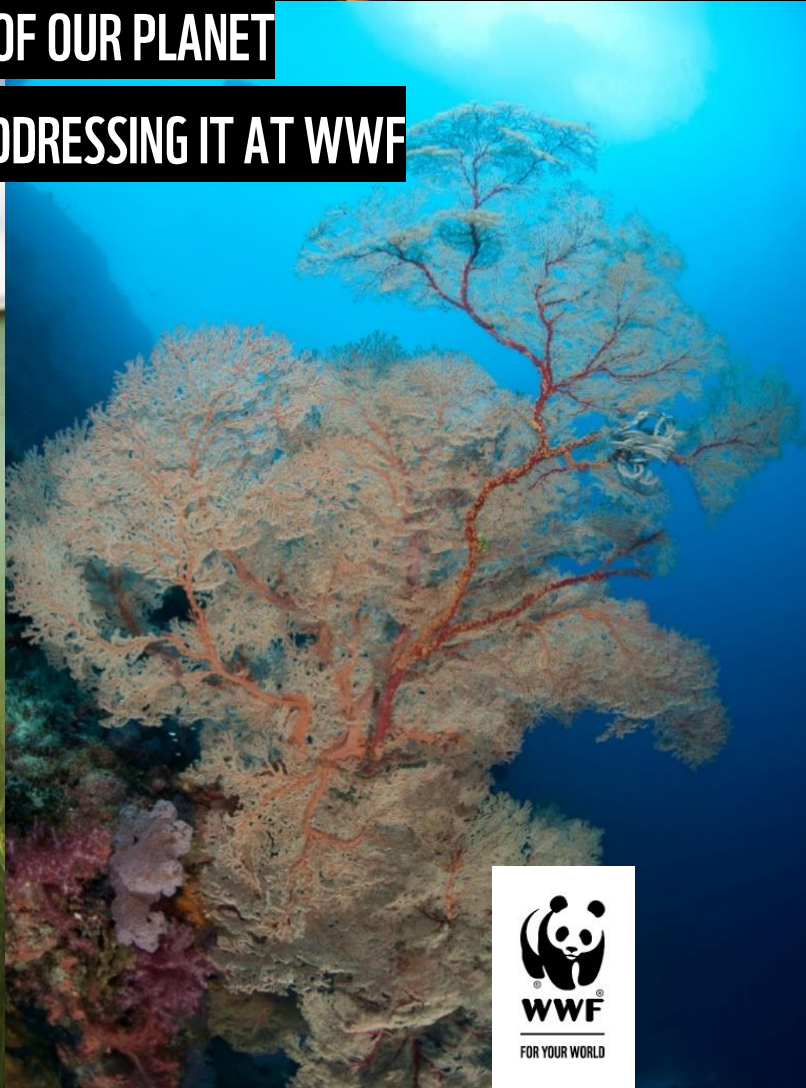


BREAKING BOUNDARIES:

THE SCIENCE OF OUR PLANET

AND HOW WE ARE ADDRESSING IT AT WWF



EXECUTIVE SUMMARY

The challenges facing our world have never been more serious. WWF's Living Planet Report 2020 highlights the devastation humanity is causing with wildlife population sizes plummeting by 68% since 1970. From the Amazon rainforest to the polar ice sheets, the latest research – as explained by Professor Johan Rockström in *Breaking Boundaries: The Science of our Planet* – shows that the life-support systems helping to regulate our Earth and maintain its stability are accelerating towards a tipping point of no return. These interconnected events threaten to bring irreversible consequences for our climate and the future resilience of our planet.

But such changes are still within our control. We know what must be done to transform at pace and stay within a series of 'planetary boundaries' – the safe operating space for a stable planet. Only by doing so can we ensure a sustainable and equitable future for people and nature. This year, with the UK hosting the COP26 climate summit, we have an unparalleled opportunity to make an impactful and meaningful difference. We must all become planetary stewards – protecting and restoring our natural world while we still have time. WWF is strategically placed to communicate the climate and biodiversity crisis, encourage others to put a value on nature and share the solutions that will set us on a path to recovery. Beyond our heartland work to protect wildlife, we are also focused on tackling the underlying root causes driving nature and habitat loss, including fixing food production, and facilitating a major step change in efforts to combat climate change. Restoring, regenerating, and conserving our natural world is the greatest solution to the environmental crisis. We urge you to put nature at the centre of your philanthropic giving.

HOW YOU CAN HELP - THE ROLE OF ENVIRONMENTAL PHILANTHROPY

At this critical time for climate and nature, environmental philanthropy has enormous potential to not only address these issues but to help chart our course to recovery. So far, it has already saved species from extinction, changed national legislation, restored vast areas of land, and safeguarded the health and livelihoods of millions of people. In this document, we are pleased to present a brief overview of WWF's priority initiatives across a range of ecosystems at risk of reaching a 'tipping point'. Each are critical areas where the science tells us we must both focus and accelerate our efforts to restore our natural world.

Please join us in igniting a climate and nature recovery. If you'd like more information about any of these initiatives or other aspects of our work, we'd be delighted to arrange a meeting with one of our WWF experts such as **Mark Wright, Chief Scientist**, to answer any questions you have. Please email philanthropy@wwf.org.uk or call (+44) 01483 412424.



PROTECTING ANTARCTICA'S CLIMATE HEROES IN THE SOUTHERN OCEAN

FUNDING NEED: £500K-£1M

The Antarctic Peninsula is one of our most spectacular and remote places, yet it has warmed faster than almost anywhere else on Earth. While the Southern Ocean accounts for about only 10% of the world's ocean, it probably supports over 50% of the world's marine mammal biomass. For many Antarctic species such as Adélie penguins, seals and blue whales, a warming ocean and the loss of sea ice in this rapidly changing environment threatens to deplete their main source of food: Antarctic krill. These small shrimp-like creatures underpin the entire Antarctic marine ecosystem. Krill is also the target species for the largest Antarctic fishery, mostly used as feed for aquaculture. An exciting finding from recent scientific research demonstrates that krill have huge benefits for carbon sequestration, drawing down from the atmosphere the equivalent of the UK's domestic carbon emissions year on year. Protecting and managing a healthy and resilient Southern Ocean ecosystem is hugely important in maintaining this function.

Yet climate change and growing international interest in krill fishing are threatening the future of krill and its benefits for climate and nature. The early life stages of krill are dependent on sea ice and adult growth

rates decline rapidly above 3°C global warming. One of WWF’s initiatives in the Southern Ocean includes working with the Plymouth Marine Laboratory and the British Antarctic Survey to research this vital marine organism, identify krill habitat refugia in the context of Southern Ocean change, and inform the management of a highly precautionary krill fishery. With your support, WWF could expand upon this vital krill research to advance the science and increase our understanding of the role these marine organisms play in enhancing long term carbon storage, and the risk associated with increased international interest in the fishery. It will also help us identify krill refugia to include within a network of Marine Protected Areas in the region – and strengthen our advocacy within the Antarctic Treaty System and its Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) to protect critical krill stocks from current and future threats.



Speak to the expert:
Rod Downie, Chief Advisor, Polar
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THE AMAZON RAINFOREST – PROTECTING THE LUNGS OF THE WORLD

FUNDING NEEDS: £4-5M (AMAZONIA VIVA) || £2-3M (GREENING SUPPLY CHAINS) || £300-500K (POLICY & ADVOCACY) || £2-3M (ALTERNATIVE LIVELIHOODS) || £1-2M (JAGUAR CONSERVATION)

The Amazon is the world’s largest rainforest, providing a home to one in ten known species and to over 30 million people, including almost 3 million indigenous people in more than 350 groups. In recent years, the fires that have ravaged parts of the Amazon have provoked global outrage. Fuelled by deforestation, these fires threaten the lives and livelihoods of indigenous peoples and local communities, and the rich biodiversity that is essential to the health of our planet. Some scientists estimate that if we lose another 5% of the Amazon, it will trigger an irreversible tipping point, which would have catastrophic consequences for the world’s climate and biodiversity. According to a [report](#) from Earth Innovation, one hectare of Amazon deforestation causes an estimated \$55,000 in damage to the global economy in terms of social cost of carbon. Every acre of the Amazon that is cleared is breaking down the vast ecosystem’s ability to sustain itself and, in turn, to sustain humanity.

WWF-UK is working with a number of organisations in Brazil, Bolivia, Peru, and Colombia – and closer to home here in the UK – to address the destabilisation of the Amazon region and prevent it from reaching a critical tipping point. No one strategy alone will save the Amazon and our approach focuses on a range of interventions from working with communities through our *Amazônia Viva* programme to addressing the global drivers in supply chains that are increasing deforestation.

A recent WWF [report](#) highlights the importance of recognising and respecting the rights, governance approaches and conservation efforts of indigenous peoples and local communities as custodians of their lands. In the Brazilian Amazon, we are working in deforestation hotspots in partnership with organisations in two states: Rondônia and Acre. These regions cover an area roughly three times the size of England. WWF is supporting the efforts of indigenous communities in these states who face increasing threats from illegal occupation and extraction of resources on their lands to carry out ‘real-time’ land monitoring; enable their advocacy for the defence of their land rights; and raise awareness on a national and international level – ultimately demonstrating an approach that can be scaled across the Amazon biome.

Your support could also help fund our work in the Amazon to remove deforestation from supply chains such as soy; strengthen our advocacy work at a local, sub-local, national or international level; create alternative livelihood options across the Amazon region; and help safeguard priority jaguar landscapes. Our aim is to protect biodiversity, enrich the livelihoods of local people, and demonstrate models for reversing deforestation and managing development sustainably across the Amazon – before it is too late.



Speak to the expert:
Sarah Hutchison, Chief Advisor - Latin America
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CORAL REEFS – LEADING A WORLDWIDE REEF REVIVAL

FUNDING NEED: \$1M-25M

Coral reefs are one of our ocean's most important ecosystems. Globally, these precious 'rainforests of the sea' provide a habitat for around 25% of known marine wildlife despite only covering 0.1% of the ocean floor. Reefs are also the lifeblood of coastal communities, offering a vital source of income and nutrition for millions of people around the world. For all the benefits of these underwater marvels, the latest research shows that 99% of tropical corals are projected to be lost if global average temperature rises by 2C (IPCC 2018), due to warming, ocean acidification and pollution. This would have grave consequences for the wellbeing and survival of millions of people, ecosystems, and marine species.

But there is hope. As we head towards a 'tipping point' of irreversible climate change, the Coral Reef Rescue Initiative – a global partnership led by WWF, including Wildlife Conservation Society, Rare, CARE International, Blue Ventures, Vulcan Inc., and the University of Queensland – aims to secure and protect 70% of the world's least climate exposed yet connected coral reefs by 2030. Driven by the knowledge that urgent and transformational change is needed to combat the loss of coral reefs, the CRRI is focusing on reefs in seven countries: Indonesia, Philippines, Cuba, Fiji, Tanzania, Solomon Islands and Madagascar.

As we move into the next five-year phase of site level implementation across the seven priority countries, we are now seeking private philanthropic funding to bridge budget gaps and help us deliver our Resilient Communities, Networks & Knowledge, and Global Advocacy work, and to help us to leverage substantial public sector funding opportunities from the Green Climate Fund – the world's largest climate fund. Ultimately, this will allow us to deliver the CRRI strategy, implementing and demonstrating priority interventions across selected reef sites, in partnership with local communities, governments, and other stakeholders.



Speak to the expert:
Carol Phua, Coral Reef Rescue Initiative Manager
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SEAGRASS RESTORATION – THE UNSUNG CLIMATE HERO

FUNDING NEED: £2-5M

With the world facing a climate and biodiversity emergency, enhancing long term carbon storage has never been more urgent. If we do not act now, losing more of our coastal ecosystems will cost the UK economy up to £15bn a year by 2050. To help tackle this crisis, our ground-breaking Seeds of Hope programme is working to restore seagrass meadows, one of the most productive ecosystems on Earth – the unsung climate hero of our ocean with some species of seagrass able to sequester up to 35 times more carbon than tropical rainforests.

WWF has partnered with the University of Swansea and Project Seagrass to undertake the biggest ever seagrass restoration project in the UK. Our vision is to help re-establish 2,500 hectares of seagrass meadows across the UK by 2030 for the benefit of people, species, and our climate. To reach this target, we will develop world-leading new technologies to rapidly increase the scale of planting, which is currently done by hand. This will be critical in unlocking future large-scale investment from government and industry as a solution to carbon capture and off-setting.

We have already planted 2 hectares of new seagrass meadow at the pilot site in Dale but your support could enable the next phase of work to restore 16 hectares of seagrass at three further sites in North Wales, the Solent or the Firth of Forth by 2026. This will help us build a robust evidence base and enable us to start taking our restoration work to scale. We will work with coastal communities to restore these amazingly productive meadows, which will help enhance biodiversity; increase our depleted fisheries; improve water quality; reduce coastal erosion and flood damage for climate change adaptation; and re-establish a huge source of carbon storage to help UK efforts to combat climate change. By incorporating strong awareness-raising and advocacy work, we aim to change public attitudes as to the value of our seas and build momentum to see ocean health restored.



Speak to the expert:

Ricardo Zanre, Ocean Restoration Programme Manager

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ENGAGING COMMUNITIES – COMMUNICATING THE CHALLENGES

FUNDING NEED: £500-750K

With our planet on the cusp of a series of tipping points that have the potential to cause runaway climate change and irreversible biodiversity loss, huge changes to the way we live and work are required. At WWF, we are working with even greater urgency and leveraging the power of the panda brand to engage people of all generations in a range of initiatives that address the climate and biodiversity crisis.

We are working with the BBC on a new TV series, *Wild Isles*, that will focus on the UK's surprising beauty and global environmentally significant wildlife, from the red squirrel to the orca. The five-part series, which will air in Spring 2023, presents a high-profile communications opportunity for UK nature. Philanthropists now have the opportunity to work with WWF to create a final 6th episode that will seek to increase awareness and understanding of the problems, and demonstrate how everyone can have a positive impact on our planet.

We are also engaging communities through a new Sustainable Futures Programme, ensuring that young people today are equipped to drive, and thrive in, the sustainable world that we are shaping. In partnership with Villiers Park and Founders4Schools, we are preparing young people for the future job market – not the past – and for the importance and relevance of “sustainable careers” to become an embedded component in careers education across all schools across the UK. The programme comprises a mix of sustainability skills training and mentoring (for young people, teachers and career leaders) along with work experience placements, awareness-raising and a government lobbying component. Your support will help facilitate a swift and effective transition to a green economy following the Covid-19 pandemic by ensuring young people who are currently in education and who are entering the workforce have aspirations, careers advice, opportunities and skills that are focused on creating a sustainable future.



Speak to the expert:

Matt Larsen-Daw, Education Manager

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THANK YOU

We would welcome the opportunity to discuss any of the above initiatives with you in more detail, but we also appreciate that you have so much more to give than simply money. We would love to discover the causes close to your heart, exchange ideas and learn from each other to find solutions to the challenges facing our planet. Together, we can catalyse change and safeguard our beautiful home for generations to come.