Acoustic Deterrent Device Statement

November 2020

Scottish Environment LINK considers the use of Acoustic Deterrent Devices (ADDs) by the aquaculture industry in Scottish waters poses a significant and unnecessary risk to cetaceans. LINK believes regulation and management of ADD use by the salmon farming industry, with the ultimate aim of phasing out their use entirely, is required to ensure protection for cetaceans and full compliance with European Protected Species legislation.

It is LINK's opinion that the use of ADDs by the salmon farming industry should be phased out in a timely manner, and that effective regulation and management to control the use of ADDs must be implemented until ADD use has ceased.

Regulation of ADDs must require that:

1. ADDs should not be used in, or affect, sensitive areas, such as the Inner Hebrides and the Minches harbour porpoise SAC and Sea of Hebrides minke whale Marine Protected Area, or tidal races, bottlenecks and pathways, where data demonstrates their importance for cetaceans.
2. ADDs should only be used under licence, with strict conditions, as a last resort, for a time-limited period, with technical specifications that do not disturb or cause hearing damage to cetaceans. Their use should include independent monitoring and reporting to government as a requirement.
3. Farm operators must demonstrate the need for using ADDs, develop a plan for ADD use during the time-limited period permitted, and identify mitigation measures to be put in place that ensure no adverse effects on cetaceans.
4. Only physical barriers for fish protection that do not harm cetaceans or seals, such as tensioned nets and double netting, should be in place before considering the use of ADDs.

LINK is the forum for Scotland's voluntary environment community, with over 35 member bodies representing a broad spectrum of environmental interests with the common goal of contributing to a more environmentally sustainable society. This statement sets out LINK member concerns on the use of ADDs by the aquaculture industry in Scotland.

The use of ADDs in the marine environment has been proven to cause disturbance and harm to cetaceans.[1] The use of ADDs throughout Scotland's aquaculture industry is currently unregulated with respect to their impact on cetaceans. This omission requires

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

immediate corrective action by Scottish Government, agencies and the industry to address the potential for widespread and indiscriminate risk of harm to European Protected Species.

Background

Cetaceans (whales, dolphins and porpoises) are strictly protected in Scottish waters. It is illegal to deliberately or recklessly disturb any cetacean under Regulation 39(2) of the Conservation (Natural Habitats etc.) Regulations 1994 unless a European Protected Species (EPS) licence has been issued. Furthermore, the Scottish Government has a legal obligation to ensure human activities and industries do not negatively impact the favourable conservation status of cetaceans in Scottish waters.

ADDs are used by fish farms to protect against depredation damage caused by seals, which are attracted to the salmon within the net cages. ADDs are powerful acoustic devices that emit an intense and aversive noise into the sea intended to scare away seals. The effectiveness of ADDs in reducing seal depredation is unclear.[2] In some cases, seals are attracted to ADDs, associating the noise with a feeding opportunity, which has led to longer exposure to levels of sound that could cause long-term damage to their hearing.[3]

Many studies have shown that the noise ADDs emit can cause disturbance and hearing damage in cetaceans[1], which depend on sound for navigation, communication and foraging. In our opinion, any use of ADDs that causes disturbance to cetaceans would constitute an infringement of the Conservation (Natural Habitats etc.) Regulations 1994.

It has been found that harbour porpoise avoid areas where ADDs are active at Scottish fish farms. In some instances, animals are excluded from large areas of habitat around farms.[4] Harbour porpoises' sensitivity to underwater noise and their high energetic requirements[5] make them particularly susceptible to disturbance and displacement by ADDs. Recent studies have also shown that minke whales show strong avoidance behaviour in response to noise from ADDs.[6]

The west coast of Scotland, where most of Scotland's fish farms are located, is an important area for harbour porpoise (Inner Hebrides and the Minches Special Area of Conservation (SAC)[7]) and minke whales (Sea of Hebrides Nature Conservation Marine Protected Area (MPA)). The area is also important for a range of other whale and dolphin species, all of which are susceptible to disturbance from noise pollution.

Recent work has demonstrated that ADDs are a significant and chronic source of underwater noise on the Scottish west coast and that both the number and geographic range of ADD use had substantially increased over the past decade.[8] It is expected that this trend will continue as the industry expands and production increases.

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[2] Götz, T. and Janik, V.M. (2013). Acoustic deterrent devices to prevent pinniped depredation: efficiency, conservation concerns and possible solutions. Marine Ecology Progress Series, 492: 285–302.
[3] Lepper, P.A., Gordon, J., Booth, C., Theobald, P., Robinson, S. P., Northridge, S. and Wang, L. (2014). Establishing the sensitivity of cetaceans and seals to acoustic deterrent devices in Scotland. Scottish Natural Heritage Commissioned Report No. 517.
[4] Booth, C.G. (2010). Variation in habitat preference and distribution of harbour porpoises in the west of Scotland. Ph.D. Thesis, University of St Andrews. Pp. 240.
[5] Wisniewska DM, Johnson M,Teilmann J, Siebert U, Galatius A, Dietz R,Madsen PT. 2018 High rates of vessel noise disrupt foraging in wild harbour porpoises(*Phocoena phocoena*). Proc. R. Soc. B 285:20172314.
[6] 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.
[7] Nature Scot – Inner Hebrides and the Minches SAC: https://sitelink.nature.scot/site/10508
[8] Findlay et al., 2018. Mapping widespread and increasing underwater noise pollution from acoustic deterrent devices, *Marine Pollution Bulletin 135, 1042-105*.

The use of ADDs by the Scottish aquaculture industry is currently unregulated and largely undocumented. European Protected Species (EPS) licences are not a requirement and there is no public record of which sites use ADDs, the number or type of ADDs in use, or how and when they operate.[9] Currently the only control on the use of ADDs by fish farms is through conditions imposed under the Planning Consent. Typically, such considerations are only applied to new planning applications and have not been applied to older consents, many of which have been in force for several years.

In July 2020, the Scottish Parliament passed the Animals and Wildlife (Penalties, Protections and Powers) (Scotland) Bill, which included a prevention on the licensing of seal shooting for the protection of fisheries or fish farms from seals.[10] Whilst LINK welcomes the ban on seal shooting, there is concern that the use of ADDs will increase as a result.

The Animals and Wildlife bill requires the Scottish Government to review the use of ADDs by the aquaculture industry and produce a report by March 2021. LINK members consider it vital that the following points are considered within this report:

1. Under the precautionary principle, it must be assumed that any use of ADDs constitutes disturbance unless proved otherwise.
2. It is an offence under the Conservation (Natural Habitats etc.) Regulations 1994 (as amended) Regulation 39 where 'it is an offence to deliberately harass or disturb any cetacean. To knowingly cause or permit this is also an offence.
3. It is a requirement under the Conservation (Natural Habitats etc.) Regulations 1994 (as amended) Regulation 44 for any salmon farm application within an SAC to provide an Appropriate Assessment.
4. Under the Marine (Scotland) Act 2010, Section 95 (1) (b), a person commits an offence within an MPA if 'the act has significantly hindered, or may significantly hinder, the achievement of the stated conservation objectives for the protected area.
5. The cumulative impact of the widespread and overlapping regional use of ADDs by salmon farms on the west coast of Scotland on the favourable conservation status of cetaceans is unknown and must be considered alongside other environmental effects and changes affecting these species.
6. It is not known whether any ADD devices are fit in terms of reducing salmon losses to seals.
7. Harassing a seal (intentionally or recklessly) at a haul-out site is an offence.
8. All sites, existing and potential future sites, need to be considered.

It is LINK's opinion that the use of ADDs should be phased out in a timely manner, and that effective regulation and management to control the use of ADDs must be implemented until ADD use has ceased.

The regulation of ADD use should include:

1. ADDs should not be used in, or affect, sensitive areas, such as the Inner Hebrides and the Minches harbour porpoise SAC and Sea of Hebrides minke whale MPA, or

[9] In response to a parliamentary question from Mark Ruskell in July 2020, Mairi Gougeon, the Minister for Rural Affairs and the Natural Environment, confirmed that in 2018 ADDs were used on 144 farms, of which 84 farms used them constantly.
[10] Animal and Wildlife (Penalties, Protections and Powers) (Scotland) Act 2020, Section 14 (3) https://www.legislation.gov.uk/asp/2020/14/chapter/1/crossheading/conservation-of-seals/enacted

tidal races, bottlenecks and pathways, where data demonstrates their importance for cetaceans.

2. ADDs should only be used under licence as a last resort, for a time-limited period, and with strict conditions and technical specifications that do not disturb or cause hearing damage to cetaceans. Their use should include independent monitoring and reporting to government as a requirement.
3. Farm operators must demonstrate the need for using ADDs, develop a plan for ADD use during the time-limited period permitted, and identify mitigation measures to be put in place that ensure no adverse effects on cetaceans.
4. Only physical barriers for fish protection that do not harm cetaceans or seals, such as tensioned nets and double netting, should be in place before considering the use of ADDs.

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