

Global Alliance Against Industrial Aquaculture, 20 March 2014

Scottish Salmon's Great Escape

- Over 3.4 million farmed salmon in nearly 200 incidents since 1998
- Shetland & Western Isles responsible for 72% of all escapees since 2002
- One escapee per 0.7 tonne of farmed salmon production since 1998
- Farmed salmon escapees are double the number of wild salmon caught since 2002
 - 11 escape incidents and 201,000 escapees per year since 1998
- Marine Harvest, Scottish Sea Farms, Balta Island Seafare, Loch Duart & the Scottish Salmon Company are the worst offenders

Read an exclusive via The Herald: "[Call to jail fish-farm bosses who allow escapes](#)" (20 March)

Ullapool, Scotland - An analysis of official statistics [published online by the Scottish Government](#) reveals that since 1998 (when statistics became publicly available), there have been over 3.4 million escapees in nearly 200 separate incidents. On average since 1998, there have been 11 escape incidents and 201,000 escapees per year [1].

Date	# of escapees	# of incidents
2014	182,479	5
2013	25,532	6
2012	37,523	4
2011	404,451	10
2010	17,987	7
2009	131,971	9
2008	58,641	8
2007	154,466	12
2006	155,653	20
2005	877,883	19
2004	90,594	11
2003	151,853	13
2002	309,996	8
2001	66,000	14
2000	428,000	22
1999	258,000	16
1998	67,000	4
Total:	3,418,029	188

A comparison with [farmed salmon production data](#) published annually by the Scottish Government reveals that there has been one escapee per 0.7 tonnes of farmed salmon production since 1998 - with 2011, 2005 and 2000 the worst years for escapes. In 2005, there were ten escapees per tonne of farmed salmon production [2].

A comparison with [wild salmon catch statistics](#) published annually by the Scottish Government reveals that farmed salmon escapees are twice the number of wild salmon caught. Between 2002 and 2012 a total of 1.2 million wild salmon were caught with an average of 107,347 per year [3]. This compares with a total of 2.4 million farmed salmon escapees with an average of 217,365 per year for the same period (2002-2012).

The worst offender was Norwegian-owned Marine Harvest who is responsible for over a quarter of escape incidents since 2002. Other repeat offenders are Scottish Sea Farms, Balta Island Seafare, Loch Duart and the Scottish Salmon Company. In 2006, the [Scottish Information Commissioner](#) made a [landmark ruling](#) following a complaint by the [Salmon Farm Protest Group](#) forcing the Scottish Government to disclose the names of companies responsible for escapes.

In January 2014, 154,569 farmed salmon escaped from a Meridian salmon farm in Shetland currently owned by Marine Harvest (read more news via [BBC News](#), [STV News](#), [Shetland News](#), [The Herald](#), [Intrafish](#), [Fish Farmer](#), [Fisheries Information Service](#), [Undercurrent News](#), [The Press & Journal](#), [The Shetland Times](#) and [Fish Farming Xpert](#)) [4].

An analysis of the data since 2002 (when official site specific statistics are first available), reveals that this was the 4th largest escape on record in Scotland since 2002. Western Isles region is responsible for seven of the top 20 largest escapes, with five in Shetland, three in Highland, three in Orkney and two in Argyll. Shetland is responsible for three out of the top four worst escapes (data collated by GAAIA via official statistics [published online by the Scottish Government](#)):

Top Twenty Worst Farmed Salmon Escapes Since 2002:

Site Name	Company Name	Region	Date of Incident	Water Type	Size	No. Fish Escaped
Winnaness	Lakeland Unst Seawater	Shetland	25/12/11	SW	3.5kg	336,470
Score Holms	Cro Lax	Shetland	24/12/2002	Sea	1,600g	238,420
Loch an Eilean Liath	Stolt Sea Farm	Western Isles	11-12/01/2005	Fresh	50g	194,000
Ness of Copister*	Meridian Salmon Farms Ltd	Shetland	19/01/2014		1.96kg	154,569
South Loch Scadavay	North Uist Fisheries Ltd	Western Isles	11/01/2005	Fresh	Not Available	151,821
Eilean Dubh	Stolt Sea Farm	Western Isles	11-12/01/2005	Sea	3,300g	127,000
Linngeam	Fjord Seafood Scotland	Western	11/01/2005	Sea	1,800g	80,513
Strome	Pan Fish (Scotland)	Highland	11/01/2005	Sea	200g	80,000
Strone Point	Lighthouse Caledonia	Argyll	14/09/2009	SW	700g	58,800
Caolas Loch Portain	Marine Harvest	Western Isles	12/05/2007	SW	1,300g	52,353
Seaforth	Marine Harvest	Western Isles	11/01/2005	Sea	5,000g	51,000
Kirk Taing	Orkney Sea Farms	Orkney	20/08/2003	Sea	Not Available	50,983
Loch Caravat	North Uist Fisheries Ltd	Western Isles	16/01/2003	Fresh	30g	47,176
Loura Voe	Scottish Sea Farms Ltd	Shetland	12/03/2004	SW	1,000g	45,000
Kishorn B (North)	Scottish Sea Farms	Highland	11-13/01/2005	Sea	440g	43,453
Strome	Pan Fish (Scotland)	Highland	07/01/2005	Sea	200g	40,000
Djubawick	Hascosay Salmon Farm Ltd	Shetland	26/04/2002	Sea	1,800g	35,335
Kirk Noust	Mainstream Scotland	Orkney	29/05/2006	Sea	300 g	34,500
Loch Frisa	Scottish Sea Farms	Argyll	25/08/2009	FW	55g	34,227
Bay of Vady	Mainstream Scotland	Orkney	17/02/2006	Sea	1,700 g	25,108

A regional analysis reveals that Shetland and Western Isles are by far the worst areas since 2012 in terms of numbers of escaped farmed salmon - between them they are responsible for 72% of all escapees. Highland and Strathclyde region have also experienced high numbers of escape incidents with Highland region accounting for the most incidents:

Shetland: 992,863 escapees (38% of all escapees) via 24 incidents (18% of all incidents)

Western Isles: 877,388 escapees (34%) via 36 incidents (27%)

Highland: 371,045 escapees (14%) via 38 incidents (29%)

Strathclyde (including Argyll): 207,772 escapees (8%) via 27 incidents (20%)

Orkney: 140,231 escapees (5%) via 6 incidents (5%)

Central: 9,700 escapees (0.4%) via 1 incident (0.8%)

Data obtained via FOI reveals that less than 5% of escapees are recaptured with a escapes from sites infected with diseases and sites using toxic chemicals. The officially reported causes of escapes are "Human Error", "Equipment Failure", "Mooring Failure", "Severe Weather", "Hole in Net", "Weather" and "Predator" - with "Hole in Net" listed as a cause of over 50% of incidents between 2002 and 2009.

Read more via a media backgrounder: "[Scottish Salmon's Great Escape - There's No Escaping the Damning Data](#)" (20 March 2014)

"This damning data blows out of the water claims that the Scottish salmon farming industry is operating safely and sustainably," said Don Staniford, Director of the [Global Alliance Against Industrial Aquaculture](#). "Escapes during the first two months of 2014 are already seven times more than the total number in 2013. The Scottish salmon farming industry is riddled by poor practice and ineffective containment. 2014 is already the 6th worst year on record since 1998 and we've still ten months to go. Shame on Scottish salmon farming!"

"Effective containment of fish is a fundamental part of good fish farming," said Scott Landsburgh, Chief executive of the Scottish Salmon Producers' Organisation, in an interview with [BBC News](#) (10 March). "The industry makes huge efforts to improve containment standards. The survival rate of farmed salmon in the wild is virtually zero. There is no evidence that escaped fish have created any actual problems whatsoever for wild salmon. All the supposed threats are theoretical, and unfounded."

Despite the industry's claims to the contrary, peer reviewed science proves that escapes from salmon farms spread so-called '[genetic pollution](#)' by interbreeding with wild salmon and are causing huge problems. A paper [published last week in Evolutionary Applications](#) by scientists at the [University of East Anglia](#) identified "a clear threat of farm salmon reproduction with wild fish" (read more via [The Scotsman](#), [The Guardian](#), [The Independent](#), [ITV News](#), [The Press & Journal](#) and [The Sunday Times](#)). Another paper [published last month in the journal Biological Invasions](#) stated that official reports greatly underestimate the true number of escapes from salmon farms.

In 2013, the Sunday Times newspaper [reported](#) that "as many as one in four wild Atlantic salmon from Scotland has been genetically "tainted" by Norwegian fish" following a genetic analysis by the Rivers & Fisheries Trusts of Scotland. A paper published by the [Royal Society of London](#) in 2003 warned that repeated escapes from salmon farms caused "an extinction vortex in vulnerable populations" [5].

"The SSPO blatantly ignores over a decade of peer-reviewed scientific evidence showing how farmed salmon are quite literally killing wild salmon," continued Staniford. "Research published last year revealed that one in four wild 'Scottish' salmon is now of Norwegian farmed origin. To save Scotland's iconic wild salmon, the Scottish Government must close the net on escapes - and that means rescinding licences for repeat offenders, hefty fines and perhaps even prison sentences. If salmon farm managers and chief executives were locked up for mass break outs then they would surely be more careful about 'human error', 'equipment failure' and 'mooring failure'. Escapes are blamed as 'acts of God' but severe weather is the one certainty you can bank on in Scotland. Insurance companies should think twice about bailing out reckless salmon farmers and drive the industry into closed containers on land where escapes can be virtually eliminated."

"The only way to provide any assurance about the survival of Scotland's wild salmon stocks and to ensure that wild fish are in the future genuinely genetically wild salmon not hybrids of farmed fish, is to remove fish farms from Scotland's seas," said Peter Urpeth of Outer Hebrides Against Fish Farms in a [press release](#) (11 March). "And the only way to reduce the chemical usage that harms the marine environment, and the use of harmful medicines and treatments that then turn-up in our supermarket food, is to remove the causal reasons for their usage – fish farming at sea. Land-based, closed containment answers the vast majority of the environmental issues that Scotland's aquaculture industry now faces at a stroke, and removes the need to pump fish farms and farmed fish full of pesticides."

"The Scottish salmon farming industry simply doesn't add up," said Jenny Scobie, Director of Protect Wild Scotland, in a [letter published in the Press & Journal](#) (12 March). "The survival rate of farmed salmon in the wild is virtually zero," claimed Scott Landsburgh of the Scottish Salmon Producers' Organisation (SSPO). So how come a scientific study published last year showed that 25% of 'wild' salmon in Scotland were now contaminated with genes from Norwegian origin farmed salmon? So-called 'Scottish' salmon farming owes its origins more to Norway than Scotland - Norwegian salmon eggs are imported by the farms operating off the West coast of Scotland and 66% of the Scottish salmon farming industry is now Norwegian-owned. SSPO also claim that the industry had made "huge efforts" to improve containment. So how come over 2.5 million farmed salmon have escaped from Scotland's salmon farms in over 130 separate incidents since 2002 including the escape 154,569 farmed salmon off Shetland in January? The simple answer is to stop farming salmon in the sea - the risk to native wild salmon stock is clearly too great."

"I urge the Scottish Government to protect our marine environment and maintain the welfare of farmed salmon by legislating to remove all fin fish farms from Scottish waters and encourage the industry to change to onshore tank based systems," wrote John Robins of Animal Concern in a [letter to the Cabinet Secretary for Rural Affairs and Environment](#) (8 March) [6].

Read press release and escapes dossier in full [online here](#)

Contact:

Don Staniford: dstaniford@gaaia.org (email to arrange a phone call)

Notes to Editors:

[1] Read data in full via: "[Scottish Salmon's Great Escape - There's No Escaping the Damning Data](#)" (20 March 2014)

[2014 farmed salmon escapes](#) (up to 11 February): 182,479 (5 incidents)
[2013 farmed salmon escapes](#): 25,532 (6 incidents)
[2012 farmed salmon escapes](#): 37,523 (4 incidents)
[2011 farmed salmon escapes](#): 404,451 (10 incidents)
[2010 farmed salmon escapes](#): 17,987 (7 incidents)
[2009 farmed salmon escapes](#): 131,971 (9 incidents)
[2008 farmed salmon escapes](#): 58,641 (8 incidents)
[2007 farmed salmon escapes](#): 154,466 (12 incidents)
[2006 farmed salmon escapes](#): 155,653 (20 incidents)
[2005 farmed salmon escapes](#): 877,883 (19 incidents)
[2004 farmed salmon escapes](#): 90,594 (11 incidents)
[2003 farmed salmon escapes](#): 151,853 (13 incidents)
[2002 farmed salmon escapes](#): 309,996 (8 incidents)

Total (2002 to 2014 up to 11 February): 2,599,029 (132 incidents)

[2] A comparison with [farmed salmon production data](#) published annually by the Scottish Government reveals:

2014: 1 escapee per 0.8 tonne of farmed salmon production*
2013: 1 escapee per 6.0 tonnes of farmed salmon production
2012: 1 escapee per 4.3 tonnes of farmed salmon production
2011: 1 escapee per 0.4 tonne of farmed salmon production
2010: 1 escapee per 8.6 tonnes of farmed salmon production
2009: 1 escapee per 1.1 tonnes of farmed salmon production
2008: 1 escapee per 2.2 tonnes of farmed salmon production
2007: 1 escapee per 0.8 tonne of farmed salmon production
2006: 1 escapee per 0.8 tonne of farmed salmon production
2005: 1 escapee per 0.1 tonne of farmed salmon production
2004: 1 escapee per 1.7 tonnes of farmed salmon production
2003: 1 escapee per 1.1 tonnes of farmed salmon production
2002: 1 escapee per 0.5 tonne of farmed salmon production
2001: 1 escapee per 2.1 tonnes of farmed salmon production
2000: 1 escapee per 0.3 tonne of farmed salmon production
1999: 1 escapee per 0.5 tonne of farmed salmon production
1998: 1 escapee per 1.7 tonnes of farmed salmon production

* Assuming 2014 production is the same as 2013

Average: 1 escapee per 0.7 tonne of farmed salmon production

[3] Here's [wild salmon catch statistics](#) published annually by the Scottish Government (includes all retained and released wild salmon caught by both rod & line and net):

[2012](#): 102,243 wild salmon

[2011](#): 107,733 wild salmon
[2010](#): 137,811 wild salmon
[2009](#): 85,450 wild salmon
[2008](#): 101,519 wild salmon
[2007](#): 110,950 wild salmon
[2006](#): 110,862 wild salmon
[2005](#): 112,937 wild salmon
[2004](#): 120,078 wild salmon
[2003](#): 85,615 wild salmon
[2002](#): 105,623 wild salmon

Total: 1,180,821 wild salmon (average = 107,347 per year)

[4] Meridian Salmon (Morpol) was [bought by Marine Harvest in 2012/13](#). However, as part of the EU Commission decision in October 2013: "As remedies for approving the transaction, Marine Harvest has agreed to divest farming capacity in Shetland with 11,000 tonnes and Orkney Islands" (Read more via "[Marine Harvest told to sell Morpol Scotland farms to clear acquisition](#)"). Marine Harvest currently still owns Meridian/Morpol. [Shetland News reported](#) in October 2013: "Chief executive Alf Helge Arskog said they had already been approached by other salmon companies wishing to take over the northern isles operations, but said it could take up to six months to finalise a deal."

[4] In January 2014, Scientists in Norway [announced the development of a new DNA test](#) to detect the farmed salmon that escape from farms, which allows linking the DNA profile of escaped fish to the farm where they come from. Norwegian scientists also reported that "almost all" escapees caught in or near the Hardangerfjord (Norway's most densely farmed area) were infected with salmon alphavirus (SAV) and piscine reovirus (PRV). "We have shown that double-virus-infected escaped salmon ascend a river close to the likely source farms, reinforcing the potential for spread of viruses to wild salmonid," reported the paper - "[Potential disease interaction reinforced: double-virus-infected escaped farmed Atlantic salmon, *Salmo salar* L., recaptured in a nearby river](#)" published in the Journal of Fish Diseases in January 2014.

The Rivers & Fisheries Trusts of Scotland "Report on Genetic Tool Development for Distinguishing Farmed Vs. Wild Fish in Scotland" (February 2013) is [available online here](#). Read more via the Wester Ross Fisheries Trust: "['Norwegian' genes found in wild salmon populations in Wester Ross](#)". For more information read "['Invasion of the Viking salmon: Scotland's wild stocks 'tainted' by Norwegian strains used in fish farms](#)"

"Farm fish are known to escape from pens in all salmon aquaculture areas," reported a paper - "[Fugitive Salmon: Assessing the Risks of Escaped Fish from Net-Pen Aquaculture](#)" - published in BioScience in 2005. "Their escape into the wild can result in interbreeding and competition with wild salmon and can facilitate the spread of pathogens, thereby placing more pressure on already dwindling wild populations." Read a summary via "[Environmental Damage from Escaped Farmed Salmon](#)"

"The high level of escapes from Atlantic salmon farms, up to two million fishes per year in the North Atlantic, has raised concern about the potential impact on wild populations," reported a paper - "[Fitness reduction and potential extinction of wild populations of Atlantic salmon, *Salmo salar*, as a result of interactions with escaped farm salmon](#)" - published by the

Royal Society of London in 2003. " We thus demonstrate that interaction of farm with wild salmon results in lowered fitness, with repeated escapes causing cumulative fitness depression and potentially an extinction vortex in vulnerable."

"Pampered farmed salmon are driving their wild brethren into an "extinction vortex" in rivers along the west coast of Scotland, according to new research," reported [New Scientist](#) in 2002. "Farmed fish are bred to grow fast," says James Butler, director of the Spey Fishery Board. "Their voracious feeding ensures that they out compete native salmon." For more information read "[Scottish salmon in 'extinction vortex'](#)"

[5] Read article via "[NGO asks Scottish Government to ban marine finfish farms](#)" (Intrafish, 10 March)

NGO asks Scottish government to ban marine finfish farms

Group says global warming will only increase escape-causing weather.

 IntraFish Media

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Following [the recent escape of 154,569 fish from a Meridian Salmon Group farm](#) at Ness of Copister in Shetland, local NGO Animal Concern has written to the Scottish Government asking it to ban marine finfish farms and move all production to on-shore enclosed pond and tank systems.

"Increasingly windy and stormy winters greatly raise the risk of floating factory fish farms being breached and releasing vast numbers of genetically inferior and perhaps diseased fish into the wild, " wrote John Robins of Animal Concern in a letter to media.

"Escapees cause havoc within wild salmon stocks. The only way to protect the marine environment and protect the welfare of farmed salmon is to get this industry out of our seas and into controlled on-shore facilities. The Scottish Government must realise it is not actually in the fish farming business and recognise that it has a duty to properly control the industry and protect the marine environment from the many downsides of intensive salmon farming. If the Scottish Government refuses to do this perhaps the companies which insure salmon farms will."

Associated Articles

- [154,569 fish escape from Morpol salmon farm](#)
- [Irish salmon farm 'wiped out' by storms](#)
- [New 'fingerprinting' system tracks escaped farmed salmon](#)
- [Fish escape from farm in Norway](#)
- [Salmon escape from Nova Sea farm](#)
- [More Morpol salmon cages go missing](#)

Read the [press release and letter sent by Animal Concern](#)