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A behavioral approach to fighting climate change

FISH FOREVER

Climate change's impact on coastal fisheries

Coastal fisheries provide invaluable benefits to coastal communities, including economic development, food security, and poverty alleviation. But the impacts of climate change, like ocean acidification, warming temperatures, and powerful storms, threaten the livelihoods of small-scale fishers. Years of unsustainable fishing practices, poverty, and poor law enforcement have already inflicted significant damage to critical habitats such as coral reefs, mangroves, and seagrass beds. With coastal fisheries expected to decline by up to 40% by 2050, scientists predict that marine habitats will worsen in the coming years, leaving hundreds of thousands of small-scale fishing communities vulnerable.

Fish Forever's climate strategy

Rare's Fish Forever program uses its behavioral adoption strategy to strengthen community-led coastal fisheries management and restore vital marine ecosystems that support climate resilience. With a global network of 150+ local partners and 100+ dedicated staff members, the program mobilizes small-scale fishing communities and their government leaders to leverage biological, behavioral, and social sciences to sustain fisheries production. We pair our community-led, rights-based approach with a networked marine management system called Managed Access with Reserves (MA+R) to obtain preferential fishing rights for local community members. Using Climate Change Vulnerability Assessments, we identify climate threats unique to individual fishing communities and use Ecosystem-based Adaptation (EbA) measures to strengthen the resilience of biodiversity, fish populations, and community livelihoods.

Our global teams

Fish Forever mobilizes coastal fishing communities, their local leaders, and governments to revitalize global coastal fisheries. We currently work in Brazil, Guatemala, Honduras, Indonesia, Mozambique, Palau, the Federal States of Micronesia, and the Philippines, with plans for scaling to new geographic locations.



FISH FOREVER

Program Highlights



Fishing for climate resilience

In 2018, with support from Germany's International Climate Initiative (IKI), Rare launched a four-year Fishing for Climate Resilience project to support coastal communities in Indonesia, Palau, the Federated States of Micronesia, and the Philippines in adopting nature-based solutions to climate change. The results provided strong arguments for Rare's behavior adoption methods and community-led rights approach, giving us a model for expanding Fish Forever's climate resilience work to more coastal communities.



The Coastal 500

In 2021, Fish Forever helped launch the Coastal 500, the largest network of local government leaders committed to protecting and restoring coastal ecosystems to safeguard ocean biodiversity and coastal community livelihoods. To date, the Coastal 500 consists of more than 160 mayors from communities in Brazil, Guatemala, Honduras, Indonesia, Micronesia, Mozambique, Palau, and the Philippines. These leaders represent coastal communities under enormous pressure from overfishing and the impacts of climate change, like storm surges and sea level rise. By elevating the voices of leaders on the frontlines of climate change, the Coastal 500 helps bring climate resilience to the global stage.



Savings clubs

Most small-scale fishers live in marginalized coastal communities in the Global South and lack access to the formal banking sector. Fishers are often unable to save long-term and plan for emergencies, leaving them even more vulnerable to climate change. Since 2017, Fish Forever has helped establish over 650 savings clubs, engaging nearly 15,000 small-scale fishing household members across six countries to save millions of dollars. These informal, community-based clubs provide many benefits to rural communities, particularly increasing social cohesion, women's empowerment, financial resilience, and new investments in businesses, education, and healthcare.

LANDS FOR LIFE

Climate change's impact on small-scale farming

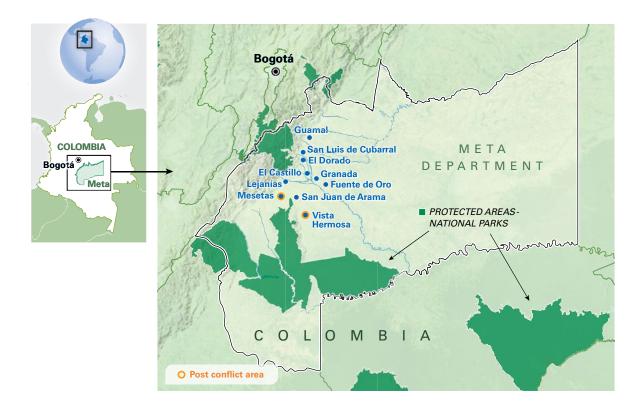
Climate change is threatening the livelihoods of smallholder farmers around the world. Extreme weather events, increased water scarcity, flooding, and rampant pests destroy the crops and landscapes that farmers rely on. In response to mitigating the devastating impacts of climate change, many farmers resort to short-term solutions like overusing chemical fertilizers that degrade soils and generate high carbon emissions. These unsustainable practices undermine ecological integrity, further escalating the climate crisis and hurting farmers' livelihoods.

Lands for Life's climate strategy

In Colombia, Rare is piloting its regenerative agriculture program, Lands for Life, seeking to transform and reimagine how we farm for the future. The program equips smallholder farmers, agricultural extension agents, and local leaders with the information, skills, training, and tools needed to shift to regenerative agriculture and more sustainable ranching practices. Our approach pairs the science of human behavior with state-of-the-art digital technology to uproot deeply entrenched farming practices and change social norms so that sustainable farming becomes the new default for smallholder farmers.

Our work in Colombia

Lands for Life focuses its work in Meta, the second-largest contributor of GHG emissions among Colombia's 32 departments.



LANDS FOR LIFE

Program Highlights



Soil health and carbon sequestration

Agriculture is a leading driver of global deforestation and climate change. Worldwide, agriculture drives 80% of deforestation and produces 23% of global greenhouse gas emissions. According to the Global Forest Watch, between 2001 and 2019, the expansion of agricultural land drove 69% of deforestation in the tropics. Agriculture and cattle ranching are responsible for 26% of Colombia's greenhouse gas emissions. Helping Colombia's smallholder farmers shift to more regenerative and sustainable land-use practices holds tremendous promise for tackling climate change. Lands for Life advocates for regenerative agriculture as a powerful climate solution to help Colombia lower its emissions while supporting farmers' livelihoods. Farming practices designed to harness the soil's ability to sequester carbon can help cool the planet and benefit the soil, water, and biodiversity on which we rely. The program partners with farming communities in high-biodiversity areas near protected areas and strategic ecosystems to achieve tangible, sustainable, and long-term results for people, biodiversity, and the climate.



Trees for Life

In 2021 Lands for Life and its partners launched the Trees for Life campaign in Colombia's central Meta department to support smallholder farmers and national climate change goals. Trees for Life supports the Colombian national government's reforestation and restoration campaign, including its goal of planting 180 million trees to fight climate change and deforestation. Planting trees in Meta improves the soil, protects the water source, and creates new biological corridors for native species to return and help the land recover from the impacts of climate change. To date, Rare has planted 131,000 trees with partners and communities in Meta and seeks to plant another 65,000 over the coming year.

CLIMATE CULTURE

Climate action in America

In August 2022, the United States signed into law the Inflation Reduction Act, the nation's greatest climate policy investment in U.S. history. The climate change legislation supports the case that individual climate actions matter. But it's one thing to incentivize electric vehicles, solar panels, and energy conservation measures — the second challenge is to get millions of Americans to act and adopt them. Today, 72% of Americans see climate change occurring in their own lives, and more than six in ten Americans believe citizens should do more to address global warming. The trouble is, they think they are alone in believing people should act.



Climate Culture's climate change strategy

Climate Culture is a data-driven, behavior-centered partnership program to engage millions of Americans in taking personal action to collectively move the meter on climate change. The program uses insights from the science of human behavior to catalyze new norms such as eating less meat, going solar, or swapping out a gas-powered car for an electric vehicle — behaviors which not only objectively reduce emissions, but also cause a ripple effect as we interact with the people around us. The Climate Culture program shifts the narrative through storytelling and media (whether that be entertainment media or social media), and through local partnerships to meet Americans where they are.

CLIMATE CULTURE

Program Highlights



H T p c i a e

Climate Culture Hometown & Boston Shine

Climate Culture Hometown is an initiative that works with leadership in forward-thinking cities like Boston to create an action plan to create sustainable norms and inspire community-level action to make cities climatefriendly. Climate Culture Boston aims to engage an additional 10% of the area's 4.5 million residents in taking collective climate action. The program host events, interactive experiences, and development programs with trusted local partners to make climate-positive behaviors more appealing. Through its new Solar Helping Ignite Neighborhood Economies (SHINE) pilot program, Rare is pairing climate-positive behavior with community economic development. This multi-faceted project undertaken with Boston's leading anti-poverty agency, Action for Boston Community Development (ABCD), and other local organizations, will advance the energy transition needed to meet societal, federal, state, and municipal climate objectives, as well as reduce energy bills for residents.

Hollywood Entertainment Lab

The Hollywood Entertainment Lab is an initiative to partner with content producers, studios, production companies, writers, and directors to infuse climate-positive behaviors into their stories. Together, we develop audienceactivation campaigns that convert viewers to participants. Based on Rare's core expertise in behavioral science research, our support includes workshops, events, consultations, audience surveys, public opinion research, and impact measurement and evaluation. The Entertainment Lab is helping creatives tell stories that create new cultural norms and drive change for a sustainable future.



Climate Culture Index

In 2021, Rare conducted the first iteration of a nationwide study, the Climate Culture Index, to measure the state of Americans' beliefs related to climate action. The Index is a groundbreaking study of the leading indicators of climate-friendly behavior change, adaptable to include behaviors such as those encouraged by the Inflation Reduction Act (IRA). Rare plans to run the Climate Culture Index annually to collect trends over time, tracking changes in attitudes, beliefs, and social norms around adopting climate behaviors.

CENTER FOR BEHAVIOR & THE ENVIRONMENT

Climate change and individual action

Over the last fifty years, the science of human behavior has grown into a vital field, particularly as it relates to understanding our relationship with the environment. Studies show that friends and family, as well as social factors like norms, peer pressure, and societal expectations, greatly influence our behaviors. And because of this social influence, our individual actions have the power to catalyze widespread change.

The climate crisis is ultimately a behavioral problem — and behavioral problems need behavioral solutions. Climate change's greatest impacts, like greenhouse gas emissions, depleting fish stocks, food insecurity, and depleted natural resources can all be mitigated by helping individuals adopt more responsible and sustainable behaviors.



The BE.Center's approach to climate change

Rare's Center for Behavior & the Environment (BE.Center) is the world's first center dedicated exclusively to behavioral science and design for the environment. The team collaborates with external partners and Rare's program staff to design and deliver behavioral solutions to a range of initiatives tackling greenhouse gas emissions, overfishing, unsustainable land use, conservation crime, water pollution, and the emergence of zoonotic diseases. We target unique audiences to increase the adoption of behaviorally informed solutions by growing interest and demand. The BE.Center helps communities worldwide develop actions to improve global environmental outcomes for years to come.

CENTER FOR BEHAVIOR & THE ENVIRONMENT

Program Highlights



Solution Search

Around the world, local communities often have successful methods for managing and protecting their natural resources. But these small-scale local practices and solutions often go unnoticed on a global scale. Through Solution Search, Rare surfaces, spotlights, and accelerates existing solutions that use behavioral science to help solve the world's most challenging environmental problems. Over the last ten years, we've amplified and scaled solutions for biodiversity, thriving fisheries, greenhouse gas mitigation, disaster resilience, clean accessible water, and more.



BE.Hive

The Center for Behavior and the Environment's (BE.Center) vision is that by 2030, more leaders effectively apply behavior-centered design to the world's greatest environmental challenges. In March 2019, the BE.Center hosted a Behavior & Environment (BE) conference, entitled BE.Hive, to elevate the role of behavioral and social sciences in the environmental sector and to increase demand for BCD. The Rare team held similar events at Dickinson College in fall of 2019 (focused on campus sustainability) and virtually in September 2021 (focused on water pollution). Combined, these events attracted over 700 attendees and inspired partners to learn more about behavior change for the environment. To build on this momentum and maintain BE.Hive as a signature brand-building event for the BE.Center, the Rare team will host a fourth event in Washington, DC in June 2024.



Pride on our Plates

Food waste is among the most overlooked contributors to greenhouse gas emissions. Food waste in China — the world's most populous country mirrors the global situation. China wastes more than 38 million tons of food annually. Most of this food is wasted by consumers, with restaurants generating more waste than that coming from homes and stores combined. In 2020, Rare, together with the One Planet Foundation and the WWF Beijing Representative office, launched Pride on our Plates to help China's micro-, small and medium-sized enterprises (MSMEs) adopt sustainable practices that curb food waste. The project supports consumer awareness of sustainable consumption and seeks to enhance and strengthen policies related to food waste. In pilot cities across the country, Rare's toolkit of behaviorally informed solutions is helping restaurants reduce waste and create new social standards for sustainability.

INNOVATIVE FINANCE

Climate change and financial security

Across the Global South, fishers, farmers, and other resource users live close to a wealth of natural resources, but often cannot benefit from sustainably managing their natural capital due to a lack of access to formal financial services. On the frontlines of climate change, local fishing and farming communities also face greater financial loss from severe weather events and growing natural disasters. Without a financial safety net, these communities often struggle to withstand the unpredictable shocks of climate change.



Innovative Finance's climate strategy

Rare's Innovative Finance program uses a people-centered, science-based approach to help remote communities enter the formal financial sector. Innovative Finance works with Rare country teams to pilot, structure, and scale financial products that sustainably finance the management and conservation of natural assets to allow local communities to capture, retain, and build their own wealth. The team develops innovative financial products, builds local capacity, and works directly with financial institutions to support communities in sustainably managing their natural resources. With the support of Rare's Innovative Finance team, local communities are able to access capital and increase their economic resilience against household emergencies, natural disasters, and pandemics.

INNOVATIVE FINANCE

Program Highlights



Blue carbon

Coastal habitats, such as mangrove forests, seagrass meadows, and tidal marshes, are among the planet's most effective carbon stores. Known as blue carbon ecosystems, these vital ecosystems mitigate the effects of global climate change by protecting shorelines from storm surges and erosion. They also secure the livelihoods of millions of small-scale fishers who rely on coastal resources. Based on Rare's decades-long successful history of working with local communities, Innovative Finance is developing local rights-based blue carbon solutions that center communities in restoring, protecting, and managing the blue carbon ecosystems they depend on. The team aims to conduct pre-feasibility assessments (PFA) in each of Rare's Fish Forever geographies to build its blue carbon portfolio responsibly. After each PFA, Innovative Finance will design and implement a climate-smart community-based mangrove protection or restoration project that generates sustainable revenue for community-led management while contributing to climate action and fisheries management.



Parametric insurance

With support from the government of Canada via the Ocean Risk and Resilience Action Alliance (ORRAA), Rare and Willis Towers Watson, a leading global advisory, broking, and risk solutions company, are piloting a parametric insurance product that helps fishers adapt to climate change by providing protection for income lost due to extreme weather. Parametric insurance provides payouts within weeks of a hazardous weather event, assisting fishers to stay financially afloat when fishing is unsafe. The product will also help alleviate poverty in the long term by reducing debt burdens and providing alternatives to credit for small-scale fishers.



Rare inspires change so people and nature thrive.

Rare is an international non-profit organization specializing in social change for people and the planet. For nearly 50 years, Rare has partnered with individuals, communities, and local leaders on the frontlines of conservation to help them adopt more sustainable behaviors and practices. With a behavior-based approach, Rare empowers individuals and communities to manage and protect the nature on which we all depend.



Learn more at <u>rare.org</u> and follow us at <u>@Rare_org</u>.