AP2/1/2015

SAVE BANTRY BAY

APPEAL

NOTICE OF APPEAL UNDER SECTION 40(1) OF FISHERIES (AMENDMENT) ACT 1997 (NO. 23)

Name and address of appellant:

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Subject matter of the appeal:

We appeal license T5/555 granted for the cultivation of Atlantic Salmon; Salmo Salar on a site on the foreshore at Shot Head, Bantry Bay, Co. Cork.

Two salmon farms are already established in the Bay and Save Bantry Bay ask for this license to be revoked as the bay has reached saturation point. What is more, Marine Harvest's Environmental Impact Statement (EIS) has failed to adequately address the following issues:

- Wild salmon at risk
- River Angling at risk
- Water quality at risk
- Wildlife at risk
- Shellfisheries at risk
- Sea fisheries at risk
- Tourism at risk
- Lack of public participation
- Concerns regarding the salmon farming policy and the decision making process

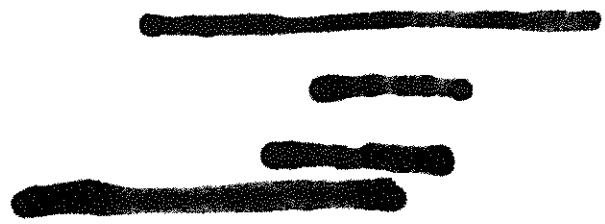
The decision to grant a license for Marine Harvest to farm salmon at Shot Head salmon farm has been based in inadequate information, and is not evidence based.

Further concerns arise regarding the decision making process, particularly in regard to license T5/555. It is believed equal representation has not been given to both sides, and independence and impartiality within the decision making process has been compromised.

These issues are outlined in greater detail below.

Site Reference Number:- **NOTICE OF APPEAL UNDER SECTION 40(1) OF FISHERIES (AMENDMENT) ACT 1997 (NO. 23). REFERENCE: T5/555 for the cultivation of Atlantic Salmon; Salmo Salar on a site on the foreshore at SHOT HEAD, BANTRY BAY, CO. CORK.**

(as allocated by the Department of Agriculture, Food and the Marine)



Appellant's particular interest
in the outcome of the appeal:

We ask that license is withdrawn on the grounds outlined below.

Outline the grounds of appeal (and, if necessary, on additional page(s) give full grounds of the appeal and the reasons, considerations and arguments on which they are based):

Wild salmon at risk

Threat from sea lice

In the wild, salmon are perfectly adapted to cope with sea lice concentrations found in natural open ocean environments. However, in salmon farms sea lice build up to such an extent that the fish have to be treated with pesticides to stop them suffering such severe damage that they develop infections and die. In the west of Ireland, where salmon farms are near ubiquitous, young wild salmon (smolts) must migrate unprotected through dense clouds of sea lice and sea lice larvae. These lice pose a serious threat to the local wild salmon and sea trout.

Various scientific studies have examined the scale of this impact. What is clear is the sea lice emanating from salmon farms are significantly increasing mortality rates in juvenile salmon migrating out to sea. The young salmon, called smolts, are most vulnerable because of their size. Indeed, it only takes a couple of sea lice to significantly impact their potential survival. In turn, the numbers of adult salmon returning to spawn has dropped so drastically they're increasingly limited in their ability to sustain future generations.

Three recent scientific papers, including three meta-analysis, show that sea lice emanating from salmon farms cause anything from a 39%, 44% or even 50% reduction in wild salmon populations.[1,2,3,4]

It is only the size of the negative impact that is in dispute today.

However, before proceeding with information regarding the impact of sea lice, consideration needs to be given to the advice given to Minister Coveney by his advisors in the report recommending the approval of license T5/555.

The recommendation license T5/555 is based on inadequate scientific information

The report to Minister Coveney that recommends license T5/555 be approved states *'Long-term studies in Ireland show that sea lice are a minor and irregular component in marine mortality of wild salmon and that the observed level of marine mortality attributable to sea lice infestation is very small, both in absolute terms (approximately 1%) and as a proportion of the overall marine mortality. At these levels it is unlikely to influence the conservation status of stocks and is not a significant driver of marine mortality. Norwegian studies have shown broadly similar results."*[5]

However, this is not the accepted thinking amongst international experts.

Just as there have been 'doubters' in the smoking "causes cancer" or climate change debates, there are 'doubters' in the debate of the impacts of sea lice on salmon farms. Ironically, the key 'doubter' is the Irish Marine Institute – the Irish government agency responsible for monitoring lice on salmon farms and charged with advising Ministers on salmon farm license applications.

Three staff from the Marine Institute are represented on the panel of seven who authored the report and recommendation to Minister Coveney that License T5/555 be approved. One is the lead researcher and author of the controversial papers that 'doubt' the impact of sea lice - Dr Jackson. The other two are his colleagues Aengus Parsons and McMahon.

What makes Dr Jackson and the Marine Institute papers and their conclusions so controversial?

To date, the most conclusive research studies examining the impact of sea lice emanating from salmon farms on wild salmon populations have been based on the same model. A research team will release pesticide treated smolts, alongside ordinary smolts, and monitor differing return rates.

The team from the Marine Institute, led by Dr Jackson, research study was based on this exact model. In turn they published three papers using their data which concluded '*that infestation of outwardly migrating salmon smolts with the salmon louse was a minor component of the overall marine mortality in the stocks studied*'.[6, 7, 8]

This conclusion of the Marine Institute's was quickly picked up and quoted by Simon Coveney, Minister for Agriculture, Food and the Marine; Bord Iascaigh Mhara; and the Irish Farmers Association and government bodies when promoting their current salmon farming agenda.[9, 10, 11] They claimed the study was definitive and unequivocal. Certainly it supported their plans for massively increasing salmon farming in Ireland, but was it true the study was definitive and unequivocal?

Upon publication there was immediate outcry amongst the international research community. One key player, Prof Costello, wrote directly to Minister Simon Coveney, to inform him he was being misled.[12] Inland Fisheries Ireland wrote a public statement, as did the internationally renowned Prof Ken Wheelan on behalf of the Association of Salmon Fishery Boards in Scotland.[13,14]

Then in August 2013, a devastating critique of the Marine Institutes work was published in The Journal of Fish Diseases. An international team of experts from Scotland, Norway and Canada re-analysed the Marine Institute's data. It noted that the Marine Institute's team '*incorrectly lead the reader to a conclusion that sea lice play a minor, perhaps even negligible, role in salmon survival*' and that '*such conclusions can be supported only if one is prepared to accept at least three methodological errors*'.[15]

Having re-analysed the data using the standard statistical methods the international team highlighted that rather than sea lice emanating from salmon farms causing a 1% mortality of salmon smolts, as Dr Jackson of the Marine Institute claimed, they in fact cause a one third reduction in adult salmon returns. The research team concluded that this '*has implications for management and conservation of wild salmon stocks*'.

The results of the reanalysis concur with other international studies, as well as Irish studies, which indicate that sea lice emanating from salmon farms have a devastating impact on wild Atlantic salmon populations.[1,2,3,15] Inland Fisheries Ireland, national and international angling and environment groups, as well as international research teams have all welcomed the clarification. Inland Fisheries Ireland stated '*In this context, the location of salmon farms in relation to salmon rivers and the control of sea lice prior to and during juvenile salmon migration to their high seas feeding ground is critical if wild salmon stocks are not to be impacted. The development of resistance to chemical treatment of sea lice and other fish husbandry problems, such as*

pancreas disease and amoebic gill disease, are likely to make effective sea lice control even more difficult in future years.'[16]

As regards the Norwegian study which supposedly found similar results to Dr Jackson, this too appears to be a significant stretch of fact.

On the one hand it is true there are similarities in the design and data gathered in the two studies. However, the conclusions drawn are quite the opposite. Authors of the Norwegian study Skilbrei at al. state that *'...salmon lice appeared to impose an average additional marine mortality of ~ 17% (odds ratio of 1.17 for recapture of treated/control fish). According to the considerations by Norwegian expert groups aiming to quantify the impact of salmon lice, this level of influence would be expected to represent a moderate regulatory effect on a salmon population'.*[17]

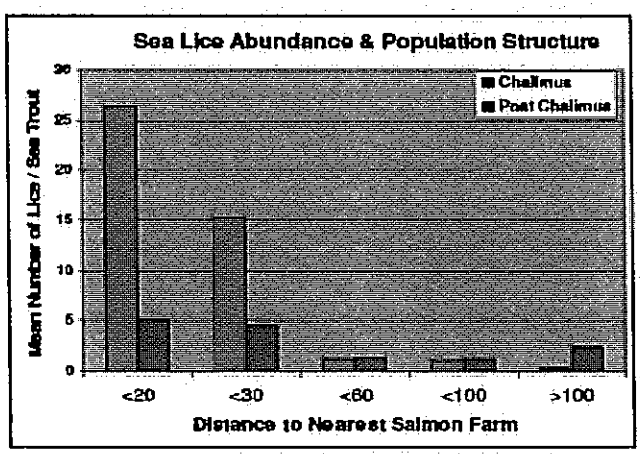
Thus to claim sea lice from salmon farms are unlikely to influence conservation status of stocks and "*a Norwegian studies have shown broadly similar results*" is wrong.[5] The Norwegian study is saying that sea lice from salmon farms do indeed have a 'regulatory' impact.

In September 2014, a definitive review of over 300 scientific publications, was published by a team of international scientists from Norway, Scotland and Ireland. It concluded sea lice have negatively impacted wild salmon and sea trout stocks in salmon farming areas in Ireland, Scotland and Norway.[4]

Based on this we ask that license T5/555 be revoked due to it being based on inadequate information. The science upon which this report is based is selective, as well as inconsistent with the vast cohort of research to date.

To return to the more widely accepted situation in Ireland regarding sea lice and salmon farms.

Research conducted in Ireland revealed the highest level of sea lice were recorded at sites less than 20km from salmon farms, with total lice infestation lower at sites less than 30km from farms.[18, 19]



This research highlights the need to separate salmon farms from wild salmon rivers to ensure wild salmon populations are not at risk of collapsing. It is for these reasons, that in 1994 a Report commissioned by the Minister of the Marine from the Sea Trout Working Group stated that until the precise nature of the relationship between sea lice and sea trout is understood '*a*

precautionary approach dictates that it would be prudent to avoid siting new fish farms or increased salmon farm production...within 20km of a sea trout river mouth'.[20] Meanwhile, today in Scotland the 'rule of thumb' is salmon farms should be located at least 18km from salmon river mouths.[21]

More recently, as part of the Strategic Environmental Assessment [SEA] of the Irish Seafood National Program 2007 – 2013 published under the National Development Plan in July 2010 it was determined that '*The targets for increased productive capacity for salmon will now have to be deferred until after 2013 at the earliest as a result of the amendments made to this Programme... during the SEA process*'.[22] The concerns again related to the negative impact of sea lice, and were submitted by the former Central and Regional Fisheries Boards and supported by the Department of Communication, Energy and Natural Resources (DCENR).

Today, the situation is far from resolved. While some progress has been made in the control of sea lice on some farms, these are often thwarted. Increasing disease incidence, recently seen with the widespread outbreaks of amoebic gill disease, has affected fish appetite resulting in decreased ingestion of in-feed medication to control sea lice. Furthermore, increased resistance to treatment and warming seas are also favouring lice breeding. The result is persistent breaches of the Treatment Trigger Level (TTL), the accepted level of lice per fish, beyond which immediate treatment is required. The number of salmon farms exceeding the TTL in 2010, 2011, and 2012 show that the sea lice levels have not been controlled and in some cases are worse than at the time of the publication of the "Irish Seafood National Program 2007 – 2013" in July 2010.[23, 24, 25] One winter salmon farm exceeded the limit in 25% of salmon farms over the last three years. The number of sites with lice levels above the TTL in two-winter salmon farms has risen continually over the last three years from 24% to 40% to 50% in 2011.

A large scale Norwegian research study published in 2012 noted that '*increased intervention efforts have been unsuccessful in controlling elevated infection levels*'.[26] In particular the paper notes that where there is an increased number of farmed salmon, either through a greater number of farms or greater farm size in an area, sea lice control becomes more difficult. It is suggested this is due to sea lice gaining resistance to available treatments.

It is entirely possible that such a situation will arise in Bantry Bay now three salmon farms have licenses, with the latest addition at Shot Head being a mere 5km from an existing salmon farm at Gearhies. To have salmon farms in such close proximity is extremely high risk.

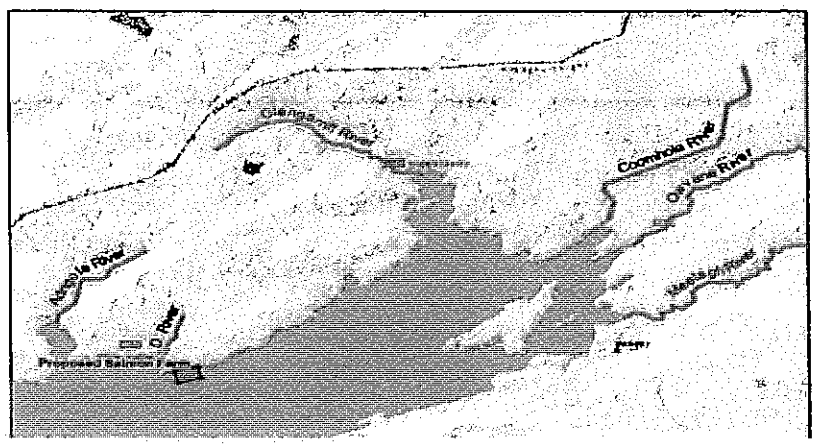
It is this experience that has led government bodies in other countries to take action to protect their valuable wild salmon populations. The recent Cohen Report published in Canada has recommended banned all expansion of salmon farming, with a view to possibly closing existing salmon farms should the issue not be resolved.[27] Meanwhile, in Norway 29 fjords and 52 rivers have been designated as salmon protection areas in which the development of salmon farming in banned.

To put this in the context of Bantry Bay: There are six wild salmon rivers within 15km of the proposed Shot Head salmon farm site – a distance far less than the recommended threshold distance of 20km. The Dromogowlane river is a mere 0.5km away.

Ironically, the Dromogowlane river, which is the river nearest to the Shot Head salmon farm, was not mentioned in Marine Harvest's Environmental Impact Statement. No consideration

has been given to the potential impacts of the salmon farm on this river, where both wild Atlantic salmon and freshwater pearl mussels (a species which depend on salmon and are protected) have been recorded. This serious omission of data does raise serious questions as to the quality of the whole document.

Salmon Rivers Near the Proposed Salmon Farm



Another fact not mentioned in the EIS, is in 2010 the North Atlantic Salmon Conservation Organisation noted three of these rivers, the Coomhola, Owvane and Meelagh to be already suffering impacts and facing potential further risks from marine salmon farming.[28] Given their proximity to the site, there can be no doubt that wild salmon from these rivers have now been put at yet further risk as a third salmon farm is developed so close by. The situation is yet worse for the much closer Glengarriff and Adrigole rivers and disastrous for the Dromogowlane river that lies only 500m away. Indeed, the salmon farm at Shot Head could spell local extinction for wild Atlantic salmon.

Save Bantry Bay, therefore ask for License T5/555 to be revoked on grounds of the impact of salmon farms and associated sea lice on wild salmon and the fact this issue has not been adequate addressed in either the EIS or report recommending the approval of the license by Minister Coveney.

Threat from escapes

A further threat to wild salmon comes from escaped farmed salmon. For a long time it has been known. Research shows escapes can have detrimental genetic and ecological effects on populations of wild conspecifics, and the present level of escapees is regarded as a problem for the future sustainability of sea-cage aquaculture. Indeed in 2005 a report states the '*risks of damage to wild salmon populations, ecosystems, and society are large when salmon are farmed in their native range, when large numbers of salmon are farmed relative to the size of wild populations, and when exotic pathogens are introduced*'.[29]

The threats arise as escaped farmed salmon spread disease and parasites, compete for food, and over-run redds.[30]

A further problems lies with inbreeding and genetic dilution. In the wild, salmon are loyal to a particular river returning each year to spawn. Each river's salmon population has adapted over thousands of years to be perfectly in tune with that very environment. If escaped farmed salmon cross breed with wild populations they pose a significant threat to their gene pool. Farmed fish are designed to be aggressive feeders that grow fast. But, they're not used to dealing with predators, and don't have carefully attuned strategies for growth, maturity, timing of migration and resisting disease that relate to their local river.

Research shows escaped farmed salmon are just as fertile as their wild cousins, and identifies *'a clear threat of farm salmon reproduction with wild fish'*.[31] Indeed, Prof Gage stated there is ample evidence that escaped farmed salmon can survive at sea and get into spawning rivers. In some Norwegian rivers, big numbers of farmed fish have been recorded – accounting for as much as half of the salmon. Here, the genetic signatures of wild salmon also exhibit significant changes that are entirely consistent with wild/farmed hybridisation'.[32]

The result of such inbreeding is reduced homing precision, survival, life span, and productivity of wild salmon populations.[33] Norwegian research shows escapees can result in a 28% reduction in smolts due to resource competition and competitive displacement.[34]

A further, and ironic impact of salmon farm escapes is they may inflate catch based spawning stock estimates to such an extent that the stock appears either to be healthy or recovering, the consequences of which are that conservation measures are either relaxed or not strengthened, or new measures not being introduced.[35]

On 1 February 2014, severe storms in Bantry Bay resulted in disappearance of 230,000 farmed salmon from damaged nets at the Gearhies salmon farm in Bantry Bay. The salmon have not been seen since. The logical conclusion is this is the largest escape of farmed salmon in Irish history, and only 5km from the new Marine Harvest salmon farm license T5/555 at Shot Head.

Yet the report recommending the license at Shot Head be approved states *'...it was not possible to establish whether any fish escaped as a result of this event'*.[5] It takes a long time for a mature dead salmon to fully decompose, and no inspection reports found any evidence of dead salmon from the incident. None were reported washed up on shores during the days after the storm damage to the salmon farm. (And, it should be noted during this time there was intense coast guard activity due to the tragedy of two Dutch tourists being washed off a cliff in these very same storms. The coast guards would have spotted such a number of salmon were they either floating or being washed up on shores all around Bantry Bay).

Thus, until there is evidence these fish didn't escape alive, it must assumed the cause of their vanishing is that they escaped alive. However, no consideration is given to the impacts of this escape and potential future escapes in the EIS or report recommending this license be approved.

The sheer scale of this escape means that the already depleted wild salmon stocks in local rivers could be swamped. For the Dromogowlane, Coomhola, Owvane, Meelagh, Glengarriff and Adrigole rivers all lie less than 20km from the escape site.

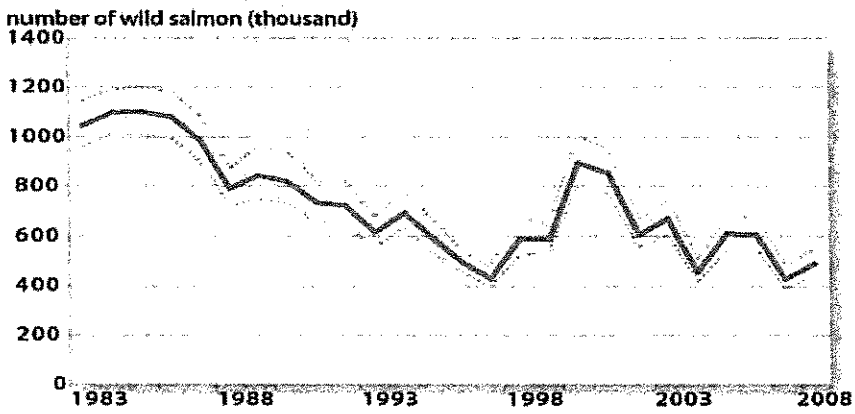
In addition to this, the Shot Head site for the proposed salmon farm is far more exposed than the existing salmon farm at Ghearies and is subject to far greater wave heights and more extreme weather conditions.[36] It is well recorded that due to climate change weather patterns are becoming more extreme, particularly winter storms, as have been experience over the last few years in Bantry Bay. Knowing this, and given recent experience of salmon farm damage in far more sheltered locations within Bantry Bay it is not appropriate to grant a salmon farm license in such an exposed area as Shot Head. Even the report recommending the license be approved notes '*nevertheless, even with the best technical standards, training and operating procedures in place, it is not possible to entirely discount the possibility of accidental losses of salmon from cages'.* [5]

The license should therefore be revoked, to avoid any further impact of escapes on local wild salmon populations.

Angling at risk

The combined impact of sea lice, disease and escapes on while salmon is considerable. In Norway, wild salmon populations have halved since the introduction of salmon farming.

Estimates of wild salmon to the coast of Norway



Source: Directorate for Nature Management, 2009
www.environment.no

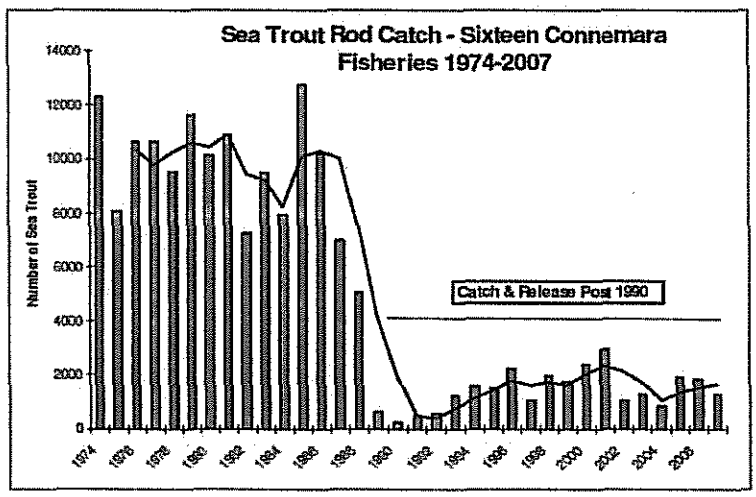
What would the collapse of wild salmon numbers in Ireland mean for the local community and economy? This direct impact has not been given due consideration in the EIA or recommendation reports, despite some interesting data being available.

A study recently commissioned by Inland Fisheries Ireland and published in 2013 found angling to be worth €750 million to the Irish economy.[37] Another study found preferred locations for angling to be predominantly rural areas, particularly in the West and South West.[38]

The economic value of the wild salmon in the six recognised salmon rivers in Bantry Bay is considerable. Recently these rivers have witnessed recovery from drift net over fishing, and

anglers are returning. Yet now this license has been granted for a third salmon farm in Bantry Bay, these wild salmon populations risk collapse once again.

Such a situation has already been seen in Ireland with the collapse of sea trout in Connemara during the 1980s when salmon farming was introduced.



To again witness the closure of wild salmon and sea trout rivers would be detrimental to angling and the associated tourism income. It would particularly impact the areas of Bantry, Ballylickey, Glengarriff, and Adrigole, which attract numerous anglers each year. Many of these angling tourists stay in bed and breakfasts and lodges where their income is extremely important to the local community, and the income remains within that community.

This impact on small family businesses has not been adequately assessed in the EIS or recommendation report. License T5/555 should therefore be revoked.

Water quality at risk

Salmon farms are known as a major source of biological and chemical pollution. A salmon farm the size of that proposed at Shot Head will discharge biological pollution in form of nutrients nitrogen and phosphorus, equivalent to those in the sewage from a town ten times the size of Bantry.* Note: All our calculations are based on the nutrient content of the waste discharge given in the EIS.

Such is their devastating impact; the law requires all towns and cities to treat sewage, to remove these nutrients prior to discharge. All other forms of industrial farming must also treat their waste, again to ensure water quality is maintained. It is known that nutrients phosphorus and nitrogen in fish farm waste can contribute to harmful algal blooms,[39] yet no control measures are in place.

Given Bantry Bay has already face regular closures to shellfish production because of toxic algae blooms which feed off these nutrients, it would be an error to place additional nutrient burdens and increased algal bloom risk in this important shellfish production area, famed for its mussels, oysters, scallops, prawns, crabs, and lobsters.

Chemical discharges also arise from the treatments used to control parasites and disease in salmon farms in Ireland. While salmon farms are required to monitor and report on sea lice levels they are not obliged to report on chemical use. Such a system allows salmon farmers to use unprecedented quantities of chemicals - none of which is recorded by government authorities. The Department of Agriculture, Food and the Marine has consistently refused requests for this information on the grounds that they do not hold it, instead referring interested parties to salmon farm operators themselves. Applications to Marine Harvest for this information in relation to their Roancarrig site have been refused on ground of commercial confidentiality. It is therefore impossible to assess the true levels of dangerous chemicals that may be discharged into Bantry Bay by their salmon farm at Shot Head. To grant a license without any proper analysis of this information is not appropriate.

What the EIS does discuss treatments is the chemicals Marine Harvest proposes to use.[36] These include:

- SLICE® (Emamectin Benzoate) which is noted in its Safety Data Sheet to be 'very toxic to aquatic organisms' and 'may cause long-term adverse effects in the aquatic environment'.[40] It is known to be highly toxic to crustaceans.[41]
- Alphamax® (Deltamethrin) which is noted to be 'toxic to crustaceous animals, and must not be used... when local sea currents leads to risk of exposure'.[42]
- Excis® (Cypermethrin) noted to be 'hazardous for the environment' in the safety data sheet for this particular formulation,[43] while being noted to be extremely dangerous to fish in other safety data sheets.
- Hydrogen Peroxide, whose eco-toxicity is unknown,[44] though it has been stated to be highly aversive to fish and can cause mortalities.[45]

Given the considerable biological emissions and highly toxic chemical emissions, it is vital a careful assessment of the waters 'carrying capacity' is completed to understand what waters are able to disperse and dilute. Only in this way can it be determined if the location of a salmon farm is appropriate. Marine Harvest however felt an assessment of the carrying capacity of Bantry Bay was 'beyond the remit' of their EIA.[36]

Fortunately, more detailed analysis of the currents within Bantry Bay is available in the Cork County Council Water Quality Management Plan. It notes that 'the lack of a well-defined tidal circulation poses serious problems as regards flushing and possible assimilative capacities'.[46]

The EU Water Framework Directive requires that all surface waters (including coastal waters of up to one nautical mile from land) achieve 'good ecological status'. While there are certain derogations to this Directive, including one that allows water status to decline from 'high' to 'good ecological status' due to new sustainable human development activities, this may only be done if: all practical mitigating steps are taken; the reasons for the change are of over-riding public interest; or the benefits cannot be achieved by other means due to technical or cost issues. None of this is the case with the Shot Head salmon farm. To put Bantry Bay's water quality further at risk by placing a salmon farm in such an inappropriate location, and thereby risk Ireland failing to comply with the Water Framework Directive would be negligent.

On top of this, the Marine Strategy Framework Directive will soon also require Member States to achieve or maintain 'good status' of marine waters. While not fully in force yet, it is worth considering the future cost of having to restore water quality, due to poor decision making today.

Wildlife at risk

A number of SPA and SACs (sites designated under the EU Birds and Habitats Directive), NHAs (Natural Heritage Areas) and proposed NHAs lie within close proximity to the proposed Shot Head salmon farm - some as close as 0.5km. These are sites of European, if not international, wildlife importance. They are home to the following endangered species which may be negatively affected by the proposed salmon farm:

1. **Otters** which are protected under Annex II and more importantly 'strictly protected' under Annex IV species of the Habitats Directive meaning an appropriate assessment of any potential negative impact is required whether or not they're within an SAC. Marine Harvest notes in their Environment Impact Assessment that '*terrestrial mammals in particular otters, visit marine salmon farm sites*'.[36] Such a ready food source will seem irresistible. Yet an Appropriate Assessment as required by the Habitats Directive has not been completed.
2. ***Seals*** are listed under Annex II Habitats Directive, and IUCN Red Data list. Ireland's largest haul out site for the protected Harbour Seal lies within Bantry Bay. Marine Harvest has noted in their EIS that they expect seals to visit the site. Yet no plans are made as to how they will address this problem. A suggestion to install acoustic devices to deter seals has been noted, but these are known to cause pain to the endangered cetaceans that frequent the Bay, and their efficacy is doubtful as seals quickly become used to them.[21] In Scotland it is now advised that '*finfish farms should be sited away from high populations of seals*'.[47]
3. ***Cetaceans*** including common dolphin, harbour porpoise, the bottlenose dolphin, Risso's dolphin, Atlantic white-sided dolphin, pilot whale, minke whale, northern bottlenose dolphin, fin whale, killer whale and humpback whale are known to frequent the area and will be affected by noise generated from the salmon farm (particularly should acoustic seal scarers be used). Most of these species are protected under Annex IV of the Habitats Directive, meaning an appropriate assessment of potential impacts must be completed prior to approval of any license. As mentioned above, this has not been done.
4. ***Atlantic Salmon*** listed under Annex II Habitats Directive, and IUCN Red Data. Liable to be very seriously affected by sea lice emanating from salmon farms; disease transfer; genetic dilution from inter-breeding with escaped wild salmon; escaped fish over running redds and displacing wild eggs. Scientific evidence shows wild salmon populations maybe reduced by as much as 50% in areas with salmon farming.[1,2,3]
5. ***Freshwater Pearl Mussels*** which are listed under Annex II and V Habitats Directive, IUCN Red Data List and Bern Convention. Freshwater Pearl Mussels are dependent on Atlantic salmon and without them face extinction in the Bantry Bay area.

The granting of license T5/555 for a third open net salmon farm in this location will have adverse effects on many highly protected species. To do this without conducting an Appropriate Assessment is inappropriate, and therefore the license should be revoked.

Shellfisheries at risk

There are six shellfisheries sites designated in Bantry Bay under the EU Shellfish Waters Directive, including Castletownbere; Glengarriff Harbour; Bantry Bay Inner; League Point;

Bantry Bay south, and lastly Adrigole Harbour which lies only 4km from the proposed Shot Head salmon farm site. All are home to locally owned mussel farms.

These sites are highly vulnerable to harmful algal blooms, which can contaminate products creating an immediate and dangerous health risk to consumers. Summer 2012 saw all sites in Bantry Bay face closure due record toxic algal blooms.[48] As discussed earlier, toxic algal blooms are fed by nutrients, and salmon farms produce considerable quantities of nutrient rich waste. Indeed, Scottish Natural Heritage noted the 'marked incompatibility' between the shellfish and finfish farming sectors.[49]

This threat is very real. In 2008, the harvesting of mussels in Bantry Bay by one company led to a product recall in three countries and severe illness in more than 300 people in France and America. Such situations can have a devastating effect on the reputation and profitability of seafood products as well as damaging Ireland's international 'green' image – as recently demonstrated in the beef industry during the horsemeat scandal.

To put these shell fisheries at further risk is not consistent with the Shellfish Directive's requirements to: reduce pollution and to ensure that designated waters comply, as a minimum, with the quality standards set.

In-shore sea fisheries at risk

Bantry Bay also offers a source of income for numerous local fishermen. It is estimated that 20 boats are already fishing the Bay over the 12 month period, many of which would see their income suffer should the Shot Head area be out of reach. While Marine Harvest has stated that local fisherman could continue to fish this area, this is disingenuous. To risk valuable fishing equipment becoming entangled in moorings (which extend some distance from the pens) or in the cages themselves is not economically viable.

There is the further issue of chemical pollution from salmon farms, in the form of sea lice treatments. Most treatments Marine Harvest propose to use at Shot Head are administered in feed to salmon, and will be emitted to the wider environment through uneaten food and as they're excreted in fish faeces.

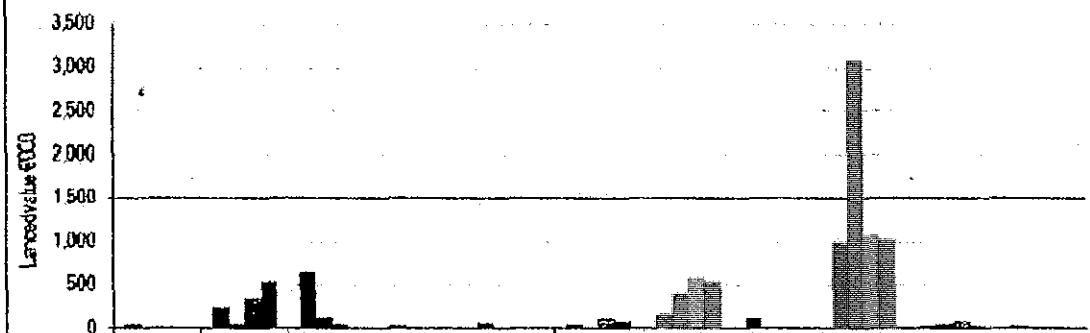
As mentioned earlier, many of these treatments are toxic and hazardous. In particular they are highly toxic to crustaceans, which is no surprise given sea lice are a copepod crustacean themselves.[50, 12]

Marine crustaceans include commercially important species such as lobster, crab, prawns and shrimps. In Scotland, fishermen have reported dead and dying *Nephrops* (also known as Dublin Bay prawn, langoustine or scampi) in creels following sea-lice treatments at nearby fish farms in 2010.[51] While in Canada research indicates that lobster catches significantly reduce when salmon farms are operating in the area.[52]

Local in-shore fishermen also have very real concerns that no survey has been completed of the spawning grounds for lobster, crab, shrimps and prawn. They regularly find females to be bearing eggs during their spawning seasons in the Shot Head area. The young of the species will be especially susceptible to the sea lice treatments, and there is a very real risk of local populations of these valuable crustaceans being wiped out.

To put monetary values on this. In 2009 €646,590 worth of crustaceans were landed in Bantry Bay, supporting numerous local jobs.[36] In turn, much of this catch was processed locally on Deenish Island, supporting further local jobs.

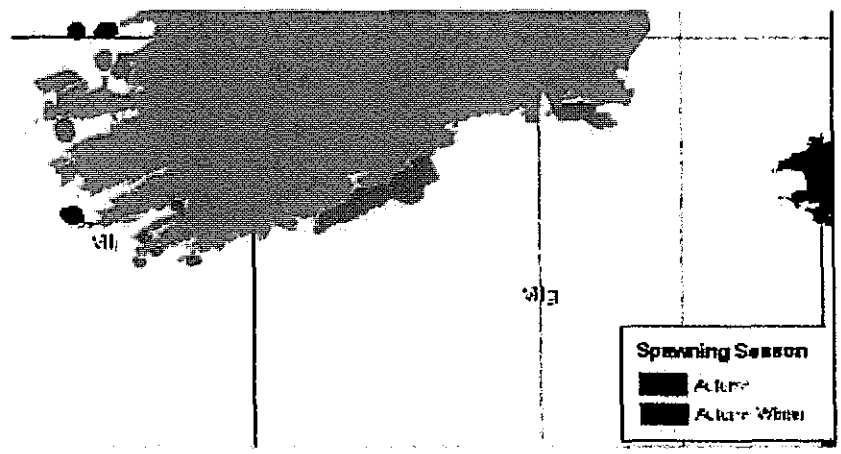
Total inshore landings for Bantry Bay ports by group; 2006 to 2009; landed value €'000.



	Elasmo-branchs	Gadoid fish	Crab edible	Crab velvet	Lobsters	Nephrops	Shrimps	Other Arthropods	Mussels Blue	Scallop	Other Molluscs
2006	10.20	246.61	649.63	32.42	78.10	50.26	170.65	116.89	986.66	35.74	25.44
2007	1.84	69.35	124.06	16.60	10.45	6.20	398.00	5.28	3,076.55	35.80	6.80
2008	3.24	343.64	41.25	21.57	4.84	117.08	591.24	2.74	1,074.47	98.59	0.02
2009	3.42	537.12	2.13	2.39	4.02	99.43	538.62	0.30	1,028.40	26.04	0.00

In addition to the spawning grounds of lobster, crab, shrimps and prawn not being considered, the EIS does not address the issues of other species of juvenile fish being susceptible to the pollution cause by salmon farms. An important herring spawning area lies just to the south of Shot Head in Bantry Bay. With a spawning area so close it is possible the replenishment of local herring stocks could be diminished, impacting another valuable inshore fishing resource.

Herring Spawning Areas - Marine Institute Stock Book 2011



There is the added issue that these in-shore fisheries and fish processing jobs are in small owned family businesses. Marine Harvest, the company behind the salmon farm proposed at

Shot Head is a multi-national whose profits go overseas. Today, they own approximately 80% of Ireland's salmon farms.

Basic economics states that it is preferable to have numerous local family businesses operating, than to have everything invested in a single multi-national whose company policy may change on a whim. This is even more the case with Marine Harvest whose company reports show its salmon farming operations in Ireland to be precarious at best.

Overall, the granting of the license T5/555 for a salmon farm at Shot Head could mark the tipping point for the viability of already hard pressed local in-shore fishermen, many of whom have drawn their livelihood from this Bay for generations. To have such economic pressures on an already struggling rural area could devastate communities and their cultural heritage. These impacts have again not been fully considered with the EIA. It is therefore asked that his appeal be upheld.

Tourism at risk

The south west peninsulas are becoming more and more popular for tourists looking for a peaceful and unspoilt refuge. This is highlighted by the great success of the 'Wild Atlantic Way' over the last two years. In addition, the proposed €24million marina in Bantry harbour which will have the capacity to house cruise ships and 150 yachts.

The Cork County Development Plan estimates that the marine leisure sector supports 14,500 jobs.[53] Many of these jobs are in areas such as West Cork. It is therefore not surprising that regional plans such as the North and West Cork Strategic Area Plan and the Cork Area Strategic Plan emphasise the national importance of their landscapes, the significant tourist economy and the potential for further development of this sector.

Local authorities near the proposed fish farm site have also confirmed the economic dependence on tourism and the opportunity to further develop this source of income. The Glengarriff Local Area Plan and the Adrigole Local Area Plan note the importance of marine tourism, while also recognising the national importance of their landscapes, their highly sensitive nature, and conservation value.[54]

Indeed, in Glengarriff much of the employment in the village is associated with the tourist industry and the Area Plan notes that this trend will continue into the future. Add to that the fact that Glengarriff is designated as a Secondary Hub under the 'Marine Leisure Infrastructure Strategy for the Western Division of Cork County 2007',[55] and there can be no doubt of the importance of taking a carefully considered approach to development in the area, and ensuring the maintenance of clean recreational waters.

Meanwhile Adrigole, the area where the farm is planned, lies within the designated Scenic Landscape as defined in the 2009-2015 County Development Plan. The Local Area Plan notes it is of the highest natural and cultural quality with conservation interest of national importance; and with its own harbour it's an important attraction in terms of marine and tourist related enterprise. It is therefore not surprising that the Local Area Plan goes on to clearly state that '*any development in the settlement must maintain the integrity of the surrounding scenic landscape and that the rural character of the settlement is not undermined by insensitive development*'.[54]

At no point do any of the planning documents feature a large aquaculture development as part of their future economic growth. This leaves the question, why has a 42.5 hectare salmon farm been granted a license in the middle of such a valuable resource? It is in total contradiction to the local planning policy.

Lack of public participation

Cork County Development Plan specifically refers to the Bantry Bay Charter.[55] This Charter gives a commitment to comprehensive public participation in relation to significant developments in Bantry Bay, and was developed in part due to the over development of the Bay, including the extensive aquaculture in the area. Wide ranging consultation and a buy in by all sectors of the local community resolved that its principle is to ensure agreement is reached within local communities before any further developments take place.

However, Marine Harvest failed to consult a single resident in the parish prior to making their application. This is entirely contradictory to the Bantry Bay Charter.

To make matters worse, much of the information contained within Marine Harvest's Environmental Impact Statement is blatantly wrong. It suggests that the hamlet directly above the proposed site '*serves three houses, one of which, at the end of the road, in [sic] unfinished. A second house is not permanently occupied whilst the third is occupied*'.[36] A simple visit to the area and discussion with local residents would have revealed a thriving community and a dozen houses in Roosk, which is adjacent to the proposed site. This is another example of the inaccuracies within the EIS that make it impossible to trust the document as a whole.

Furthermore, while local viewpoints were not a high priority by either Marine Harvest in the preparation of their EIS or the authorities during the consultation period, the Taoiseach and Minister Coveney met with Marine Harvest on 30 January 2014 while the license application was being considered. At this meeting Marine Harvest discussed their future plans for salmon farming in Ireland. This lies in direct conflict with the notion of impartiality or independence in the decision making process. It is therefore requested the license be revoked.

Concerns regarding the salmon farming policy and the decision making process

The government endorsed Food Harvest 2020 outlines plans for a 78% increase in salmon farming in Ireland.[57] A greater increase than is projected for any other area of farming. These plans for sizable increases in salmon farming in Ireland are also included in the government policy document 'Harnessing Our Ocean Wealth'. Meanwhile, government agency Bord Iascaigh Mhara is planning three mega salmon farms that would further increase output by 300%.[58]

The EU requires that any government policy, or minor amendment or modification to an existing policy, which potentially has a significant impact on the environment must undergo a Strategic Environmental Assessment.[59] This ensures views and interests of all parties are taken into consideration prior to adoption of national policy. Such an assessment was completed on the 2007-2013 National Seafood Plan and led to a moratorium on the expansion in salmon farming due to the negative impacts of sea lice emanating from salmon farms on wild salmon (see above).[22] Despite the fact the issues leading to this moratorium

are far from resolved, national policy has been dramatically amended and no strategic environmental assessment has been completed. This questionable under EU law.

A further issue lies in the fact the Department for Agriculture, Food and the Marine hold responsibility for all stages of the aquaculture licensing process, and has almost total control over the appeals process too. Under the Aquaculture (License Application) Regulations 1998, potential aquaculture operators must apply to the Aquaculture and Foreshore Management Division of the Department for Agriculture, Food and the Marine for a license.[60] The Minister of Agriculture, Food and the Marine then decides on whether or not to approve a license. Should a license be approved and any individual or organisation wish to appeal, they must lodge their appeal with the Aquaculture Licenses Appeals Board established under the Fisheries (Amendment) Act 1997. All representatives on this Board are appointed by the Minister for Agriculture, Food and the Marine.

To have a single Minister responsible for all stages of license approval, and a very significant influence over whether or not appeals should be upheld, is highly inappropriate. As a result those appealing the granting of this license have some serious concerns as to whether or not they will receive a fair hearing, which is genuinely independent and impartial.

In particular, now at the point of appeal, it has been noticed that various members of the Aquaculture License Appeals Board (ALAB) have connections to either government organisations, trade or private companies who are either promoting salmon farming or have much to gain from its expansion. It is therefore requested that all ALAB members declare any potential conflict of interest, and where such conflicts arise they are not involved in any discussions or decision relating to this case.

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Fee enclosed: €152.37
(payable to the Aquaculture Licences Appeals Board in accordance with the Aquaculture Licensing Appeals (Fees) Regulations, 1998 (S.I. No. 449 of 1998))(See Note 2)

Signed by appellant: ..... Date: 02 OCTOBER 2015.

Note 1: This notice should be completed under each heading and duly signed by the appellant and be accompanied by such documents, particulars or information relating to the appeal as the appellant considers necessary or appropriate and specifies in the Notice.

Note 2: The fees payable are as follows:

Appeal by licence applicant.....	€380.92
Appeal by any other individual or organisation	€152.37
Request for an Oral Hearing (fee payable in addition to appeal fee)	€76.18

In the event that the Board decides not to hold an Oral Hearing the fee will not be refunded.