



The Scottish Government
St. Andrew's House
Regent Road
Edinburgh
EH1 3DG

1 February 2022

Dear Scottish Ministers,

Please Come Clean on the Dirty Trade in Wrasse & Lumpfish by Salmon Farms!

In view of the lethal trade in 'cleaner fish', [Scamon Scotland](#) (formerly called Scottish Salmon Watch) calls on the Scottish Government to address the mortality, welfare and disease problem of salmon farms using wrasse (mostly caught in the wild) and lumpfish (mostly farmed).

Scamon Scotland calls on Scottish Ministers to:

- Establish a public register of shipments/imports/transfers of cleaner fish
- Record and report monthly cleaner fish mortalities
- Test for infectious diseases, pathogens and viruses in cleaner fish prior to transfer to salmon farms and during their short lives on salmon farms
- record antibiotic use on cleaner fish



Scamon Scotland is [diametrically opposed to the use of toxic chemicals to kill sea lice infestations on salmon farms](#) but the use of 'cleaner fish' is certainly not an ecologically or welfare friendly alternative. If salmon farming cannot operate without lice infestations and mass mortalities – in both farmed salmon and 'cleaner fish' – then it has clearly lost its environmental, welfare and social license. Scottish salmon's dirty trade in cleaner fish must stop now!

Current practices – as [showcased via ‘Case Information’ published by the Scottish Government’s Fish Health Inspectorate](#) - raise serious concerns about mortality and welfare of cleaner fish:

Cleaner fish 'Case Information' published by the Fish Health Inspectorate in 2021								
Date	Company	Site	Species	# on site	Mort #s	% Mortality	% stocking	Details recorded by FHI 'Case Information'
Oct	Scottish Sea Farms	Toyness	Wrasse	5,953	5,765	47	6	First cyle of stocking wild caught wrasse (12,187 input in Sept 2021)
Oct	Mowi	North Shore	Both	149,728	117,414	49	46	234,028 lumpfish from Ocean Matters in Wales & 63,668 wild wrasse
Oct	Mowi	Tabhaigh	Both	67,650			12	Farmed lumpfish and wild caught wrasse on site
Oct	The Scottish Salmon Co	Druimyeon Bay	Lumpfish	50,000			14	Lumpfish on site from Ocean Matters
Oct	The Scottish Salmon Co	Portree	Lumpfish	90,980		12.4		Lumpfish (Ocean Matters) morts "attributed to general background losses"
Oct	The Scottish Salmon Co	East Tarbert Bay	Lumpfish	70,000			17	Lumpfish from Ocean Matters & Otter Ferry
Oct	Scottish Sea Farms	Westerbister						"Site to stock wrasse (local wild caught from Orkney) to help combat rising sea lice levels"
Sept	Mowi	Caolas a Deas	Both	90,720	53,596		100	Morts in lumpfish due to sea lice treatment (freshwater) & Tenacibaculum
Sept	Scottish Sea Farms	Scallastle Bay	Wrasse	16,705			3	Ballan wrasse caught from the wild; hoping to get lumpfish
Aug	Mowi	Invasion Bay	Both	135,046	4,971		24	Lumpfish morts due to "emancipation", Pseudomonas, wounds & fin damage
Aug	Mowi	Camas Glas	Both	79,506	16,323		12	Morts due to decomposition, wounds, fin damage & culling
July	The Scottish Salmon Co	West Strome	Lumpfish	61,013			12	Lumpfish from Otter Ferry & Swansea University
July	Mowi	Ardintoul	Lumpfish	216,733	48,499	22.3	12	Florfenicol (antibiotic) treatment for Pseudomonas infection in lumpfish
July	Mowi	Duich	Both	48,409	27,000	37	7	Lumpfish morts "attributed to a Flavivirus infection that was transferred from the supplier" (Ocean Matters); wild caught wrasse from Skye & Weymouth
July	The Scottish Salmon Co	Sgian Dubh	Wrasse	27,000			3	Wild wrasse
June	Mowi	Ornish Island	Lumpfish	19,072	2,612	5.13	5	Lumpfish came from Ocean Matters in May 2021
June	Loch Duart	Calva Bay	Wrasse	1,400			0.3	
June	The Scottish Salmon	Gometra	Both	37,121	43,945		11	Issues with "black loss" (less fish retrieved at end of cycle than expected) "Mortality is not being identified when cleaner fish stick to sides of pen and don't end up in mort basket before rotting away"
June	The Scottish Salmon	Geasgill	Lumpfish	90,711	1,414		12	"Black loss" with cleaner fish described as "most vulnerable to bad weather"
June	The Scottish Salmon	Vuia Mor	Lumpfish	51,749			11	
June	The Scottish Salmon	Kyles of Vuia	Lumpfish	46,838			9	
June	The Scottish Salmon	Gravir	Both	66,294			8	Morts "above expected since input"; "company not 100% sure of the cause"
June	Scottish Sea Farms	Fada	Wrasse					"Wrasse brought over from Ireland during last cycle"
June	The Scottish Salmon	Taranaish	Both					"Locally caught wrasse later in the summer & lumpfish in the autumn/winter"
June	Scottish Sea Farms	Nevis A	Both	45,900	2,353		31	"Elevated mortalities...related to treatments & some higher sea temperatures"
June	Scottish Sea Farms	Nevis C	Both	7,732	2,632		12	Lumpfish "imported from Ireland for this cycle (2020), not planning to do this in the future"; Morts due to increased water temperatures
May	The Scottish Salmon	Druimyeon Bay	Lumpfish	65,611	1,340	2	10	
May	The Scottish Salmon	East Tarbert Bay	Lumpfish	88,114	2,061		11	0.88% weekly mortality of lumpfish in Week 19 of 2021
May	Mowi	Poll na Gille	Both	79,612		30 & 13	13	Wild wrasse "caught around Mull, Loch Melfort & some were imported from Ireland (not since last inspection)"; 30% lumpfish & 13% wrasse mortality
May	Mowi	Bagh Dail Nan Ceann	Both	170,833		4.4 & 1.2	43	"Very few wrasse observed"; 4.4% lumpfish & 1.2% wrasse mortality
May	Kames Fish Farming	SW Shuna	Lumpfish	88,000		7.2	16	Lumpfish (from Otter Ferry) mortality "attributed to handling"
May	Mowi	Harport	Both	34,463			13	Farmed & wild Ballan wrasse, wild Corkwing wrasse & lumpfish; "Cages stocked with wild wrasse reported to have had fewer sea lice interventions"
May	Mowi	Scalpay	Both	54,000			13	
May	Scottish Sea Farms	Speive	Wrasse	8,792			2	Wild caught wrasse from West coast of Scotland
April	Scottish Sea Farms	Kempie Bay	Lumpfish	13,696			12	"Movement of lumpfish from out with GB (sic) onto site from Bantry at end of 2020. Health certificates inspected on site"
April	Scottish Sea Farms	Sian Bay	Lumpfish	31,845			12	Same details as Kempie Bay case above
April	Scottish Sea Farms	Shuna	Both	11,525			16	Wild wrasse from West coast of Scotland & lumpfish from Republic of Ireland
April	Mowi	Kingairloch	Both	30,731	3,594		13	Wrasse "left over from last cycle, with risk assessment"; Lumpfish "increased mortality due to freshwater treatments...try to remove cleaner fish prior to treatments"

Of the 38 cases identified above, 333,519 morts (both wrasse and lumpfish) were reported but only 15 cases provided any information on mortality at all. Mortality rates reported ranged from 49% (at Mowi's North Shore salmon farm in Loch Erisort) to 1.2% at Mowi's Bagh Dail Nan

Cean ('Bay of the Dead Heads') salmon farm in the Sound of Jura although only 10 sites reported % mortality and it was often not clear if this was reported as weekly, monthly or total mortality.

The Scottish Salmon Company referred to "black loss" (less fish retrieved at end of cycle than expected) with a report from Gometra salmon farm in June 2021 detailing: "Mortality is not being identified when cleaner fish stick to sides of pen and don't end up in mort basket before rotting away" (see later in this letter for more case details).

Assessing total mortality of cleaner fish on salmon farms in Scotland is currently impossible given the lack of data. A report [published by the Nordic Council of Ministers in December 2021](#) cited a recent study by the Norwegian Food Safety Authority which revealed that salmon farmers reported a mortality rate of around 40% but that the real mortality rate was closer to 60% (see at the end of this letter for more details). If the mortality rate of cleaner fish on salmon farms in Scotland is anything like 40-60% then millions of wrasse and lumpfish could be dying horrible deaths.

Data on cleaner fish stocked on site was more comprehensive with 35 out of 38 cases reported via the Fish Health Inspectorate in 2021 detailing numbers and a total of 2.2 million cleaner fish (wrasse and lumpfish) reported. Around half the sites identified in 2021, stocked both wrasse and lumpfish (17) with some sites just stocking lumpfish (13) and wrasse (6) alongside the salmon.

In terms of cleaner fish stocking rates (the ratio of wrasse and lumpfish per salmon on the farm), one site (Mowi's Caolas a Deas salmon farm in Loch Shell in September 2021) reported even more cleaner fish (76,342 wrasse and 14,378 lumpfish) than salmon (89,452) i.e. just over 100% stocking. The Fish Health Inspectorate report ([Case 2021-0309](#)) stated that "it has been accepted by industry that freshwater treatments will lead to elevated lumpfish mortalities" but that "no alternative solution was given":

Increased Mortality in Cleanerfish:

LUM 2021: wk8, 6447 (freshwater); wk22, 8321; wk23, 7228; wk29, 5690; wk30, 11621 (extended freshwater); wk31, 10030 (extended freshwater)

Causes of mortality: sealice treatment (freshwater), tenacibaculum

It has been accepted by industry that freshwater treatments will lead to elevated lumpfish mortalities. No alternative solution was given. Site manager said that it is difficult to dewater lumpfish as a result of size and shape. Staff try to remove fish as much as possible with hand nets. Increased handling may also contribute to mortalities.

Site Details (include cleaner fish for all sections)				
Total No facilities	20		Facilities stocked	18
Species	SAL	WRS	LUM	
Age group	Q4 2020	2021	mixed	
No Fish	89,453	76,342	14,378	
Mean Fish Wt	2.5kg	mixed	mixed	

An industry norm for stocking of cleaner fish appears to be ca. 10-15% with the most cleaner fish (216,733 lumpfish) recorded on site during 2021 at Mowi's Ardintoul salmon farm in Loch Alsh. In July 2021 ([Case 2021-0273](#)) Mowi reported 48,499 mortalities of lumpfish (22.3%

mortality) since input in February (i.e. over a six month period). Another [Fish Health Inspectorate visit to Mowi's Ardintoul salmon farm in Loch Alsh in October 2019](#) published the first photos of diseased lumpfish along with details of mass mortalities and diseases ([Case-2019-0577](#)):



One salmon farm (Westerbister) inspected during 2021 reported that cleaner fish would be used in the future whilst another Scottish Sea Farms site at Fada reported "wrasse brought over from Ireland during last cycle" but failed to report any wrasse in the stocking data (or on [the import data disclosed last month by the Scottish Government](#) – see later in this letter for more details).

Other sites (not recorded in the table above) reported zero cleaner fish in the stocking information (e.g. Cooke Aquaculture) and data is still missing for the whole of December and over a dozen cases in September, October and November are still recorded [by the Fish Health Inspectorate as “awaiting publication”](#).

It is difficult to gauge the total use of cleaner fish at salmon farms across Scotland as the Fish Health Inspectorate does not visit every salmon farm each year and the 38 cases detailed in the table above may only represent ca. a quarter of all sites. The Scottish Government's 'Scottish Fish Farm Production Survey 2020' [published in September 2021](#) (the latest publicly available data) records 232 salmon farms in Scotland in 2020 but 101 reported zero production (i.e. only 131 were active).

Fish Farming Expert [reported back in 2016](#) that Marine Harvest ([renamed Mowi in 2019 due to "negative consumer perception"](#)) "intends to stock 2.5 million cleaner fish – split 50/50 between wrasse and lumpfish, the former work better in summer and the latter in winter".

Since Mowi accounts for ca. a third of all salmon farming production - Mowi [claims to produce 68,000 tonnes of farmed salmon annually in Scotland](#) and the latest Scottish Government data reported 192,129 tonnes of farmed salmon production in 2020 with 232,000 tonnes forecast for 2021 - the number of cleaner fish used in salmon farms in Scotland could be well over 7 million (a [report published by the Marine Conservation Society in February 2021 said demand for cleaner fish – mostly lumpfish - on salmon farms in Scotland was an estimated 10 million](#)).

The [Mowi-owned lumpfish farming facility at Ocean Matters in Wales reported](#) "it produced over 2 million cleaner fish during 2019". However, it is not known how many of these farmed lumpfish die each year on salmon farms in Scotland or what the cleaner fish are dying from.

'Case Information' [published by the Scottish Government's Fish Health Inspectorate for an inspection in July 2021](#) details "significant" mortalities in lumpfish caused by Flavivirus at Mowi's Loch Duich salmon farm with 37% mortality (27,000 dead lumpfish) since input in May 2021 ([Case 2021-0274](#), p121-124). Flavivirus infection "was transferred from the supplier" (i.e. Mowi's Ocean Matters in Wales):

Lumpfish came onto site in May from Ocean Matters and were stocked at 8%. Site suffered elevated lumpfish mortalities following transfer, which has been attributed to a Flavivirus infection that was transferred from the supplier. Total mortality since input was 37% (27,000). Site staff increased mortality removal, net cleaning and they were hand feeding the lumpfish to promote recovery. Mortality has since reduced.

Wrasse on site were wildcaught in the waters around Skye and Weymouth. Wrasse are being transferred to the site as and when they are available from the supplier. Stocking began 2 weeks ago and the site manager stated that the site will continue to receive wrasse until they reach a stocking density of 2%. Wrasse mortality since input is 1%.

Case Information' [published by the Scottish Government's Fish Health Inspectorate for an inspection in June 2021](#) details "black loss" mortality problems in cleaner fish at The Scottish Salmon Company's Gometra salmon farm off the Isle of Mull ([Case 2021-0192](#), p37-9):

Issues with black loss (less fish retrieved at end of cycle or grade than expected) at end of cycle with cleaner fish. Site manager suspects that mortality is not being identified where cleaner fish stick to sides of pen and don't end up in mort basket before rotting away. Site manager mentioned that efforts are being made to reduce black loss. Site are trialling new and different hide set ups and increasing the amount of hide available to Cleanerfish. This will help provide sanctuary during rough weather as well as reduce stress.

Cleanerfish mortality (last 4 weeks)
Week 19 - Wrasse - 8 - Lumpsucker - 11
Week 20 - Wrasse - 6 - Lumpsucker - 10
week 21 - Wrasse -2 Lumpsucker 2
Week 22 - Wrasse - 9 - Lumpsucker -6

Cleanerfish mortality picked up during regular mortality removal is generally low, however there is issue with black loss during grades and harvests. (see details below)

Wrasse Black loss recorded as mortality - Picked up during grading in week 16 2021 - 10995 mixed species and 8807 Ballan

Lumpsucker Black loss from movements off site - week 35 9770 and week 36 3398

2020 weeks 13 , 17 and 18 - 4146, 4464 and 2365 - Lumpsucker Black loss from end of cycle harvesting.

'Case Information' [published by the Scottish Government's Fish Health Inspectorate for an inspection in July 2021](#) details no cleaner fish at Grieg Seafood's North Papa salmon farm (other cases involving Cooke Aquaculture also reported no cleaner fish) and states that "Company policy has been to limit cleaner fish due to health concerns for the cleaner fish" ([Case 2021-0226](#), p99-101):

Case No:	2021-0226	Date of visit:	21/07/2021
Time spent on site:	3 hours	Main Inspector:	
Site No:	FS0515	Site Name:	North Papa
Business No:	FB0440	Business Name:	Grieg Seafood Shetland Ltd

Company policy has been to limit cleaner fish use due to health concerns for the cleanerfish.

'Case Information' [published by the Scottish Government's Fish Health Inspectorate for an inspection in April 2021](#) details wrasse "left over from last cycle, with risk assessment" at Mowi's Kingairloch salmon farm ([Cases 2021-0058](#), p1-3). Mortality records detailed 3,594 lumpfish morts since input with "increased mortality due to freshwater treatments" and the note that the farm "try to remove cleaner fish prior to treatments" (freshwater and mechanical treatments can kill cleaner fish):

Time spent on site: Main Inspector:

Site No: Site Name:
 Business No: Business Name:

Case Types: 1 2 3 4 5 6

Water Temp (°C): Thermometer No: FHI 045 completed

Observations: Region: HI Water type: S CoGP MA: M-36

Dead/weak/abnormally behaving fish present? If yes, see additional information/clinical score sheet.

WRS left over from last cycle, with risk assessment. New input of lumpfish for current stock. Risk assessment for SAL movement from Port na Cro to Kingairloch inspected. Movement required due to biomass.

Site Details (include cleaner fish for all sections)

Total No facilities	<input type="text" value="8"/>		Facilities stocked	<input type="text" value="7"/>	
Species	SAL	LUM	WRS		
Age group	2020 Q2	2020	wild, mixed		
No Fish	238,000	24,805	5,926		
Mean Fish Wt	3.4kg	25-30g	85g		

Mortality Records

1. Mortality records available for inspection? Y

2. How are mortalities disposed of?
 If other detail:

3. Mortality records complete and correctly entered? Y

4. Recent mortality (last 4 wks):

5. Evidence of recent increased/atypical mortalities? N
 If yes, facility nos/no mortality per facility/no stock per facility/reason:

6. Any other peaks in mortality during period checked? Y
 If yes, detail:

'Case Information' [published by the Scottish Government's Fish Health Inspectorate for an inspection in June 2021](#) at the Fada salmon farm operated by Scottish Sea Farms in the Summer Isles refers to wrasse imported from Ireland but does not record any wrasse or lumpfish in the stocking data or any mortalities ([Case 2021-0166](#)) and there are no import shipments for Scottish Sea Farms [disclosed in the trade data provided by the Scottish Government on 10 January 2022](#):

Case No:	2021-0166	Date of visit:	01/06/2021
Time spent on site:	3.5h	Main Inspector:	
Site No:	FS0858	Site Name:	Fada
Business No:	FB0125	Business Name:	Scottish Sea Farms Ltd

Wrasse brought over from Ireland during last cycle.

Site Details (include cleaner fish for all sections)				
Total No facilities	6	Facilities stocked	6	
Species	SAL			
Age group	2021S1			
No Fish	149,035			
Mean Fish Wt	200g			

'Case Information' [published by the Scottish Government's Fish Health Inspectorate for an inspection in June 2021](#) detailed lumpfish “imported from Ireland for this cycle (2020), not planning to do this in the future” ([Case 2021-0183](#), p87-9).

Case No:	2021-0183	Date of visit:	09/06/2021
Time spent on site:	2.5 hrs	Main Inspector:	
Site No:	FS0546	Site Name:	Nevis C (Ardintigh)
Business No:	FB0125	Business Name:	Scottish Sea Farms Ltd

LUM imported from Ireland for this cycle (2020), not planning to do this in the future

Cleaner fish observed on site, salmon deeper in the pens and at times challenging light conditions resulting in decreased visibility. No moribund or lethargic fish observed. Fish sampled for VMD appeared healthy and in good condition.

Cleaner fish mortality records: Mortality in last 4 weeks between 51-83 per week for the entire site for both wrasse and lumpfish. Increase in mortality from wk 29 2020 until week 41 2020 with a peak in mortality in wk 35 2020 at 2,364 morts. Largely mortalities are attributed to treatments for lice and AGD. Some mortalities of lumpfish believed to be attributed to increased water temperatures.

Database entry records mortalities by different species but exports from the database don't reflect this. Company who provided the database is currently working on improving this.

Site Details (include cleaner fish for all sections)				
Total No facilities	12	Facilities stocked	3	
Species	SAL	LUM	WRS	
Age group	2019 Q4	2020	Wild	
No Fish	62,974	4,732	3,000	
Mean Fish Wt	6.7kg	80-250g	Mixed	

'Case Information' [published by the Scottish Government's Fish Health Inspectorate for an inspection in April 2021](#) detailed movement (i.e. import) of lumpfish from Bantry in Ireland with “health certificates inspected on site”(although this import does not show up in [FOI data disclosed by the Scottish Government last month](#)) to a salmon farm operated by Scottish Sea Farms in Kempie Bay in Loch Eriboll ([Case 2021-0083](#), p1-3):

Case No:	2021-0083	Date of visit:	27/04/2021
Time spent on site:	4 hours	Main Inspector:	
Site No:	FS0359	Site Name:	Kempie Bay
Business No:	FB0125	Business Name:	Scottish Sea Farms Ltd

Movement of Lumpfish from out width GB onto site from Bantry at end of 2020. Health certificates inspected on site.

Case No:	2021-0083	Site No:	FS0359
Date of Visit:	27/04/2021	Inspector(s):	
Registration/Authorisation Details			
1. Business/site details summary checked by site representative?			
2. Changes made to details?			
Site Details (include cleaner fish for all sections)			
Total No facilities	6	Facilities stocked	6
Species	SAL	LUMP	
Age group	2020 S1's	2020	
No Fish	109,582	13,696	
Mean Fish Wt	3.5kg	30g	

Another [Scottish Government inspection in May 2021](#) of a salmon farm operated by Scottish Sea Farms at nearby Sian Bay also in Loch Eriboll detailed movement of lumpfish from outside Great Britain from Bantry in Ireland at the end of 2020 with “health certificates inspected on site” ([Case 2021-0083](#), p15-17) even though this import did not show up in [FOI data disclosed last month by the Scottish Government](#):

Case No:	2021-0087	Date of visit:	27/04/2021
Time spent on site:	4 hours	Main Inspector:	
Site No:	FS0361	Site Name:	Sian Bay
Business No:	FB0125	Business Name:	Scottish Sea Farms Ltd

Movement of Lumpfish from out with GB onto site from Bantry at end of 2020. Health certificates inspected on site.

Site Details (include cleaner fish for all sections)				
Total No facilities	10	Facilities stocked	10	
Species	SAL	LUMP		
Age group	2020 S1's	20/21		
No Fish	254,939	31,845		
Mean Fish Wt	3.3kg	30g		

Another [Scottish Government inspection in May 2021](#) of a salmon farm operated by Scottish Sea Farms at Shuna in Loch Linnhe detailed wild wrasse from the West coast of Scotland and lumpsuckers imported from the Republic of Ireland (ROI) in 2020 ([Case 2021-0078](#), p1-3):

Case No:	2021-0078	Date of visit:	28/04/2021
Time spent on site:	4 hours	Main Inspector:	
Site No:	FS0695	Site Name:	Shuna
Business No:	FB0125	Business Name:	Scottish Sea Farms Ltd

wrasse wild - West coast Scotland Lump on in 2020-ROI

Site Details (include cleaner fish for all sections)				
Total No facilities	10	Facilities stocked	5	
Species	sal	lump	wrasse	
Age group	2020 S1	adult	adult	
No Fish	71,261	7,688	3,837	
Mean Fish Wt	5.6	400g	200g	

The import of wild caught wrasse from Ireland (both Northern Ireland and the Republic of Ireland) was red flagged by a [FOI disclosure last month by the Scottish Government](#):



Why is JJ O'Neill in Dunloy permitted @scotgov @daera_ni @DefraGovUK to export 275,678 wrasse from Northern Ireland to salmon farms in Scotland? @MowiScotlandLtd @kamesfishfarm tinyurl.com /yb66hzvk @salmonwatchire @NSFAS_Ireland @sliabhaliag @AfloatMagazine @nifpo @anifpo

Date consignment due	Destination site name	Destination business name (Site operator)	Species	Stage	Number	Source Country	Import consignor	Import Site of Origin
15/08/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	9,485	Northern Ireland	JJ O'Neill	Dunloy
12/10/2020	Bagh Dall Nan Ceann	Mowi Scotland Ltd	WRS	MVG	8,182	Northern Ireland	JJ O'Neill	Dunloy
23/08/2021	Ardintoul	Mowi Scotland Ltd	WRS	MVG	8,010	Northern Ireland	JJ O'Neill	Dunloy
25/08/2021	Ardintoul	Mowi Scotland Ltd	WRS	MVG	8,000	Northern Ireland	JJ O'Neill	Dunloy
05/10/2020	Bagh Dall Nan Ceann	Mowi Scotland Ltd	WRS	MVG	7,535	Northern Ireland	JJ O'Neill	Dunloy
14/09/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	7,465	Northern Ireland	JJ O'Neill	Dunloy
09/08/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	7,390	Northern Ireland	JJ O'Neill	Dunloy
27/09/2021	Bagh Dall Nan Ceann	Mowi Scotland Ltd	WRS	MVG	6,950	Northern Ireland	JJ O'Neill	Dunloy
19/07/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	6,525	Northern Ireland	JJ O'Neill	Dunloy
21/06/2021	Carnas Glas	Mowi Scotland Ltd	WRS	MVG	6,416	Northern Ireland	JJ O'Neill	Dunloy
06/09/2021	Bagh Dall Nan Ceann	Mowi Scotland Ltd	WRS	MVG	6,320	Northern Ireland	JJ O'Neill	Dunloy
19/09/2021	Bagh Dall Nan Ceann	Mowi Scotland Ltd	WRS	MVG	6,264	Northern Ireland	JJ O'Neill	Dunloy
13/09/2021	Bagh Dall Nan Ceann	Mowi Scotland Ltd	WRS	MVG	6,183	Northern Ireland	JJ O'Neill	Dunloy
18/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	6,025	Northern Ireland	JJ O'Neill	Dunloy
03/10/2021	Gorsten	Mowi Scotland Ltd	WRS	MVG	5,980	Northern Ireland	JJ O'Neill	Dunloy
08/08/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,960	Northern Ireland	JJ O'Neill	Dunloy
25/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,739	Northern Ireland	JJ O'Neill	Dunloy
22/08/2021	Ardintoul	Mowi Scotland Ltd	WRS	MVG	5,500	Northern Ireland	JJ O'Neill	Dunloy
26/07/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	5,420	Northern Ireland	JJ O'Neill	Dunloy
04/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,251	Northern Ireland	JJ O'Neill	Dunloy
02/08/2020	Loch Leven (1)	Mowi Scotland Ltd	WRS	MVG	5,121	Northern Ireland	JJ O'Neill	Dunloy
11/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,064	Northern Ireland	JJ O'Neill	Dunloy
29/08/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,903	Northern Ireland	JJ O'Neill	Dunloy
21/09/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	4,840	Northern Ireland	JJ O'Neill	Dunloy
18/10/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,750	Northern Ireland	JJ O'Neill	Dunloy
17/10/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,735	Northern Ireland	JJ O'Neill	Dunloy
01/08/2021	Invasion Bay	Mowi Scotland Ltd	WRS	MVG	4,680	Northern Ireland	JJ O'Neill	Dunloy
13/06/2021	Kingarloch	Mowi Scotland Ltd	WRS	MVG	4,615	Northern Ireland	JJ O'Neill	Dunloy
12/07/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	4,330	Northern Ireland	JJ O'Neill	Dunloy
30/08/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,220	Northern Ireland	JJ O'Neill	Dunloy
16/11/2020	Port Na Cro	Mowi Scotland Ltd	WRS	MVG	4,208	Northern Ireland	JJ O'Neill	Dunloy
06/06/2021	Invasion Bay	Mowi Scotland Ltd	WRS	MVG	4,173	Northern Ireland	JJ O'Neill	Dunloy
07/08/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	4,146	Northern Ireland	JJ O'Neill	Dunloy

Mairi Gougeon and 9 others

12:49 PM · Jan 14, 2022 · Twitter Web App

The Department of Agriculture, Environment and Rural Affairs in Northern Ireland told Scottish Salmon Watch last month:

From: **Smith, Patrick** <Patrick.Smith@daera-ni.gov.uk>
 Date: Tue, Jan 25, 2022 at 5:05 PM
 Subject: RE: Wrasse exports from NI to Mowi Scotland
 To: Don Staniford <salmonfarmingkills@gmail.com>
 Cc: Lyttle, Owen <Owen.Lyttle@daera-ni.gov.uk>, McCaughan, Mark <Mark.McCaughan@daera-ni.gov.uk>, Campbell, Paddy <Paddy.Campbell@daera-ni.gov.uk>, Hayes, Jim <Jim.Hayes@daera-ni.gov.uk>, Watts, Jim <Jim.Watts@daera-ni.gov.uk>, Kane, John (DAERA) John.Kane@daera-ni.gov.uk

Mr Staniford,

I refer to your email of 14 January 2022 on the subject of wrasse movements from Northern Ireland to Scotland.

In regard to export certificates or environmental/disease risk assessments, the Department of Agriculture, Environment and Rural Affairs (DAERA) inspects and certifies all movements of

live fish (including wrasse) from Northern Ireland. This is a legislative requirement under aquatic animal health regulations.

All movements of live wrasse from Northern Ireland are consigned to salmon farming organisations in Scotland. DAERA has not yet carried out an assessment of the impact of wrasse harvesting but has continued to record the number of exports to inform any future assessment. At this time, the Department has not considered any formal consultation on the wrasse fishery in Northern Ireland.

Regards

Patrick Smith | Marine and Fisheries Division | Sea Fisheries Policy Branch | Department of Agriculture, Environment and Rural Affairs | Rathkeltair House | Market Street | Downpatrick | Co Down | BT30 6AJ

Contact: Tel: +44 (0)28 44618111

Email: patrick.smith@daera-ni.gov.uk

A letter from the Department of Agriculture, Environment and Rural Affairs in Northern Ireland dated 20 January 2022 confirmed the above information:

Environment, Marine & Fisheries Group
Marine & Fisheries Division



Department of
**Agriculture, Environment
and Rural Affairs**

www.daera-ni.gov.uk

Our reference: AE1/22/56667

Mr Jim Haughey

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1st Floor
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Belfast
BT7 2AJ

Telephone: 028 90 569593

Email: owen.lyttle@daera-ni.gov.uk

Date: 20th January 2022

Dear Jim

RE: WILD CAUGHT WRASSE IN NORTHERN IRELAND

Thank you for your e-mail of 13th January 2022 regarding wild caught wrasse in Northern Ireland in which you make reference to a tweet from Don Stanniford which includes the numbers of wrasse moved to Scotland from Northern Ireland.

The commercial capture of wrasse in Northern Ireland waters is legal. DAERA is aware that wild wrasse is caught in Northern Ireland and sent as cleaner fish to salmon farming operations in Scotland. Whilst wrasse species are not subject to any quota in Northern Ireland, the movements of such live fish from Northern Ireland are regulated insofar as all movements are certified by this Department in accordance with the current aquatic animal health regulations.

Following a consultation in 2020, the Scottish Government introduced a scheme of mandatory measures involving closed seasons and landing sizes for wild wrasse. These measures are aimed at improving the sustainability of wrasse capture. They apply to anyone supplying Scottish salmon producers and this means that they apply to the NI suppliers.

Yours sincerely



**OWEN LYTTLE
DIRECTOR
MARINE & FISHERIES DIVISION**

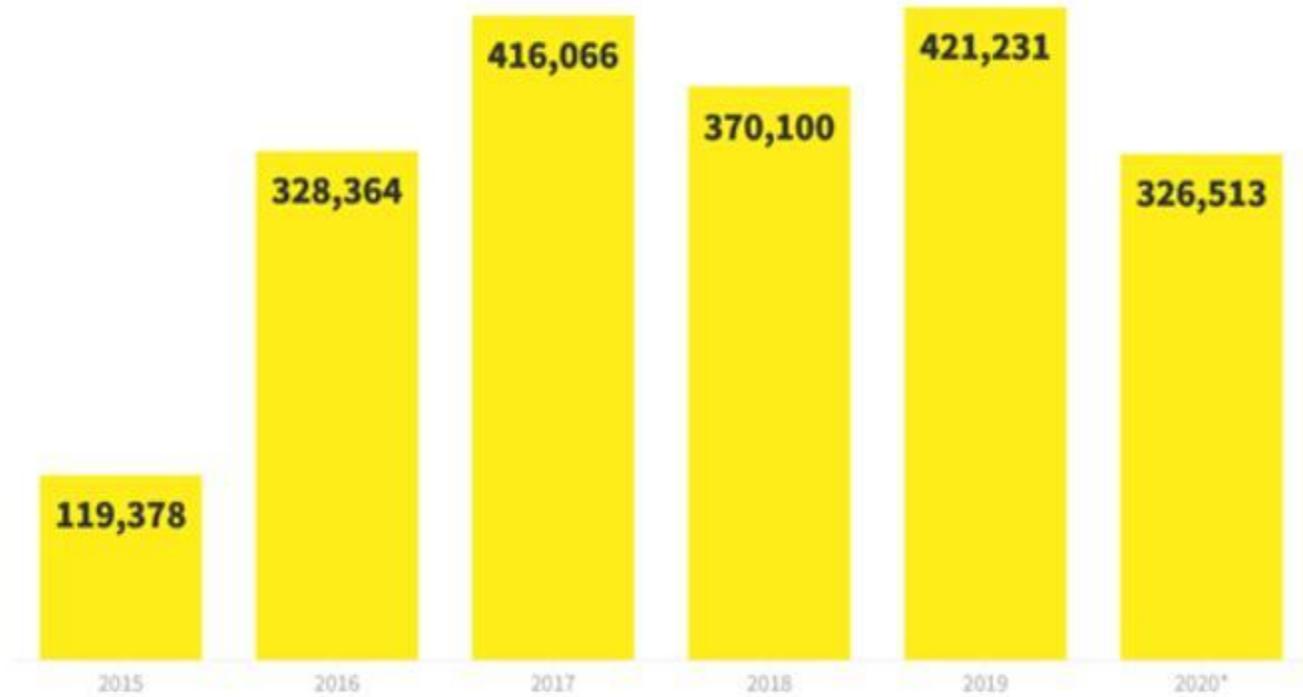
Sustainability at the heart of a living, working, active landscape valued by everyone.

If you are deaf or have a hearing difficulty you can contact the Department via the Next Generation Text Relay Service by dialling 18001 + telephone number.



Exactly how many wild caught wrasse and lumpfish are used on salmon farms in Scotland in total (including from the Republic of Ireland and England) is unclear. Data [published in June 2021 by The Journal/Noteworthy](#) details ca. 300,000 to 400,000 wild caught wrasse moved to salmon farms in Ireland each year:

N Wild Wrasse moved to Salmon Farms (2015-2020)
Vast majority were caught from the wild



Source: Marine Institute via FOI • *The 2020 figure excludes 3,540kg of wild wrasse moved to farms as the number of individual fish this may represent is unknown.

Industry data in Scotland - which is ca. ten times bigger than Irish salmon farming in terms of production - [reported 30,564 wild caught wrasse in Scottish waters in 2018](#).

Species	Undersize	Target	Oversize	Total
<i>Ballan</i>	1130	3187	573	4890
%	23.11	65.17	11.72	
<i>Corkwing</i>	2458	2306	380	5144
%	47.78	44.83	7.39	
<i>Cuckoo</i>	1107	1315	436	2858
%	38.73	46.01	15.26	
<i>Goldsinney</i>	5801	4759	104	10664
%	54.40	44.63	0.97	
<i>Rock Cook</i>	4290	2684	34	7008
%	61.21	38.30	0.49	
<i>All</i>	14786	14251	1527	30564
%	48.38	46.63	4.99	

Summary table of 2018 Scottish wild caught wrasse data, based on first 20 traps lifted each week by each boat. Click on image to enlarge. Table: SSPO.

Data for wild caught wrasse in Scottish waters in 2019 (as [published by the Scottish Salmon Producers Organisation](#)) rose to 52,645:

Number of wrasse in first 20 traps lifted weekly	Undersize	Target	Oversize	Total
Ballan				
Number	3062	7102	1747	11911
%	25.7	59.6	14.7	22.6
Corkwing				
Number	3438	4901	399	8738
%	39.3	56.1	4.6	16.6
Cuckoo				
Number	2230	2566	248	5044
%	44.2	50.9	4.9	9.6
Goldsinny				
Number	6516	7811	18	14345
%	45.4	54.5	0.1	27.2
Rock cook				
Number	6107	6481	19	12607
%	48.4	51.4	0.2	23.9
All wrasse				
Total	21353	28861	2431	52645
%	40.6	54.8	4.6	

However, data on wild caught wrasse in Scottish waters (or for that matter in England, Wales, Ireland and any other country) has not yet been published for 2020 or 2021 by Salmon Scotland (formerly SSPO) or the Scottish Government.

[FOI 2021-00259890](#) disclosed by the Scottish Government on 10 January 2022 detailed 275,678 wrasse imported from Northern Ireland to salmon farms operated by Mowi Scotland and Kames Fish Farming (although Shuna SW/ Rubh'an Trilleachain is in reality operated by Mowi not Kames) from May 2020 to November 2021. Here's the 62 import shipments from JJ O'Neill in Dunloy ranked highest to lowest ([MVG = Fish weighing more than 5 grams](#)):

Date consignment due	Destination site name	Destination business name (Site operator)	Species	Stage	Number	Source Country	Import consignor	Import Site of Origin
15/08/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	9,485	Northern Ireland	JJ O'Neill	Dunloy
12/10/2020	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	8,182	Northern Ireland	JJ O'Neill	Dunloy
23/08/2021	Ardintoul	Mowi Scotland Ltd	WRS	MVG	8,010	Northern Ireland	JJ O'Neill	Dunloy
25/08/2021	Ardintoul	Mowi Scotland Ltd	WRS	MVG	8,000	Northern Ireland	JJ O'Neill	Dunloy
05/10/2020	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	7,535	Northern Ireland	JJ O'Neill	Dunloy
14/09/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	7,465	Northern Ireland	JJ O'Neill	Dunloy
09/08/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	7,390	Northern Ireland	JJ O'Neill	Dunloy
27/09/2021	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	6,950	Northern Ireland	JJ O'Neill	Dunloy
19/07/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	6,525	Northern Ireland	JJ O'Neill	Dunloy
21/06/2021	Camas Glas	Mowi Scotland Ltd	WRS	MVG	6,416	Northern Ireland	JJ O'Neill	Dunloy
06/09/2021	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	6,320	Northern Ireland	JJ O'Neill	Dunloy
19/09/2021	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	6,264	Northern Ireland	JJ O'Neill	Dunloy
13/09/2021	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	6,183	Northern Ireland	JJ O'Neill	Dunloy
18/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	6,025	Northern Ireland	JJ O'Neill	Dunloy
03/10/2021	Gorsten	Mowi Scotland Ltd	WRS	MVG	5,980	Northern Ireland	JJ O'Neill	Dunloy
08/08/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,960	Northern Ireland	JJ O'Neill	Dunloy
25/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,739	Northern Ireland	JJ O'Neill	Dunloy
22/08/2021	Ardintoul	Mowi Scotland Ltd	WRS	MVG	5,500	Northern Ireland	JJ O'Neill	Dunloy
26/07/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	5,420	Northern Ireland	JJ O'Neill	Dunloy
04/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,251	Northern Ireland	JJ O'Neill	Dunloy
02/08/2020	Loch Leven (1)	Mowi Scotland Ltd	WRS	MVG	5,121	Northern Ireland	JJ O'Neill	Dunloy
11/07/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	5,064	Northern Ireland	JJ O'Neill	Dunloy
29/08/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,903	Northern Ireland	JJ O'Neill	
21/09/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	4,840	Northern Ireland	JJ O'Neill	Dunloy
18/10/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,750	Northern Ireland	JJ O'Neill	Dunloy
17/10/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,735	Northern Ireland	JJ O'Neill	Dunloy
01/08/2021	Invasion Bay	Mowi Scotland Ltd	WRS	MVG	4,680	Northern Ireland	JJ O'Neill	Dunloy
13/06/2021	Kingairloch	Mowi Scotland Ltd	WRS	MVG	4,615	Northern Ireland	JJ O'Neill	Dunloy
12/07/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	4,330	Northern Ireland	JJ O'Neill	Dunloy
30/08/2021	Loch Alsh (Sron)	Mowi Scotland Ltd	WRS	MVG	4,220	Northern Ireland	JJ O'Neill	Dunloy
16/11/2020	Port Na Cro	Mowi Scotland Ltd	WRS	MVG	4,208	Northern Ireland	JJ O'Neill	Dunloy
06/06/2021	Invasion Bay	Mowi Scotland Ltd	WRS	MVG	4,173	Northern Ireland	JJ O'Neill	Dunloy
07/09/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	4,145	Northern Ireland	JJ O'Neill	Dunloy
28/09/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	4,130	Northern Ireland	JJ O'Neill	Dunloy
11/10/2021	Linnhe	Mowi Scotland Ltd	WRS	MVG	4,000	Northern Ireland	JJ O'Neill	Dunloy
16/08/2020	Gorsten	Mowi Scotland Ltd	WRS	MVG	4,000	Northern Ireland	JJ O'Neill	Dunloy
05/07/2020	Loch Leven (1)	Mowi Scotland Ltd	WRS	MVG	3,921	Northern Ireland	JJ O'Neill	Dunloy
28/06/2021	MacLean's Nose	Mowi Scotland Ltd	WRS	MVG	3,902	Northern Ireland	JJ O'Neill	Dunloy
31/05/2020	Kingairloch	Mowi Scotland Ltd	WRS	MVG	3,820	Northern Ireland	JJ O'Neill	Dunloy
10/10/2021	Linnhe	Mowi Scotland Ltd	WRS	MVG	3,738	Northern Ireland	JJ O'Neill	Dunloy
17/08/2020	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	3,710	Northern Ireland	JJ O'Neill	Dunloy
02/11/2020	Poll Na Gille	Mowi Scotland Ltd	WRS	MVG	3,707	Northern Ireland	JJ O'Neill	Dunloy
09/11/2020	Port Na Cro	Mowi Scotland Ltd	WRS	MVG	3,616	Northern Ireland	JJ O'Neill	Dunloy
21/06/2020	Loch Leven (1)	Mowi Scotland Ltd	WRS	MVG	3,410	Northern Ireland	JJ O'Neill	Dunloy
03/11/2021	Loch Leven (1)	Mowi Scotland Ltd	WRS	MVG	3,086	Northern Ireland	JJ O'Neill	Dunloy

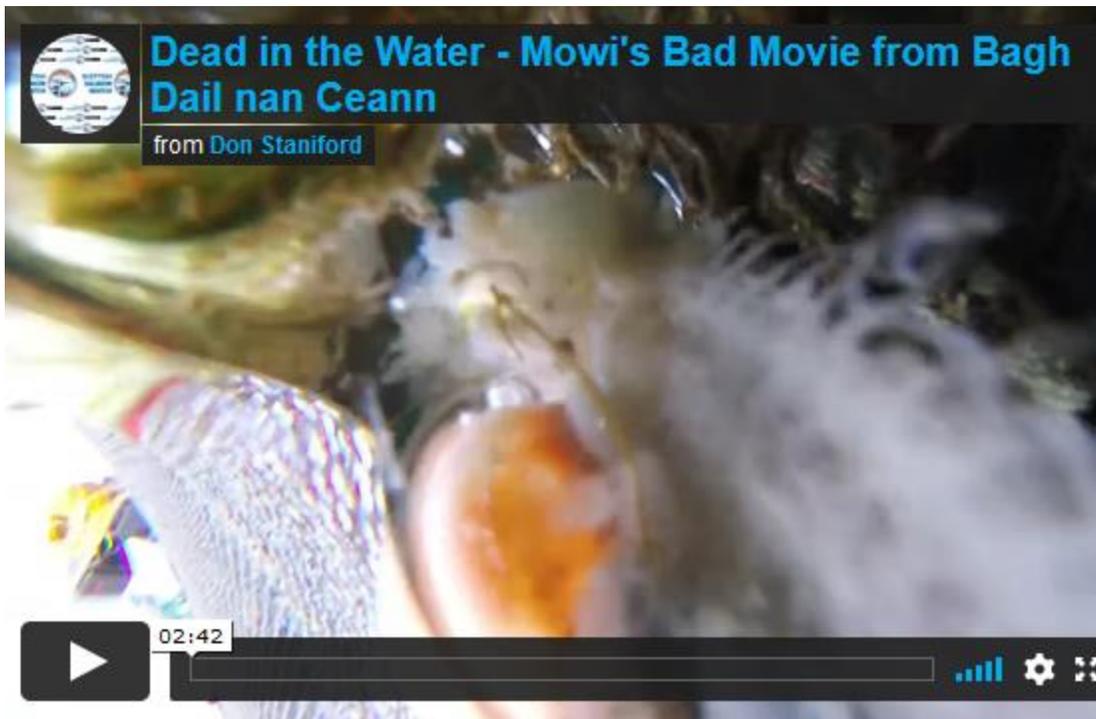
26/10/2020	Poll Na Gille	Mowi Scotland Ltd	WRS	MVG	3,060	Northern Ireland	JJ ONeill	Dunloy
28/06/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	3,010	Northern Ireland	JJ ONeill	Dunloy
30/05/2021	Invasion Bay	Mowi Scotland Ltd	WRS	MVG	2,844	Northern Ireland	JJ ONeill	Dunloy
19/10/2020	Shuna SW (Rubh'an Trill	Kames Fish Farmir	WRS	MVG	2,769	Northern Ireland	JJ ONeill	Dunloy
23/11/2020	Poll Na Gille	Mowi Scotland Ltd	WRS	MVG	2,670	Northern Ireland	JJ ONeill	Dunloy
22/11/2021	Loch Duich	Mowi Scotland Ltd	WRS	MVG	2,570	Northern Ireland	JJ ONeill	Dunloy
23/08/2020	Linnhe	Mowi Scotland Ltd	WRS	MVG	2,460	Northern Ireland	JJ ONeill	Dunloy
07/09/2020	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	2,135	Northern Ireland	JJ ONeill	Dunloy
14/09/2020	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	2,125	Northern Ireland	JJ ONeill	Dunloy
21/09/2020	Bagh Dail Nan Cean	Mowi Scotland Ltd	WRS	MVG	2,055	Northern Ireland	JJ ONeill	Dunloy
28/09/2020	Poll Na Gille	Mowi Scotland Ltd	WRS	MVG	1,985	Northern Ireland	JJ ONeill	Dunloy
29/11/2020	Poll Na Gille	Mowi Scotland Ltd	WRS	MVG	1,885	Northern Ireland	JJ ONeill	Dunloy
14/06/2020	Port Na Cro	Mowi Scotland Ltd	WRS	MVG	1,678	Northern Ireland	JJ ONeill	Dunloy
07/06/2020	Port Na Cro	Mowi Scotland Ltd	WRS	MVG	1,513	Northern Ireland	JJ ONeill	Dunloy
23/08/2020	Shuna SW (Rubh'an Trill	Kames Fish Farmir	WRS	MVG	1,510	Northern Ireland	JJ ONeill	Dunloy
14/06/2021	Camas Glas	Mowi Scotland Ltd	WRS	MVG	1,000	Northern Ireland	JJ ONeill	Dunloy
26/11/2021	Linnhe	Mowi Scotland Ltd	WRS	MVG	985	Northern Ireland	JJ ONeill	Dunloy

As detailed via the [Fish Health Inspectorate's 'Case Information' for 2021](#), there are other imports of cleaner fish from the Republic Ireland (e.g. Bantry) which appear not to have been officially reported ([something which Scottish Sea Farms has had an issue with in relation to toxic chemical use](#)).

Whatever the true figure for the use of cleaner fish on salmon farms in Scotland, it is clear in the secret filming conducted since 2018 by Scottish Salmon Watch that cleaner fish mortality is a significant problem. For example, [video footage inside a Billy Bowie skip captured evidence of mass mortalities of wrasse and lumpsuckers](#) at The Scottish Salmon Company's Toward processing and transportation facility near Dunoon in September 2020 (presumably dumped out when farmed salmon were transported for harvest):



Scottish Salmon Watch [filmed serious welfare problems in lump sucker 'cleaner fish' at RSPCA Assured Mowi's 'Bay of the Dead Heads' salmon farm in July 2019](#) – with [lump suckers dead and dying on the surface of the cage](#).



The Fish Health Inspectorate [reported in June 2019](#) for an inspection of Mowi's 'Bay of the Dead Heads' salmon farm ([Case 2019-0311](#)):

2 pens are stocked with wild mixed wrasse and the rest of pens are stocked with lumpfish.

More wrasse arriving over the summer. A consignment of wrasse was due to be received from Northern Ireland on the 30th of June. The consignment contained around 1000 wrasse. Due to the movement of wrasse on site from Northern Ireland, this will increase the surveillance frequency category from medium to high.

There was an input of wrasse during 2018. These wrasse were slowly lost to mortality throughout the year and more so through the winter months. Looking through the records of wrasse mortality there seemed to be a variety of reasons for mortality. Predation, furunculosis being the main ones. Site manager indicated that not many wrasse survived through the 2018/19 winter period.

Winter input of lumpfish into ten pens. Site manager noted that he was pleased with lumpfish survival over the winter, however they have been having issues with mortality increasing with the warmer weather and rise in sea temperature. This was visible when inspecting the pens as some fish looked very lean, and others with a clear fungal challenge. There were a few pens where this was evident, however most pens this did not seem to be an issue from the inspection. Health challenges were reported by site workers to the company vet. Who visited the site to health check the lumpfish, the vets report concluded that there was no visible health challenge with the lumpfish on site.

Another Fish Health Inspectorate report in June 2019 from Mowi's nearby Port Na Cro salmon farm ([Case 2019-0312](#)) detailed:

42000 lumpfish put in at end of 2018 - 32000 left. Lots of mortality attributed to post treatment and summer weather. Lethargic and lean lumpfish could be seen swimming round the edges of the pens. There were a lot of healthy ones too. Some had apparent issues with fungus attributed to the warmer weather. Site manager noted that they do really well in the winter months but as the sea warms up in summer they see increases in mortality and increases mortality post treatment.

Wrasse going to be stocked over the summer months. A Combination of wild and farmed - Possibly coming from Ireland, Weymouth or local fishermen. BDNC is currently being stocked with wild wrasse from NI and local areas.

Morts are ensiled off site at a pier owned by Kames. Dead fish are moved to pier using work boats rather than a waste collector, so there are no transport records, just a list of how many bins are taken to the pier periodically.

Following a [welfare complaint filed by Scottish Salmon Watch in July 2019](#), the Fish Health Inspectorate visited Mowi's 'Bay of the Dead Heads' salmon farm again [reporting in August 2019](#) (Case 2019-0376):

Lump fish in all cages, wrasse in 7 cages. Cleaner fish will be recycled for a maximum of 2 cycles, if in good condition and go through a quarantine procedure. 8 week fallow period. So far, no lumpfish have been recycled.

Lumpfish from Anglesay.

Lumpfish monthly mortality = Dec 18) - 816 01) - 2,207 - 02) - 3653 03) - 1195 04) - 3007 05) - 5055 06) - 9009 07) - 26860 08) - 2781
WRA - Dec 1015 1) 781 2) 597 3)518 4)723 5)510 6)599 7)907 8) 81 Total - 41473 since January

Florfenicol treatment for lumpfish in February 2019. Mortality came down in March, but began rising again in April.

127,878 total lumpfish over cycle ~22,000 remain on site with the majority dying from unknown causes.

The company SOP says Cleaner fish mortality should be reported to cleaner fish vet when back ground mortality levels reach 0.3% background mortality per day, however it appear that few checks were carried out between May and August, even with mortality rising.

Health reports -

13/06/2019 - Health report suggests Crator disease may be a cause of mortality in lumpfish stock. Systemic bacterial infection

24/06 - There was a health inspection of the cleaner fish. There were signs of bacterial infection on the lumpfish with white nodules being present on the tips of spines. There was also a passive grade of the fish as well a thermolicer treatment.

31/07 - July 31st – Lumpfish have a known bacterial infection and no treatment plan is in place, as salmon are on harvest plans and starve days for treatment. However staff are removing infected lumpfish.

When Scottish Salmon Watch [visited Mowi's Loch Torridon salmon farm in November 2018](#) we found dead cleaner fish – both wrasse and lumpfish – dumped in mort bins along with diseased farmed salmon:



When Scottish Salmon Watch [visited Mowi's Sconser salmon farm on the Isle of Skye in November 2018](#) we found dead lumpfish in bins with farmed salmon:



When Scottish Salmon Watch [visited Mowi's RSPCA Assured and ASC-certified Gorsten salmon farm in Loch Linnhe in November 2018 \(as featured on Netflix's Seaspiracy\)](#) in November 2018 we discovered dozens of dead cleaner fish in a skip full of diseased salmon:



When Scottish Salmon Watch [visited The Scottish Salmon Company's salmon farm at Quarry Point in Loch Fyne in September 2018](#) the dead bodies of lumpfish littered a skip full of diseased salmon:



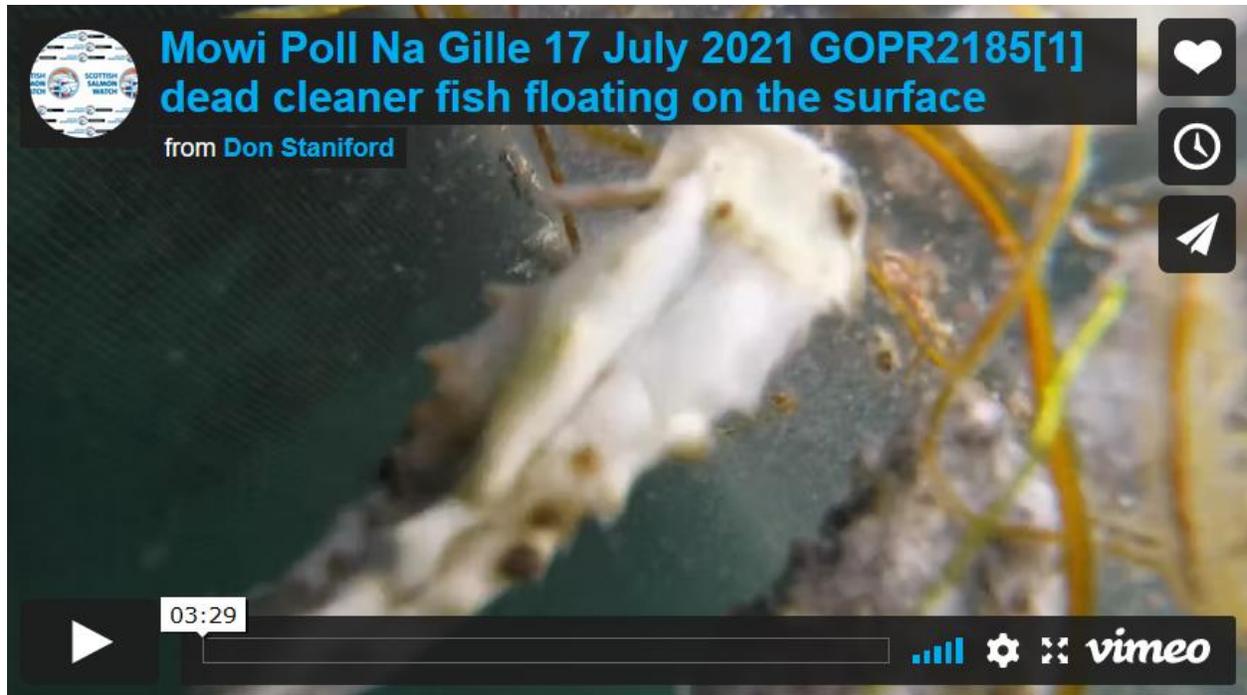
The mortality of cleaner fish was on display when Scottish Salmon Watch [visited South Shian processing plant operated by Scottish Sea Farms in Loch Creran in September 2018](#) (presumably the lumpfish are dumped out with the farmed salmon morts after processing):



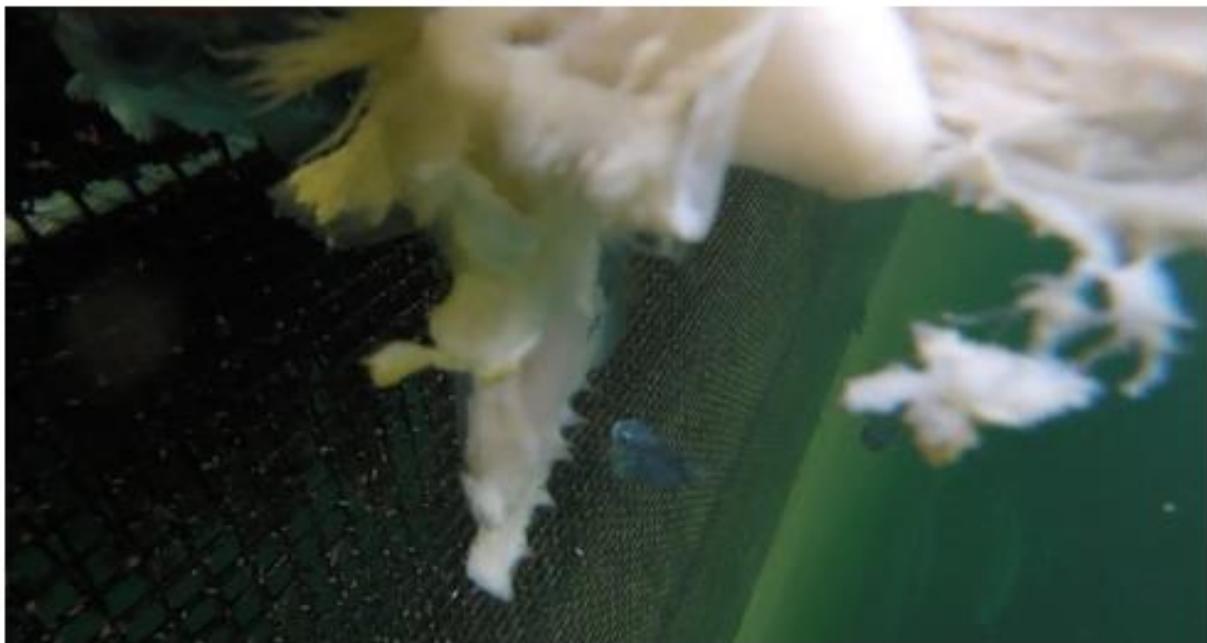
When Scottish Salmon Watch [filmed inside the Loch Spelve salmon farm operated by Scottish Sea Farms on the Isle of Mull in August 2018](#) we found lice-infested lumpfish:



In July 2021, when Scottish Salmon Watch [visited Mowi's RSPCA Assured salmon farm at Poll Na Gille in the Sound of Jura](#) (rated by OneKind as the worst salmon farm in Scotland) we found dead lumpfish on the surface of the cages and wild fish swimming inside the cages with lice-infested salmon:



As well as dead cleaner fish, [video footage shot at Mowi's Poll Na Gille salmon farm on 17 July 2021](#) shows lumpsuckers foraging near a dead farmed salmon floating on the surface of a cage:



Despite a [welfare complaint filed by Scottish Salmon Watch in July 2021](#), neither the Scottish Government's Fish Health Inspectorate nor the Animal & Plant Health Agency visited Mowi's Poll Na Gille salmon farm. When APHA did inspect Mowi's nearby 'Bay of the Dead Heads' salmon farm after a similar welfare complaint filed by Scottish Salmon Watch in July 2019, [APHA warned Mowi in a letter in September 2019 \(finally disclosed via Freedom of Information in April 2020\) that they were breaking welfare laws:](#)



Animal and Plant Health Agency
Strathearn House
Broxden Business Park
Lamberkine Drive
Perth
PH1 1RX

T 03000600704

www.gov.uk/apha

Mowi Scotland Limited

Farms Office

Glen Nevis Business Park
Fort William
PH33 6RX

16 September 2019

Dear [REDACTED]

Failure to Comply with Welfare Legislation

Animal Health and Welfare (Scotland) Act 2006

Following my visit on 2/08/19 to inspect your livestock at Marine Fin Fish farm (Atlantic Salmon) FFMC54 BDNC- Bagh Dail nan Ceann (Bay of the Dead Heads) in the Sound of Jura, in the presence of [REDACTED] (site Manager), [REDACTED] (Mowi's Area Manager), [REDACTED] (APHA VA) and [REDACTED] (FHI Marine Scotland), I must advise you that I found the following non-compliances with current welfare legislation.

Mortality in lumpfish has been a known ongoing issue, affecting the 80% of the lumpfish stocked during this production cycle at the above fish site under your responsibility.

On the day of the visit at the site (02/08/19), data provided by your staff regarding your investigation of mortality and consequential actions was not satisfactory. [REDACTED]

[REDACTED] Seeking for a health plan for lumpfish at the site at the time of the visit and further clarification regarding the health management for the investigated period, a second meeting as part of the investigation took place at APHA Perth office on Tuesday 13/08/19 with yourself, [REDACTED] (Lead Vet) and [REDACTED] (Health Manager).

During this meeting, evidence were provided of investigations and actions taken to try and minimise an increasing mortality trend in lumpfish from May 2019 until the treatment provided in between 01/07/19 to 03/07/19. After this day, there is little evidence of actions taken whilst the mortality in lumpfish continued to increase.

During the meeting on the 13/08/2019 you confirmed that a decision to humanely cull the remaining lumpfish had be taken the day before and had already started.

You have not been able to show that adequate actions were taken in the period between the 10/07/19 to the 12/08/19 in order to promote the welfare of the lumpfish under your responsibility. Not taking effective decision at earlier date has prolonged the period while the lumpfish still at the site have been in need to be protected from suffering and disease.

This is a failing to comply with the Animal and Welfare (Scotland) Act 2006, Part 2-24 (1) and 3(e) that states that:

"a person commits an offence if the person do not take such steps as are reasonable in the circumstances to ensure that the needs of an animal for which the person is responsible are met to the extent required by good practice";

An animal's needs include *"its need to be protected from suffering, injury and disease."*

APHA is an Executive Agency of the Department for Environment, Food and Rural Affairs and also works on behalf of the Scottish Government, Welsh Government and Food Standards Agency to safeguard animal and plant health for the benefit of people, the environment and the economy.

WF08 (Rev. 06/17)

OFFICIAL-SENSITIVE

As discussed during the onsite visit and the second meeting, it would be helpful to keep separated records for mortality and culled animal not only for salmon as you are correctly doing, but also for lumpfish and wrasse in order to have a detailed monitoring system for all species under your responsibility.

This letter is without prejudice to any further enforcement or other action, which may be taken at a later date.

Please contact me if you wish to discuss any aspect of this letter.

Yours sincerely,

██████████

APHA

████████████████████

Mobile: ██████████

Email Address: ██████████@apha.gov.uk

The [warning letter from APHA to Mowi dated 16 September 2019](#) ended by recommending: "it would be helpful to keep separated records for mortality and culled animal not only for salmon as you are currently doing, but also for lumpfish and wrasse in order to have a detailed monitoring system for all species under your responsibility".

The Ferret/Sunday National [reported in November 2019](#):

Mowi has **disclosed** that its Bagh Dail nan Ceann salmon farm in Loch Shuna north east of the island of Jura was visited recently by APHA inspectors. In a letter in September 2019, APHA told the company that it had failed to take "adequate actions" between 10 July and 12 August to ensure the welfare of lumpfish.



Back in December 2018, OneKind [published a damning report on the welfare of cleaner fish on salmon farms in Scotland](#) - including reference to 'Case Information' published by the Scottish Government's Fish Health Inspectorate:

Mortality rates

Mortality rates for cleaner fish on Scotland's salmon farms are not published by the industry, so it is not possible to ascertain the exact percentage of cleaner fish that survive the full salmon production cycle. Despite this, there is a suggestion that cleaner fish mortality can be high, with suggestion that it is near 100%, with the European Union Reference Laboratory for Fish Disease (2016) noting that:

"Cleaner fish mortalities in salmon farms are often high, and very few cleaner fish presumably survive through a full salmon production cycle"

Furthermore, Brooker *et al.* (2018) note that survival of cleaner fish following deployment on salmon farms can be low. Johannesen *et al.* (2018) also state that, despite the assumption that lumpsuckers

are hardy fish, mortality rates on farms can be high. In one incident in 2017 at the salmon farm North Shore, freshwater treatment for disease and sea lice, killed nearly 100% of lumpsuckers on site.

Wrasse mortality rates on salmon farms can also be high, for example Skiftesvik *et al.* (2014) note that, in Norway, there is "considerable loss of wrasses in the salmon net pens due to predation, handling, escapes and disease." Indeed, in the same study, it was found that, for one group of wrasse caught in June, mortality 35 days post-capture had reached 75%.

Fish Health Inspectorate reports also shed some light on mortality rates of cleaner fish, with the following instances being documented (Table 2).

Table 2. Cleaner fish mortalities as documented by Fish Health Inspectorate reports.

SPECIES	WHEN?	WHERE?	WHAT?
Lumpsuckers	July 2017	Seaforth	6,566 (16 %) mortality
Wrasse	July 2017	Seaforth	4,498 (12 %) mortality
Lumpsuckers	2017	Cole Deep	24,000 lumpsuckers stocked on site in Sept 2016, and now (2017) very few are left.
Lumpsuckers	April 2017	Shuna SW	High mortalities of lumpsuckers, up to 400 fish a day. Fish were treated with antibiotic for bacterial infection. No lumpsuckers left on site.
Lumpsuckers	July/August 2017	Stead of Aithness	Site stocked with lumpsuckers but these have died. This occurred shortly after the 15,000 lumpsuckers were inputted.
Cleaner fish (species not specified)	2017	Loch Alsh (Sron)	Approximately 40 % of all cleaner fish lost since input. AGD has been detected.
Lumpsuckers	Summer 2017	Raineach	Had stocked the site with lumpfish in Autumn 2015 and summer 2016, but have lost most fish.
Wrasse	December 2012	Vidlin North	Recent mortality in last weeks- 100/site/week attributed to post-treatment losses.
Wrasse	December 2012	Lismore West	Loss of 10 % of wrasse stocks since delivery in August 2012.

OneKind [concluded](#):

Collection of data

There are clear gaps in the collection of data on cleaner fish. Information on cleaner fish mortality rates, cause of mortalities, and numbers harvested from the wild are not adequately collected.

Open Seas (2017) note that information on the number of cleaner fish used by salmon farms in Scotland and the number of wild fish used, is held by salmon farms, and is available to the Scottish Government during inspections. This information should be gathered and published by the Scottish Government. Since August 2018, the Scottish Salmon Production Organisation have started publishing mortality data of farmed salmon, and this should be extended to cleaner fish too.

Scottish Ministers should also heed the warning in of a recent report - "Towards a sustainable fishery and use of cleaner fish in salmonid aquaculture: challenges and opportunities" - [published in December 2021 by the Nordic Council of Ministers](#):



"There are extensive fisheries for wrasses, and aquaculture of ballan wrasse and lumpfish," [states the Nordic Council of Ministers report](#). "Fisheries and use have evolved fast, but the development of a regulatory framework has lagged behind. Challenges linked to poor welfare, diseases and changes in the genetic structure have raised questions on the sustainability of the current practice, and The Norwegian Food Safety Authorities stated that if the welfare is not improved and the effect of cleaner fish better documented, the use can be reduced or terminated."

The [Nordic Council of Ministers report](#) (December 2021) cited a recent study by the Norwegian Food Safety Authority which revealed that salmon farmers reported a mortality rate of around 40% but that the real mortality rate was closer to 60%:

Understanding the loss of cleaner fish in the net pens

There is a high loss of cleaner fish in the net pens. The proportion of loss of cleaner fish due to escapes or mortalities is poorly known. A recent study by the Norwegian Food Safety Authorities (NFSA) revealed that the farmers registered an average mortality of around 40%, but that they believed the actual mortality was closer to 60%. This discrepancy illustrates that the current registration and reporting systems of mortality in cleaner fish are insufficient. This leads to poor data quality and makes it difficult to identify the causes of the high mortality and the actual proportions of escaped and dead fish.

The farmers reported to the NFSA that they consider de-lousing, diseases, and handling as the main causes of mortality. There are presently no adequate systems for sufficient monitoring of disease outbreaks among cleaner fish. Mortalities and escapes of cleaner fish are often not detected until long after the losses occurred. New systems for real time surveillance of cleaner fish, for example based on machine vision and artificial intelligence, can contribute to better documentation of mortality, fish health and welfare.

There should therefore be developed systems for more accurate registration of mortality and disease for cleaner fish in sea cages. In addition, today's reporting system of fish biomass and mortality to the government is outdated, making the data difficult to analyse. It is thus urgent for both the farmers and the authorities that new systems for registration of cleaner fish mortality in salmon and rainbow trout sea cages are developed.

Scamon Scotland concurs with the [Nordic Council of Ministers report](#) (December 2021) in calling for “more accurate registration of mortality and disease for cleaner fish in sea cages”.

Further information is detailed via a blog published today: [Dirty Secrets Exposed: Stop Scottish Salmon's Deadly Trade in 'Cleaner Fish'!](#)

Finally, Scamon Scotland asks the Scottish Government to provide further information on mortalities, welfare problems and diseases of cleaner fish on salmon farms in Scotland since 1 January 2020.

Please include any photos, videos, documentary evidence and any data on cleaner fish mortalities, welfare and diseases (including sea lice). For example, a [FOI disclosure by the Scottish Government in January 2018](#) included:

Attached is a photograph of a lumpfish taken during a site visit conducted as part of the Fish Health Inspectorate's aquatic animal health surveillance inspection programme.



Please include any Cabinet Briefings, correspondence with salmon farmers, the Nordic Council of Ministers and any other parties in relation to cleaner fish mortalities, welfare and diseases.

Further to [FOI 2021-00259890](#) disclosed by the Scottish Government on 10 January 2022 please also provide information on trade in cleaner fish including imports from England, Wales, Ireland (the Republic of Ireland and Northern Ireland), Iceland, Norway, France and any other countries.

Please includes any 'risk assessments' and health certificates of transfers/imports of cleaner fish.

Please consider this a formal request for information under the relevant FOI and Environmental Information regulations.

Please provide the information electronically.

Please provide a receipt for this FOI request.

Yours sincerely,

Don Staniford

Director, [Scamon Scotland](#)

