Stanford | Center for Ocean Solutions

Over 300 million people around the world depend on the oceans for their livelihoods, and over three billion people rely on oceans for food security. But oceans are in an era of upheaval, propelled by climate change, overfishing, coastal development, pollution and other stresses. The Stanford Center for Ocean Solutions (COS) is creating the innovations needed to sustain ocean health in the face of these threats – translating insights from research into solutions at scale for oceans and people.

We Are

The Stanford Center for Ocean Solutions (COS) capitalizes on Stanford's deep expertise in ocean science and in the many other disciplines crucial to solving ocean problems including engineering, computer science, political science, design and business.

We host a range of researchers and fellows to support our work, including Early Career Fellows who support interdisciplinary collaborations, and more seasoned senior fellows who help drive policy impact.

Mission

The Stanford Center for Ocean Solutions catalyzes research, innovation and action to improve the health of the oceans for the people who depend on them most.

Our Approach

We work with researchers at Stanford and other universities to advance understanding of ocean challenges and to help create new solutions.

Our core team of researchers and fellows partner with other research institutions, national and international non-governmental organizations (NGOs), businesses and governments, as well as established and emerging leaders in the data revolution to deliver impact in the water.

As a university-based center, we integrate leadership development into all of our work to help build a generation of ocean leaders who are equipped to work across disciplines and across sectors.



Key Initiatives in our Portfolio

- **Oceans and the Future of Food**: Through a partnership with Stanford's Center on Food Security and the Environment and Springer Nature, we are working to build a community of researchers investigating the many connections between oceans and the food system. We aim to generate insights that can guide the diverse decision-makers – governments, companies, and consumers – whose choices will shape the future of food and of the ocean.

- **Sustainable Ocean Economies**: We are developing approaches and tools to support the small island developing states of the Pacific in their efforts to integrate development and conservation. In Palau, at the request of the President, we are working with the Palau International Coral Reef Center and a team of Palauan and international experts to develop analyses and options for implementation of legislation that protects 80% of its Exclusive Economic Zone as a marine sanctuary, while achieving its economic development and food security goals.

- **Managing Ocean Risk**: We are creating a suite of models and data analyses, starting in the Arctic, to better understand how multiple threats impact the ocean – and how potential management and policy options can mitigate these risks. COS is also a co-founder of the Ocean Visions Initiative to develop and implement climate-based ocean solutions.

- **Bringing the Power of Tech to Small-Scale Fisheries**: In a collaboration with Stanford's d.school, we are working to use human-centered design approaches to identify new technologies that can help fishing communities manage their resources through, for example, improving financial capacity, monitoring catches, or improving access to markets.

- **Addressing Illegal Fishing and Labor Abuses**: We are leading an effort by the Friends of Ocean Action, a group of leaders convened by the UN and the World Economic Forum, to accelerate action on illegal fishing and human rights violations through linked efforts on three fronts. First, data: we are working with governments, companies and leading data platforms to increase data sharing that's needed to detect illegal fishing and support action in supply chains and at ports. Second, supply chains: we are working with leading retailers and seafood companies to establish traceability and transparency across their supply chains and shift the sector toward sustainability. Third, policy: we are working with leading governments and key NGOs to forge international cooperation to prevent vessels from landing illegal catch.

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