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Consultation about electrofishing for razor clams in Scotland

Please note that the Scottish Wildlife Trust has also signed up to the joint Scottish Environment Link response to this consultation.

The Scottish Wildlife Trust welcomes the opportunity to comment on the consultation about electrofishing for razor clams in Scotland and considers the practice of electrofishing to be a highly important and controversial issue that requires swift resolution.

It is the Trust's firm view that all marine activities must consider and maintain the quality, health and biodiversity of the waters it occupies, avoiding significant, cumulative, long-term or irreversible damage to the environment. In line with the Trust's 25-year vision for *a 'network of healthy, resilient ecosystems supporting expanding communities of native species across large areas of Scotland's land, water and seas'*, all activities, including electrofishing, must be performed in the most environmental and sustainable manner to ensure any significant direct or indirect impact on biodiversity is avoided and all opportunities for improvement are identified and implemented.

The Trust recognises the practice of electrofishing is currently illegal under EU law, yet its use for fishing razor clams is taking place off the west coast of Scotland. Due to the high potential for economic gain, electrofishing will continue to take place in an unmanaged and unmonitored fashion unless swift action is taken to control the activity. To effectively manage electrofishing, the Scottish Government will be required to either increase their policing efforts or legalise the practice and regulate fishing effort and landings through an inshore fisheries management plan.

Exiting the EU will provide the UK and Scottish Governments with increased powers over fishing activity and the capacity to legalise the practice of electrofishing. With this in mind, it is essential that all information is made available and a close collaborative effort between stakeholders is established to assist with the process of evaluating the advantages and disadvantages of electrofishing.

Studies on the practice of electrofishing – the towing of electricity conductors along the seafloor to stun target species to be collected by a diver or a trawl net – suggest it has the potential to relieve many of the environmental impacts of current legal methods of fishing for razor clams, most notably mechanical and water jet dredging. Dredging is a highly damaging practice that results in long lasting physical damage to the seafloor, while the physical impact of electrofishing is comparatively minimal. Other benefits, such as reduced

bycatch and fuel usage, certainly make electrofishing an attractive alternative to traditional dredging practices, for both fishermen and marine conservationists.

However, despite the potential benefits electrofishing provides, it is still a relatively new practice and, with any new and unregulated practice, there are significant concerns that must be investigated and resolved prior to considering widespread adoption and implementation. Due to the lack of regulation, there is a current lack of data on what equipment is being used and how it is being used. Without this information it is difficult to gauge the true environmental impact an electrofishing industry will have. The first step towards managing electrofishing must be to standardise the practice (both equipment and methods), which should be informed by up-to-date scientific research, and evidence from the fishing industry.

Electrofishing is a highly effective method of fishing for razor clams, but it is unknown whether the razor clam population is large enough or healthy enough to support such an intensive form of fishing. Further information is needed on the size and distribution of the razor clam population before electrofishing is widely permitted. The non-discriminate practice of electrofishing also has wider direct and indirect impacts on non-target species and marine ecology. To ensure the practice is carried out in a sustainable manner, it is imperative these impacts are identified, understood and mitigated against. With regards to the *method* of electrofishing, the following points are of most concern to the Trust:

1. Knowledge on the impact electrofishing has on non-target species is incomplete. Unlike trawling and dredging, where the impacts on the sea floor and non-target species are relatively easy to identify, many of the impacts of electrofishing are less apparent and difficult to detect and measure. For example, species that live within seafloor sediment, such as polychaete worms and other burrowing organisms, are hidden from view and, therefore, their survival rates post electric shock are unknown. The broader ecological impact of electrofishing on smaller and hidden organisms requires further investigation.

2. The long-term impact of electrical currents on marine organisms has not been fully investigated. For example, injuries sustained by large fish (non-target species in this case) when exposed to electrical currents include broken or cracked vertebrae and internal haemorrhaging, which, although not immediately fatal, will make the organism more susceptible to predation or lead to a prolonged death.

   Additionally, the long-term impact of electric shocks on the reproductive capability (e.g. fertility, fecundity) of marine organisms and how this could affect population health and community structure is unknown.

3. As mentioned previously, the illegal and unregulated nature of electrofishing means the equipment and methods being used are unknown. More information is needed on:
   - The strength of current being used
   - The power source

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- Where electrofishing is happening – there are reports electrofishing has taken place in areas not licensed for shellfish harvesting, which raises public health concerns
- What the current fishing effort is
- How often the equipment is checked
- Whether divers are in the water during the trawl and if there are health risks
- Whether the people performing electrofishing are appropriately trained and qualified to carry out the work

4. It is known that electric currents penetrate into seafloor sediment, but how deep the current actually penetrates is not clear – this is dependent on the strength of the current being used. With regards to the removal rates of razor clams and recovery rates of fished sites, it would be of value to know whether all razor clams in the fished area are susceptible to electric shock, and therefore removal, or if there is a 'safe' depth where the clams are not affected. The use of weaker strength currents that only affect razor clams in the top 30 cm of sediment, for example, may be an effective way of ensuring not all clams are removed and site recovery rates are improved.

   In general, the most appropriate current strength used for electrofishing needs further investigation – the optimal strength should be strong enough to maintain electrofishing as an effective fishing method but also weak enough to minimise mortality, injury, and stress effects on non-target species.

5. The potential legalisation and regulation of electrofishing also raises questions on the spatial management of fishing effort. Electrofishing opens up the potential for new fishing grounds, which may not have been viable options for dredging and may compete with other fisheries. For example, trawling and dredging practices are banned in certain marine protected areas (MPAs), but it is not clear whether this ban would also apply to electrofishing.

   With respect to fishing pressure on the razor clam population, it will be important to establish whether electrofishing vessels will replace trawling/dredging vessels, the same approach taken towards the electrofishing derogation in the Netherlands, or add to the total number of vessels (and therefore fishing effort) currently fishing for razor clams. Preferably, existing vessels will be converted to perform electrofishing, thus maintaining the current size of the fishing fleet.

The Scottish Wildlife Trust believes that, at present, our understanding of the true environmental impact of electrofishing is insufficient and would, therefore, welcome further investigations into the broader, long-term impacts on non-target species, and a detailed comparative assessment with current legal fishing practices to inform future decision-making.

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Please could you keep the Trust informed of how this consultation progresses.

Yours sincerely,

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