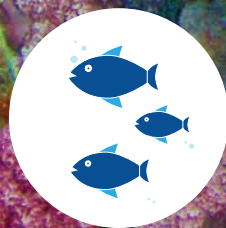


# Healthy Oceans, Healthy Planet

A strategic vision for the future of oceans

Environmental Defense Fund (EDF) is a champion of healthy oceans that help sustain the planet, feed the world, alleviate poverty and support fishers and their communities, even in the face of climate change. We work with partners around the world and draw on strong science and economic principles to advance sustainable fishing practices, forward-looking policies and innovative tools that support the health of our oceans and the people who depend on the sea for their livelihoods.

# Healthy Oceans,



Sustainable Fisheries



Marine Biodiversity



Thriving Coastal Communities



Climate Regulation  
Carbon Sequestration  
Climate Resilience

## Why protect the oceans?

Oceans sustain all life on the planet. They produce oxygen, regulate the global climate, provide critical habitat for countless plants and animals, support billions of people with food and jobs and shape the cultural traditions and identities of coastal communities around the world.

Today, our oceans face dire threats. Chief among these is overfishing, which has brought many fisheries to the brink of collapse. Overfishing has decimated fish populations, damaged critical habitats, reduced marine biodiversity and hurt coastal communities worldwide. According to [our research](#), unless bold action is taken to end overfishing, nearly 90% of global fish stocks will be depleted by 2050.

Climate change impacts — including warmer water temperatures, ocean acidification, shifting ocean currents and habitat loss — are also dramatically stressing our oceans, putting at risk both global ocean health and the goods and services oceans provide. Fisheries across the globe are already feeling the effects of climate change, from the southeastern Pacific anchovy fishery to the northern Atlantic mackerel fishery. Many fish species are on the move in search of cooler waters, and in the tropics, climate change threatens to reduce the ocean's ability to produce fish for food by up to 40-50%.

To ensure healthy oceans that can sustain coastal communities and the planet at large for generations to come, we must act now to reduce climate pollutants, implement climate-adaptive policies and put an end to overfishing.

# Healthy Planet

Today, roughly 3 billion people rely on fish as an important source of protein, and that number is expected to rise to 4.5 billion by 2050.

Many communities that are most vulnerable to climate impacts are also home to some of the world's richest biodiversity hotspots.

Nearly 50% of all ocean-based jobs are fishery jobs, and in total, ocean-based industries and activities contribute approximately \$2.5 trillion to the global economy each year.

In temperate regions, shifts in species distribution will give rise to new management conflicts, undermining already sustainably managed fisheries.

What is at stake?

# Restore fisheries, restore ocean health

Fisheries health is critical to ocean health. Though challenges abound, we still have an opportunity to build sustainable, climate-resilient fisheries.

The [latest science on climate change and fisheries](#) tells us strong fisheries management that reduces overfishing and rebuilds depleted populations will support healthier ocean ecosystems and coastal communities, even under climate change.

Adaptive and forward-looking management strengthens the ocean's ability to withstand current and future climate change impacts. By anticipating future changes in ocean conditions, fisheries productivity and the location of fish, we can work today to ensure that fish populations and the communities that depend on them are more resilient to climate impacts.

## When we take care of fish, we take care of everything else:



Preserving marine food web



Protecting coral reefs



Supporting **hundreds of millions of jobs** globally



An **essential source of nutrition** for more than a billion people around the world

# EDF is helping transform fisheries management around the world



Fisheries reform is one of our top priorities — it is the key to unlocking healthier oceans. EDF is also focused on strengthening the adaptive capacity of coastal communities so they can stay economically and environmentally resilient in the face of emerging climate change impacts. We work closely with a broad and diverse network of partners, collaborators and fishery stakeholders to implement climate-resilient fisheries management at local, national, regional and global scales. We help drive transformational change by putting science-based and climate-smart policies, tools and technologies in place where they are needed most.

## Our goal

By working closely with a broad network of allies to put our [pathways to climate-resilient fisheries](#) in place, we will improve the health of critical ocean habitats and enhance ocean-based livelihoods and food security. We will also help communities expand beyond capture fisheries and tap into other elements of the blue economy — such as aquaculture and ecosystem service returns — to ensure they are positioned to thrive, now and in the future.

By 2030, we will protect **60% of wild fisheries** by equipping partners across the globe with the knowledge, tools and resources they need to implement climate-resilient fisheries management.

## Five pathways to climate-resilient fisheries

- 1 Put science-based fisheries management and governance in place as soon as possible.
- 2 Anticipate and plan for future changes in oceanographic conditions and the geographic distribution of fish populations.
- 3 Enhance international cooperation and strengthen international institutions for shared fisheries management.
- 4 Improve the health of marine ecosystems to ensure they remain functional and can help fisheries recover from climate shocks or disturbances.
- 5 Uphold principles of fairness and equity in decision-making to ensure climate change does not exacerbate existing inequalities between socioeconomic groups.

## Five core elements of sustainable fisheries management

- 1 Set science-based limits on catch to ensure fish populations remain healthy and productive for generations to come.
- 2 Allocate secure rights to fishers that guarantee them access to a portion of total fish catch and provide the necessary incentive for long-term conservation.
- 3 Ensure management measures are flexible and can be adjusted as ocean dynamics change to ensure fisheries can continue providing ecological and socioeconomic benefits.
- 4 Uphold transparent, inclusive and participatory decision-making processes that provide a space for all fishery stakeholders — from fishers to government officials — to have a say in the way rules are made and enforced.
- 5 Implement effective governance structures and accountability measures that ensure all fishery participants comply with established management systems.

# Our climate resilience strategy

EDF has a bold new vision for tackling climate-driven changes in ocean dynamics.

We are promoting climate-resilient fisheries principles and practices at local, national, regional and global levels, and we have developed a comprehensive strategy to help coastal communities around the world address social, economic and environmental challenges and opportunities they will face due to climate change. Climate impacts on fishing communities will be different in different places. EDF is taking a regional approach to our work and employing a suite of solutions to address the challenges and opportunities climate change presents in three distinct zones: the tropical, temperate and polar regions.

## THE TROPICS

As temperatures rise in tropical waters, their ability to produce fish will decrease significantly, key habitats like corals may decline and fish populations will move poleward in search of cooler waters and more suitable habitat. As a result, some countries may experience dramatic declines in the amount of seafood they can produce, putting their food security and fishery-based livelihoods at risk.

### OUR STRATEGY

EDF is building strategies for new blue economy approaches that combine sustainable fisheries, sustainable aquaculture, marine tourism and future payments for ecosystem services, such as carbon sequestration. By demonstrating viable pathways that simultaneously ensure human well-being and strong ocean stewardship, we can achieve sustainable outcomes in these regions that benefit communities and ocean ecosystems alike.

### CASE STUDY

In Indonesia and the Philippines, EDF is building local capacity for sustainable fisheries management in order to help protect some of the world's richest marine biodiversity hotspots. Climate change may cause declines in tropical fisheries productivity in the coming years, and new strategies will be required to help communities in places like Indonesia and the Philippines sustain their livelihoods and continue protecting the rich biodiversity found in their waters. In these communities, we will help incorporate additional ocean-based opportunities into local economies.



## TEMPERATE ZONES

Changing ocean temperatures are driving geographic shifts in most temperate zone fisheries, and up to 80% of the world's fish populations could shift across the boundaries of one or more countries by 2100. As fish move across boundaries, many well-established management systems and international agreements will become ineffective and may collapse.

### OUR STRATEGY

EDF will help address fisheries shifts by strengthening management capacities in globally influential countries currently lacking a foundation of sustainable management, and by supporting new approaches for stocks shifting across traditional management boundaries.

### CASE STUDY

In Chile and Peru, we are working to advance science that extends beyond national boundaries to facilitate ecosystem-scale fisheries management that is critical in the face of climate change. We are helping put practices and tools in place for climate-smart management, including an early warning system for climate-driven ocean changes that will support real-time adjustments to fishing activity.



## POLAR ZONES

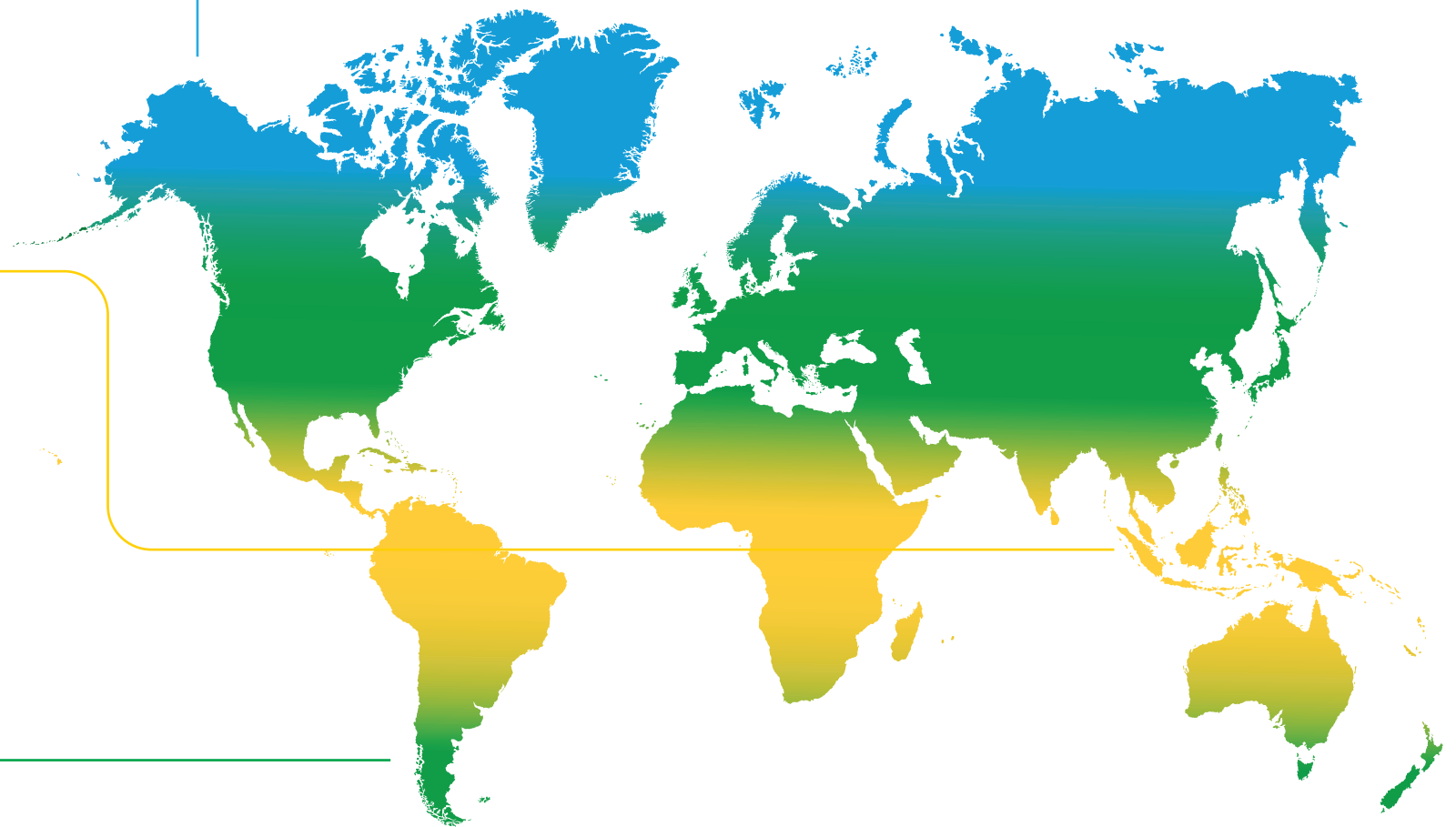
As the waters of the Arctic warm, this region will offer suitable habitat for many species searching for cooler waters, and new fisheries will emerge. Today, we lack comprehensive national and international solutions for effectively managing new fishing pressure in this region, which has been largely covered by ice for thousands of years.

### OUR STRATEGY

We will draw on our climate and fisheries science expertise, our experience driving sustainable fisheries management reforms and lessons from other fisheries to bolster the Arctic's existing science and management capacities and ensure effective management is put in place for emerging fisheries at the national level and in international waters.

### CASE STUDY

EDF will work with the U.S., the Arctic Council and other Arctic nations to ensure the global community continues taking a precautionary approach to fishing in the Arctic's rapidly-opening waters. We will help the U.S. establish science-based practices, champion appropriate conservation and management standards in the region and use its leadership to help ensure management in international waters supports sustainable use of the Arctic ecosystem.



# Spreading solutions around the world

As a complement to our work in local fishing communities, we are developing new scientific insights and a robust set of tools and technologies that can be applied in a wide variety of places and situations.

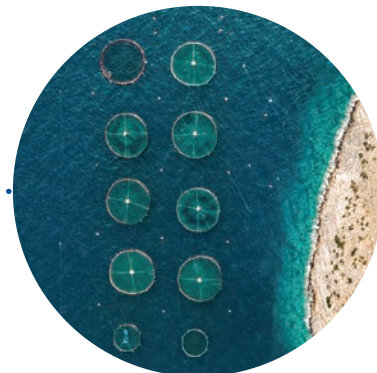
These solutions are specifically designed to enhance climate resilience, and our partners — including other NGOs, multilateral funders, philanthropists, governments, seafood industries and communities — help us put them into action on the water. These solutions include:

**Electronic “smart boat” and other technologies** that generate information to improve fishing businesses, enhance management accountability, protect sensitive habitats, anticipate climate impacts on ecosystems, predict and plan for changes in species abundance and even reduce the carbon footprint of fishing activity.

**Capacity building tools, trainings and other resources** that empower governments, communities and other stakeholders to design and implement management systems in small-scale fisheries around the world.

**Flexible, forward-looking fisheries policies and management systems** that respond to emerging opportunities and challenges, including new recreational fisheries management approaches, creative applications of rights-based management strategies and prediction and early warning systems for climate change impacts on fisheries.

**New models, best practices and policies to advance sustainable marine aquaculture** as a part of global seafood solutions.



# Why EDF?

EDF has spent decades bringing innovative, science-based solutions to some of the biggest challenges facing our oceans and coastal communities. We have become an established and accomplished leader in the oceans space by working closely with fishers and providing them with the incentives they need to become champions of reform.

**Strong track record of success:** EDF has a proven track record of success in advancing fisheries reform, climate-resilient fisheries principles, technology applications for commercial and recreational fishing and management, and collaborative approaches for capacity building in small-scale fisheries. For example, in the United States, EDF has played a critical role in supporting fisheries reform by advocating for science-based management approaches and helping implement catch share programs across many commercial fisheries. Due in part to our efforts, more than 90% of federally managed fisheries are now either rebuilt or on a clear rebuilding pathway.

**On-the-ground community engagement:** We work hand-in-hand with communities, building trusting relationships and empowering them to implement solutions that are good for the oceans and good for people. We work in dozens of communities worldwide and have helped drive national fisheries reform in the U.S., the European Union, Japan, Cuba and Belize. We support local communities seeking to manage their fisheries sustainably by facilitating learning exchanges; sharing successful applications of science, policy and management tools; advancing the development and application of novel technologies; and promoting rights-based management systems that align fisheries and conservation incentives.

**Solutions that can be replicated:** We advance science, policy, technologies, tools and information that are broadly applicable and can increase the sustainability and resilience of global commercial, small-scale and recreational fisheries.

**Collaborative leadership model:** While we offer deep expertise and decades of experience in fisheries management, we are also a collaborative leader committed to working closely with diverse international partners across the fishing industry, government, academia and the private conservation sectors at global, national and local scales.

# Partnerships are our key to success

Our partnerships and relationships with fishers, managers, governments, industry, scientists, multilateral funders, foundations and individual donors are critical to our work and help us drive transformational change in coastal communities around the world.



## Join Us!

Thanks to the support and collaborative efforts of our partners, we have made, and will continue to make, lasting positive changes in our oceans. We invite you to join the ranks of those already working with us to build healthier oceans and a healthier planet that will support us for generations to come.

 [edf.org/oceans](https://edf.org/oceans)

 [@EDFOceans](https://twitter.com/EDFOceans)

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