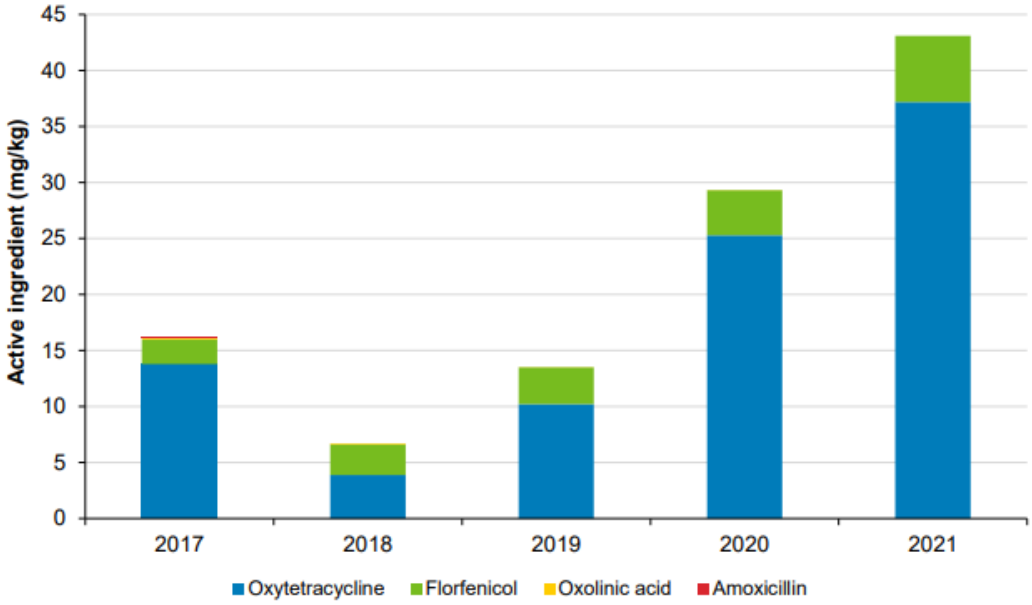

Figure 2. Veterinary Medicines Directorate UK Veterinary Antibiotic Resistance and Sales Surveillance Report. Active ingredient (mg/kg) of antibiotics by antibiotic class used in salmon, 2017 to 2021.

3.10.7 Given the WHO recommendations on reducing antimicrobial usage in food-producing animals, the UK salmon farming sectors increased reliance on antibiotics is both concerning and unsustainable. This increasing trend further increases the threat of AMR, which has severe human healthcare consequences.

3.11 Carbon footprint of Scottish salmon farming

3.11.1 Salmon Scotland often refers to farmed salmon as a product with a "low carbon footprint".

3.11.2 However, there are nuances within carbon accounting which complicate this claim.

3.11.3 An analysis by the Markets Institute at World Wildlife Fund (WWF), which was last updated in 2022, stated: "The authors do not think all the information to quantify GHG emissions from the salmon value chain exists".[73]

The importance of 'scope 3' emissions

3.11.4 Carbon emissions are commonly calculated via Life Cycle Assessment (LCA) tools. These break down an industry's carbon/GHG footprint into Scope 1, Scope 2 and Scope 3 emissions. These are defined as follows:

[73] WWF Markets Institute | Measuring and Mitigating GHGs: Salmon | 2022

Scope 1 emissions are directly released onsite or from sources controlled by the company resulting from fuel combustion and incorporating accidental leakage.

Scope 2 emissions are indirect resulting from the generation of energy purchased by the reporting company.

Scope 3 emissions are also indirect emissions upstream or downstream in the value chain.

3.11.5 It is widely accepted across international organisations such as the IPCC and the World Economic Forum that companies need to cut emissions across all scopes 1-3 to meet internationally-agreed targets on global warming[74].

3.11.6 However, due to the opaque nature of LCA calculations made by the Scottish salmon farming industry, it is not clear whether these calculations take into account scope 3 emissions.

3.11.7 A 2022 study by the University of Edinburgh [75] of aquaculture carbon emissions stated that "scope 3 emissions represent the majority of emissions". On salmon farming, the report noted that:

"The feed is composed of marine ingredients and vegetable ingredients, as well as other additives such as micronutrients and astaxanthin. The marine ingredients are fishmeal (FM) and fish oil (FO), derived from processed forage fish or by-products from other fisheries, which are then transported to the feed factories. The vegetable ingredients are farmed around the world, then transported to the feed mills. These raw materials are processed and mixed, before being shipped to salmon producer countries. All these processes represent Scope 3 emissions for the aquaculture companies."

3.11.8 This confirms the finding of an earlier 2009 LCA study of global salmon aquaculture, which stated:

"Consistent with previous research, we found feed provision to be the single most important contributor to resource use and emissions associated with the farm-gate production of salmonids cultured in net-pen systems."[76]

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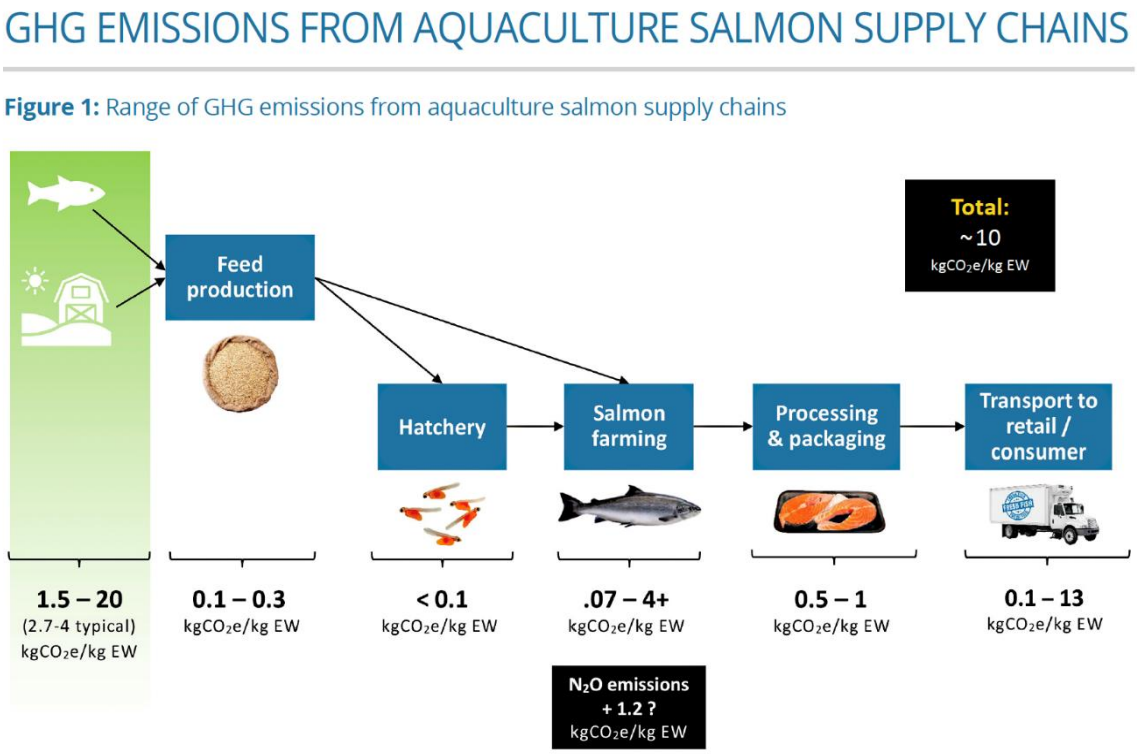
[74] World Economic Forum | We know Scope 1, 2 and 3 emissions. But what are Scope 4?

[75] Hammer, AJ, Millar, C & Hennige, SJ | Reducing carbon emissions in aquaculture: Using Carbon Disclosures to identify unbalanced mitigation strategies', Environmental Impact Assessment Review, vol. 96, 106816 | 2022

[76] Pelletier, Nathan, Peter Tyedmers, Ulf Sonesson, Astrid Scholz, Friederike Ziegler, Anna Flysjo, Sarah Kruse, Beatriz Cancino, and Howard Silverman | Not all salmon are created equal: life cycle assessment (LCA) of global salmon farming systems: 8730-8736 | 2009

3.11.9 The importance of scope 3 emissions in aquaculture is illustrated well by the following graphic reproduced from the 2022 report by WWF, showing GHG emissions at various stages of the industrial production and sale of farmed salmon [77]



3.11.10 The 2022 University of Edinburgh study looked specifically at Mowi as a case study (Mowi is the largest operator in the Scottish salmon farming sector):

"Scope 3 emissions for Mowi ASA were 1,891,612 tCO2e, representing 90% of its total emissions. Of this amount, 1,582,202 t are from the raw materials in Mowi's own fish feed production, the emissions from feed provided by other suppliers and the transport of the fish feed to the production sites, representing 84% of Scope 3 emissions and 75% of all Mowi emissions in 2018."

3.11.11 Similarly, for Grieg Seafood ASA:

[77] WWF Markets Institute | Measuring and Mitigating GHGs: Salmon | 2022

"Scope 3 emissions for GSF were 265,301 tCO2e, representing 89% of total emissions (299,515 tCO2e). Of this amount, 181,783 tCO2e are due to fish feed, which is 69% of Scope 3 emissions and 61% of all emissions in 2018."

3.11.12 As the majority of fishmeal and fish oil used in feed for farmed salmon is sourced from the Global South, as well as soy, which is increasingly being used to reduce the use of marine ingredients [78], emissions related to the transportation of feed are therefore an important contributor to the Scottish salmon farming industry's overall emissions.

3.11.13 It is unclear whether current LCA analyses include scope 3 emissions, such as those related to the transportation of Scottish farmed salmon from farm to market. However, much Scottish farmed salmon is exported. 2023 Q1 export figures from the Scottish farmed salmon industry showed that the Far East and America are increasingly large markets for export[79], necessitating air freight, which is a carbon intensive means of transportation:

"Airfreight is the largest contributor, and GSF discloses that air continental freight contributes 1.03 kg CO2e/tkm (tonne kilometre). Intercontinental freight contributes 0.65 kgCO2e/ tkm, and trucking contributes 0.08 kgCO2e/tkm."[80]

"Aviation is over 10 times more GHG-intense for the same distance tonnage than trucking or watercraft. Life cycle assessments of transport emissions range from less than 0.1 to over 10 kgCO2e/kg EW. The low

[78] This substitution of marine ingredients for land-based ingredients may also be problematic from a carbon emissions perspective:

"Feed ingredient substitution may have environmental implications beyond the range of issues here. For example, increasing soy cultivation in Amazonia as a result of growing global demands for feed production has been identified as a major driver of deforestation in the region as well as a contributor to greenhouse gas emissions association with climate change… substituting fish and poultry meals with soy meal in aquaculture may exacerbate these problems."

Pelletier, Nathan, Peter Tyedmers, Ulf Sonesson, Astrid Scholz, Friederike Ziegler, Anna Flysjo, Sarah Kruse, Beatriz Cancino, and Howard Silverman | Not all salmon are created equal: life cycle assessment (LCA) of global salmon farming systems: 8730-8736 | 2009

[79] Salmon Scotland | Scottish salmon exports to Asia double to £24m in Q1 driven by growing demand

[80] Pelletier, Nathan, Peter Tyedmers, Ulf Sonesson, Astrid Scholz, Friederike Ziegler, Anna Flysjo, Sarah Kruse, Beatriz Cancino, and Howard Silverman | Not all salmon are created equal: life cycle assessment (LCA) of global salmon farming systems: 8730-8736 | 2009

end was within Europe; values near 1 represent non-air travel to Asia, while values near 10 represent air travel to Asia (from Europe)"[81]

Lower carbon, not low carbon

3.11.14 The Scottish salmon industry claims to be low carbon in comparison to other forms of livestock. See for example, "Scottish salmon has a lower carbon footprint than most other farming sectors" at Sustainability | Salmon Scotland and "farmed salmon, when compared to other types of livestock such as chicken, pork and beef, has an extremely low carbon footprint" at Is Scottish salmon a healthy and responsible source of protein? | Salmon Scotland

3.11.15 While this may be the case for some types of agricultural livestock (e.g., beef), a number of studies find its footprint to be comparable to farmed chicken.

3.11.16 For instance, academics have reported that:

"At a global average farm-gate GHG emission intensity of 2.15t CO^2-e/t… [farmed salmon] is approximately 50% more GHG-intensive than U.S. poultry (1.4t CO^2-e/t) (22) and 27% higher than average global capture fisheries (1.7t CO^2-e/t)"[82]

3.11.17 A 2023 comparative study of the environmental footprint of the global farmed chicken (broiler) and salmon industry, found that greenhouse gas (GHG) emissions were higher in the salmon farming industry compared to that of farmed chicken:

"Global chicken production is over 55 times greater than salmon (130.8 vs. 2.4 million tonnes slaughter weight, respectively), logically leading to higher pressures and CPI [Cumulative pressure index]. However, compared with these levels of production, for three of four pressures, chicken production is more efficient, resulting in only 10 times more spatial disturbance than salmon, 20 times higher nutrient pollution, and 38 times greater GHG emissions."[83]

3.11.18 There is also a distinction to be made between *low* carbon and *lower* carbon, which is relative concept and does not denote sustainability.

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[81] WWF Markets Institute, Moberg et al, Measuring and Mitigating GHGs: Salmon, https://files.worldwildlife.org/wwfcmsprod/files/Publication/file/98jogctv71_MOBERG_GHG_Brief_SALMON_08_22_v3.pdf?_ga=2.89655579.1084617551.1696708090-757921838.1696708090

[82] Not All Salmon Are Created Equal: Life Cycle Assessment (LCA) of Global Salmon Farming Systems, Pelletier et al, Environmental Science & Technology (2009), https://pubs.acs.org/doi/10.1021/es9010114

[83] Kuempel et al, *Environmental footprints of farmed chicken and salmon bridge the land and sea*, Current Biology (2023).

Protein of the future?

3.11.19 Expansion of salmon aquaculture (in its current form) does not solve the issue of GHG emissions from the global food production system.

3.11.20 The WWF report states that, in order to reduce emissions to the necessary level by 2050, the "maximum emissions intensity from seafood will be about 14 tCO2e/t protein, which is at least triple the current intensity of salmon".

3.11.21 Current salmon farming practice, as in Scotland, is therefore, inherently unsustainable from the perspective of GHG emissions.

Data gaps

3.11.22 It is also worth noting that there are a number of gaps in knowledge and research, in relation to calculating GHG emissions linked to farmed salmon. The WWF report mentions the following gaps:

"Emissions from decomposition of faeces and feed are highly unknown, and how aquaculture practices influence those emissions is not well studied"

Highlighting the lack of knowledge around methane and N2O emissions from aquaculture systems, "emissions of nitrous oxide are likely significant"

"Few estimates of processing and packaging for salmon exist"

"Despite most emissions occurring on farms, relatively few tools for on-farm calculations are available"

"There are relatively few studies and tools available for GHG assessment in seafood; there are fewer still focused on salmon specifically."[84]

3.11.23 These gaps mean that it is difficult to fully calculate the carbon impact of salmon farming, with the result that claims of 'sustainability' cannot be supported by claims related to lower GHG emissions.

3.11.24 The 2009 LCA study concluded:

"Human appropriation of global net primary productivity… has significant consequences for energy flows within food webs, the biodiversity that ecosystems can support, the composition of the atmosphere, and the provision of important ecosystem services. In this respect, producing

[84] WWF Markets Institute | Measuring and Mitigating GHGs: Salmon | 2022

farmed salmon (and other carnivorous species) may be considerably less eco-efficient than terrestrial livestock production."[85]

Scottish farmed salmon compared to farmed salmon globally

3.11.25 The 2009 LCA study also found that Scottish farmed salmon had the highest GHG emissions per unit of production, when compared to farmed salmon from other regions (Norway, Canada (British Columbia) and Chile). The Scottish industry was also found to have the highest cumulative energy use, biotic resource use and acidifying emissions.[86]

3.11.26 Similarly, the 2022 study from the University of Edinburgh looked specifically at operations by Mowi and Grieg Seafood ASA:

"The results from both these large aquaculture operators indicate that Scope 1 emissions in the UK are higher than in other regions of the world, despite production being consistently lower."[87]

3.11.27 The WWF study noted low mortality as a mitigation option ('large potential') for the salmon aquaculture industry to lower its GHG emissions.[88] However, the mortality rate on Scotland's salmon farms (roughly 25%, equivalent to 16.7 million fish last year) remains extremely high.

4 Breaches of applicable Regulations by Salmon Scotland

4.1 Overall, there are very significant environmental and welfare issues associated with Scottish farmed salmon production.

4.2 In that context, WildFish considers that the various statements made by Salmon Scotland as to the 'sustainability' of the production of farmed salmon in Scotland are contrary to applicable Regulations and Codes.

4.3 The relevant prohibitions on misleading statements, upon which WildFish bases this complaint, are contained within provisions of the Consumer Protection from Unfair Trading Regulations 2008, the Business Protection

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[85] Pelletier, Nathan, Peter Tyedmers, Ulf Sonesson, Astrid Scholz, Friederike Ziegler, Anna Flysjo, Sarah Kruse, Beatriz Cancino, and Howard Silverman | Not all salmon are created equal: life cycle assessment (LCA) of global salmon farming systems: 8730-8736 | 2009

[86] Pelletier, Nathan, Peter Tyedmers, Ulf Sonesson, Astrid Scholz, Friederike Ziegler, Anna Flysjo, Sarah Kruse, Beatriz Cancino, and Howard Silverman | Not all salmon are created equal: life cycle assessment (LCA) of global salmon farming systems: 8730-8736 | 2009

[87] Hammer, AJ, Millar, C & Hennige, SJ | Reducing carbon emissions in aquaculture: Using Carbon Disclosures to identify unbalanced mitigation strategies | Environmental Impact Assessment Review, vol. 96, 106816 | 2022

[88] WWF Markets Institute | Measuring and Mitigating GHGs: Salmon p.9 | 2022

from Misleading Marketing Regulations 2008 and the CMA Guidance on Environmental Claims on Goods and Services.

4.4 Under the Consumer Protection from Unfair Trading Regulations 2008, a misleading statement will fall within the provisions of Regulation 3 and 5 where it (i) falls within the definition of a 'commercial practice'; (ii) satisfies the conditions to be construed as a 'misleading action'; and (iii) is communicated by a 'trader'.

4.5 A 'trader' is a person acting in relation to that person's business, whether acting personally or through another person acting in the trader's name or on the trader's behalf. The 2008 Regulations define 'business' to include (a) a trade, craft or profession, and (b) the activities of any government department or local or public authority.

4.6 Therefore, as Salmon Scotland is a producers' organisation, although it does not sell salmon itself, the statements it makes are designed to be relied upon by the Scottish salmon farming industry as a whole, which will pass on the detail of such statements to supermarket buyers, exporters, catering companies, restauranteurs and, ultimately, ordinary consumers.

4.7 In *R v Scottish and Southern Energy Plc*, it was held that the actions of a company, where that company did not deal directly with the consumer, should nonetheless be considered the acts of a 'trader' as defined by the 2008 Regulations, Lord Justice Davis ruling that, to do so, "gives effect to the broad wording of, and purposive approach required to be applied to, the 2008 Regulations"[89].

4.8 Accordingly, here, Salmon Scotland falls within the definition of a 'trader' under Regulation 2(1).

4.9 In any event, Salmon Scotland is caught by Regulation 16 of the 2008 Regulations as a 'third party' and can be held liable for misleading information that it provides to traders, that is then passed on to consumers, and ultimately risks misleading those consumers.

4.10 The press and other statements made by Salmon Scotland as to the 'sustainability' of Scottish farmed salmon are caught by the definition of a 'commercial practice', being "any act, omission, course of conduct, representation or commercial communication (including advertising and marketing) by a trader, which is directly connected with the promotion, sale or supply of a product to or from consumers, whether occurring before, during or after a commercial transaction (if any) in relation to a product".

[89] *R v Scottish and Southern Energy Plc* [2012] EWCA Crim 539

4.11 Those commercial practices are then misleading actions, that satisfy Regulation 5(2) of the 2008 Regulations, as each "(a) contains false information and is therefore untruthful in relation to any of the matters in paragraph (4) or if it or its overall presentation in any way deceives or is likely to deceive the average consumer in relation to any of the matters in that paragraph, even if the information is factually correct; and (b) it causes or is likely to cause the average consumer to take a transactional decision he would not have taken otherwise."

4.12 The "matters in paragraph 4" required to engage Regulation 5(2) include the nature of the product and its main characteristics.

4.13 Whether it is acting as a trader or a third party, Salmon Scotland must comply with the provisions of the 2008 Regulations. The statements Salmon Scotland makes must not constitute unfair commercial practices.

4.14 WildFish considers that the statements made by Salmon Scotland, as to the 'sustainability' of Scottish farmed salmon, must be considered to be either false and/or they create an overall impression that misleads, or deceives, or is likely to deceive the average consumer.

4.15 Relying on Salmon Scotland's statements has caused or is likely to cause the average consumer to change their economic behaviour.

4.16 Salmon Scotland has not provided definitive evidence that confirms the statements about sustainability and claims that Scottish farmed salmon is, in some way, a sustainable product, are accurate and are not misleading.

4.17 Therefore, the publication of Salmon Scotland statements as to the sustainability of farmed salmon amount to misleading actions that are unfair commercial practices prohibited by the 2008 Regulations. Salmon Scotland has made a number of statements that claim Scottish farmed salmon has been produced 'sustainably'. Such claims are false and/or deceive or are likely to deceive, thus bringing those statements within the scope of Regulation 5(2)(a).

4.18 The Salmon Scotland statements are designed to and are therefore likely to have an impact on consumers so as to influence their purchasing behaviour, satisfying the test in Regulation 5(2)(b).

4.19 Indeed, the former Chief Executive of Salmon Scotland has said: "we want consumers, we want the public and anybody with an interest in Scottish salmon to be confident that the salmon farming sector is doing absolutely everything that it can to grow sustainably". See Is there a problem with salmon farming? | BBC News

4.20 Salmon Scotland also undertakes community projects, meaning they directly promote the benefits of salmon farming to the public, such as in relation to the Tall Ships race. See Scottish Salmon – Fuelling Sheltland's Success | The Tallships Lerwick, or via Scottish schools, during which exercise in 2022, schoolchildren in Stirling were provided with leaflets referring to "sustainable salmon".

4.21 That Salmon Scotland statements will have affected consumers is supported by survey evidence, which shows that more than half of the public say sustainability affects our shopping decisions when it comes to seafood.

4.22 In a consumer survey carried out by Fidra, 13% of respondents in 2021 said information about sustainability was the most important consideration for them when buying farmed salmon. This had increased from 6% in 2020. 19% of respondents said fish welfare was the most important consideration, compared to 9% in 2019. 27% of respondents thought information on the source and the sustainability of a product is important. Additionally, the majority of respondents were happy to pay more for a salmon product that claimed it was responsibly sourced (69% agreed or strongly agreed). Similarly, the majority of respondents were happy to pay more for a product that claim it had been produced in an environmentally sustainable way (68% agreed or strongly agreed).[90]

4.23 Furthermore, the Scottish salmon farming industry is not well understood by consumers. Less than half of all respondents to the Fidra survey in 2021 felt they had enough information on specific environmental factors related to Scottish salmon. Further, only 6% of consumers know that Scottish salmon is farmed in the UK.

4.24 These results clearly indicate that consumer knowledge is lacking about Scottish farmed salmon generally. Any material published and accessible by consumers may therefore have a disproportionate impact on their understanding of the Scottish salmon farming industry when consumer knowledge is sparse on the subject. This impact could influence both consumption habits and the price consumers are willing to pay for Scottish farmed salmon products.

4.25 In that context, there must be an extra onus on Salmon Scotland to avoid misleading consumers in the statements it makes.

4.26 This is something the Scottish salmon farming industry should reasonably appreciate, having previously faced criticism for their use of the term 'sustainable' in relation to farmed salmon.

[90] Fidra | Scottish Salmon Farming – Consumer survey results | 2022

4.27 For example, Loch Duart, which farms fish in Sutherland and the Outer Hebrides, had previously marketed itself as "the sustainable salmon company". Following an investigation[91] by the Advertising Standards Authority, the company has ceased marketing itself in this manner. See The Ferret, Scottish salmon firm drops 'sustainable' branding, 5 April 2019: Scottish salmon firm drops 'sustainable' branding | The Ferret

4.28 The largest salmon farming company operating in Scotland, Mowi, is a global corporation. It is reported as having agreed to enter a settlement with a New York based catering company in order to settle a class action that had been filed against Mowi. The class action alleged that Mowi USA had misled consumers by falsely claiming on their salmon products that their products were all natural, sustainably sourced and from Maine. The class action claimed that the product was not from Maine nor sourced in an environmentally friendly way and the fish were treated with artificial chemicals. A settlement agreement was reached which included a provision preventing Mowi from using the terms 'sustainable' and 'eco-friendly' from some of their products sold in the US Mowi pays £1.3m to settle US 'false marketing' case | Fish Farming Expert.

4.29 Overall, it is clear that Salmon Scotland statements and communications will reach consumers directly and indirectly and, as a result, the misleading statements have the ability, and are likely to alter consumers shopping habits and understanding of the sustainability of the Scottish salmon farming sector.

4.30 Further, Salmon Scotland's statements breach the Business Protection from Misleading Marketing Regulations 2008, under which statements are prohibited (Regulation 3) when they fall within the definition of misleading advertising and are made to a trader by a trader.

4.31 Traders may rely on statements by Salmon Scotland and purchase or use Scottish farmed salmon on the basis it is "sustainable". In turn, this may have an indirect impact on consumers if salmon is mistakenly labelled, promoted or presented as 'sustainable' by traders due to misrepresentations made by Salmon Scotland.

4.32 Note that the statements made will, in any event, amount to an offence even where Salmon Scotland is not considered to be a 'trader' in terms of Business Protection from Misleading Marketing Regulations 2008, if, because of their act or default, a trader commits an offence, Salmon Scotland may be prosecuted as a third party whether or not proceedings are also brought against the offending trader.[92]

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[91] The Ferret | Scottish salmon firm drops 'sustainable' branding

[92] Regulation 9 of BPMMR

4.33 The statements made by Salmon Scotland fall within the definition of misleading advertising, which encompasses any form of representation which is made in connection with a trade, business, craft or profession in order to promote the supply or transfer of a product.[93]

4.34 Statements in relation to the sustainability of Scottish salmon farming would clearly fall within this definition, being representations made in connection with the trade and business of selling salmon in order to promote its sale to consumers.

4.35 Such advertising is deemed misleading where it "in any way, including its presentation, deceives or is likely to deceive the traders to whom it is addressed or whom it reaches; and by reason of its deceptive nature, is likely to affect their economic behaviour."[94] To determine whether advertising is misleading, a product's characteristics, which includes the nature of the product, may be taken into consideration.[95]

4.36 In so far as Salmon Scotland is making representations to companies that market and sell Scottish farmed salmon, in order to promote the sales and marketing behaviour of those companies, the Salmon Scotland statements are being made to traders and influencing their economic behaviour.

5 Breaches of CMA Guidance on Environmental Claims on Goods and Services by Salmon Scotland

5.1 The statements made by Salmon Scotland also need to be considered in terms of the CMA's guidance on environmental claims. Making environmental claims on goods and services - GOV.UK (www.gov.uk)

5.2 The CMA Guidance has set out six principles[96] that businesses should[97] follow when making environmental claims:

- Claims must be truthful and accurate;
- Claims must be clear and unambiguous;
- Claims must not omit or hide important information;
- Comparisons must be fair and meaningful;

[93] Regulation 2(1) of BPMMR
[94] Regulation 3(2) of BPMMR
[95] Regulation 5(3) and (4) of BPMMR
[96] CMA Guidance on Environmental Claims on Goods and Services, Helping Businesses comply with their Consumer Protection Law Obligations, 20 September 2021, CMA 146
[97] CMA Guidance, paragraph 2.32, at page 8

- In making the claim you must consider the full life cycle of the product or service; and

- Claims must be substantiated.

5.3 It is clear that the CMA Green Code applies to claims about sustainability:

> "The principal focus of this guidance is environmental claims that businesses make to promote their goods, services, processes or brands. However, the points made are also relevant to the wider category of sustainability claims [footnote 1]. Businesses should also have regard to this guidance when making sustainability claims".

5.4 Footnote 1 notes that "by 'sustainability claims', we mean claims which suggest that a product is made, a service delivered or a business run in accordance with principles of sustainability, sustainable consumption or sustainable development. This could include claims relating to the environment and climate change, biodiversity, animal welfare, workers' welfare or corporate social responsibility".

5.5 The statements Salmon Scotland makes as to sustainability, given the specific issues as to the welfare and environmental issues the Scottish salmon farming industry creates, are false, and variously place Salmon Scotland in breach of the CMA's six principles.

5.6 In particular, in relation to the principle that claims must be truthful and accurate, the guidance states:

> "Broader, more general or absolute claims are much more likely to be inaccurate and to mislead. Terms like 'green', **'sustainable**' or 'eco-friendly', especially if used without explanation, are likely to be seen as suggesting that a product, service, process, brand or business as a whole has a positive environmental impact, or at least no adverse impact. Unless a business can prove that, it risks falling short of its legal obligations."[98]

5.7 In relation to the principle that in making a claim you must consider the full life cycle of the product or service, the guidance states:

> "As noted elsewhere in this guidance, broad, general claims – for example that a product or business is 'eco-' or 'environmentally friendly' – suggest they have a positive overall environmental impact (or no negative one). A business making these sorts of claims is at risk of misleading consumers, unless it has done a thorough assessment of a product's entire life cycle, for example, and the product has an overall beneficial impact."[99]

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[98] CMA Guidance, paragraph 3.19 at page 13

[99] CMA Guidance, paragraph 3.113, at page 33

5.8 The CMA Guidance provides the following definition for 'sustainability claims': "claims which suggest that a product is made, a service delivered or a business run in accordance with principles of sustainability, sustainable consumption or sustainable development. This could include claims relating to the environment and climate change, biodiversity, animal welfare, workers' welfare or corporate social responsibility."[100]

5.9 The current concept of sustainability appeared for the first time in the Brundtland Report published in 1987. Also called Our Common Future, the Brundtland Report, published by the United Nations In 1987, the United Nations Brundtland Commission defined sustainability as "meeting the needs of the present without compromising the ability of future generations to meet their own needs".

5.10 The statements by Salmon Scotland patently claim that Scottish farmed salmon is a sustainable product, whereas the information provided in this complaint demonstrates amply that this is not the case, as against both the definition in the CMA Guidance and, indeed, the Brundtland definition.

5.11 Salmon Scotland is also in breach of the CMA Guidance on environmental claims.

5.12 Of course, it is common for businesses to market themselves as sustainable in order to win more custom. Sustainability is an issue currently at the front of consumers' and business' minds. Consumers aim to find ways to incorporate sustainable and environmentally friendly products into their lives. As people are altering their buying habits with this aim in mind, the impact of statements promoting sustainability, as made by Salmon Scotland, are particularly persuasive. There can be no doubt that Salmon Scotland's misleading statements may misinform the public and businesses alike.

5.13 The CMA Guidance supports this conclusion:

"Consumers are likely to take into account a range of important factors in making decisions about products, services, brands and businesses. In many cases, those are likely to include the impact on the environment. In a transition to a low-carbon economy, these considerations are likely to become even more important."

5.14 The statements made by Salmon Scotland in this regard have an impact both directly on consumers, and on the way in which its members and the wider industry markets Scottish farmed salmon to consumers.

[100] CMA Guidance, page 5 footnote

5.15 The CMA should note, in contradiction to the headline claims repeatedly made by Salmon Scotland, that Salmon Scotland's Sustainability Charter, What is the Scottish Salmon Sustainability Charter? | Salmon Scotland indicates an ambition to *become* sustainable:

> "our sector ambition is to become world-leading in the provision of healthy, tasty, nutritious food, produced in the most responsible and sustainable way".

5.16 Salmon Scotland continues:

> "Perhaps most importantly of all, we know that, to maximise our impact, sustainability needs to underpin everything we do: from the way we care for our fish and protect our local environment, to sourcing responsibly, developing our people, and listening to our communities. So this is our strategic vision; our statement of intent. It's been shaped by a series of events and workshops involving 144 different voices: young and old, farmer and supplier, private and public sector, regulator and innovator, government and non-profit non-governmental organisation. Each perspective has been, and will continue to be, as valuable as the next. Because a commitment of this size and scale isn't one that we will deliver alone. It will take the vision, belief, knowledge, expertise, passion, energy, tenacity, resources and might of many. But that collective effort starts here and it starts now. We hope you'll join us for the journey".

5.17 The CMA is asked to note the 'ambition to become', is an implied acknowledgement that Scottish Salmon is not currently sustainable. This is an indication, that, today, Salmon Scotland does in fact appreciate that its mode of production is not currently sustainable, despite the repeated claims, referenced above, that it has made.

5.18 While WildFish and many other eNGOS and scientists would contest whether Scottish salmon farming can ever be sustainable, considering that the mode of production is inherently unsustainable, for the purpose of this complaint, it matters not what the future might or might not hold.

5.19 The question for the CMA here is whether, today, it is correct to describe Scottish farmed salmon as "grown sustainably".

5.20 In this context, the CMA is referred to the Advertising Standards Authority guidance CAP-guidance-on-misleading-environmental-claims-and-social-responsibility.pdf (asa.org.uk) (at page 8), which states that "Absolute environmental claims (such as "sustainable" or "environmentally friendly") must be supported by a high level of substantiation. Evidence of initiatives which are intended to deliver results in the future is unlikely to be considered sufficient to substantiate absolute claims. Similarly, claims that go beyond

aspirational claims and suggest that a business is already taking steps to reduce emissions and have a positive environmental impact are likely to mislead if the ad omits material information about the balance of current activities, current emissions and the pathway to reducing these". (emphasis added)

5.21 Claims by Salmon Scotland relating to future sustainability, in so far as such claims have been made, are also in breach of the CMA Code.

6 Request for action from the CMA

6.1 Claims made by Salmon Scotland in relation to Scottish farmed salmon being in any way 'sustainable' are false and are likely to mislead businesses and consumers.

6.2 By virtue of these statements, Salmon Scotland is in breach of Regulation 5 of the Consumer Protection from Unfair Trading Regulations 2008, Regulation 3 of the Business Protection from Misleading Marketing Regulations 2008 and the CMA Guidance on Environmental Claims on Goods and Services.

6.3 Salmon Scotland should reasonably be expected to understand that it should not make such claims.

6.4 Therefore, WildFish considers that Salmon Scotland should be sanctioned accordingly, and steps taken to correct the misinformation that has been circulated to the Scottish salmon farming industry, to traders, to supermarket buyers, to exporters, to caterers, to consumers, to schoolchildren, and to the wider public, as a result of its misleading statements.

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