

Our oceans under threat

Overfishing, plastic pollution, temperature rises and chemical contaminants have all badly impacted the health of our oceans, upon which billions of people depend for their sustenance and livelihoods. How do we engage with companies to ensure the marine environment is protected for future generations? By Sonya Likhtman, Emma Berntman and Lisa Lange.

Setting the scene

Oceans help to regulate the climate and the water cycle, as well as being a source of food and used for shipping routes. However, following centuries of treating the oceans as an inexhaustible resource at least a third of fish stocks are depleted, while microplastic pollution has become endemic, with potentially dangerous consequences for human health. In this article we explore why these issues matter to investors and the five themes that most closely relate to ocean sustainability: climate change, pollution, sustainable fishing, biodiversity, and human rights.

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Protecting and conserving the marine environment is essential for human life and the economy. The oceans play a central role in regulating our climate and provide key ecosystem services, such as the production of oxygen and carbon sequestration. The biodiversity of our oceans could be a key source of innovation and medical advances, with the potential to discover new antibiotics for example.¹ Sectors such as shipping, tourism and fishing are highly dependent on the oceans, with most global trade occurring by sea and about 80% of tourism occurring in coastal areas.² It is estimated that over three billion people³ depend on the oceans for their livelihoods and that the natural capital of our oceans is valued at US\$24tn.⁴

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Yet these vast resources are dwindling fast. Climate change, pollution, and overfishing are threatening the sustainability of our oceans. Human activity has had severe ecological consequences for marine ecosystems. The oceans are a prime example of a tragedy of the commons, where an open access resource is depleted to the detriment of all.

¹ Antibiotics search to focus on sea bed – BBC News

² UN, Life below water: why it matters

³ The Ocean Conference 5-9 June, 2017 – United Nations, New York

⁴ Ocean Assets Valued at \$24 Trillion, but Dwindling Fast | Stories | WWF (worldwildlife.org)

Between

50-80%

of the world's oxygen comes from the ocean



Fishing provides the main source of protein for over

1bn people



Oceans are estimated to contain

50-80%

of the planet's total biodiversity



The consequences of failure

Failing to protect marine ecosystems will have negative consequences for the global economy, posing a systemic risk to long-term investments. There are business model risks for industries such as tourism, while changing sea levels and stronger, more frequent hurricanes pose a physical risk to businesses located in coastal areas. And if a company is linked to ocean pollution it can result in reputational damage, impacting its share price. A prominent example is the Deepwater Horizon blowout that sent oil major BP's share price tumbling by 55% and resulted in the company having to pay over US\$65bn in clean-up and litigation costs.⁵

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In addition to the risk of litigation, companies that do not adequately manage their impact on ocean sustainability may be underprepared for regulatory changes. International agreements that safeguard the oceans, such as the 1986 ban on commercial whaling, can fundamentally disrupt industries, although the practice continues in Japan, Norway and Iceland.⁶

Today, the global community is starting to see the importance of managing its impact on the oceans. The UK government is one of 30 countries in the Global Ocean Alliance calling for 30% of seas to be protected by 2030.⁷ The United Nations Sustainable Development Goals (SDGs) highlight ambitions for action in SDG 14 "life below water",⁸ which includes targets on reducing marine pollution, protecting and restoring ecosystems, reducing ocean acidification and sustainable fishing, among others. Finally, consumer awareness of environmental impacts, fuelled by popular documentaries such as the BBC's Blue Planet series, has resulted in significant shifts in market demand for products linked to ocean pollution, such as single-use plastic items.

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Investors should be aware of these risks and how the companies in which they are invested impact the oceans. This will involve scrutinising the impact of different companies and sectors on ocean sustainability. Engagement with policymakers will also be required to ensure that the right frameworks and incentives are established to protect ocean health and account for the externalities that damage oceans. Effective stewardship practices should be in place to push companies to understand and monitor how their activities impact and depend on the oceans. They should develop mitigation measures or fundamentally shift their business models where they negatively impact marine ecosystems. Ultimately, companies should work towards solutions that have a net-positive effect on the oceans through innovation and circular economy practices.

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⁵ BP's Deepwater Horizon bill tops \$65bn | Deepwater Horizon oil spill | The Guardian

⁶ Commercial whaling: Unsustainable, Inhumane, Unnecessary – EIA Reports (eia-international.org)

⁷ Global Ocean Alliance: 30 countries are now calling for greater ocean protection – GOV.UK (www.gov.uk)

⁸ Goal 14: Life Below Water | The Global Goals

Five engagement themes for ocean sustainability



1. Addressing the climate crisis

The oceans and the earth's atmosphere exist in a balance, with oceans absorbing the excess heat and greenhouse gases from the atmosphere. Oceans have absorbed over 90% of the excess heat in the climate system, with the rate of take-up increasing in the past few decades.⁹ The increased water temperature negatively impacts habitats and contributes to sea level rise, as water expands at higher temperatures. Rising temperatures are also causing ice shelves and glaciers to melt at faster rates. The resulting heightened risk of flooding and submersion poses a threat to major cities and coastal communities, including the infrastructure and the diverse economic activities located there.

Ocean warming is also altering global ocean currents, which will have knock-on effects on weather patterns around the world. The increased concentration of greenhouse gases in the oceans is changing their chemical composition and causing acidification, which has a detrimental impact on coral reefs and other species. In fact, research shows that if temperatures rise more than 2°C above pre-industrial levels, coral reefs are likely to become extinct.¹⁰

It is thought that between 50% and 80% of the world's oxygen comes from the ocean, mostly from oceanic phytoplankton during photosynthesis.¹¹ This process absorbs carbon dioxide from the atmosphere and eventually locks up carbon deep in the ocean. Other species also act as important carbon stores – a single whale can capture 33 tons of CO₂ over its lifetime.¹²

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Companies must urgently mitigate their contribution to climate change to protect the oceans. This requires a commitment to net-zero emissions by 2050 at the latest, with supporting science-based short- and medium-term targets. We responded to the Science-Based Targets initiative (SBTi) consultation on net-zero target setting, which seeks to bring greater assurance to companies' long-term targets and interim goals. Risk management and disclosure should be aligned to the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD). Our *Climate Change Expectations*¹³ provide further details of how companies should address climate change. To achieve a healthy and productive ocean, the UN Global Compact highlights the need to harness renewable ocean energy, such as offshore wind and tidal energy, on a much greater scale.¹⁴

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We engage with companies across all relevant sectors on climate change. We recently engaged with a Malaysian shipping company on its decarbonisation strategy, board oversight of climate change, and improving climate-related risk management. We are engaging with companies in the food and beverage sector to address supply chain emissions and to encourage a transition to more regenerative and climate-smart agricultural practices as a way to future-proof business models and improve ocean sustainability.

We also engage on public policy measures that will support the private sector in addressing climate change. We have been advocating for mandatory climate-related reporting in line with the recommendations of the TCFD through our public policy consultations to the US Securities and Exchange Commission and the UK's Department for Business, Energy and Industrial Strategy. This will require companies to report on both transition risks and physical risks, to which coastal communities and small island nations may be most vulnerable.



2. Tackling pollution

Pollutants and toxic materials, such as chemicals, industrial waste, oil and plastics, can cause significant harm to ocean ecosystems. Sewage plants, chemical fertilisers and pesticides can cause eutrophication,¹⁵ which is when inorganic nutrients, such as nitrogen and phosphorus, fuel the excessive growth of algae and aquatic phytoplankton. This results in oceanic dead zones devoid of native plants and animals due their low levels of oxygen.

Plastics pollution is also a threat. In 2016,¹⁶ the Ellen MacArthur Foundation highlighted that there could be more plastic than fish in the oceans by 2050. Marine debris, primarily plastic rubbish, has accumulated in the notorious Great Pacific Garbage Patch,¹⁷ a floating vortex of discarded rubbish between the US and Japan. Plastic waste enters the ocean through rivers, while discarded plastic fishing nets also contribute to pollution and the death of marine wildlife. Conventional plastics break into ever smaller pieces – so-called microplastics that measure under 5mm and accumulate chemicals on their surface. These have become ubiquitous in the marine environment, posing a danger to ocean-dwelling animals, and entering the global food chain.¹⁸

⁹ Carbon Brief, Heat absorbed by oceans has doubled since 1997

¹⁰ IPCC, Special Report on Global Warming of 1.5 °C

¹¹ NOAA, How much oxygen comes from the ocean?

¹² Protecting whales to protect the planet

¹³ Federated Hermes International, Climate Change Expectations

¹⁴ UN Global Compact, 5 Tipping Points for a Healthy and Productive Ocean By 2030

¹⁵ What Is Eutrophication? – WorldAtlas

¹⁶ EllenMacArthurFoundation, TheNewPlasticsEconomy_Pages.pdf

¹⁷ Great Pacific Garbage Patch | National Geographic Society

¹⁸ Ocean plastic pollution | Fauna & Flora International (fauna-flora.org)

Investors can voice their concerns about such polluting activities. Depending on the sector, this might mean calling for a reduction in the use of harmful substances that end up in the oceans, such as single-use plastics, and better substance management and processes to address issues such as chemical runoff. With regard to plastic, EOS has set out expectations for companies in the consumer goods, retail and chemicals sectors in the white paper *Investor Expectations for Global Plastics Challenges*.¹⁹ A shift towards circular economy practices that create a closed loop is needed, where materials are fed back into production at the end of their use phase. With an increase in regulation and changing consumer preferences, companies adopting such practices would be considered more resilient.

EOS has a strong record of engaging with companies in different sectors on the prevention of plastics pollution. With retailers we have focused on reducing single-use plastics, setting targets for this reduction, and for recyclability, recycled content and recycling rates. We have engaged with consumer goods and apparel companies to address plastic packaging and the use of synthetic fibres in clothing.

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In 2020, we engaged with a Japanese shipping company about the impact of an oil spill on the local marine environment. We wanted to understand the cause of the accident, the company's measures for preventing another incident, and what it was doing to mitigate and rectify the environmental damage caused.



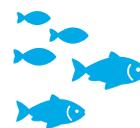
3. Transitioning to sustainable food systems

It is estimated that the principal livelihoods of 880 million people depend on the fisheries sector, with 198 million people directly employed by fisheries and aquaculture or their associated value chain.²⁰ Fishing is important from a food security perspective and provides the main source of protein for more than a billion people. However, fishing is one of the key drivers of marine wildlife decline alongside climate change and pollution.²¹

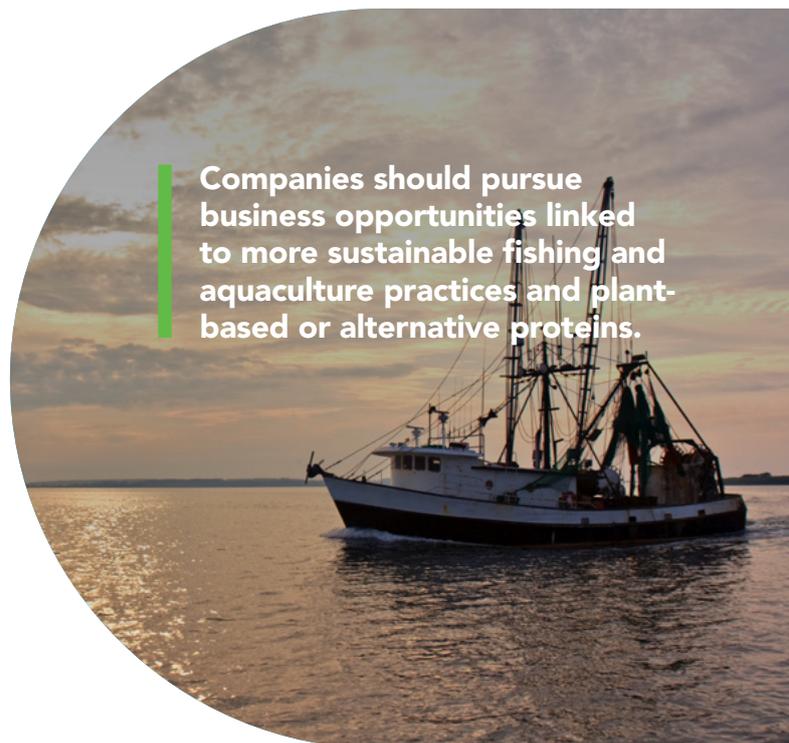
Current practices lead to overfishing, where fish are caught at a faster rate than they can repopulate themselves, bycatch, and the destruction of key marine habitats such as coral reefs. Bycatch is the unintended capture of non-target fish species and other marine wildlife such as cetaceans (whales, dolphins and porpoises), sharks, marine birds and sea turtles. It is caused by the use of non-selective fishing gear such as longlines, trawling and gillnets. This sort of gear is estimated to cause the death of 300,000 small whales, dolphins, and porpoises each year, while hundreds of thousands of turtles drown from entanglement in fishing nets.²² According to the UN Food and Agriculture Organization, the number of overfished stocks globally has tripled in the past 50 years, with a third of fish stocks currently overfished.²³

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To address these issues and mitigate the associated financial and reputational risks to companies and their investors, responsible fishing and aquaculture practices need to become the norm and animal protein consumption must be reduced. Investors should expect companies to show to what extent sustainable fishing practices are used, to demonstrate the traceability of their seafood supply chain, and to put in place policies to mitigate any significant negative impact on marine wildlife associated with their operations and supply chain. Companies should also pursue business opportunities linked to more sustainable fishing and aquaculture practices and plant-based or alternative proteins. Priority sectors include aquaculture, wild-catch fisheries, food producers, restaurants, consumer goods and retailers.

¹⁹ [investor-expectations-for-global-plastics-challenges-april-2020.pdf \(hermes-investment.com\)](#)

²⁰ [Scoping study on decent work in fisheries and aquaculture. Issues and actions for discussion and programming \(fao.org\)](#)

²¹ [Ocean Habitat | Habitats | WWF \(worldwildlife.org\)](#)

²² [What is Bycatch? Understanding and Preventing Fishing Bycatch \(worldwildlife.org\)](#)

²³ [The State of World Fisheries and Aquaculture 2020 \(fao.org\)](#)

²⁴ [scale-illicit-trade-pacific-ocean-marine-resources.pdf \(wri.org\)](#)

EOS has engaged with retailers such as Sainsbury's and food producers such as Kerry Group, General Mills and Tyson Foods over a number of years. We have asked them to demonstrate a comprehensive approach to protein diversification covering commercial strategy, resilience of protein sourcing strategies, nutritional profile improvements, and tracking their exposure to animal and plant-based proteins.

 **4. Reversing the loss of biodiversity**

Oceans are thought to be the most biodiverse areas on earth, estimated to contain 50-80% of the total biodiversity on the planet.²⁵ However, climate change, pollution and overfishing are threatening habitats and species, in some cases before they have been discovered. The Living Planet Index shows an average 68% fall in the population sizes of mammals, birds, amphibians, reptiles and fish between 1970 and 2016.²⁶ As species exist in a delicate balance, disruptions to whole food chains are created when some species are over-exploited or are no longer able to survive in the altered environment.

Marine species have intrinsic value but may also facilitate new medical treatments and deliver other benefits for people. The properties of sea sponges are thought to be valuable for treating some cancers and infectious diseases, for example.²⁷

Our white paper on biodiversity, *Our Commitment to Nature*,²⁸ outlines an engagement framework and expectations for companies. It is critical that companies understand their impacts and dependencies on biodiversity, including marine biodiversity. We are encouraging companies to commit to having a net-positive impact on biodiversity throughout their operations and supply chains by 2030 at the latest.

Dependencies may include generating revenue for the tourism industry, the discovery of new drugs for the pharmaceuticals sector, and the continued supply of seafood for food-related industries. Once companies have identified their most material impacts and dependencies, a biodiversity strategy must focus on these issues. Key activities include reducing greenhouse gas emissions in line with the goals of the Paris Agreement, reducing the volume of fertiliser used in agricultural practices to minimise chemical runoff, and developing sustainable plastic and packaging strategies.

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As well as our direct engagements with companies, we are working on collaborative engagement initiatives and public policy engagement as signatories to the Finance for Biodiversity Pledge. With a small group of investors we are exploring the formation of a Nature Action 100, which would include collaborative engagement focused on ocean sustainability. We are also urging governments to agree an ambitious Global Biodiversity Framework at the upcoming COP 15, as the private sector needs support from regulators if we are to collectively halt and reverse biodiversity loss.

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²⁵ EcoMENA, Deep Oceans and Biodiversity

²⁶ WWF Living Planet Report, 2020

²⁷ Mongabay, The sponge with the secret recipe: A cancer-fighting chemical

²⁸ EOS, Our Commitment to Nature, 2021



Declining fish stocks driven by overfishing coupled with growing consumer demand for cheap seafood has led to increased abuse of fishing crews.



5. Protecting human rights

The global seafood industry, and in particular IUU-fishing, is linked to labour-related challenges and serious human rights abuses. The industry is characterised by informal, isolated, seasonal, remote and often hazardous work, and a lack of transparency around conditions in the complex value chain increases the vulnerability of crews. Declining fish stocks driven by overfishing coupled with growing consumer demand for cheap seafood has led to increased abuse of fishing crews. As labour costs are often the largest part of vessel expenses, ship operators may target migrant worker groups who are especially vulnerable to human traffickers, abusive brokers and captains.²⁹ The International Labour Organization has estimated that 40.3 million people are victims of modern slavery, of which 25 million are in forced labour.³⁰ Some 11% of identified forced labour cases occur in the agriculture and fishing sector. Investigations into the seafood industry have uncovered abuses such as forced labour, unpaid wages, long hours, poor living conditions, physical abuse and even murder.

Over the past decade we have engaged on hundreds of supply chain human rights issues across the food, consumer goods and retail sectors. This includes engaging on human rights issues in the seafood supply chain with companies such as CK Hutchison. EOS engages using the UN Guiding Principles on Business and Human Rights framework and seeks to understand a company's operating context, governance, human rights due diligence and reporting of salient human rights risks, plus any actions taken to prevent and mitigate these risks, and the provision of remedy. The pandemic has highlighted the vulnerability of crews, with the International Maritime Organization estimating that 400,000 seafarers³¹ were stranded at sea. Travel restrictions meant that

crews were stranded on board for prolonged periods of time, unable to get home to their families. EOS has engaged with Asian and European shippers such as Swire Pacific and Maersk to determine how they managed and mitigated the negative impacts on the physical and mental health of their crews and facilitated their return home.

An opportunity for change

Our society is dependent on the oceans in a myriad of ways and it is therefore important to reverse this tragedy of the commons and nurture the long-term sustainability of ocean ecosystems. We will continue to explore new areas of company and public policy engagement to protect the oceans and ensure the continuity of the vast benefits that they yield. With the COP 26 for climate change and the COP 15 for biodiversity due to take place later this year, there is an excellent opportunity to place ocean sustainability higher on global policy agendas.

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²⁹ Blood-water-06-2019-final.pdf (ejfoundation.org)

³⁰ wcms_575479.pdf (ilo.org)

³¹ 400,000 seafarers stuck at sea as crew change crisis deepens (imo.org)

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