What to do if Union law has been breached?

If you are a national of a Member State of the European Union, or if you live in one of the Member States, or if you run a business in the European Union, Union law gives you a number of rights.

If you would like to know more, you can:

- Ask a question about the EU (Europe Direct)
- Find out more about your EU rights when moving around in the EU (Your Europe)
- Ask a question about your rights in a situation you are facing in the EU (Your Europe Advice).

If you feel that your rights under Union law have not been respected by the national authorities of a Member State, you should first of all take up the matter with national bodies or authorities. This will often be the quickest and most effective way to resolve the issue.

Available means of redress at national level

As stated in the Treaties, the public authorities and Member States' courts have the main responsibility for the application of Union law.

Therefore, it is in your interest to make use of all possible means of redress at national level (administrative and/or out-of-court mediation mechanisms).

Depending on the system of each Member State, you may also submit your file to the national ombudsmen or regional ombudsmen.

Or you can bring your matter to the court of the Member State where the problem occurred. Find out more about national judicial systems or going to court. If solving your problem requires the annulment of a national decision, be aware that only national courts can annul it. If you are seeking compensation for damage, only national courts have the power, where appropriate, to order national authorities to compensate individuals for losses they have suffered due to a breach of Union law.

Other problem-solving instruments

Alternatively, you may wish to:

- **contact SOLVIT**- SOLVIT is a service provided by the national administration, which deals with crossborder problems related to the misapplication of Union law by national public administrations in the Internal Market. There is a SOLVIT centre in every EU country, as well as in Norway, Iceland and Liechtenstein. Your Member State will try to solve the problem with the other Member State concerned. Going through SOLVIT might take less time than making a formal complaint to the European Commission and can solve your individual problem. If a problem goes unresolved, or you consider that the proposed solution is unacceptable, you can still pursue legal action through a national court or lodge a formal complaint with the European Commission. Please be aware that addressing the issue to SOLVIT does not suspend time limits before national courts.

  Submit your problem to SOLVIT

- **contact European Consumer** Centres - there is a Europe-wide network of consumer centres, which cooperate to help settle disputes between consumers and traders based in different EU countries, as well as in Norway, Iceland and Liechtenstein.

  Submit your problem to European Consumer Centres

- **contact FIN-Net** - which is a network for resolving financial disputes out of court in EU countries, as well as in Iceland, Liechtenstein and Norway. They are responsible for handling disputes between consumers and financial services providers.

  Submit your problem to FIN-Net

Available actions at EU Level

Although you will usually be able to enforce your rights better in the country where you live, the European Union may also be able to help you:

- **The Committee on Petitions of the European Parliament**

You have the right (Article 227 TFEU) to submit a petition to the European Parliament about the application of Union law. You may submit your petition by post or online via the European Parliament's website**.** You can find out more about petitions to the European Parliament on the EU citizenship and free movement website**.**

- **The European Commission**

You can contact the European Commission about any measure (law, regulation or administrative action), absence of measure or practice by a Member State that you think is against Union law.

The European Commission can only take up your complaint if it is about a breach of Union law by authorities in an EU Member State. If your complaint is about the action of a private individual or body (unless you can show that national authorities are somehow involved), you have to try to solve it at the national level (courts or other ways of settling disputes). The European Commission cannot follow up matters that only involve private individuals or bodies, and that do not involve public authorities.

If you are not an expert in Union law, you may find it difficult to find out exactly which Union law you think has been breached. You can get advice quickly and informally from the Your Europe Advice service, in your own language.

- **The European Ombudsman**

If you consider that the European Commission has not dealt with your request properly, you may contact the European Ombudsman (Articles 24 and 228 TFEU).

How to submit a complaint to the European Commission

You must submit your complaint via the standard complaint form, which you can fill out in any official EU language. Please make sure you include the following details:

- Describe exactly how you believe that national authorities have infringed Union law, and which is the Union law that you believe they have infringed.
- Give details of any steps you have already taken to obtain redress.

What does the European Commission do with your complaint?

- The European Commission will confirm to you that it has received your complaint within 15 working days.
- The European Commission will invite you to resubmit your complaint in case you have not used the standard complaint form.
- Within the following 12 months, the European Commission will assess your complaint and aim to decide whether to initiate the formal infringement procedure against the Member State in question. If the issue that you raise is especially complicated, or if the European Commission needs to ask you or others for more information or details, it may take longer than 12 months to reach a decision. You will be informed if the assessment takes longer than 12 months. If the European Commission decides that your complaint is founded and initiates the formal infringement procedure against the Member State in question, it will inform you and let you know how the case progresses.
- If the European Commission thinks that your problem could be solved more effectively by any of the available informal or out-of-court problem-solving services, it may propose to you that your file be transferred to those services.
- If the Commission decides your problem does not involve a breach of Union law, it will inform you by letter before it closes your file.

– At any time, you may give the European Commission additional material about your complaint or ask to meet representatives of the European Commission.

Find out more about how the European Commission handles its relations with complainants: Communication on the handling of relations with the complainant in respect of the application of Union law.

There are two ways of submitting a complaint:

- **via internet:** SG-PLAINTES@ec.europa.eu
- **by post**:

  European Commission Secretary-General
  B-1049 Brussels BELGIUM

  Or

  EU Commission office in your country

  Or

  by fax: 3222964335

Complainants are an important source of information for detection of possible infringement cases. The Commission is not bound to open the formal infringement procedure, even in cases where a complaint reveals the presence of an infringement (indeed the Commission enjoys discretionary power in deciding if and when to commence infringement proceedings). Moreover, if the Commission takes a Member State to the Court of Justice and wins the case, the Member State will have to take all actions to remedy the violations. However, this does not mean that complainants are directly entitled to compensation or damages. To seek compensation, complainants must still take their case to a national court within the time limit set out in national law.

Multiple complaints

Where a number of complaints are lodged in relation to the same grievance, the Commission may register them under the same number.

Individual acknowledgements and letters may be replaced by a notice on the Europa website.

Multiple complaints receipt confirmations

Decisions taken on multiple complaints

Before filling in this form, please read '*How to submit a complaint to the European Commission*':

EUROPEAN COMMISSION

Complaint – Infringement of EU law

https://ec.europa.eu/assets/sg/report-a-breach/complaints_en/
All fields with * are mandatory. Please be concise and if necessary continue on a separate page.

1. Identity & contact details

	Complainant*	Your representative (*if applicable*)
Title* Mr/Ms/Mrs	Mr and Mrs	
First name*	David and Jean	
Surname*	Ainsley	
Organisation:		
Address*	Dunaverty	
Town/City *	Easdale, By Oban,	
Postcode*	PA34 4RF	
Country*	Scotland	
Telephone		
E-mail		
Language*	English	
Should we send correspondence to you or your representative*:	☐	☐

2. How has EU law been infringed?*

	Authority or body you are complaining about:
Name*	Scottish Ministers
Address	
Town/City	
Postcode	
EU Member State*	United Kingdom
Telephone	
Mobile	
E-mail	

2.1 Which **national measure(s)** do you think are in breach of EU law and why?*

We welcome the opportunity to bring this case to the European Commission. The UK's withdrawal from Europe, despite Scotland's vote to remain, brings an uncertain future for access to environmental justice. Scottish cetaceans are suffering illegal disturbance, habitat exclusion and possible hearing injury over large inshore areas important to wildlife tourism, because the EU and Scottish law is not being enforced. We hope that the Commission will take on this case and ask for the opinion of the EC on the following:

1. **Is the disturbance of cetaceans by salmon farm Acoustic Deterrent Devices (ADDs) an offence under the Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007, Habitats Regulation 39(2)[1]?**

2. **Is the disturbance of cetaceans by salmon farm ADDs an offence unless a European Protected Species (EPS) license is held?**

3. **Is it an offence to disturb EPS with ADD(s) if a farm has a planning consent including ADD(s) as part of their predator control plan but no EPS licence?**

4. **Should Art. 6(3) appropriate assessments have been carried out on the effect of ADDs on cetaceans on:**
   (i) The Port na Cro Planning Application within the Inner Hebrides and Minches cSAC?
   (ii) All new consents within the Inner Hebrides and Minches cSAC?
   (iii) All existing consents within the Inner Hebrides and Minches cSAC?
   (iv) Should such Art. 6(3) appropriate assessments consider the cumulative effect of ADDs on cetaceans within the SAC?

It is important that cetacean disturbance stops, however this must not lead to an increase in seal shooting. There will need to be a short but sufficient phase-in period for farms to fit alternative non-lethal methods of preventing seal predation such as anti-predator nets.

We think that the infringements to EU law are: -

(1) The failure to enforce Habitats Regulation 39(2)

Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, the Habitats Directive, is transposed into Scottish Law as the Habitats Regulations. Under Habitats Regulation 39(2) as amended in Scotland[2] (Hab. Reg. 39(2)) it is an offence *"to deliberately or recklessly disturb **any** dolphin, porpoise or whale (cetacean)."*

It is also an offence under the Nature Conservation (Scotland) Act 2004 to *"intentionally or recklessly disturb a cetacean."*

A jet skier was correctly prosecuted for reckless disturbance of dolphins[3], no salmon farms using ADDs have ever been prosecuted despite the clear scientific evidence that ADDs disturb, exclude and can cause permanent hearing damage to cetaceans. The law should apply to industry and individual citizen alike.

[1] www.legislation.gov.uk/ssi/2007/80/regulation/10/made (emphasis added)
[2] *Ibid*
[3] *https://www.banffshire-journal.co.uk/Banff/Jetskier-who-disturbed-dolphins-is-fined-500-2165.htm*

The head of Policy and Advice of Scottish Natural Heritage advised Marine Scotland (MS) on 28/7/17:

1. *"There is sufficient evidence, both empirical and modelled, to show that ADDs can cause disturbance and displacement of cetaceans.*

2. *There is sound, scientific evidence to expect that hearing damage, stress and masking may also occur but these are difficult to demonstrate empirically and would require further assessment."*

This SNH report is important and annexed to this complaint (annex 1). It summarises pertinent science and concludes:

"In summary, ADDs used in aquaculture are of the frequency range and level that has been shown to disturb and displace cetaceans in various scientific studies. SNH advises that the potential for these impacts is real and therefore the requirements for protection conferred upon these species through the Habitats Regulations need to be considered"

We discuss the science in section 2.3: one of the studies involved an aerial survey by Brandt et al (2012)[4] using a single ADD. They recorded a *"significant decrease in porpoise density from 2.4 before to 0.3 porpoises per square kilometre during ADD operation within the 990 km² survey area", i.e.* a single ADD excluded 87.5% of porpoises from a 990 km² area. The same survey recorded 96% exclusion of porpoises at stations 7.5 km from the ADD.[5] There was no evidence that disturbance did not happen at greater distances.

The SNH commissioned report Lepper et al 2014[6] states *"the risk that ADDs at Scottish aquaculture sites is causing permanent hearing damage to marine mammals cannot be discounted"*. Echo-locating cetaceans rely on their sensitive hearing to forage and hearing injury could result in early death.

The 28/7/17 report from the head of Policy and Advice of Scottish Natural Heritage to Marine Scotland (MS) (annex 1) represents a welcome change of attitude by SNH. We hope that this report will be translated into action to correctly interpret European and Scottish law.

The reply from MS to the report from SNH (31/10/17 annex 1) ignores advice from their statutory conservation adviser that there is sufficient evidence for disturbance, which is all that is required to enforce Hab. Reg. 39(2). There may be an innocent explanation, but if you also consider the minutes of the SNH / MS discussion on ADDs and EPS 8/10/16[7] (annex 1 and discussed in part 3 of this section), it appears that

[4] Brandt, M. J., Höschle, C., Diederichs, K., Betke, K., Matuschek, R., Witte, S., Nehls, G. (2012c) Far-reaching effect of a seal scarer on harbor porpoises (Phoena phocoena). *Aquatic Conservation:Marine and Freshwater Ecosystems:1-11*

[5] Ibid. see table in Results

[6] Lepper, P.A., Gordon, J., Booth, C., Theobald, P., Robinson, S. P., Northridge, S. & Wang, L. (2014) Establishing the sensitivity of cetaceans and seals to acoustic deterrent devices in Scotland. *Scottish Natural Heritage Commissioned Report No. 517.*

[7] FOI response from SNH 25/04/17

MS who have for years failed in their statutory duty to protect cetaceans by enforcing Hab. Regs. 39 and 44 are ignoring the precautionary principle and calling for even more science as a delaying tactic.

In summary: the use of ADDs by salmon farms in areas where they could disturb cetaceans is an offence under Hab.Reg. 39(2), we ask for this legislation to be enforced.

(2) The failure to enforce EPS licensing requirements

Under Regulation 44 of the Habitats Regulations, disturbance to cetaceans, which are European Protected Species (EPS), can only take place if a EPS licence is granted.[8]

SNH's 'Marine mammals and licencing' paper offers further guidance, stating that, '*if injury or disturbance [to cetaceans] were likely... to result from the activity a EPS licence would be required in order for that activity to be carried out legally.'*

No fish farms in Scotland hold EPS licenses.[9] The 118 which use ADDs may have Planning consents which include ADDs.

It is ironic that a scientific study on ADDs requires an EPS licence[10] however salmon farm ADDs disturb cetaceans over large areas without EPS licenses.

Three tests must <u>all</u> be passed for an EPS licence to be granted. It is our contention that that the use of ADDs by fish farms fails not one, but all of these tests.

Test 1: Licensable Purpose

The first part of the test is that a 'licensable purpose' is required. This must relate to one of the purposes enumerated in Habitats Regulation 44(2). Because the Inner Hebrides and the Minches cSAC is designated for harbour porpoise, a priority species (no. 1351), the EC advises that the conditions of overriding public interest are particularly strict[11] : the only licensable purposes which could apply are: (a) human health and public safety; (b) over-riding beneficial consequences for the environment; or (c) for other imperative reasons if the opinion of the European Commission has been given.

Test 2: No satisfactory alternatives to the use of ADDs

[8]https://www.nature.scot/professional-advice/safeguarding-protected-areas-and-species/licensing/species-licensing-z-guide/licensing-dolphins-whales-and-porpoises

[9] Our FOI questions to MS 19/1/18 and MS response

[10] ORJIP Project 4, Phase 1 Use of Deterrent Devices - Carbon Trust https://www.carbontrust.com/media/.../orjip-project-4-phase-1-summary-report.pdf

[11] http://ec.europa.eu/environment/nature/natura2000/management/docs/Aqua-N2000%20guide.pdf at page 69

EC Guidance states 'Where another solution exists any argument that it is not "satisfactory" will need to be strong and robust'[12] [13]. ADDs fail this test, as there are satisfactory alternatives to their use.

The issue of satisfactory alternatives to the use of ADDs is also pertinent to the ongoing shooting of seals by salmon farmers. The shooting of seals is licenced under the Marine (Scotland) 2010 Act. Guidelines to the Act, and seal shooting license conditions, state that seals can only be shot 'as a last resort'[14].

To a reasonable person the requirement that a seal can only be shot 'as a last resort' means that **all** other non-lethal methods of deterring seal attack have been tried. ADDs are not fully effective at deterring seals[15] [16]. Anti-predator nets have been found to be the only fully effective solution negating the use of ADDs and shooting of seals. These nets are being used successfully in Canada[17], Turkey[18] and Tasmania[19]. Closed circulation also provides effective separation of seals and farmed salmon and solves most of the environmental impacts of the industry.

Seals shot on farms which do not use the best technology are **not** being shot 'as a last resort' and thus farms relying on ADDs, rather than more efficient technology to prevent seal predation are failing to comply with their seal shooting license conditions. The salmon farm companies who shot most seals in 2015, Marine Harvest and Scottish Seafarms both rely on ADDs[20].

MS has never taken action against a salmon farm for a breach of the seal shooting license conditions.

Iwama et al (1997) concluded that ADD effectiveness diminished with time and that pinniped attacks continued to occur, even when ADDs were present. They recommended the prohibition of ADDs and the Canadian Department of Fisheries and Oceans for the British Columbia aquaculture industry are no longer issuing the letters of authority required for installation of an ADD[21].

A FOI reply from MS[22] reveals that of 172 Scottish fish farms, 121 use ADDs. Airmar ADDs are used at 62 farms, Ace Aquateq ADDs at 17 farms and Terecos are used at 39 farms. Only 6 farms use just 1 single ADD, whilst 84 farms (nearly 70%) use 4 ADDs or more. In some cases, up to 20 Airmar ADDs are being used at a single farm.

[12] http://ec.europa.eu/environment/nature/natura2000/management/docs/Aqua-N2000%20guide.pdf
[13] SNH Publication, EPS Licensing Guidance – Test 2 (2011) 2.3
[14] MS Seal Shooting Licence Application form.
[15] D.Pemberton and P Shaughnessy 1993 Interaction between seals and marine fish-farms in Tasmania
[16] Lepper, P.A., Gordon, J., Booth, C., Theobald, P., Robinson, S. P., Northridge, S. & Wang, L. (2014) Establishing the sensitivity of cetaceans and seals to acoustic deterrent devices in Scotland. *Scottish Natural Heritage Commissioned Report No. 517.*
[17] Marine Harvest (2011) Marine Harvest Canada Takes Immediate Action to Reduce Seal and Sea Lion Kills
[18] Güçlüsoy, H., Savas, Y. (2003) Interaction between Monk seals Monachus monachus (Hermann, 1779) and marine fish farms in the Turkish Aegean and the management of the problem. Aquaculture Research 34:777-783
[19]Pemberton, D, Shaughnessy, P. D. (1993) Interaction between seals and marine fish-farms in Tasmania, and management of the problem. Aquatic Conservation 3:149-158
[20] SMRU advice to SASWG Members.
[21]Iwama, G., Nichol, L., Ford, J. (1997) Salmon Aquaculture Review: Aquatic Mammals and Other Species, Vancouver.
[22] Our FOI questions to MS 19/1/18 and MS response

Hjaltland Seafarms Ltd use **no** ADDs on their 25 farms and Cooke Aquaculture only use ADDs on 3 of their 22 farms. Fifty-one farms do not use ADDs, 8 of which do so to comply with the Wholefoods accreditation scheme, demonstrating that farms can operate without ADDs . There are alternatives to ADDs which do not harm cetaceans.

The RSPCA "Freedom Foods" (FF) accreditation requires that accredited farms operate ADDs continuously. The biggest individual seal shooting companies in 2015, Marine Harvest and Scottish Seafarms were both RSPCA – FF accredited salmon farms. In 2014 almost 70% of seals reported as shot were at FF accredited sites[23] which must use ADDs. SNH cites as justification for not objecting to the use of ADDs on Planning consents that they will not be used continuously. The farms which are supposed to use ADDs intermittently and are FF accredited must be breaking one or other condition.

The Aquaculture Stewardship Council requires that certified farms worldwide comply with strict requirements for responsible farming. Certified farms cannot use ADDs or kill marine mammals. In Norway, a total of 115 salmon farms are certified, including 49 Marine Harvest farms whereas in Scotland only 2 are certified, one of which is in freshwater where there are no seals. We welcome the recommendation of the ECCLR committee that Scottish farms should be certified[24].

The industry maintains that anti-predator nets trap wildlife: this might be the case if large mesh monofilament nets for example were used but this is not a problem in Canada where suitable mesh size and type is used. Anti-predator nets may reduce water flow a little, this is an economic issue and therefore not a consideration where a European Protected Species is concerned.

The use of single nylon nets is widespread in Scotland, this is the lowest cost of construction, but even when tensioned, nylon is more flexible than stronger net materials and seals can bite into a salmon through the mesh, in most cases without breaking the net[25]. Dead fish (morts) accumulate at the cage bottom (see video[26]) and if these are not regularly removed, seals are encouraged by an easy meal. Many farms using these cheaper nets shoot seals and use ADDs[27].

In summary: no salmon farm could pass this test: there are satisfactory alternatives.

Test 3: Favourable conservation status

The third and final stage of the test requires that the 'actions authorised will not be detrimental to the maintenance of the population of the species concerned at favourable conservation status in their natural range.'

[23] SNH FOI reply 25/04/17

[24] http://www.parliament.scot/S5_Environment/Inquiries/20180305_GD_to_Rec_salmon_farming.pdf

[25] Northridge, S., Coram, A. & Gordon, J (2013). Investigations on seal depredation at Scottish fish farms. Edinburgh: Scottish Government

[26] https://vimeo.com/home/myvideos/page:1/sort:plays/format:video (see video)

[27] Coram, A., Gordon, J., Thompson, D., Northridge, S (2014) Evaluating and assessing the relative effectiveness of non-lethal measures, including Acoustic Deterrent Devices, on marine mammals. Scottish Government.

We discuss Hab. Dir. Art 6 in section 4 and maintain that this test could not be passed.

We are concerned that the proposed Marine Scotland EPS Guidance[28] review could result in reduction of protection to cetaceans in order to allow salmon farms to obtain EPS licenses. We ask the Commission to intervene if EPS licensing conditions are to be relaxed.

The minutes of the SNH / MS discussion on ADDs and EPS 8/10/16[29] are very pertinent to this complaint, and raise concerns that MS intend to reduce the protection EU law affords to cetaceans. We summarise key points: -

- SNH asks MS *"for a clear and formal policy statement that sets out the government position, especially where this seems to diverge from published guidelines"*
- MS seeks to define 'reckless' in a way that ADD use by the aquaculture industry would not be an offence under Hab. Reg. 39(2). However, their legal advice is that it would be difficult to infer recklessness "unless there was an identified negative impact of ADDs used in aquaculture upon EPS species."
- SNH question MS interpretation, the purpose of EPS legislation is to avoid disturbance and harm to EPS species. Disturbance through ADD use (irrespective of the sector employing it) falls within this scope.
- SNH propose a compromise EPS process which would allow disturbance by ADDs in all but the most sensitive areas. We maintain that this would not comply with EU or Scottish law.
- According to MS "The Marine EPS Guidance would need to be updated, in relation to its description of Reg. 39(2)". We take this as an indication that MS are reluctant to comply with their statutory duty to enforce Hab. Reg. 39(2)
- It was emphasised that planning legislation cannot be used to address and manage impacts covered by other regulatory regimes (such as EPS legislation)

We submit that peer-reviewed science *does* show an identified negative impact (ADDs disturb cetaceans). The term "deliberate or reckless disturbance" in Hab.Reg. 39(2) is described by MS themselves[30] as a "*catch-all disturbance offence*" which a reasonable person would understand to mean that "deliberate or reckless" is intended to be interpreted in the widest possible sense.

Article 12(1)(b) of the Habitats Directive has been considered by the European Court of Justice. The Commission Guidance (paragraph 33) therefore proposes the following definition:

'Deliberate' actions are to be understood as actions by a person who knows, in light of the relevant legislation that applies to the species involved, and the general information

[28] Coram, A., Gordon, J., Thompson, D., Northridge, S (2014) Evaluating and assessing the relative effectiveness of non-lethal measures, including Acoustic Deterrent Devices, on marine mammals. Scottish Government.
[29] FOI response from SNH 25/04/17
[30] *The protection of Marine European Protected Species from injury and disturbance, Guidance for Scottish Inshore Waters*, March 2014 *paragraph 1.2.3 on page 9 (emphasis added).*

delivered to the public, that his action will most likely lead to an offence against a species, but intends this offence or, if not, consciously accepts the foreseeable results of his action.

We maintain that fish farm companies using ADDs consciously accept the foreseeable results of using ADDs: that cetaceans will be disturbed. Accordingly, the use of ADDs where there are cetaceans constitutes deliberate disturbance.

The test of recklessness in Scots law comes from the case of *Allan v Patterson* 1980 JC 57 for the majority of statutory offences. It is the following:
'[Performing the activity in a way] which demonstrates a gross degree of carelessness in the face of evident dangers.' (per Lord Justice-General Emslie at 59)

The legal paper "Recklessness in Scots criminal law" gives the following definition: -

"The mens rea of recklessness is generally defined either subjectively or objectively. A subjective approach says a person is reckless where he takes an unjustified risk of which he was actually aware. An objective approach says a person is reckless where he takes an unjustified risk of which he either was aware or ought to have been aware. He "ought" to have been aware of the risk where the reasonable person would have been aware of it."

The paper concludes that Scots law has always viewed objective recklessness as the basis for criminal liability, the ignorance of the risk to cetaceans would be no excuse for disturbing cetaceans. In just one case the subjective approach was take, thus there is a small chance that on a first offence a salmon farm might be acquitted on a charge of reckless disturbance under Hab. Reg, 39(2) in the unlikely event they could prove that they were unaware that ADDs disturb cetaceans. However, even if acquitted they would have to stop using ADDs as they would then be aware of the risk.

In summary: even though a farm may have ADDs on its Planning Permission, it is unlawful to use ADDs in an area where there is potential to disturb cetaceans unless an EPS licence is held.

If the use of ADDs in areas where they could disturb cetaceans is discontinued because it is an offence under Hab. Reg. 39(2) and the Nature Conservation (Scotland) Act 2004, there is no need to consider the further legal protection afforded by Article 6(3) of the Habitats Directive.

(3) The failure to carry out Habitats Directive Art.6(3) Appropriate Assessments

ADDs disturb cetaceans over large areas. Art. 6(3) appropriate assessments (section 2.2) should have been carried out on the impacts of ADDs on cetaceans in the Inner Hebrides and Minches cSAC both for existing farms and new applications. The cSAC, designated for harbour porpoise, is also important to minke whales and two well-studied populations of bottlenose dolphins. No appropriate assessments have been carried out on any salmon farms within the cSAC.

In 2017 Argyll and Bute Council granted a planning consent to the Marine Harvest Port na Cro farm[31], located within the cSAC. The application included 4 ADDs as part of the predator control plan.

Science based objections were lodged to the application by Scottish Environment LINK, Whale and Dolphin Conservation, Hebridean Whale and Dolphin Trust and ourselves, however a local SNH officer advised that Art. 6(3) appropriate assessments were not necessary (see section 2.3). We submit that this advice did not correctly interpret the applicable science or law and failed to apply the precautionary principle.

We discuss this case in section 2.3, it is a test case for the recently designated cSAC. It also sheds light on why the regulatory and consenting systems are failing to enforce the law.

Regulators have also failed to carry out Art.6(3) appropriate assessment on the ***cumulative impact*** of ADDs within the Inner Hebrides and Minches cSAC.

Scientific studies, discussed later, find that porpoise and other cetaceans are disturbed and excluded at great distances from active ADDs. However, even if the area of disturbance was deemed to be minor, the ruling of the European Court of Justice case *Sweetman*, which found that it would be an offence for a member state to allow even a small part of an SAC to be damaged[32] must be taken into account.

SNH's interpretation of the science is the opposite of precautionary, understating the adverse effects on cetaceans of ADD use, perhaps in order to justify their decision not to carry out Art. 6(3) appropriate assessments. Information provided under FOI/EIR suggests a worrying attitude amongst some MS and SNH officers, that they are more concerned at what the industry will accept than they are about their duty to enforce the law. For example, a SNH spokesperson at the Salmon and Aquaculture and Seals Working Group meeting 6/4/16 was asked if porpoise SACs will prevent the use of ADDs. The minuted reply was "They (SNH) believe that there is no need to alter the status quo in any significant manner".[33]

SNH contend[34] that the cSAC was designated at favourable conservation status (FCS) with an existing level of ADD use and, assuming this level does not increase, FCS will be maintained. This argument ignores FOI evidence from SNH[35] that the use of ADDs is increasing. It also fails to recognise that disturbance by ADDs is an offence under Hab. Reg 39(2). Moreover, it fails to recognise that fish farms are "plans or projects" and therefore must comply with Art.6(3) as well as the non-deterioration obligation of Art.6(2).

[31] Argyll and Bute Council Planning dept. Application 16/03407/MFF.
[32] Sweetman and others. CURIA C-258/11
[33] SNH FOI reply 25/04/17
[34] SNH FOI reply to D&J Ainsley question 13. 08/3/18
[35] http://www.parliament.scot/S5_Environment/Inquiries/20180305_GD_to_Rec_salmon_farming.pdf submission by SNH to ECCLR committee and SNH FOI reply

Art.6(3) requires demonstration beyond all reasonable scientific doubt[36] that the use of ADDs on any farm, in combination with all other ADDs within or close to the cSAC will not adversely affect the integrity of the site.

The same local SNH officers used a similar argument in 2006; that the Firth of Lorn SAC had been designated with a certain level of scallop dredging, and if this did not increase FCS would be maintained. The officers also maintained that Art. 6(3) appropriate assessment was not needed for scallop dredging. The EC disagreed and ruled that Art.6(3) appropriate assessment should have been carried out. Following this ruling the Firth of Lorn SAC was closed to scallop dredging. The officers who had wrongly advised that scallop dredging did not require appropriate assessment in 2006 also advised that appropriate assessment was not necessary for Port na Cro in 2017.

We welcome the 05/03/18 Environment, Climate Change and Land Reform Committee: Report on the environmental impacts on salmon farming[37], which calls for a precautionary approach and a resolution of the environmental problems and states that they are *'not convinced the sector is being regulated sufficiently or regulated sufficiently effectively. This needs to be addressed urgently because further expansion must be on an environmentally sustainable basis.'* ***'The status quo is not an option.'***

We append questions to MS and SNH. MS answered only one of our questions. SNH also avoided direct answers to simple questions on EPS legislation. The paucity of response and our reading of other FOI answers suggest that if MS and SNH have valid reasons for failing to enforce Hab. Reg. 39(2) and 44, the requirement for EPS licences, they are reluctant to share them with the public.

The salmon farming industry has a history of poor regulation. We discuss the Port na Cro Planning application as a test case in section 2.3. Emmamectin Benzoate (a toxic sealice medicine) levels of 3.04 µg/kg were reported in seabed samples near the farm in 2016 (the failure level is 0.763 µg/kg) [38]. It's neighbour Shuna SW breached sealice trigger levels between November 2016 and August 2017.[39]

We append FOI/EIR responses which support the view that the regulatory system is ineffective (appendix 2). There have been many breaches of regulations by salmon farms, however there have only been 2 fines or prosecutions since 2006, which were for discharges of effluent and diesel into rivers in 2007 and 2008. There have been no prosecutions or fines since the Wildlife and environmental Crime unit started operating in August 2011.

[36] *Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw, Natuurbeheer en Visserij (2004) Case C-127/02*
[37] http://www.parliament.scot/S5_Environment/Inquiries/20180305_GD_to_Rec_salmon_farming.pdf
[38] https://theferret.scot/45-lochs-polluted-fish-farm-pesticides/
[40]https://www.salmon-trout.org/2017/11/20/worst-lice-offenders-full-farm-list/?mc_cid=baa4450b8d&mc_eid=c839e4ea0e

2.2 Which is the **EU law** in question?

Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora, the 'Habitats Directive', Articles 12, 16 and 6

1. **Article 12 of the Habitats Directive** is transposed into Scottish law as the conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007, the 'Habitats Regulations'.

Regulation 39(2) states that, *'it is an offence to deliberately or recklessly disturb **any** dolphin, porpoise or whale (cetacean).'*[40]

It is also an offence under the Nature Conservation (Scotland) Act 2004 to *'intentionally or recklessly disturb a cetacean'.*

Marine Scotland's publication 'The Protection of Marine European Protected Species from injury and disturbance' offers: '*Regulation 39(2) […] provides further protection to cetaceans through an additional catch-all disturbance offence […] The purpose of this regulation is to provide cetaceans with protection at all times regardless of the circumstances of the mammal at the time of the disturbance in question[.]'*[41]

SNH provides further clarification:[42] *'In Scottish inshore waters, it is an offence to intentionally or recklessly kill, injure, capture, disturb or harass a cetacean.'*

The Scottish Marine Wildlife Watching Code states, *'it is an offence to deliberately or recklessly disturb or harass **any** whale, dolphin, porpoise, marine turtle or otter[.]'*[43]

When read with the precautionary principle, it is evident from the above that the Habitats Regulations and Nature Conservation (Scotland) Act 2004 create a comprehensive offence, aimed at tackling cetacean disturbance at the individual level. We submit that the wording of the laws (intentional, deliberate or reckless) is a catch-all to indicate that it is the disturbance that is illegal every time disturbance is caused, however that disturbance is caused.

2. **Article 16 of the Habitats Directive** states:

Provided that there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range, Member States may derogate from the provisions of Article 12 , 13, 14 and 15 (a) and (b):

Art 16 lists 5 situations where Member States may derogate from the provisions of Article 12, one of which is pertinent to this case:

[40] www.legislation.gov.uk/ssi/2007/80/regulation/10/made

[41] *The protection of Marine European Protected Species from injury and disturbance, Guidance for Scottish Inshore Waters*, March 2014 *paragraph 1.2.3 (emphasis added).*

[42] *https://www.snh.scot/professional-advice/safeguarding-protected-areas-and-species/protected-species/species-z-guide/protected-species-dolphins-whales-and protected-*

[43] *The Scottish Marine Wildlife Watching Code, 2016 page 19 (emphasis added).*

(c) in the interests of public health and public safety, or for other imperative reasons of overriding public interest, including those of a social or economic nature and beneficial consequences of primary importance for the environment;

Article 16 of the Habitats Directive is transposed into Scottish Law as Habitats Regulation 44. Regulation 44 allows disturbance of EPS under an EPS licence which can only be issued if all 3 conditions discussed in section 2.1 of this complaint are met.

If ADD use by salmon farms is banned as an offence under Hab Regs 39 and 44, further legal arguments are unnecessary. If not, protection is also offered by Article 6 of the Habitats Directive

3. Article 6 of the Habitats Directive

Article 6(3) applies in the Inner Hebrides and Minches cSAC, designated for harbour porpoise, it states:

> *'Any plan or project likely to have a significant effect on a […] site, either individually or in combination with other plans or projects,* ***shall undergo an Appropriate Assessment*** *to determine its implications for the site.* ***The competent authorities shall only agree to the plan or project after having ascertained that it will not adversely affect the integrity of the site concerned.'***[44]

Because case law refers to Art. 6 of the Habitats Directive, we will use the Directive, rather than the corresponding Regulations. Member states have a duty to accurately transpose regulations into national law. Some documents refer to Habitats Regulation Assessment, which is equivalent to Art. 6(3) appropriate assessment.

The European Court of Justice *Waddenzee* case clarifies that the precautionary principle is one of the foundations of the European Community's policy on the environment, and environmental law must be read in the light of it.[45] A risk to the environment exists if it *'cannot be excluded on the basis of objective information that the plan or project will have significant effects on the site concerned.'*[46]

In accordance with *Waddenzee*, and the precautionary principle, Article 6(3) should be interpreted as requiring an appropriate assessment unless no reasonable scientific doubt remains as to the absence of such effects.[47] The *Waddenzee* judgment states:

> *'in case of doubt as to the absence of significant effects such an assessment must be carried out'*[48]*… 'So, where doubt remains as to the absence of adverse effects on the integrity of the site linked to the plan or project being considered, the competent authority will have to refuse authorisation.'*[49]

[44] *http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A31992L0043*
[45] *Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw, Natuurbeheer en Visserij (2004) Case C-127/02, at 44.*
[46] *Ibid*
[47] *Landelijke Vereniging tot Behoud van de Waddenzee v Staatssecretaris van Landbouw, Natuurbeheer en Visserij (2004) Case C-127/02,* at 59.
[48] *Ibid,* at 44
[49] *Ibid,* at 57

Client Earth provides further clarification: *'Member States must only permit/**allow the continuation** of an activity within the Natura 2000 network if they have made certain that it will not adversely affect the integrity of that site.'* [50]

The court ruling Akester[51], determined that Art. 6(3) appropriate assessment should be carried out even if the adverse effects were deemed to be minor. ADDs have been well-studied and demonstrated to have far-reaching effects as discussed in sec 2.3.

Even if the area of disturbance was deemed to be small, the ruling of the European Court of Justice case *Sweetman*, which found that it would be an offence for a member state to allow even a small part of an SAC to be damaged[52] must be taken into account. Several peer-reviewed studies demonstrate that cetaceans are disturbed from large areas of important habitat by ADDs.

In advising that appropriate assessments are not necessary for existing and new consents for the use of ADDs within the Inner Hebrides and Minches cSAC SNH have failed to adopt a precautionary approach, no reasonable interpretation of the science would lead to the conclusion that no *"doubt remains as to the absence of adverse effects on the integrity of the"* Inner Hebrides and Minches cSAC, designated for harbour porpoise.

Art.6(3) Appropriate Assessments should be carried out on existing and new consents which use ADDs in SACs where there are cetaceans.

4. **The Marine Strategy Framework Directive** also requires controls on underwater noise.

[50] https://www.clientearth.org/reports/natura-2000-site-integrity-briefing.pdf
[51] www.richardbuxton.co.uk/sites/default/files/.../Akester%20-%20Wightlink.doc
[52] Sweetman and others. CURIA C-258/11

2.3 Describe the problem, providing facts and reasons for your complaint* (max. 7000 characters):

Salmon farm ADDs disturb, exclude and can cause hearing injury to cetaceans over large areas of Scottish inshore waters.

Disturbance and injury to cetaceans is an offence under EC and Sottish law, but the regulators are not enforcing the law.

ADD use within SACs can only be allowed if Hab. Dir Art 6(3) appropriate assessment demonstrates beyond reasonable scientific doubt that ADDs will not adversely affect the integrity of the site.

Port na Cro was one of the first farms to apply for planning consent after the Inner Hebrides and Minches cSAC was designated. We consider this as a test case and challenge SNH officer's advice that Hab. Dir Art 6(3) appropriate assessment was not necessary. We also challenge the advice that Shuna Sound would not be acoustically blocked by 4 Terecos ADDs. We also demonstrate that SNH sound maps based on an unvalidated model underestimate the areas of disturbance reported in peer-reviewed scientific studies based on field measurements.

We welcome the recent report from the Head of Policy and Advice of SNH to MS (annex 1) which recognises that ADDs disturb, displace and injure cetaceans and that the protection for cetaceans under the Habitats Regulations must be considered. The reply from MS calling for even more science appears to be a tactic to delay compliance with their duty to enforce the laws protecting cetaceans. It ignores the conclusion of common sense and comprehensive scientific studies that loud noises are harmful to cetaceans. It also ignores the precautionary principle and the reversal of the normal burden of proof under Art 6(3): the duty to prove no adverse effects if ADDs are to be allowed.

There are clearly inconsistencies between the advice to planners given by local SNH officers, the answers given to FOI requests, the sound maps produced by SNH which seek to underestimate the adverse effects of ADDs and the report from the Head of Policy and Advice of SNH to Marine Scotland in annex1.

Because ADDs are not always effective at deterring seal attack, farms which use ADDs also shoot seals. US policy is to stop importing farmed salmon unless all aquaculture operations are prohibited from killing or serious injury of marine mammals.

The US Department of Commerce's National Oceanic and Atmospheric Administration has issued guidance regarding this policy to the European Union, stating that 'the harvesting nation must demonstrate that all aquaculture operations.... sited in marine mammal habitat are prohibited from intentional killing or serious injury of marine mammals.' If valuable exports of Scottish farmed salmon to the US are to continue, seal shooting and hearing injury to cetaceans will have to stop by 1 January 2020..

There are alternatives to the use of ADDs which do not involve harming cetaceans or shooting seals.

Scientific studies on disturbance, exclusion and hearing damage to cetaceans by ADDs

Disturbance of any cetacean, at any distance from an ADD is an offence under Hab. Reg. 39(2). Unless the EC rules that the regulation does not apply, the use of ADDs must stop in areas where there are cetaceans. In this case there is no need to consider Hab. Dir Art. 6(3).

If it is ruled Hab. Reg. 39(2) does not apply, the best available scientific estimates of the distances at which disturbance, exclusion and hearing injury can occur would be required to inform Art. 6(3) appropriate assessments.

Recent studies have concluded that harbour porpoises are particularly sensitive to sound and that disturbance occurs at lower sound pressure levels (SPL) than previously accepted. Kok et al., (2017)[53] recorded disturbance to captive porpoises, which chose to swim from a noisy pool to a quiet pool at 100 dB re 1µPa (RMS). In their estimation of the area in which porpoise within the cSAC are disturbed by ADDs, however, SNH use the dated USA NOAA estimate that disturbance to small cetaceans (not specific to the sensitive porpoise) occurs at 120 dB re 1µPa (RMS).

Brandt et al., (2012)[54] recorded ***exclusion*** of 97.66% and 94.25% of porpoise at 2 stations ~7.5km from a single active Lofitech ADD (see table 2 in her results): the SPL at this distance was 113 dB re 1µPa (RMS). She also found by aerial survey that ~85% of porpoises were excluded from an area of 990km^2 by the ADD.

Olesiuk (2002) found that around 90% of porpoises were excluded within a range of 3.5 km of an active ADD (the maximum distance observed in this study).[55] Neither Brandt nor Olesiuk measured porpoise numbers at distances greater than 3.5 km or 7.5 km from the ADD, however it is probable that porpoises are excluded at greater distances.

Brandt et al (2012 b) stated that a loud ADD could be audible to harbour porpoise at a range greater than 20km.[56] Signals from an Airmar ADD were audible in the Sound of Mull at more than 16km (Calderan et al 2007)[57], and such a device could theoretically be heard at 20.2km[58]. ADDs are audible to hydrophones at up to 30 km in the cSAC[59]. We accept that audibility is not the same as disturbance, but submit that the 10 km zone of disturbance plotted on fig.3, the Corram report to MS is significantly less than field observations.

Killer whales in British Columbia were excluded from a 10km radius of an Airmar ADD.[60] Two further surveys in BC concluded that ADDs disturb and displace harbour porpoise from their traditional feeding areas.[61] [62] Minke whales show pronounced avoidance to ADDs at considerable ranges (McGary et al., 2017)[63].

Lucke et al., (2009)[64] found that porpoises are vulnerable to temporary threshold shift (TTS) hearing injury (which can become permanent on short exposure to loud or longer exposure to moderate noise) at a sound pressure level (SPL) of 164.3 dB re 1 µPa (RMS)[65]. The output of ADDs used by salmon farms range from

[53] Kok, A.C.M.,et al,.Spatial avoidance to experimental increase of intermittent and continuous sound in two captive harbour porpoises. *Environmental pollution (2017),* https://doi.org/10.1016/j.envpol.2017.10.001

[54] Brandt, M. J., Höschle, C., Diederichs, K., Betke, K., Matuschek, R., Witte, S., Nehls, G. (2012c) Far-reaching effect of a seal scarer on harbor porpoises (Phoena phocoena). *Aquatic Conservation:Marine and Freshwater Ecosystems:1-11*

[55] Olesiuk et al (2002) *Marine Mammal Science, 16 (4) pp 843-862*

[56] Brandt, M. J., Höschle, C., Diederichs, K., Betke, K., Matuschek, R., Witte, S., Nehls, G. (2012b) Effectiveness of a sealscarer in deterring harbor porpoises (Phecoena phoconea) and its application as a mitigation measure during offshore pile driving. *Bioconsult SH, Husum, Germany. 0-1t al.,09*

[57] Calderan, S.V., Booth, C.G., Stevik, P.T., Gordon, J., 2007. Distribution of harbour porpoises (*Phocoena phocoena*) in the Sound of Mull in relation to ADD use: 2003 - 2006. A report prepared by the Hebridean Whale and Dolphin Trust., p. 34. Scottish Natural Heritage & Scottish Sea Farms.

[58] Jacobs, S.R., Terhune, J.M., 2002. The effectiveness of acoustic harassment devices in the Bay of Fundy, Canada: seal reactions and a noise exposure model. Aquatic Mammals 28, 147 - 158.

[59] FOI reply from SNH DOC1 25/04/17

[60] Morton, A. B., Symonds, H. K. (2002) Displacement of Orcinus orca (L.) by high amplitude sound in British Columbia, Canada. *Journal of Marine Science, 59: 71-80*

[61] Johnston, D. W., Woodley, T. H. (1998) A survey of acoustic harassment device (AHD) use in the Bay of Fundy, NB, Canada. *Aquat. Mamm. 24 (1): 56-61*

[62] Strong, M. B., Trippel, E. A., Clark, D. S., Neilson, J. D., Chang, B. D. (1995) Potential impacts of use of acoustic deterrent devices (ADDs) on marine mammals in the Quoddy Region based on a study conducted in British Columbia waters. *DFO Atlantic Fisheries Research Document 95/127.*

[63] McGarry, T., Boisseau, O., Stephenson, S. and Compton, R. (2017). Understanding the effectiveness of acoustic deterrent devices (ADDs) on minke whale (Balaenoptera acutorostrata), a low frequency cetacean. ORJIP Project 4, Phase 2. RPS Report EOR0692. Prepared on behalf of The Carbon Trust.

[64] Lucke *et al.* (2009) Temproary shift in masked hearing thresholds in harbour porpoise after exposure to seismic airgun stimuli. *J Acoust Soc Am 125:4060-70*

[65] Lepper, P.A., Gordon, J., Booth, C., Theobald, P., Robinson, S. P., Northridge, S. & Wang, L. (2014) Establishing the sensitivity of cetaceans and seals to acoustic deterrent devices in Scotland. *Scottish Natural Heritage Commissioned Report No. 517.*

Terecos at 178 dB re 1 µPa (RMS)[66], measured at 184 dB re 1 µPa by Oelisk[67] , Lofitech at 189 dB re 1µPa (RMS) to Airmar dB plus 11 at 197 dB re 1µPa (RMS).

Scottish studies by Northridge et al [68] and Booth [69] found that ADDs disturb and exclude porpoise over wide areas and may block channels to porpoises. Booth produced a sound map of the Sound of Mull from field measurements (Figure 6.8 below). Almost all of the surveyed areas had SPL above Kok's disturbance threshold of 100 dB re 1 µPa (RMS) and large areas had sound levels above Brandt's 113 dB re 1 µPa (RMS) exclusion threshold and the NOAA estimate of 120 dB re 1 µPa (RMS) for disturbance used by SNH.

Figure 6.9 shows Booth's measured sound levels at given distances from ADDs. A quick survey of the graphs indicates that 5 km from the ADD on sites (a) and (c) ~90% of Booth's sound measurements were above 100 dB re 1µPa (RMS), ~45%were above 113 dB re 1µPa (RMS) and ~25% above 120 dB re 1µPa (RMS). The range of values was ~100 to 118 dB re 1µPa(RMS) 7.5 km from the ADD on site (b) and 100-125 dB re 1µPa (RMS) at 1200m on site (c), possibly due to the topography of L. Sunart, at the north of Fig.6.9. Sites (a),(b) and (c) were in the same ballpark as Brandt's measured value of 113 dB re 1µPa (RMS) at 7.5km from the ADD.

Booth's soundmap Fig. 6.8 below shows that all surveyed areas in the sound of Mull were subject to SPLs above Kok's 100 re 1µPa (RMS). The SE end of the sound is 15km from 3 ADDs and has received levels of 105 to 110 re 1µPa (RMS). The islands 8km north of the southernmost ADD had a SPL of 115 re 1µPa (RMS), consistent with Brandt's measured 113 re 1µPa (RMS) at 7.5 km. There were 9 farms with ADDs in Booth's 2010 study, now there are thirteen farms with ADDs in the same area.

In determining the zone of disturbance to porpoise to inform an Art.6(3) appropriate assessment, the best available evidence needs to be used, so field measurements would carry far more weight than a model (which would only be robust if validated by field measurements). In the light of the ECJ Waddensea ruling, an appropriate assessment would need to prove ***beyond reasonable scientific doubt*** that ADDs do not adversely affect the integrity of the site before those ADDs could be allowed.

A reasonable scientist would take account of Kok's disturbance threshold of 100 dB re 1µPa (RMS), it is clear that the disturbance threshold lies below 113 dB re 1µPa (RMS) at which 96% of porpoise were excluded.

Although there is little evidence for the distance at which porpoise are not disturbed, there is good evidence from Brandt and Booth that the SPL attenuates to ~113dB around 7.5 to 8 kms from a Lofitech or Airmar ADD at which level ~96% of porpoise are excluded. The zone of disturbance must be greater than this for a typical farm and ideally should be measured as the values are site specific.

SNH use the dated non-precautionary 120 dB re 1µPa (RMS), and base their predictions on a mathematical model, it is not clear if their inputs to the model have been validated by field measurements. Their predictions that the zone of disturbance for an Airmar ADD is 2.5 Kms and for a Terecos is 50metres are not precautionary and an Art 6(3) appropriate assessment based on these predictions would not have proven beyond reasonable scientific doubt that ADDs do not adversely affect the integrity of the cSAC.

We asked SNH why they do not use Kok's threshold for disturbance. They replied that they will not accept data from captive animals, which is strange because the Sea Mammal Research Unit works with ADDs on captive seals. They also said that Kok's threshold was too low because of background noise. Background noise in most sealochs (at Port na Cro for example) will be low with little traffic or wave action. Any argument that 100 dB re 1µPa (RMS) would be too low because of background levels would need to be supported by robust science and proof that the background noise is of similar frequency to the ADDs.

[66] Northridge, S., Coram, A. & Gordon, J (2013). Investigations on seal depredation at Scottish fish farms. *Edinburgh: Scottish Government*
[67] Olesiuk et al (2002) *Marine Mammal Science, 16 (4) pp 843-862*
[68] Northridge, S., Coram, A. & Gordon, J (2013). Investigations on seal depredation at Scottish fish farms. *Edinburgh: Scottish Government*
[69] Booth, C. G (2010). Variation in habitat preference and distribution of harbor porpoises west of Scotland. *St Andrews PhD*

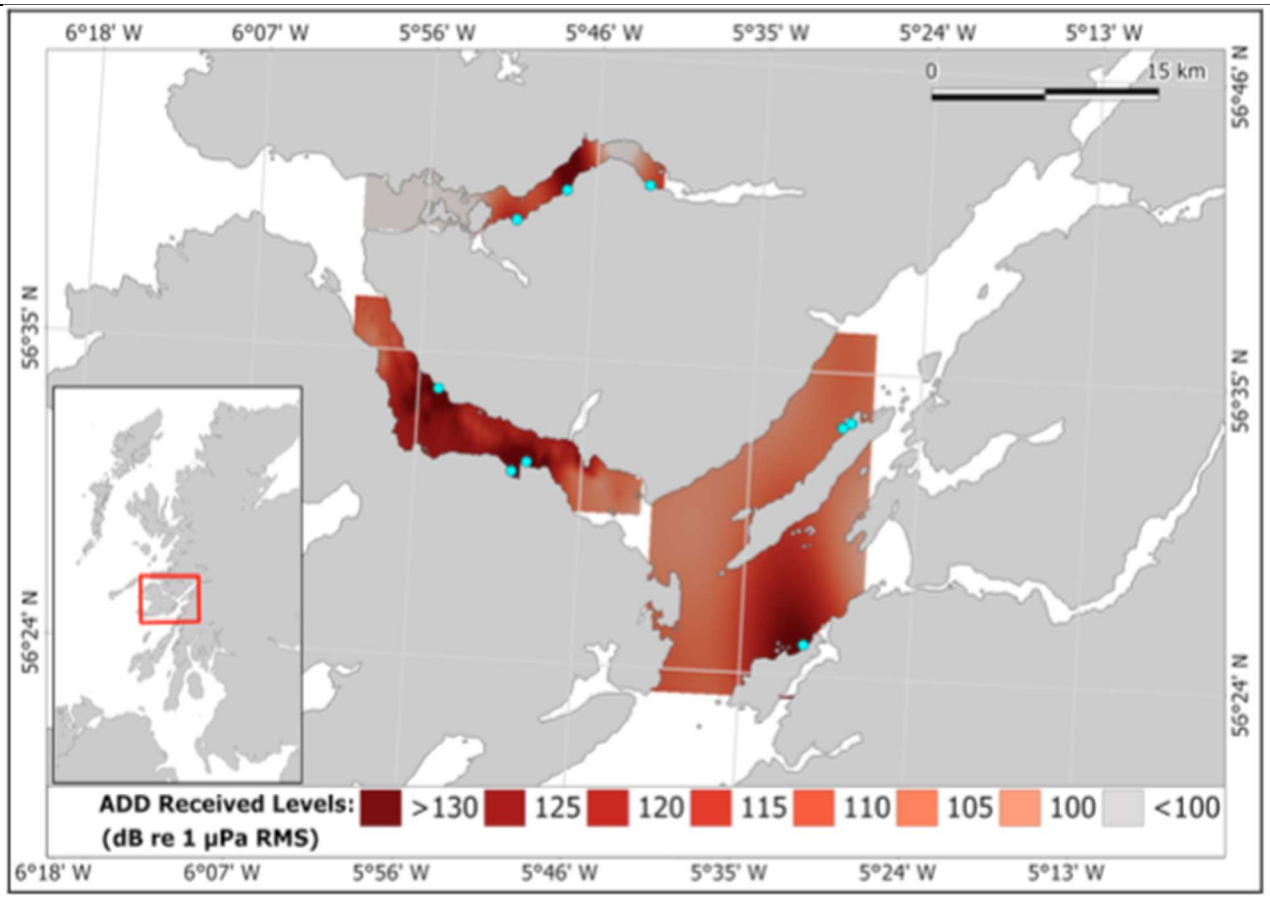

Figure 6.8 - Interpolated sound fields of the main cluster of CAADs observed on the west cast of Scotland. Light blue dots show the position of the CAAD sites. Received level legend and scale bar are shown. Airmar CAAD Source Level: 194 dB re 1 µPa (RMS).

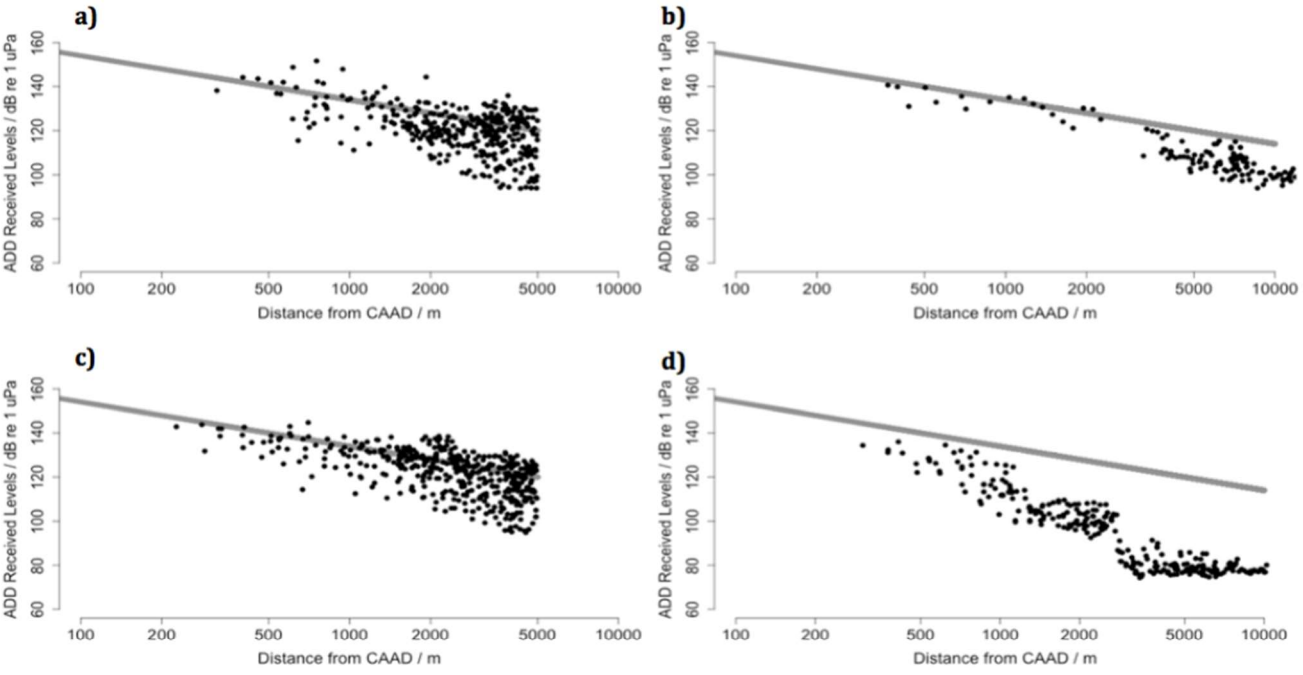

Figure 6.9 – The relationship between Received Level (RL) and distance from the active CAADs for four sites in the Inner Hebrides: (a) Fishnish B (in the Sound of Mull); (b) Kerrera; (c) Fiunary (in the Sound of Mull) and (d) Loch Sunart. The received levels of CAAD signals are represented by the black dots and the expected propagation loss under a spherical spreading model (from a source level of 194 dB re 1 µPa) is shown by the grey line.

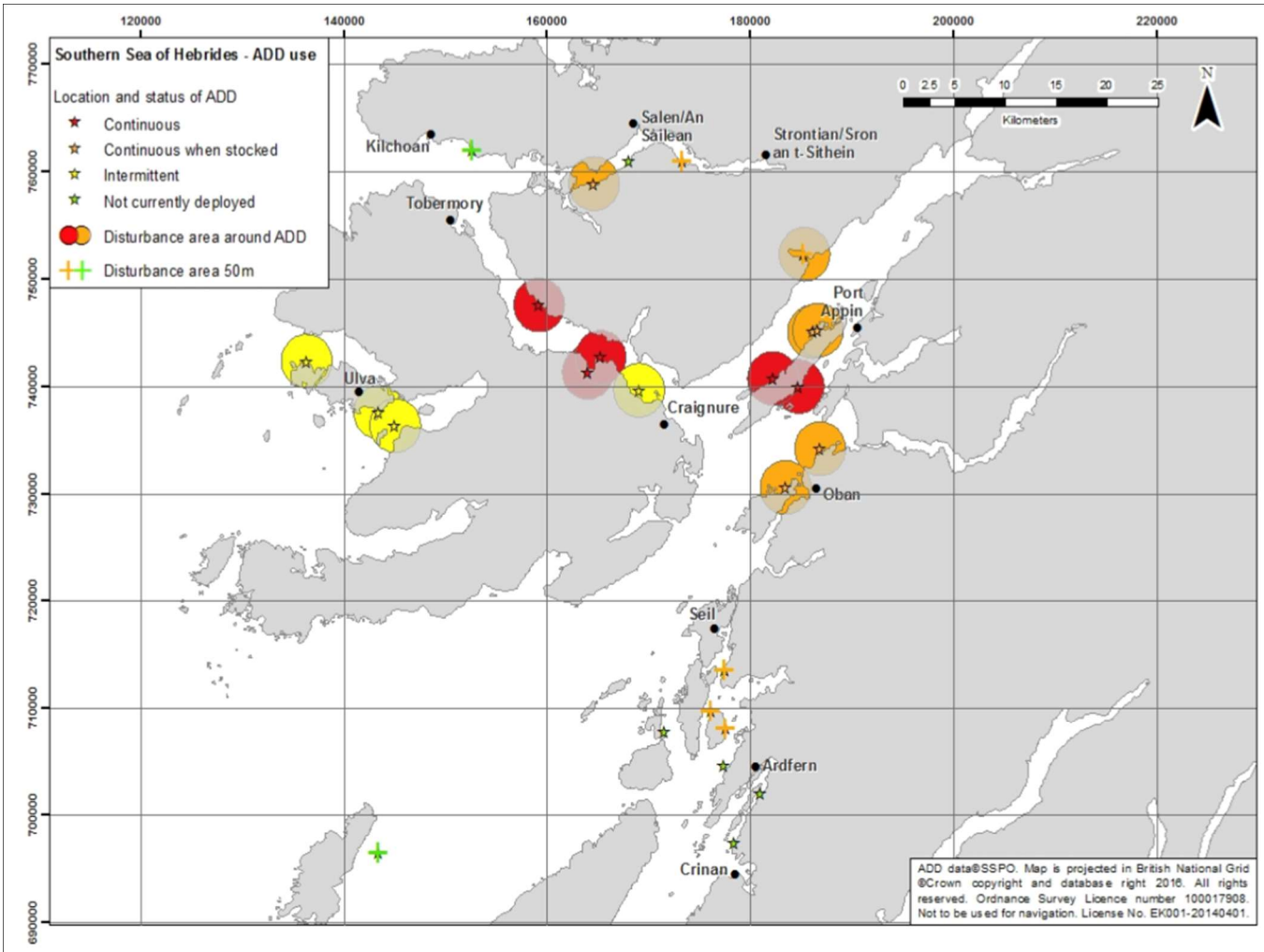

Fig 1. SNH map showing zones of disturbance of 2.5 km for Airmar ADDs and 50m for Terecos ADDs

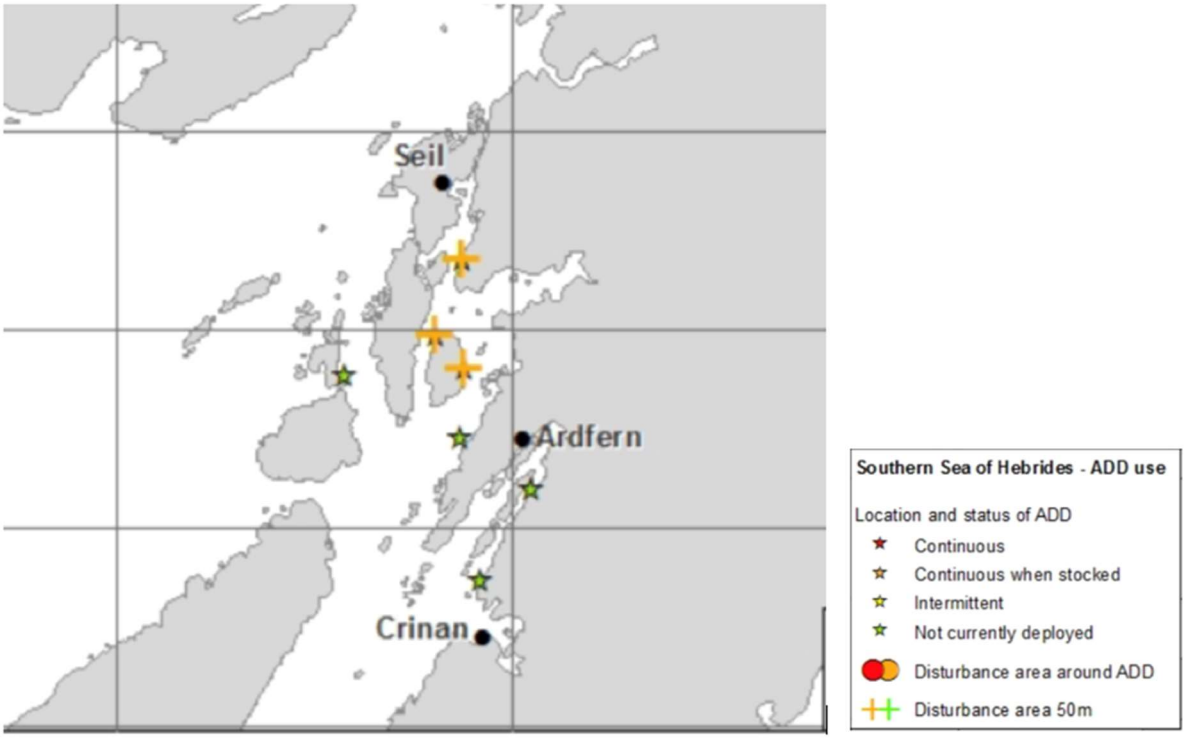

Fig 2. Extract from Fig 1. Showing ADDs around Shuna island, with Port na Cro the central yellow cross. The crosses indicate SNHs view that 4 Terecos ADDs have a disturbance area of 50m.

Fig.1 and fig 2. "Southern sea of Hebrides" sound maps provided under FOI by SNH show their estimates of the areas of disturbance by ADDs, based on their view that disturbance occurs at up to 2.5 Kms from Airmar ADDs (note the disparity between Booth's and Brandt's measured levels and SNH modelled levels). The crosses around Shuna on the smaller map show SNH's view that 4 Terecos ADDs only disturb porpoises at 50mtrs from source. Port na Cro is the westernmost yellow cross.

Given that Brandt's Lofitech attenuated from189 dB re 1µPa (RMS), to 113 dB re 1µPa (RMS), in 7.5 km, we struggle to understand how SNH predict that the 197 dB re 1µPa (RMS), Airmar ADD range of disturbance is 2.5km. We find it even more difficult to understand the SNH prediction that 4 Terecos ADDs which each output 178 dB re 1µPa (RMS), (or 185 dB re 1µPa (RMS), measured by Oelisk) could only disturb porpoise to a distance of 50m. We asked SNH to supply the figures input into their model, they supplied the formulae, but not the input figures.

The distance at which the noise produced by a single Terecos ADD with an output of 178dB re 1 µPa rms will fall below injurious or disturbance levels depends on the propagation conditions of the site. A textbook[70] calculation suggests that propagation loss could range between 20 Log (range) in open water and 10 Log (range) in a perfectly ducted situation. Propagation loss in Scottish coastal waters is around Log15 (range).

The ranges for 178dB to fall to 120dB are;
For 20LogR prop loss range to 120dB is 0.794km
For 15LogR prop loss range to 120dB is 7.35km
For 10Log R prop loss range to 120dB is 63km

The ranges for 178dB to fall to 113dB (Brandt's threshold for exclusion of ~96% of porpoise) are;
For 20LogR prop loss range to 113dB is 1.778km
For 15LogR prop loss range to 113dB is 21.5km
For 10Log R prop loss range to 113dB is 316km

Brandt's disturbance threshold of 113 dB re 1 µPa (RMS)[71] corresponds to a calculated distance of 21.5kms for a *single* Terecos ADD using 15LogR prop loss. Even using the 20LogR prop loss for open water and the non-precautionary 120dB these figures do not support the SNH officer's claim that the .6 Km wide Shuna Sound would not be acoustically blocked by the 4 Terecos ADDs.

A mathematical model such as the one used by SNH to estimate the range of disturbance for ADDs can provide a wide range of answers depending on the inputs used and is worthless unless validated by field measurements.

Fig 3 shows the sound map from Corram's report to MS. Corram identified a zone of audibility at 10km.
As discussed, other studies show the zone of audibility can be as high as 30m depending on propagation conditions. However, the green zone represents a realistic estimate of the zone of disturbance, based on Brandt and Booth's field measurements, which must be greater than Brandt's 7.5km exclusion. This and Booth's map would be more realistic sound maps to inform an Appropriate Assessment of the cumulative impact of ADDs on the cSAC, than the maps so far produced by SNH (fig 1,2 & 4).

[70] Urick R.J. (1983) Principles of underwater sound. McGraw-Hill.
[71] Brandt, M. J. et al (2016) Effects of offshore pile driving on harbor porpoise abundance in the German Bight. *Hamburg, Germany: Offshore Forum Windenergie.*

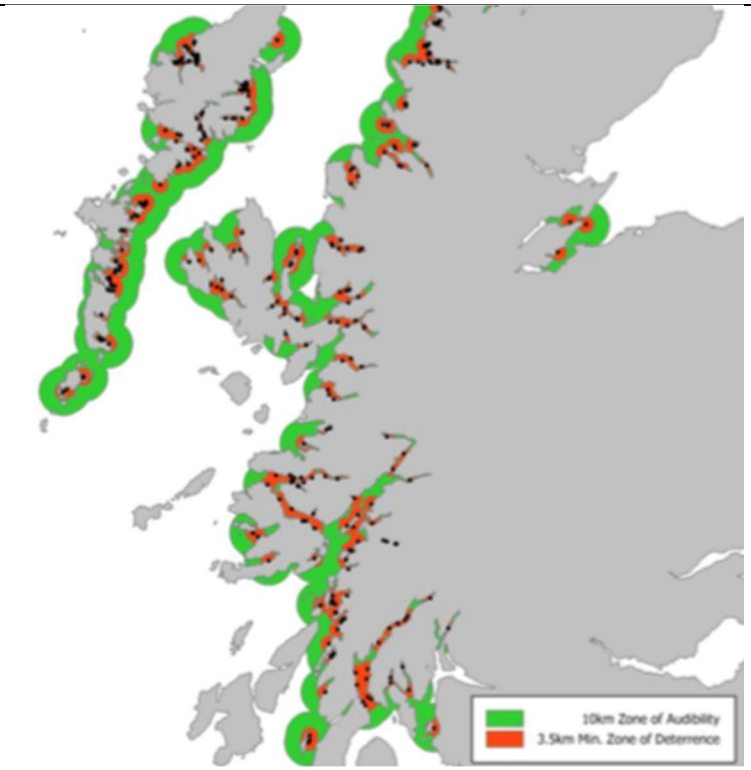

Fig 3. Map from Corram et al., (2014) Report to Marine Scotland showing zone of deterrence at 3.5km and zone of audibility at 10km.

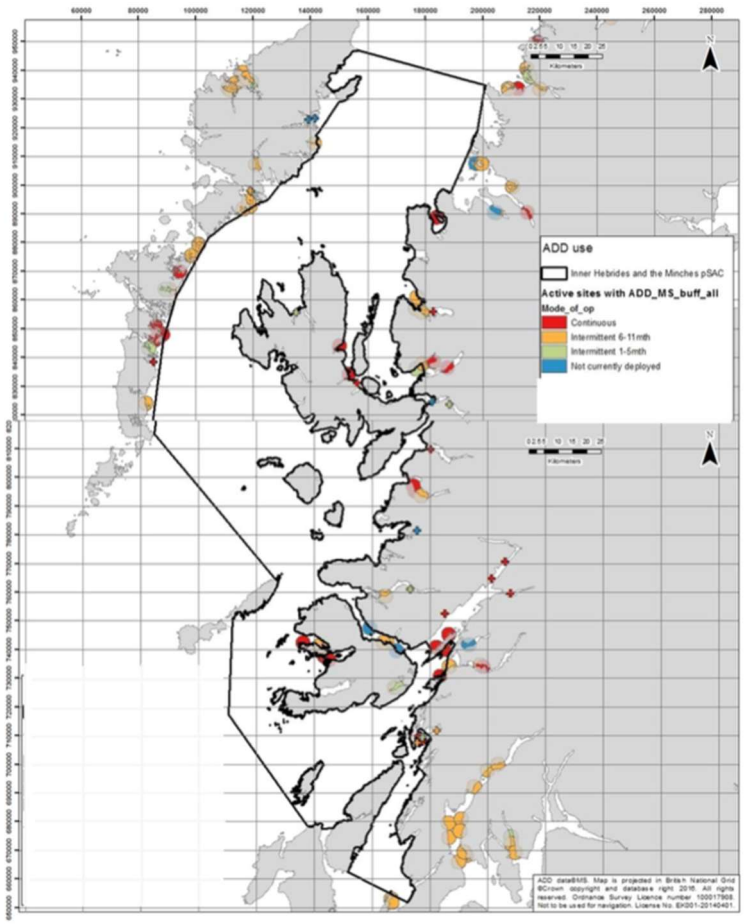

Fig 4. The sound map supplied by SNH under FOI showing the cSAC boundary and the disputed SHN estimate of the zones of disturbance of ADDs.

The potential for hearing injury

SNH's commissioned report by Lepper et al 2014[72] addresses the evidence of porpoise disturbance, exclusion and potential for hearing damage by ADDs. The final summary point of that paper states that:

'*Modelling of the exposure time to exceed injury criteria for seals and porpoises at given ranges from active ADDs suggest that there is a credible risk of exceeding injury criteria for both seals and porpoises. Thus,* ***the risk that ADDs at Scottish aquaculture sites is causing permanent hearing damage to marine mammals cannot be discounted.'***

The report explains that auditory systems can be damaged both by instantaneous exposure to loud sounds and by cumulative exposure over a period of time. The report predicts the time to reach the threshold for temporary hearing injury, which can become permanent if exposure continues, would be 2.5 hours a porpoise stayed at 100m from a single Terecos device and that the safe range for 24-hour exposure would be beyond 500m.

The study also predicts that the time to reach threshold for hearing injury decreases pro rata with the number of devices deployed. For example, at 500m the injury threshold is reached after 5.5 hours for a single Airmar ADD, 2.75 hours for 2 ADDs and 1.8 hours for a farm with 3 ADDs. Some farms have up to 20 Airmar ADDs.

There is currently no ADD type used on Scottish Farms that do not disturb porpoise. There was one small study as part of a larger report that suggested that Terecos might disturb less than other makes[73], however the scientists who carried out the study put in a caveat to their report which stated that further work would have to be done to ascertain whether the results which were accurate. The instruments used had proved to be malfunctioning and they had not had an opportunity to repeat their experiments. Because of the malfunction the scientists had no way of knowing if the ADD was working at the times it was supposed to be turned on.

An ADD aimed at disturbing seals but causing less disturbance to porpoise may become available. The low frequency may be less audible to porpoise but can still cause hearing damage, which is particularly dangerous if it does not disturb porpoise from the vicinity of the ADD. It would still disturb dolphins.

We disagree with SNH's view that Art. 6(3) appropriate assessments were not required for existing or new farms within the cSAC and contend that this opinion was not based on robust science and did not embrace the precautionary principle. We welcome the information[74] that SNH's developing guidance on the use of ADDs within the cSAC will require Habitats Regulation Assessment (HRA) (Art. 6(3) appropriate assessment is transposed into Scottish law as HRA) for future applications. We hope that these appropriate assessments will be carried out with scientific rigour and that Art. 6(3) appropriate assessments will also be carried on existing ADD use on individual farms and on the cumulative effect within the cSAC.

We call for SNH and the Planners to fulfil their statutory duties to enforce Hab. Reg. 39(2) unless a court decision states it is not applicable to Salmon farm ADDs, in which case Art. 6(3) appropriate assessments must be carried our within SACs.

[72] Lepper, P.A., Gordon, J., Booth, C., Theobald, P., Robinson, S. P., Northridge, S. & Wang, L. (2014) Establishing the sensitivity of cetaceans and seals to acoustic deterrent devices in Scotland. *Scottish Natural Heritage Commissioned Report No. 517.*

[73] Northridge, S., Coram, A. & Gordon, J (2013). Investigations on seal depredation at Scottish fish farms. *Edinburgh: Scottish Government*

[74] Email from George Lees SNH to David and Jean Ainsley 8/3/18.

Port na Cro Planning Application[75] within the Inner Hebrides and Minches Porpoise cSAC

Given that the Inner Hebrides and the Minches cSAC is designated to protect harbour porpoise, it must be conceded that this is an important area for their conservation. There is a wealth of data testifying to the importance of the cSAC and particularly of the part of the SAC where our test example Port na Cro is situated to porpoise conservation, including that summarised in SNH's consultation document on the cSAC, stating that:

> *'The western side of Cuan Sound and the approaches to it, along with the area around the islands of Torsa and to the south, were identified in the West Scotland Shelf model as being in the top 10% persistent high-density areas [for porpoise].'*

Studies by Booth[76] and Gil Molinero[77]also demonstrate that the area affected by ADDs from Shuna Sound is one of the most important for porpoises in Europe.

Marine Harvest applied to Argyll and Bute Planners for new cages and 4 Terecos ADDs at Port na Cro in Shuna Sound on 19/2/2016. This was the first planning consent after the cSAC was designated. There are 5 salmon farms within 2 miles of Port na Cro, it's immediate neighbours Shuna SW and Ardmaddy hold CAR licences for 2500 tonne biomass. Shuna SW has a condition on it's planning consent prohibiting the use of ADDs

In their original letter to the Planning Department[78], SNH objected to the proposed use of ADDs at Port na Cro, stating that, *'in our view, this proposal is likely to have a significant effect on the harbour porpoise of the Inner Hebrides and the Minches cSAC.'*[79] This objection was later withdrawn by a local officer. [80] who advised that an Art 6(3) appropriate assessment was not necessary, claiming that Shuna Sound (which is ~600m) wide would not be 'acoustically blocked' by the use of ADDs at the farm.

One of the reasons given to support the SNH officer's withdrawal of their objection was that the farm had made a commitment that 'the devices would not be activated continuously, but only in response to a predation threat'[81]. SNH do not monitor or enforce compliance with such commitments. The controversial RSPCA Freedom Foods accreditation[82] requires that the ADDs are operated continuously.

The report to MS by Corram et al., 2016[83] states *'ADD usage is largely unregulated, including no monitoring of the effectiveness of the devices or the impact on other species'* SNH state in their submission to the ECCLR Committee *"There is evidence of an increase in the extent of marine acoustic pollution in areas of Scottish waters important to cetaceans [ ] we have concerns about the lack of a consistent approach to the monitoring and management of ADD usage"*

Following objections to the application, including Whale and Dolphin Conservation[84], Scottish Environment Link[85] (on behalf of Hebridean Whale and Dolphin Trust, National Trust for Scotland, Marine Conservation Society and Scottish Wildlife Trust), ourselves as affected wildlife tourism operators[86], Richard Kerr of the Planning Department emailed [87] the SNH officer. Mr Kerr pointed out that the neighbouring farm at SW Shuna had a planning condition precluding the use of ADDs and requiring seal blinds to be fitted to the nets, suggesting

[75] Argyll and Bute Council Planning dept. Application 16/03407/MFF.
[76] Booth, C. G (2010). Variation in habitat preference and distribution of harbor porpoises west of Scotland. St Andrews esp. page 165.
[77] Molinero.G MSc Heriot Watt University (2016)
[78] Letter 9.2.17 Andrew Campbell SNH to Richard Kerr Planning Department (Appendix 1)
[79] Argyll and Bute Council Planning Dept. Application 16/03407/MFF.
[80] Letter 8.3.17 Jane Dodd SNH to Richard Kerr Planning Department (Appendix 2)
[81] Letter 28.3.17 Andrew Campbell SNH to Jean Ainsley (Appendix 3)
[82] https://www.salmon-trout.org/wp-content/uploads/2017/09/RSPCA_Assured_report_2017_FINAL.pdf
[83] Coram, A., Gordon, J., Thompson, D., Northridge, S (2014) Evaluating and assessing the relative effectiveness of non-lethal measures, including Acoustic Deterrent Devices, on marine mammals. *Report to Marine Scotland.*
[84] Appendix 5
[85] Appendix 5
[86] Appendix 5
[87] email 16.3.17 at 15:18 Richard Kerr Planning department to Jane Dodd SNH (Appendix 4)

that the same condition should apply at Port na Cro. The SNH officer promptly replied, "We stand by our original response"[88]

The advice of the SNH officer to the Planning Department failed to fulfil SNH's statutory obligations, as read in the light of the precautionary principle, both under the Conservation (Natural Habitats, &c.) Amendment (Scotland) Regulations 2007[89] (the "**Habitats Regulations**") reg.39(2), and Council Directive 92/43/EEC (the "**Habitats Directive**") Art.6(3).The SNH officer failed to inform the Planners of the requirement to enforce Habitats Reg. 39(2). She also stated that Hab.Dir. Art.6(3) appropriate assessment was not necessary for the 4 ADDs.

As previously discussed, we dispute the SHN claim that the cumulative impact of 4 Terecos ADDs would not disturb porpoise further than 50 mtrs, (or 100m as stated in answer to our FOI question). Because this figure is very different to field measurements on other ADDs we asked under FOI for the input values to SNH's calculations: we have not been provided with these values. However, the acceptance by SNH that disturbance does occur confirms that the use of these ADDs is an offence under Habitats Regulation 39(2) and the Nature Conservation (Scotland) Act 2004.

We also dispute SNH's decision to use the least precautionary NOAA 120 dB re 1 µPa (RMS) sound level for disturbance of porpoise, ignoring more recent work which indicates as the figure could be as low as 100 dB re 1 µPa (RMS) and would certainly be below Brandt's threshold of 113 dB re 1 µPa (RMS) at which 96% of porpoise were excluded.

The ECCLR Committee concluded *"there appears to have been too little focus on the application of the precautionary principle in the development and expansion of the sector"* and *"the current consenting and regulatory framework, including the approach to sanctions and enforcement is inadequate to address the environmental issues".* We submit that SNH advice for this planning consent and their responses to our questions support the Committee's conclusions.

The Aquaculture Stewardship Council requires that certified farms worldwide comply with strict requirements for responsible farming. Certified farms cannot use ADDs or kill marine mammals. In Norway, a total of 115 salmon farms are certified, including 49 Marine Harvest farms whereas in Scotland only 2 are certified, one of which is in freshwater where there are no seals. We welcome the recommendation of the ECCLR committee that Scottish farms should be certified[90].

Nearly all Marine Harvest Scottish farms use ADDs and they shot more seals than any other fish farm company in 2015.

SNH maintain that Planners are responsible for planning decisions and the Planners say that their decisions are based on advice from SNH who are their advisers on conservation. The Akester [91] ruling states:*"For the purposes of the appropriate assessment the competent authority shall consult the appropriate nature conservation body, in this case Natural England, and shall have regard to any representations made by it"*

The SNH advice was clearly incorrect, and they are deemed to be the experts. It is not clear which body was responsible for an incorrect planning decision or how the environmental damage from a wrong decision should be redressed. This case illustrates how the current regulatory system for salmon farming is failing and this needs to be addressed by Scottish Government.

[88] email 16.3.17 at 15:40 Jane Dodd SNH to Richard Kerr Planning Department (Appendix 4)
[89] www.legislation.gov.uk/ssi/2007_20070080_en.pdf
[90] http://www.parliament.scot/S5_Environment/Inquiries/20180305_GD_to_Rec_salmon_farming.pdf
[91] www.richardbuxton.co.uk/sites/default/files/.../Akester%20-%20Wightlink.doc

We believe that the planning permission for ADDs at Port na Cro should not have been granted.

- **SNH accept that there is disturbance but failed to inform the Planners that *any* disturbance is an offence under Habitats Regulation 39 (2).**
- **The farm has no EPS License, an offence under Habitats Regulation 44[92]. We maintain that a planning consent alone is not permission to disturb an EPS species, and that the farm would not pass the 3 tests required for an EPS license.**
- **An Article 6(3) appropriate assessment was not carried out to demonstrate beyond all reasonable scientific doubt that the ADDs on this farm, in combination with the ADDs at neighbouring farms would not adversely affect the integrity of the cSAC.**

We thank you for your interest and hope that the EC will call for enforcement of the laws protecting cetaceans. We would welcome the opportunity to comment on input from Scottish authorities.

2.4 Does the Member State concerned receive (or could it receive in future) EU funding relating to the subject of your complaint?

○ Yes, please specify below ○ No ⊗ I don't know

2.5 Does your complaint relate to a breach of the EU Charter of Fundamental Rights?

The Commission can only investigate such cases if the breach is due to national implementation of EU law.

○ Yes, please specify below ⊗ No ○ I don't know

3. Previous action taken to solve the problem*

Have you already taken any action in the Member State in question to solve the problem?*

IF YES, was it: ⊗ Administrative ○ Legal ?

3.1 Please describe: (a) the body/authority/court that was involved and the type of decision that resulted; (b) any other action you are aware of.

-We submitted objection to Port na Cro planning application with follow up correspondence between ourselves and SNH.
-We submitted to the ECCLR Committee Inquiry. Report issued 05/03/2018.
-We have requested information under FOI from SNH, Marine Scotland and the Argyll and Bute and Highland Councils.

3.2 Was your complaint settled by the body/authority/court or is it still pending? If pending, when can a decision be expected?*

The complaint has not been settled and Marine Scotland, in particular, has refused to answer most of our questions. This is why we are seeking assistance from Europe.

9
%20No%20satisfactory%20alternative.pdf

IF NOT please specify below as appropriate

○ Another case on the same issue is pending before a national or EU Court
○ No remedy is available for the problem
○ A remedy exists, but is too costly
○ Time limit for action has expired
○ No legal standing (not legally entitled to bring an action before the Court) please indicate why:

○ No legal aid/no lawyer
○ I do not know which remedies are available for the problem
○ Other – specify

4. If you have already contacted any of the EU institutions dealing with problems of this type, please give the reference for your file/correspondence:

○ Petition to the European Parliament – Ref:……..
○ European Commission – Ref:……..
○ European Ombudsman – Ref:……..
○ Other – name the institution or body you contacted and the reference for your complaint (e.g. SOLVIT, FIN-Net, European Consumer Centres)

5. List any supporting documents/evidence which you could – if requested – send to the Commission.

⚠ Don't enclose any documents at this stage.

We can send:

- All communications between ourselves, SNH, Marine Scotland, Argyll and Bute and Highland Councils.
- All information obtained under FOI and our submission to the ECCLR committee.
- All legal references and all scientific references where copyright allows.

6. Personal data*

Do you authorise the Commission to disclose your identity in its contacts with the authorities you are lodging a complaint against?

⊗ Yes ○ No

 *In some cases, disclosing your identity may make it easier for us to deal with your complaint.*