

Environment Links UK evidence to Environment Audit Committee Sustainable Seas Inquiry

May 2018

Environment Links UK comprises the combined membership of Wildlife and Countryside Link, Scottish Environment LINK, Wales Environment Link and Northern Ireland Environment Link, and collectively represents more than 8 million supporters across the United Kingdom.

ELUK's Marine and Whales Working Groups work in their respective administrations to fight for effective policies to protect the marine environment from a myriad of environmental threats. The wide scope of this inquiry is welcome as many of the questions cover devolved areas of competency and will require collaboration with the devolved administrations. Our response to the questions that are most relevant to our combined expertise is below.

This submission is supported by the following organisations:

- Client Earth
- Environmental Investigation Agency
- IFAW
- Institute for Fisheries Management
- RSPCA
- Marine Conservation Society
- Scottish Wildlife Trust
- The Wildlife Trusts
- Whale and Dolphin Conservation
- Wildfowl and Wetland Trust
- WWF
- ZSL

1. What forms of pollution are most prevalent in the ocean, and what impact are they having?

1.1. Pollution in the ocean comes in many different forms. Some are visible, such as marine litter, lost or discarded fishing gear or excess nutrient input leading to algae blooms, while others are invisible, including contaminants such as heavy materials, persistent organic pollutants (POPs) as well as underwater noise, bacteria and viruses from untreated sewage and carbon dioxide which causes ocean acidification.

1.2. Marine litter comes from both land and sea based sources with [estimates of more than 80% coming](#) from the land. The Marine Conservation Society's September 2017 beach clean found an average of 718 pieces of litter per 100m of the 339 beaches surveyed around the UK. The majority being plastic, including small plastics pieces and cotton bud sticks, wet wipes and on the go items such as sweet wrappers, caps and lids. Plastic items breakdown in the marine environment leading eventually to microplastics. Both macro - and microplastics cause harm to marine animals through entanglement and ingestion, as well as transferring toxins directly to the animals that ingest the plastics and potentially up the food chain to humans as seafood consumers ([1](#), [2](#), [3](#)). Seabirds are known to ingest plastic artefacts and become entangled, causing starvation and general debilitation often leading

to death. Several sea turtle species are seriously threatened by 'feeding on' plastic and marine debris. Plastic waste can also transport invasive non-native species (4).

- 1.3. For more information on plastic pollution and its impacts, please see WCL's response to the [Chinese Waste Import Ban inquiry](#), and [disposable packaging inquiry](#) and ELUK's response to the [Microbeads consultation](#).
 - 1.4. Contaminants can be described in three groups: organic substances (e.g. POPs, hormones, pharmaceuticals), radionuclides and stable trace elements (e.g. Copper, Lead, Mercury). These produce a wide range of effects including impacting on biological development as well as causing immunotoxicity, endocrine disruption and carcinogenicity. As described in the [JRC technical report](#) on contaminants 'the toxic effects of chemical contaminants on marine organisms are dependent on bioavailability and persistence, the ability of organisms to accumulate and metabolise contaminants, their interactions with the organisms' DNA, and the interference of contaminants with specific metabolic or ecological processes'. Contamination by hazardous substances is listed as one of the major pressures affecting marine bird populations. Sea ducks and divers have [low resistance to surface contaminants](#).
 - 1.5. A POP of specific concern is Polychlorinated Biphenyls (PCBs). PCBs were banned in the 1980s in both the UK and across the EU. However, a tonne of PCBs are still released annually and due to their bio-accumulating nature, are still having a profound effect on marine predators such as Orcas, Bottlenose Dolphins and Striped Dolphins. The effects are widely associated with [long-term population decline and low or zero rates of reproduction](#). In 2016, 'Lulu', a killer whale washed up on the Isle of Tiree, and was found to have the [highest level of PCBs ever recorded](#): 20 times higher than a cetacean is known to be able to manage. Researchers monitoring the pod of Orcas that Lulu belonged to - off the coast of Scotland - have no evidence of a birth for 25 years. This population now numbers just eight individuals and experts believe it will likely die out within a generation.
 - 1.6. Further concerted action is needed to remove and safely dispose of the remaining sources of PCBs. The current [UK POPs national implementation plan](#) suggests little new action to tackle remaining sources of POPs including PCBs. For information on how this can be addressed, see WCL's response to the plan [here](#).
 - 1.7. Noise pollution is increasingly prevalent in the ocean. Derived from ship traffic, underwater explosions for exploration and exploitation of fossil fuels, the construction and maintenance of windfarms, and military operations. The effects of noise pollution range from behavioural changes to injury and death of mammals, fish and invertebrates.
- 2. What impact is climate change having on the ocean? What are the effects of ocean acidification now and in the future? How important is meeting the goals set out in the 2015 Paris Agreement on climate change for marine biodiversity?**
- 2.1. Since the industrial revolution, carbon dioxide has been released into the atmosphere (alongside other greenhouse gases), with levels rising from 280 to over 400 ppm in the modern day. Around a quarter of carbon dioxide released due to human activities (from fossil fuel burning, cement manufacture and land use changes) has been absorbed by the ocean resulting in a decrease in carbonate ion concentration with a decrease in pH of 0.11.

2.2. These changes result in a range of negative impacts, including increased risk of eutrophication and difficulties for calcifying organisms, such as plankton, coral and shellfish, to make their shells and skeletons. The impacts of ocean acidification extends up the food chain and will impact fisheries, aquaculture and tourism and coastal and inshore waters through sea level rise. The impacts are likely to be increased further by rising global temperatures. To this end, meeting the goals set out in the 2015 Paris Agreement is vital for marine biodiversity.

3. What is the UK's record on meeting existing obligations under international law and the UN Sustainable Development Goal 14 (Life Below the Sea) in respect of biodiversity?

- 3.1.** The UK has a mixed record of meeting existing obligations, several of which reflect extensions of previous missed commitments.
- 3.2.** In 2001, the UK, as part of the EU, set itself the target to [halt biodiversity loss in the EU by 2010](#). And, in 2002, the UK signed up to a global target under the Convention on Biological Diversity (CBD) aimed at significantly reducing biodiversity loss worldwide by 2010. Subsequently, the UK adopted the EU Biodiversity Strategy with the overall target to halt the loss of biodiversity and ecosystem services by 2020 and is signed up to the CBD 2010 "Aichi Biodiversity Targets" on improving the status of biodiversity by 2020. The Aichi targets include a specific [Target 11](#) to conserve at least 10% of coastal and marine areas through "effectively and equitably managed, ecologically representative and well-connected systems of protected areas and other effective area-based conservation measures".
- 3.3.** Much progress in marine biodiversity protection has been made in recent years, as a result of both domestic and European legislation and regulation. We would particularly point to the ongoing development of a UK network of MPAs notably incorporating European Marine Sites (EMS) designated under the Birds and Habitats Directive and Marine Conservation Zones (MCZs) designated under the Marine and Coastal Access Act and Nature Conservation Marine Protected Areas designated in Scottish waters under the Marine (Scotland) Act 2010 (inshore) and Marine and Coastal Access Act (offshore). The UK coverage of Marine Protected Areas (MPAs) stands at more than 23%, as a result of increases in designation over the last ten years. Following the development of the revised approach to management of fisheries within EMS and subsequently MCZs and NCMPOAs, the most damaging fishing practices have been stopped within some sites. However, we believe that there are areas where further progress can be made, especially in offshore areas
- 3.4.** Global progress on achieving the Aichi targets has been poor and insufficient to meet the 2020 targets according to the [CBD's own analysis](#), though progress has varied throughout the UK nations with Scotland now generally thought to be the furthest forward. Furthermore, evidence - including the UK Government's [biodiversity indicators](#), reports such as the [State of Nature](#) and [Living Planet Report](#), and OSPAR's [Intermediate Assessment](#) - all point to the reducing status of key elements of UK marine ecosystems, such as seabirds and benthic habitats. For example, bathing water quality at our coasts has improved, but only 65% of UK waters are rated 'excellent' compared to a [European average of 85%](#).

- 3.5.** Many of the SDG14 targets, with the exception of ocean acidification, are translated into UK policy through the [UK Marine Strategy](#), which sets domestic targets and actions for biodiversity and a range of pressures, including pollution (14.1), fisheries (14.4) and protected areas (14.5). This strategy is currently being reviewed and, if co-developed and mutually agreed by UK administrations showing joint ambitions, could guide the future implementation of SDGs, international obligations and domestic commitments (such as those set out in the 25 Year Environment Plan for England) in the marine environment. ELUK believe that there is a significant opportunity for improving the planning process in the marine environment, setting biodiversity values at its heart and delivering a restored marine environment that will underpin human economy and welfare.
- 4. Is the UK's current legal and regulatory framework adequate to protect biodiversity given the growing demands which are likely to be placed on marine resources?**
- 4.1.** In most policy areas, current frameworks require improvement to effectively protect biodiversity. In addition, in many cases, the public authorities tasked with management are not properly resourced either financially or in terms of human resources and expertise. Without proper investment in monitoring and enforcement, environmental protections in the law will not be fully realised.
- 4.2.** The UK Marine Strategy sets clear targets and measures and the legal requirement under the UK Marine Strategy Regulations and EU Marine Strategy Directive to achieve or maintain '[Good Environmental Status](#)' provides a strong ambition. The Marine Strategy introduces an ecosystems-based approach to marine management, which is critical to ensure cumulative impacts and pressures are considered and addressed in the UK. However, we are unlikely to achieve Good Environmental Status by 2020. The UK Government has committed to maintain the UK Marine Strategy after leaving the European Union (EU) but to provide an effective framework, the revisions must include targets that are more ambitious. Since the environment is a devolved matter, a revised UK Marine Strategy must be co-developed and mutually agreed by all UK administrations.
- 4.3.** While creating uncertainty, leaving the EU must be used as an opportunity for reforming our fishing industry. Switching to fully sustainable fishing will benefit jobs, consumers and wildlife, both now and in the future. Despite positive trends in the past decade arising from CFP reform, 40% of Northeast Atlantic stocks for which data are available are [still overfished](#) or are outside safe biological limits. The UK must ensure that all fish stocks, including stocks that are shared with the EU and other countries, are restored and maintained above biomass levels capable of producing the maximum sustainable yield, with fishing pressure correspondingly kept below such levels. The wider ecosystem impacts of fishing, including damage to sensitive seabed habitats and food-webs, and by-catch of non-target species, must be reduced and where possible, eliminated. The UK must improve its enforcement and sanctioning of fisheries laws. For example, the UK (focusing on Scotland) was [recently found](#) to have the highest reoffending rate out of the four biggest European fishing nations. This was despite enforcement action being taken, indicating that penalties for illegal fishing are not strong enough to deter offending.

- 4.4.** A coherent network of marine protected areas (MPAs) is essential to preserve and restore biodiversity in UK waters. The MPAs and legal frameworks introduced via the [EU Birds and Habitats Directives](#) provide strong protections for vulnerable species and habitats and must be fully retained and well managed in the UK after departure from the EU. Domestic MPAs are important to complement these European Marine Sites and the upcoming consultations into the third tranche of English MCZs and on four large NCMPAS in Scotland will be welcome additions to the existing network. It is important that the third tranche in England, and future designations in Wales and Northern Ireland, address the gaps identified in the analysis carried out by the Joint Nature Conservation Committee. A review of the Scottish MPA network is due at the end of 2018.
- 4.5.** The UK must also protect endangered, rare and threatened marine mammals, sharks, rays, and seabirds. These animals are threatened by entanglement in fishing gear, marine pollution, acoustic disturbance, habitat destruction, and loss of food sources and the combination of these pressures. At present, UK laws and regulations do not do enough to ensure that negative effects from these pressures are minimised and, where possible, eliminated. There are also a number of key lifestyle sites which are still unknown due to a lack of monitoring and as such are not given adequate protection – e.g. moulting sites of sea ducks. It is important that such gaps in data and knowledge are filled.

5. How effective are the Marine Stewardship Council's ecolabel and fishery certification scheme at ensuring fisheries are sustainable?

- 5.1.** The Marine Stewardship Council (MSC) is widely regarded as being the most robust and credible wild capture certification and chain of custody traceability standard. It is currently one of three wild fisheries standards that has passed the Global Sustainable Seafood Initiative (GSSI) benchmark. In achieving and maintaining MSC certification, fisheries need to meet the criteria in the MSC standard.
- 5.2.** The role of ratings programmes and certifications, like MSC, is to recognise and promote best practice and to incentivise improvements in the way fisheries are managed and operated so as to reduce their environmental impacts. We have observed several instances where fleets or managers have improved practices, policies and data collection in order to meet or maintain MSC certification. Like any credible standard or ratings methodology, criteria should be periodically reviewed to ensure they reflect best practice, and we know that MSC undertake such consultations and encourage stakeholder feedback.
- 5.3.** Having said that, it is important to note that the MSC is not acting in isolation and is part of a large community of organisations and initiatives in the UK that are working to recognise and promote best practice throughout the fishing industry, the supply chain and consumers. Many organisations in this community also work directly with managers, policy makers and industry to raise awareness and achieve improvements in practices and management.
- 5.4.** The size and diversity of this community is likely not replicated in many other countries and the UK should take considerable credit for driving global change and be proud of what it has achieved to date. However, there is much more work to do in order to recover all UK fisheries, improve creditation schemes, and make them and the fisheries they acknowledge

- plus the international ones they rely upon - as healthy and sustainable as possible, to minimise impacts to the wider marine environment such as bycatch of Endangered, Threatened and Protected (ETP) species and for our and future generations.

6. Does aquaculture cause less harm to marine biodiversity than fishing? Is aquaculture in the UK adequately regulated to protect biodiversity?

- 6.1.** Insufficient evidence exists to assess whether or not aquaculture causes more or less harm to biodiversity than fishing. Aquaculture is not adequately regulated (or monitored) to ensure protection of biodiversity. Knowledge gaps include but are not limited to: long term and widespread effects of chemical sea lice treatment; farm level impacts outside the Allowable Zone of Effect; impacts of aquaculture on [Priority Marine Features](#) (both inside and outside Marine Protected Areas), including shooting of seals, and the effects of escaped farmed fish. Both Atlantic salmon and sea trout are Priority Marine Features yet it is known that farmed Atlantic salmon in Scotland are having an effect on both of these species via parasite/disease transfer and interactions with escaped farmed fish. However, the extent of those effects are still unknown. Acoustic Deterrent Devices are widely used but unregulated, causing unknown levels of disturbance to 'protected' harbour porpoises.
- 6.2.** The [FEAST](#) tool used to ascertain the impacts of aquaculture on biodiversity in Scotland remains data deficient in many areas, which substantiates our concerns.
- 6.3.** For example, we still do not understand the cumulative carrying capacity for open net pen finfish culture of Scotland marine inshore waters. Given that Scotland is the third largest producer of farmed Atlantic salmon in the world, and that farmed salmon is the UK's biggest food export, this lack of knowledge is alarming. With ambitious growth targets of up to 400,000 tonnes by 2030, up from today's 164,000 tonnes production figures, to not understand the carrying capacity of the operating environment or the wider ecological impacts of production is unacceptable.
- 6.4.** Shellfish fisheries can also impact on local biodiversity in estuaries, especially where there are low or slow levels of flushing. Biological processes of the shellfish affect the food web, the biogeochemical cycling, and the physical and chemical environment, potentially modifying habitats and ecological functioning. They can cause increases in bacteria, deposit feeders and crustaceans but also cause decreases in [suspension feeders, zooplankton and larval fish](#) and [waterbird survival](#) .
- 6.5.** They have also been the cause of the introduction of a number of invasive non-native species which have had their own impact on biodiversity. For example the pacific oyster, which is classified as medium risk by UK risk assessment, will compete with native bivalves. Invasive non-native species can also hitch-hike within shell fish cultures facilitating spread.

7. What is the environmental impact of marine industries, such as deep sea mining, and how effectively does the Government and the International Seabed Authority regulate them to mitigate their environmental impact?

- 7.1.** Deep sea mining could lead to irreversible losses of marine biodiversity. Recent scientific evidence suggests that most mining-induced loss of biodiversity in the deep sea is likely to [last forever on human timescales](#), given the very slow natural rates of recovery in affected ecosystems.
- 7.2.** The UK is a sponsoring state for two contracts for exploration in the Pacific Ocean, putting us at the forefront of international deep-sea mining developments. However, deep-sea mining runs contrary to our Sustainable Development Goal commitments – (SDG 12) (*sustainable consumption and production*) and SDG 14 (*conserve and sustainably use the oceans*).
- 7.3.** As this activity is at odds with our international obligations, the UK Government should focus its efforts on transitioning away from this technology by reducing the demand for raw materials, through better product design, sharing, re-use, repairing and recycling.
- 7.4.** However, transition takes time, so the UK should proactively work with the International Seabed Authority (ISA) to improve its regulations with the following measures:
- Amend the Strategic Plan so the obligation for any activities in the Area to ensure effective protection for the marine environment from harmful effects is the fundamental objective of the ISA;
 - Act on civil society requests for fundamental reforms of the ISA operations, including: the establishment of an Environment Committee; open the legal and technical committee for observers; and allow public access to data and information;
 - Establish a process to investigate, in a participatory and science based manner, the fundamental questions about the need for deep seabed mining;
 - In the meantime, end the granting of contracts for deep-sea mining exploration and exploitation.
- 7.5** The [Scottish Government's commitment](#) to “evaluate options to create a deep sea national marine reserve” is welcome and we would like to see this progressed to include protection from deep-sea mining and aggregate extraction.

8. How well has Government supported UK marine science and innovation? What more could the Government do to promote a sustainable blue economy?

- 8.1.** Government funding may be allocated either directly through sponsorship, e.g. by Defra or Devolved Administrations, or indirectly through Research Council funding. From 2013 - 2018 Defra and the Natural Environment Research Council (NERC) co-funded the £6 million Marine Ecosystems Research Programme. The 2018-2022 GCRF Blue Communities programme will receive £225 million of funding through the Research Council UK ‘Building Capacity’ Global Challenges Research Fund call, to encourage international collaboration to support the development of sustainable development in coastal communities. In 2018 the [Environment Minister pledged £150,000 in funding](#) to support research into marine natural capital.
- 8.2.** To further promote a sustainable blue economy, the Government could do the following:
- Support marine renewables by reinstating the [guaranteed market price](#) for energy from the industry, and opening up the capacity market to renewables



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- Ensure all developments meet strict environmental criteria so as to minimise their impact on marine mammals and other marine wildlife
- [Support central investment in taxonomy](#), taxonomic skills training, and taxonomic analysis under national capability programming.

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