

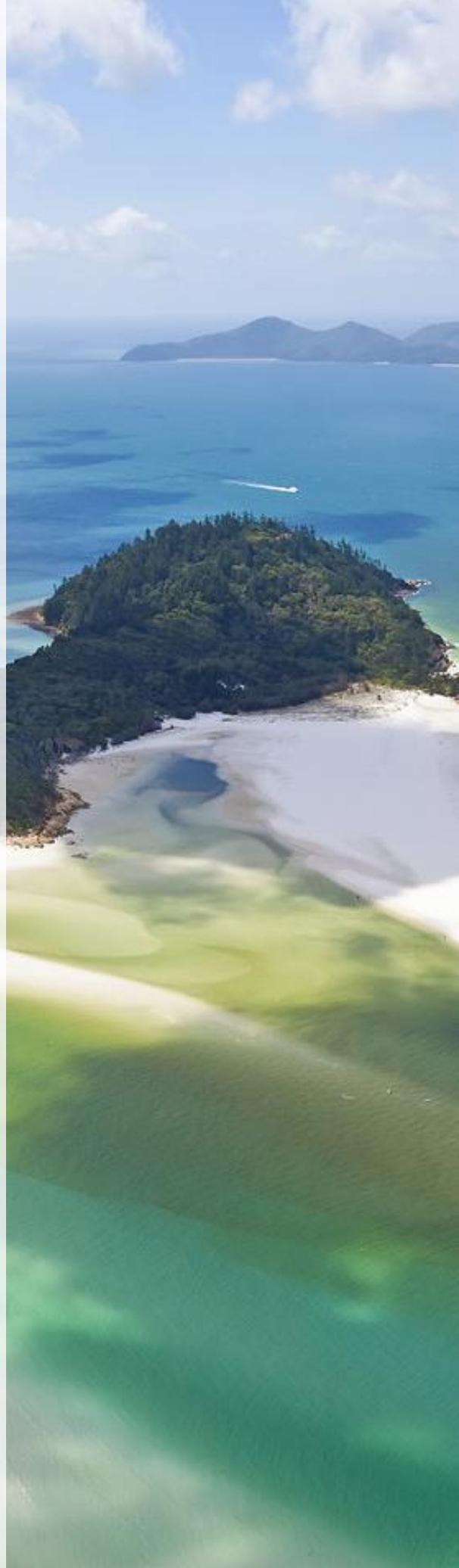


BECHT
FOUNDATION

Protecting and restoring biodiversity through marine conservation

A philanthropic response to combating
threats to our oceans

June 2020





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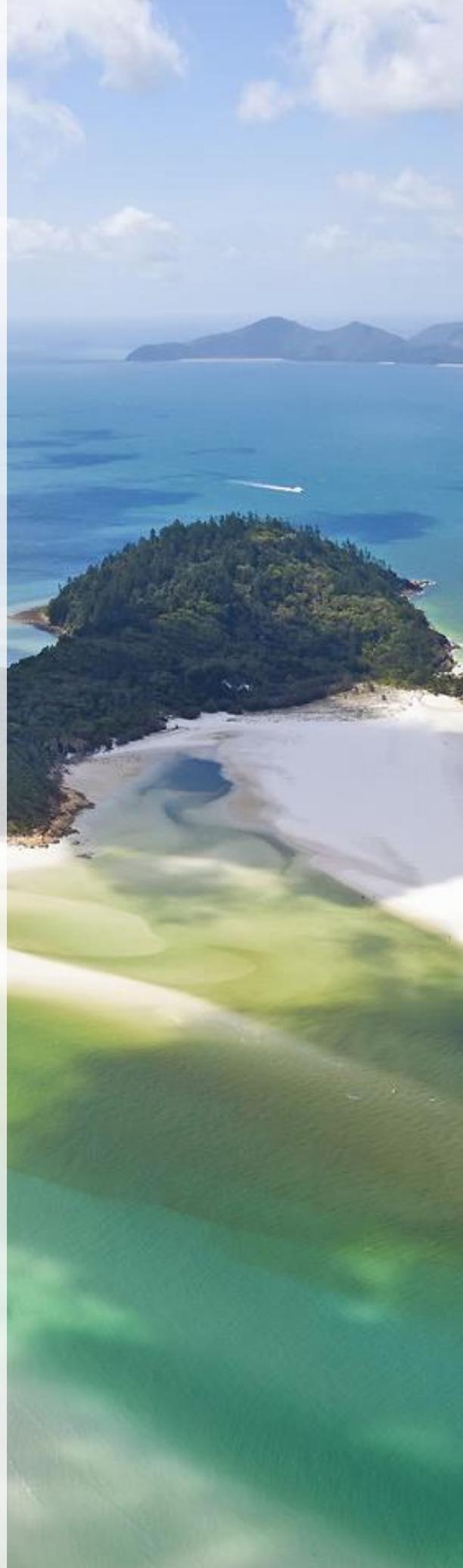
From the founders:

We have always believed we can and should live in full harmony with nature.

Nature, even when not kind to us, is something to be nurtured, cherished and taken care of.

When we started our charitable trust we were much less concerned about this than we were about the unneeded human suffering around the world. However, as time went by we became increasingly convinced that the way we are living and exploiting our planetary resources is very much damaging the world we live in, will certainly lead to increased suffering and possibly even the demise of mankind. As a consequence we took a big step back and completely reassessed the purpose and direction of our charitable trust, the result of which you will find in the following.

- Ann & Bart Becht



When The Becht Foundation launched the research covered in this document, our starting point was protection and restoration of biodiversity. We were looking to understand the role The Becht Foundation could play towards that purpose. We met over 30 experts, ranging from scientists, to policy makers, from entrepreneurs driving innovation and new technologies, to world leading organisations at the forefront of the fight against climate change and rescue of collapsing ecosystems. This document is a summary of the key findings on critical causes of climate change and the degradation and depletion of land and ocean. It looks at the different opportunities and initiatives to address the above issues and describes how The Becht Foundation can use its resources to produce impact that translates into sustainable biodiversity and climate improvements.

This report is not intended to be an exhaustive compilation of all the different opportunities that philanthropy should consider in its purpose to support the recovery of our planet's biodiversity and ecosystems, but instead, it highlights the specific areas in which The Becht Foundation can leverage its resources and core strengths.

During the period of research, we learnt that there is a complex set of factors leading to depletion of marine and land ecosystems. These factors range from, but are not limited to climate change, pollution, food production methods and consumer behaviour. The current overconsumption of natural resources for food and other products by humans is leading to an accelerated degradation of our environment. The combination of these threats has the potential of driving many more species to extinction and increasing human suffering. We recognise the urgency of responding to them. We firmly believe in being driven by a central purpose and identifying specific goals and series of steps to achieve that purpose, which this document will elaborate on.

Our purpose

We reviewed the critical importance of oceans. Oceans provide 50% of the oxygen we breath. They are the world's largest carbon sink and crucial to regulating the world's climate¹. They are the main source of animal protein for over a billion people and provide livelihoods for 200 million citizens worldwide².

Oceans are foundation of all life on Earth, but they are under serious threat. The warming of oceans due to climate change, unsustainable levels of overfishing, acidification and pollution due to untreated sewage, agricultural and industrial run off, as well as the dumping of plastic and other waste, are some of those threats.

There are proven examples worldwide that show ocean ecosystems are resilient. They can be restored much faster than land-based ones with the right interventions. Some examples of these interventions are Marine Protected Areas (MPAs), greater transparency and stronger enforcement of sustainable fishing practices, and innovations in food systems especially in animal & fish feed and plant-based alternatives for animal and fish protein.

[The faster rate of recovery and resilience of ocean ecosystems combined with the fact that the marine space is chronically underfunded is the very reason for our focus on marine conservation.](#)

As a result, The Becht Foundation will provide a more modest resource allocation to humanitarian and educational causes than before

1. [NOAA. Ocean Exploration and Research. How has the ocean made life on land possible? Retrieved from https://oceanexplorer.noaa.gov/facts/oceanproduction.html. Last consulted May 25, 2020.](https://oceanexplorer.noaa.gov/facts/oceanproduction.html)

2. FAO. (2018). The State of World Fisheries and Aquaculture 2018 - Meeting the sustainable development goals. Rome.

Protecting and restoring biodiversity through marine conservation

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1. Executive summary

The Becht Foundation will use both grants and investments to realise its purpose. In grant making, The Becht Foundation is rapidly becoming a significant donor in the UK environmental space. Some examples of our grants are: creating 4 million km² of protected marine ecosystems in the eastern Pacific Ocean through a 3 year grant to [Oceana](#), and enforcing fishing quotas and effective implementation of MPAs in the EU through [ClientEarth](#). Normally, size and duration of our grants is wide ranging from \$50k to \$1m spanning 1 to 3 years.

In terms of investments, The Becht Foundation increasingly invests part of the foundation's assets in for-profit social enterprises which we believe are very sound investments from a return point of view, and whose social goal is consistent with our purpose. For example, we have recently invested in [DryGro](#) which is a UK-based agritech company that produces Lemna, a high protein alternative for fish and animal feed.

The Becht Foundation is interested in working in partnership with other foundations, sharing insights and activities. We are open to funding proven existing work, or co-funding ambitious programmes. We are also prepared to lead and initiate activity. Our priority is to work on initiatives that drive tangible, measurable transformations to our planet's biodiversity through marine conservation. **With that in mind, we will be supporting organisations that are working towards a specific outcome and have measurable KPIs to track progress.**

The key conclusions from our research are:

- **Oceans are critical** to maintaining a balanced ecosystem for the entire planet. They are indispensable in addressing the 3 biggest environmental challenges today: protecting biodiversity, addressing climate change, and feeding a growing population.
- **They are facing major threats**, biggest of which are overfishing, climate change resulting in warming temperature and acidification, and run-off pollution
- **Oceans are resilient**. They show a faster rate of recovery vs land-based ecosystems with the right solutions. Studies show that substantial recovery of marine life could be achieved by 2050, if major pressures, including climate change, are mitigated³.
- **However, this space is chronically underfunded**, receiving less than \$500m in philanthropic funding globally each year.
- **Chronical underfunding combined with the resilience of oceans is the reason for our focus on marine conservation.**
- **Key initiatives where The Becht Foundation can have a positive impact** through donations and investments:
 - i. Recovery of fish stocks and marine biodiversity
 - ii. Restoration of marine ecosystems, such as mangroves and sea marshes
 - iii. Fight against pollution of rivers and the ocean
 - iv. Transition to sustainable & more efficient food systems
 - v. Shift of consumers towards more balanced, plant-based diets and behaviours
 - vi. Recovery of soils and pollinators
 - vii. Support the fight against climate change
- The **core levers** in which The Becht Foundation can activate these interventions are:
 - i. Strategic litigation & policy influencing
 - ii. Bottom-up, community projects
 - iii. Corporate influencing
 - iv. Consumer communication
 - v. R&D, technology and innovation
 - vi. Monitoring and enforcement

2. Key findings

In our research, we identified the biggest ocean-based threats and related opportunities to mitigate their impact and build on ocean resilience. In addition to ocean-based threats, we also learnt about the negative impact of food-systems on both land and marine ecosystems and biodiversity. We recognise their importance in restoring biodiversity and look towards relevant solutions.

2.1) Ocean-based threats and opportunities

Oceans are facing unsustainable pressures today, mainly driven by human activities. In order to mitigate the impacts of these threats, it is important to understand what these are and based on that identify opportunities to recover marine biodiversity. The major threats we identified are:

1. Overfishing

Fisheries and aquaculture continue to grow in significance for food, nutrition and employment. Fish currently provides ~3 billion people with almost 20% of their animal protein⁴. This sector is a major source of employment, engaging ~59.5 million people in 2018⁵. However, the growing appetite and dependence on fisheries are leading to mass depletion of oceanic life. Today, over 90% of fish stocks are either fully fished or overfished at biologically unsustainable levels⁵. Amongst a range of factors, three are the biggest contributors of this depletion: (i) waste and by-catch, (ii) non-food catch and (iii) IUU fishing.

Firstly, a significant 35% of the global harvest is either lost or wasted⁵. This is caused by inefficiencies in supply chain or by-catch that is thrown back into the sea. Appropriate policies, capacity building, services & infrastructure and physical access to markets are needed to improve the efficiency and sustainability of the sector.

Secondly, out of the ~179 million tonnes of global fish production in 2018, 12% (23m tonnes) did not end up on human plates⁵. This significant proportion was used to produce fishmeal and fish oil. These are considered the most digestible & nutritious ingredients for farmed fish (i.e. aquaculture). Aquaculture is the fastest growing subsector of food production. It accounted for 46% of total production and 52% of fish for human consumption⁵. Whilst aquaculture is considered to be more efficient (in terms of input vs output) vs land-based animal protein, its reliance on wild caught fish for fishmeal or fish feed is depleting oceans. Even farmed species that would normally be vegetarian, such as tilapia, are now routinely fed fish meal to fatten them up more quickly.

Thirdly, illegal, unregulated and unreported (IUU) activities account for 26 million tonnes of global catch⁵. In addition to negative environmental, social and economic impact, IUU is heavily linked to human rights violation driven by trafficking and slavery.

Underlying the above factors are harmful and destructive fishing practices such as bottom trawling and dredging that lead to destruction of all biodiversity regardless of the target fish being caught and bycatch leading to non-target marine life being caught and thrown back into the sea.

Overfishing is undoubtedly the biggest threat to marine life, but proven means to fight this issue exist. We can see recovery with improved implementation of management measures. In 2017, biologically sustainable fished stocks accounted for 59.6%, an increase of 17ppts since 1989⁵. Some countries, including the US, Canada, Iceland, and South Africa, have transformed their policies and practices towards sustainable fishing, and others are starting to adopt similar agendas.

4. Béné, C., Barange, M., Subasinghe, R. et al. (2015). Feeding 9 billion by 2050 - Putting fish back on the menu. Food Sec. 7, 261-274.

5. FAO. 2020. *The State of World Fisheries and Aquaculture 2020. Sustainability in action*. Rome.

We collectively need to find ways to transform practices in China and Japan also. Technological innovation through use of AIS technology and tracking by Global fishing watch allow for monitoring of where industrial fleets are fishing and for how long, facilitating better stock management & enforcement of sustainable yields.

2. Climate change

To date, oceans have been silently protecting us from the devastating effects of climate change having absorbed more than 90% of the extra heat⁶ and a third of the CO₂ created through human activity⁷. This is coming at a huge price to oceans where both biodiversity and coastal communities have become increasingly vulnerable. They are becoming warmer, more acidic, and threaten biodiversity such as shellfish & biodiversity hotspots - corals.

Atmospheric warming is leading to the melting of inland glaciers and ice, causing rising sea levels with significant impacts on shorelines and their biodiversity. Fish and coral reefs die when big variations in temperature occur, and these are becoming more extreme. Coral reefs only occupy a tiny 0.1% of the ocean, yet they harbour an astonishing 25% of its life. We have already lost a fifth of coral reefs globally, with further heating and the associated acidification of the ocean threatening those that remain.

Coastal ecosystems such as mangrove forests and coral reefs are the first line of defence against climate change. Mangroves, salt marshes and seagrasses have been identified as the places with the highest capacity to store carbon. Whilst the coastal waters where these carbon sinks are found cover just 7% of the ocean, they support around 50% of the world's fisheries⁸. Funding mangrove forests, protecting coral reefs and establishing large marine protected areas have proven to strengthen and grow the oceans' resilience.

3. Pollution

Around 80% of pollution to the marine environment, comes from land⁶. Run-off from agriculture, industrial waste, untreated wastewater and plastic pollution are main contributors. Amongst these, agricultural run-off is the most significant threat and the single largest producer of wastewater, by volume. The use of pesticides and fertilisers is not only destroying biodiversity on land, including pollinators, but it is highly polluting rivers and the ocean. It is also the main cause of deoxygenation in coastal areas that causes dead zones, because of nitrogen in the run-off. Nitrogen discharge to rivers increased by 43% from 1970 to 2000, with agriculture being responsible for 3 times as much as sewage⁹. Globally, around 115 million tonnes of synthetic nitrogen fertilisers are applied to croplands each year. Around 35% of these nitrogen inputs enters the ocean, equating to around 40 million tonnes. By comparison, somewhere between 8-13 million tonnes of plastic enter the ocean each year.

Regulatory and governance solutions combined with technological innovations are leading to restrictions that prohibit disposal of untreated waste in the oceans, a growth of circular economy and alternatives to harmful pesticides and plastics.

6. <https://www.iucn.org/resources/issues-briefs/ocean-warming>

7. <https://www.climate.gov/news-features/understanding-climate/climate-change-ocean-heat-content>

8. <https://www.ubs.com/global/en/ubs-society/philanthropy/insights/beyond-blue.html>

9. Breitburg, D. et al (2018) Declining oxygen in the global ocean and coastal waters. *Science*, Vol. 359, Issue 6371, eaam7240, DOI: 10.1126/science.aam7240

2.2) Food systems based threats and opportunities relevant to the marine space

In addition to the marine factors, we also recognised the role food-systems play in biodiversity loss. Food systems are complex and are defined as ‘the complete set of people, institutions, activities, processes and infrastructure involved in producing and consuming food’.

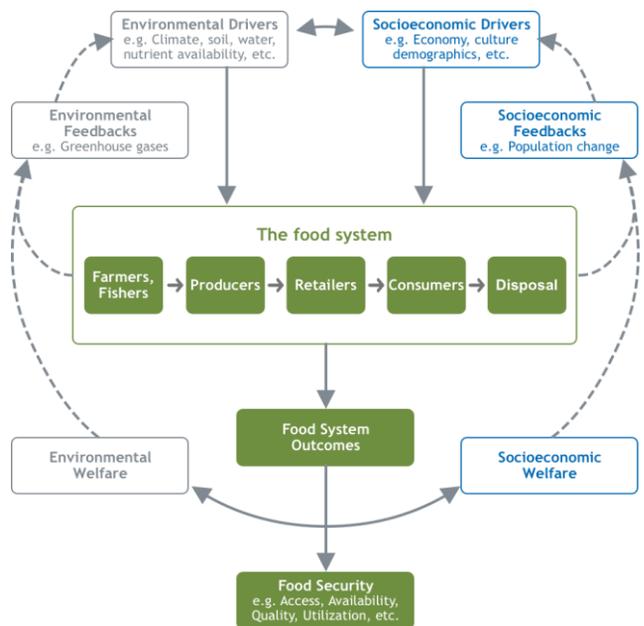
This covers all stages of the value chain: from growing and harvesting agricultural products through to processing, packaging, transporting, selling, consuming, and the disposal of food waste and packaging.

Two phenomena are exacerbating the negative impact of food-systems on biodiversity loss: a growing population and a growing demand for fewer crops and alternative sources of protein. The first puts more pressure on the limited natural resources. The latter is driving more deforestation for agriculture and livestock production. More people are looking to seafood for their protein needs because it is considered relatively better for the environment than animal protein. But the use of wild caught fish for animal and fish feed and fish oil is depleting fish stocks.

This is worsened by growing environmental pressures, including climate change, soil degradation, disruption of water cycles, expanding pathogen ranges and increased frequency of extreme weather events.

It is important to make our food-systems more efficient and durable, because the current rate of mass deforestation and biodiversity loss is unsustainable. In this space, we came across innovations offering sustainable, more efficient and cheaper alternatives to animal and fish feed such as insect feed and lemna. New waste management systems to optimise the resources we already have and better control of pesticides and fertilisers that are threatening soils, pollinators and ocean health are opportunities that exist and need better implementation and regulation and scaling up.

In these areas, The Becht Foundation will focus its resources on those projects that help support marine biodiversity, prevent habitat destruction, reduce water pollution, develop alternative animal and aquaculture feed and influence consumer behaviours to support and protect the oceans.



3. A philanthropic response

As a result of our research, we have identified the following focus areas, opportunities, and levers for The Becht Foundation to consider in support of our purpose:

Focus Areas	Opportunities for action	Strategic levers
<p>1. Primary focus: Protection and restoration of marine ecosystems</p> <p>2. Secondary focus: Transition to sustainable food systems</p>	<ol style="list-style-type: none"> 1. Recovery of fish stocks and marine biodiversity 2. Restoration of coastal ecosystems, such as mangroves and sea marshes 3. Fight against pollution of rivers and oceans 4. Transition towards alternative, more sustainable, animal and fish feed 5. Shift of consumers towards more balanced, plant-based diets and behaviours 6. Recovery of soils and pollinators 7. Support the fight against climate change 	<ol style="list-style-type: none"> 1. Strategic litigation & policy influencing 2. Bottom-up, community projects 3. Corporate influencing 4. Consumer communication 5. R&D, technology and innovation 6. Monitoring and enforcement

3.1) Focus Areas

1. Primary focus: Protection and restoration of marine ecosystems

Biodiversity in marine ecosystems is our number one priority. The warming and acidification of oceans due to climate change, unsustainable levels of overfishing, and pollution of oceans due to run off are within the scope of The Becht Foundation’s area of intervention.

Ocean ecosystems are resilient and can be restored much faster than land-based ones. This is especially true for fish stocks and mangroves, yet funding in these areas has been very limited.

In selecting projects, we will be guided by science but recognise the importance of macro-factors such as governance, financing, and socio-political landscape in achieving successful implementation of projects. We are interested in projects that lie at the intersection of favourable science and macro-factors. This is applicable for both marine and neighbouring coastal habitats.

2. Transition to sustainable food systems

It is important to transition to a more sustainable and efficient food system to reduce carbon emissions and protect our biodiversity. The major threats that are most relevant to marine conservation and that The Becht Foundation will seek to support are animal & fish-feed driven deforestation, dietary choices, decline in pollinators and harmful pesticides.

3.2) Current opportunities for action

We have identified seven opportunities that The Becht Foundation will focus on restoring oceans and food systems. We expect this list to evolve as new challenges and opportunities arise.

1. Recovery of fish stocks and marine biodiversity

One of the most promising opportunities to recover fish stock and marine biodiversity is by increasing the number of Marine Protected Areas (MPAs) and improve their enforcement.

When managed properly, MPAs work. For example, in Cabo Pulmo Marine Reserve in Mexico, after 14 years of protection, the fish biomass within the reserve had increased by 463% and was five times larger than that found outside the reserve.

Scientists say we need to protect 30% of the ocean by 2030 in connected, ecologically representative and fully protected MPAs in order to ensure ocean health. Today, 7.8% of the ocean is protected, and ~5% of the ocean is actually being managed as a protected area, and only ~2.5% is within fully protected MPAs in which no extractive activity is allowed. In zones where all extractive and destructive practices are excluded - marine life flourishes with increases in numbers, weight and the diversity of species. Moreover, as a result of the spill over effect into surrounding waters, fishers end up catching more fish. Bridging the gap to 30% and effective enforcement of MPAs will be a key focus for The Becht Foundation.

2. Restoration of coastal ecosystems, such as mangroves and sea marshes

The restoration of coastal habitats, most importantly mangroves and coral reefs, is crucial for the preservation of essential ecosystem services such as fisheries, storm protection and building materials. These environments can also support the fight against climate change, working as powerful carbon sinks. Similarly, phytoplankton and seaweed also provide conservation opportunities as carbon storage.

Coral reefs are worth an estimated \$375 billion per year for around 500 million people that rely on the services they provide¹⁰. They not only provide food to coastal communities; they also provide a natural barrier against natural disasters.

Mangroves are 10 times more effective as a carbon sink when compared to a traditional jungle tree, but unfortunately, we are losing 2% cover every year. Curbing mangrove loss and restoring them simultaneously address carbon emissions and help millions of people adapt to the impacts of climate change. Integrating mangroves into climate strategies and policies needs collaborative effort between communities, governments, scientists and philanthropists. Success will mean invaluable strengthening of coastal resilience, storage of millions of tons of carbon, protected ocean habitats and improved food security and well-being of coastal communities.

3. Fight against pollution of rivers and oceans

Identifying sources of water pollution determines areas of opportunities to tackle them. Some of these sources, as discussed earlier, are industrial waste, agricultural run-off, untreated sewage and plastic pollution. In order to tackle them we are seeing a gradual shift in farming practices towards reduction of fertilisers and pesticides, better monitoring of industrial waste run-off and adoption of alternatives to the intense reliance on plastic to transport and deliver food.

10. <https://www.unenvironment.org/news-and-stories/story/coral-reefs-we-continue-take-more-we-give>

We must work collaboratively to accelerate and amplify this shift by raising awareness amongst citizens and policymakers, banning the use of harmful pesticides and fuelling innovation and scaling up of alternatives.

Such alternatives can range from agricultural methods, such as organic and multi-crop farming which generally requires less need to add fertilisers, and eliminates the use of pesticides, bringing back the biodiversity that supports a healthier food growth to plastic alternatives, i.e. substituting plastic for something else. Here, there is massive scope for funding towards the development of new systems that could do away with the need for packaging (or at least single use packaging) altogether, such as reuse and refill schemes.

4. Transition towards alternative, more sustainable, feed for animals and fish

Emerging technologies are aiming to significantly reduce the environmental impact of our food systems. This is particularly true with livestock. We have seen innovations to grow fish oil on land which, if successful, would only need 200,000 hectares (0,2% of what is currently used for soybeans) to satisfy global demand of ~1 million tonnes of fish oil per year. This would dramatically reduce the need for wild fish catch as the current only source of Omega 3 to feed farmed fish.

Progress is being made in insect-based and lemna-based feed for animals and fish. Insect-based feed whilst historically not allowed as per EU regulations, is slowly advancing in negotiations to be used to feed animals and fish. Here we see both innovation and campaigns to raise consumer awareness as effective tools to drive this transition.

5. Shift of consumers towards more balanced, plant-based diets and behaviours

Food is the single strongest lever to optimise human health and environmental sustainability on Earth. However, food is currently threatening both people and planet¹¹. The West's high consumption of meat and dairy produce is fuelling global warming through greenhouse emissions and deforestation. Many more people could be fed using less land if individuals cut down on eating meat and fish and transition to a more plant-based diet¹².

A plant-based diet would also have significant health benefits, avoiding over 10 million deaths every year. According to Barclays' research, the market for alternative meat could reach \$140 billion over the next decade. That rapid pace of growth implies the animal-free industry could capture about 10% of the \$1.4 trillion global meat industry. This transition needs to be sensitive to local contexts; many people in the Global South will struggle to eat enough micronutrients from plant source foods alone.

In this area, consumers hold the power to demand healthier and more sustainable foods. For example, encouraging consumers to demand fish lower down the food chain, and herbivorous species (e.g., molluscs, tilapia) can significantly reduce the amount of wild fish used. We can scale this up by raising consumer awareness, increasing transparency in the food supply chain and work with governments to embed these in policymaking.

6. Recovery of soils and pollinators

Regenerative agriculture comprises a system of farming principles and practices that increases biodiversity, enriches soils, improves watersheds, and enhances ecosystem services. In the process of rebuilding topsoil, carbon is sequestered in the ground and aboveground biomass, helping withdraw it from the atmosphere.

11. https://eatforum.org/content/uploads/2019/07/EAT-Lancet_Commission_Summary_Report.pdf

12. https://www.ipcc.ch/site/assets/uploads/2019/08/4.-SPM_Approved_Microsite_FINAL.pdf

13. Rodale Institute Regenerative organic agriculture and climate change
<https://secureservercdn.net/184.168.47.225/02f.e55.myftpupload.com/wp-content/uploads/2016/03/Rodale-Institute-White-Paper-1.pdf>

Regenerative agriculture also transforms land-based systems from CO2 emitters, to CO2 capturers. According to Rodale Institute¹³, recent data from farming systems and pasture trials around the globe show that we could sequester a very significant portion of current annual CO2 agricultural emissions with a switch to widely available and inexpensive organic management practices, what they term “regenerative organic agriculture”. These practices work to maximise carbon fixation while minimising the loss of that carbon once returned to the soil, reversing the greenhouse effect.

7. Support the fight against climate change

Most experts interviewed agreed that climate change is the single biggest threat to our ocean and land-based food systems. Since the most pressing issue to solve in climate change is to reduce the greenhouse emissions, it feels natural to also focus on food-systems as greenhouse contributors.

Halving food loss and waste would reduce the global need for cropland area by around 14% and drop greenhouse gas emissions from agriculture and land use change by 22-28%.

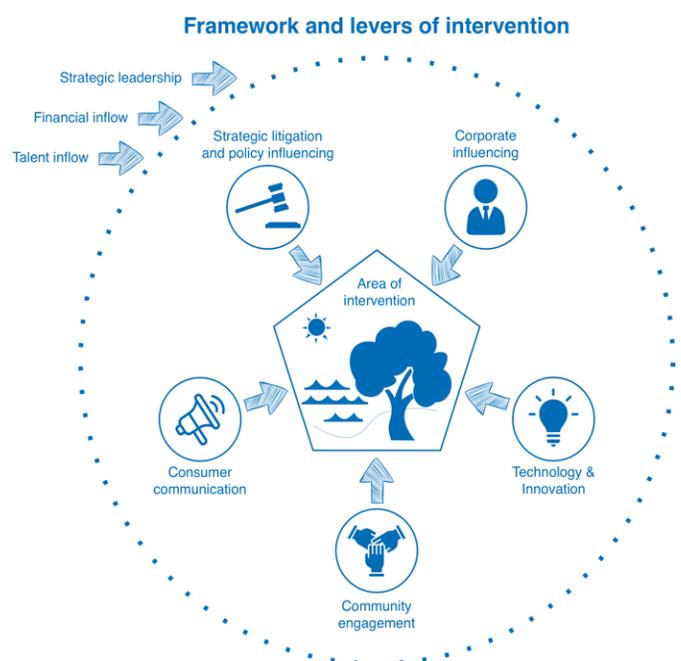
3.3) Strategic levers of intervention

The above section has given us clear areas of opportunities where we can drive change. However, in order to capitalise on them we need specific interventions that will execute the process of change. In our meetings with experts, we identified the below levers where we will invest The Becht Foundation resources to generate the needed shifts and amplify existing efforts:

1. Top-down, strategic litigation and policy influencing

Science should push for policy change, and lobbying can be the bridge between the two. Multiple malpractices followed by fishers and farmers are nurtured by wrong incentives designed by governments many years ago, or new ones not following the latest scientific recommendations, for example fishing quotas higher than the recommended ones or not enforced where they exist. There are two examples amongst The Becht Foundation grantees that deploy this lever:

- I. [ClientEarth](#) uses power of law to hold governments responsible for making the right policies and enforcing them effectively. With The Becht Foundation funding, ClientEarth is working on 3 concrete areas. Firstly, drastically reducing overfishing by forcing EU governments to adhere to Maximum Sustainable Yields (MSY) in fishing quotas. Secondly, enforcing effective implementation of protected areas in the EU and globally. Lastly, banning pollinator harming pesticides by forcing EU to disclose use of such pesticides by country and manufacturer as well as fighting legal cases against EU member states who are violating pesticides bans.



- II. [High Seas Alliance](#) is working towards establishment of a global treaty for the protection of high seas at the UN level.

We continue to look for such opportunities where strategic litigation and lobbying effort would ensure that those mechanisms are fully aligned with scientific recommendations and that these policy mechanisms are implemented. We strongly believe and push for science-led policymaking and its effective implementation.

2. Bottom-up, community projects

We have heard from experts about the importance of understanding not only the natural systems of the areas that we need to protect, but the people around these systems. Fish is what they eat, fish is what generates their income. Most importantly, fish is part of their culture. Empowering these communities that depend on their natural resources entirely for their subsistence, makes them powerful stewards of these abundant natural resources. Examples of 2 organisations that are working towards community-led marine protection and are also funded by The Becht Foundation are:

- I. [Blue Ventures](#) develops transformative approaches for catalysing and sustaining locally led marine conservation. The Blue Ventures model is centred around empowering grassroots coastal communities to take responsibility for their local marine areas leading to effective marine conservation. This has resulted in rebuilding of coastal fisheries, effective and replicable approaches for reversing marine biodiversity loss, improving food security and building socio-ecological resilience to climate change across eight countries in Africa and the Indian Ocean.
- II. [Oceans North](#) is a Canadian charity that supports marine conservation in partnership with indigenous and coastal communities in Canada through establishment of Indigenous Protected Areas (IPAs). They have enabled protection of 5% of the area that Canada counts towards its international commitments under the Convention of Biological Diversity.

3. Corporate influencing

During our meetings with experts, we heard that, for many years, corporates have not taken the required level of climate change action in the hope that someone else was going to solve the problem for them. We have learnt that lobbying from industrial fishing companies is one of the biggest hurdles for the growth of MPAs. We will support efforts to curb these, such as PR, tracking of fish stock, better decisions on subsidies and influencing consumer habits.

Corporates can have a significant influence in food producing methods, and in people's diets. For example, Tesco and Walmart are pushing for sustainability innovation in its value chain, and restaurants that are part of the Cool Food programme, which collectively amount to nearly 1 billion meals a year, are progressively transitioning their menus to fully sustainable ones.

4. Consumer communication

Climate change communication is doing well in increasing awareness and concern, but we are missing action. People don't yet know what they should do, even though there are many lists out there in the media. People either feel these things are too small for the level of anxiety they have, or too big for the individual to make any difference.

We heard from a leading neuroscientist that we need to help people take their first steps - to start with action and let that lead to stronger beliefs rather than just focus on awareness raising that we hope will lead to behaviour transformation. Here, we found work by Sir David Attenborough, [Greenpeace](#) and the [Gamechangers](#) documentary to have raised consumer awareness and led to demand better products and policies for their and the planet's health.

5. R&D, technology and innovation

Technology development can significantly drop the resources needed to manage a sustainable and accountable enforcement of marine area and fisheries management policies as well as food systems. Satellite information and other tracking data, together with AI, can not only support fishers and farmers by providing them with vital information to manage their practice, it can also

serve authorities to enforce policies. It also means that surveillance and enforcement is becoming increasingly cheap and effective to protect our land and the ocean. There are 2 examples that stand out in this area:

- I. [DryGro](#) is a UK-based agritech company that produces Lemna, a high protein alternative for fish and animal feed. The Becht Foundation has used its investment resource towards DryGro's advancement.
- II. [Rare](#)'s use of *our fish* app allows for measuring of catch by small-scale fishers in Mesoamerican region. This is not measured robustly at a global level, which is a gap because small fishers land 40% of the global catch. This easy to use tool allows fishers to measure their catch and economic value of it and it helps governments to manage and maintain fish stocks. The Becht Foundation has granted funds to Rare for designation and implementation of MPAs in Honduras and Guatemala.

6. Monitoring and enforcement

Today there are established and emerging technologies and techniques utilising a combination of satellites, ship-tracking devices, radar, and AI to locate infringements in near-real-time from anywhere in the world, and at low cost. For example, [Global Fishing Watch](#) promotes ocean sustainability through greater transparency by using cutting-edge technology to visualise, track and share data about global fishing activity in near real-time and for free. If illegal or unethical fishing or deforestation practices are spotted before much harm has actually been done, activists and governments stand a much better chance of preventing more damage. Capacity building and building the right infrastructure to fully capitalise on such technologies can help bridge the gap to their best possible implementation.

The Becht Foundation is committed to making a structural and measurable impact to protect and restore our planet's biodiversity, through marine conservation. Within this focus area, we expect our approaches and interventions to evolve as we learn more and as new challenges and opportunities appear. We are open to and encourage collaboration with charities, foundations, governments, social enterprises and cause-driven businesses to drive systemic change.



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