

More fish, food and prosperity

An interview with John Mimikakis

By Judy Stoeven Davies



Hundreds of millions of people—10 percent of the world's population—are at risk of malnutrition because of overfishing. Most are poor and when their fisheries crash, they lose a crucial protein in their diet, as well as the income they need to buy other food for their families. With a global food crisis looming, it is urgent that we act quickly.

The good news is that oceans are resilient and can recover. Peer-reviewed research by Environmental Defense Fund (EDF) and academic partners shows that sustainable fishing could help most of the world's fisheries recover in just 10 years.

In much of the world, there is a strong incentive to overfish, with fishermen and fisherwomen competing to catch as many fish as they can as quickly as

possible, without protecting their long-term economic interest, or the health of the ocean. EDF is working to reverse overfishing. Using science, economics and innovative policies, we are seeing remarkable results, especially in the U.S., where overfishing has dropped 60 percent in federal waters since 2000. Fisheries are recovering and fishing communities are on the rebound.

Our goal is to see 50 percent more fish in the sea by 2030—while improving the well-being of 400 million vulnerable people. We are currently working in the U.S., Europe, Latin America, Asia and seven Asia Pacific tuna fishing countries that dominate the world's supply and demand for fish.

EDF brings technical and scientific expertise to the places we work—and deep experience with fisheries around the world. But it is the local fishing communities that have an intimate knowledge of what is happening off their shores, so we work closely with them to find solutions that work.

The challenge is that it can take a long time to build relationships and trust in the Asia Pacific region, especially in fishing communities. Dr. John Mimikakis, who heads our Asia Pacific work, says, “We start by asking questions.”

Why is EDF working in Asia?

Overfishing is accelerating faster in Asia than anywhere else in the world. At the same time, there are more people there whose livelihoods are tied to fishing, probably more than anywhere else. People depend on fish for their food every day, so as the fish disappear, the race to catch them accelerates.

More than half of all fish caught in the world come from Asia Pacific waters. The



Japan's fisheries are experiencing signs of stress—with fish harvests only one-third what they were 30 years ago. EDF is working with Japanese partners to build a vision for thriving fisheries.



With EDF support, more than 7,000 fisherfolk in 10 small villages in the Philippines now have sustainable management programs that they helped design to revive their fisheries. Their success is prompting other villages to develop their own programs.

opportunity to turn things around is very large. Governments in these countries have a strong interest in restoring their fisheries, because they have such a deep impact on their people and their future.

For EDF, is this a moral issue?

A humanitarian crisis is unfolding in Asia right in front of our eyes. In poor, remote villages, the people don't understand what's happening. Why have the fish disappeared? Some say it's God's will. Others blame international trawlers that use nets to scrape up everything in their path, destroying the ecosystem and leaving nothing behind. These people see chaos and don't know why it's happening or what they should do.

Sustainable fishery management has worked in many different kinds of nations around the world. If Asian nations were to adapt to their own circumstances principles that are working elsewhere, not only would that be tremendously beneficial to the ocean environment, but it would also have a huge impact on billions of poor people who depend on fish for food.

In some parts of the Philippines, average daily catches have declined from 88 lbs in the 1970s to less than 7 lbs today. Desperation and growing hunger have driven some fishermen to use dynamite and cyanide to catch fish, destroying important fish habitats and magnificent coral marine sanctuaries.

What can we do? Well, outsiders had come before to the island community of Ayoke

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in Cantilan to tell locals what to do and how to do it. But when EDF and our partners arrived in 2013, we went to listen. We encouraged fishing communities to use their intimate knowledge of the ocean to develop their own plan for sustainable fishing.

The process involved intense study, questions and a lot of passionate talking back and forth among fishermen, communities and the people who depend on this resource. Ana Lou, a mother of two and a vocal community leader, was skeptical. But after seeing her ideas formally adopted in a new law, she began to weep. “For the first time,” she said, “I am hopeful about a better future for myself and my family.”



EDF encouraged local residents like Ana Lou to develop their own designs for fishing rights and fish recovery zones in the Philippines based on their local knowledge of the area, their own needs and on their own timetables.

Where is EDF working in Asia Pacific?

We're already actively working in China, Indonesia, Japan, the Philippines, Myanmar and the Pacific island tuna fishing nations. Vietnam is also on the list, but we haven't yet started any work there.

Most of these nations have large domestic fishing fleets and a profound economic

interest in fixing their fisheries, which in the end will drive governments to want to fix the overfishing problem.

EDF also chose these countries because they have tremendous biodiversity, especially in the region. Plus, China and Japan have great influence in the region. The Chinese depend on fish from so many other countries. As they increasingly see sustainable fisheries are in their economic interest, we hope they will become champions of good fisheries management around the world.

How serious is overfishing around the globe?

Nearly a third of the world's fisheries that have been studied are in deep trouble—and that's likely an underestimate. Overfishing has wreaked havoc on our oceans. If we don't make changes quickly, 80 percent of the world's fisheries will be in trouble in 15 years. But what we've seen over the past few decades is that fisheries have started to recover in places where management reforms are put in place. In the waters around Australia, New Zealand, Europe and the U.S., fish populations are rebounding. But not yet in Asia.

Fisheries are the heart of healthy ocean ecosystems. Coral reefs that have more fish are more resilient to climate change because there's so much biodiversity. Making fisheries healthy not only benefits fishing families and the economy, but also helps birds and other wildlife that depend on fish.

What can you do to stop overfishing?

Good fisheries management is a key part of the solution. A kind of “rights-based fishing” has already transformed fisheries in the U.S. A fisherman receives a secure share of the catch—and agrees to adhere to strict limits that allow fish populations to rebuild. This gives fishing families a long-term ownership stake—in the form of a percentage of the fishery. They can sell their share or grant it to their children. And when the fishery grows, their stake in it increases, along with their profits. We've seen this principle at work in diverse contexts, from small-scale fisheries in the developing world—to big industrial fisheries in developed nations. Fishing rights are a core element of what's needed in Asia to make fishing sustainable.

How do you set up a rights-based program?

Accurate data and good science are needed to understand what's going on under the water and on boat decks, which many countries in Asia Pacific lack. But you can't manage something that hasn't been measured. EDF's scientists have pioneered new tools for assessing fisheries, given the limited amount of data.

Fishing communities are a wealth of knowledge about how the ecosystem has changed over time. When boats come in with the catch, we can measure the length of the fish. From that, you can extrapolate to the health of the population. The bigger fish are older and capable of much higher reproduction rates—so more big fish indicates a healthier population.

And something else. There has to be some way to enforce the rules when a fisherwoman or fisherman sees somebody breaking them.



China is by far the world's largest producer and consumer of seafood. EDF is on a small task force advising top government officials on oceans.

How do you do that?

There's every incentive for people to go in and poach without effective enforcement. To keep that from happening, you need partnerships between local people and the government. We learned working in Belize that the government felt powerless to enforce the rules because nobody was reporting violations. But once the fishermen understood that access to the fishing zones belonged to their village, they would call government officials when they saw somebody fishing illegally. Or enforce the rules themselves.

What works is the idea of ownership, responsibility and stewardship. If the fishing families understand that the resource is theirs to take care of, they will take conservation action and reap the benefits. This is the kind of behavior we've seen when fishermen have secure access or fishing rights. They see conservation as being in their economic self-interest.

Does rights-based fishing work the same everywhere?

There are lots of different forms and shapes that rights-based fishing can take. In some Indonesian villages, they have traditional rules that are essentially rights-based. And those have developed over many, many years. The concept of ownership of the fish is embedded in individual quotas on the U.S. West Coast—and enshrined in Belize where a village has its own fishing grounds.

These principles have evolved independently in many different ways. And where they have, we generally see fishing working better because if your community conserves that resource, then you'll all profit.

What happens when EDF hits the ground in a new country?

In poor villages, it can be complicated. Can the local people reach a consensus about what's happening to their fisheries or how to fix them? In Indonesia, for example, many communities depend on the blue swimming crab. It's the third-most-profitable fishery there. The crabs are mostly sold into the lucrative foreign market, where there is a preference for big crabs.

We've seen in other countries that village fishermen typically catch mostly adult crabs at first. Then, there are only juveniles left. The international market doesn't



Fishing is growing faster in Myanmar than almost any place on earth. EDF is now working with local partners to design fishery reform pilots in three of the country's four coastal regions.



Indonesian women in Sumatra processing blue swimming crabs for the lucrative overseas market.

want small crabs, so the buyers move on to the next community. It's called serial depletion and has a devastating impact on fishing families. Their incomes crash, along with the fish population.

Many things had been tried to put sustainability programs in place, but they weren't working. EDF started asking questions: "Okay, what are the problems? What are your goals? Have you looked at this whole suite of options that are being used elsewhere in the world?"

For the first time, the government and stakeholders are having a productive conversation. They're in the design phase. We expect there will be a new management plan very soon that will cover about 10 percent of Indonesia's total blue swimming crab production and as many as five thousand fishermen and fisherwomen.

How do you build local support for sustainable fishing?

We look for local leaders. In Sumatra in Indonesia, a local woman stepped up in her community. She owns a mini processing plant where about 30 to 40 local women steam and crack the crabs—and pick the meat out for export to the U.S. She's seen what overfishing has done to her business and the community. She's now running for mayor of her small village and gave a very moving speech about the village's future depending on sustainable fisheries. "If we treat the crabs well and take care of the ocean," she said, "the crabs and the ocean will take care of us."

Her eloquence and passion give local people hope for their future. Everywhere we go, we need leaders who will stand up in their communities. There's no way EDF or any NGO can come in and lead the Indonesian people. We can offer help. We can spark someone to do more. But without a charismatic leader whom people look to, we can't get very far.

Is building the capacity for local people to implement the strategy a priority?

Yes. Ultimately, we want to work ourselves out of a job. We hit the ground. We work with partners. We identify the priorities of the government, industry and other groups—and try to figure out where we can provide the most value in helping them put the essential pieces in place.

Are there sensitivities about a U.S.-based environmental group coming in with answers?

We don't approach our partners as if we have all the answers. It is the people in fishing communities who know the most about what's really happening. We ask questions, help people understand what's worked elsewhere and then we work with them to figure out how to apply those principles in their own context. Often this means developing new solutions. And we connect local fishermen with other fishermen and fisherwomen around the world who have dealt with similar challenges.

A Northern California fisherman whom we've worked with came with us on a trip to Japan. Bob Dooley fishes for groundfish, mostly whiting. He didn't know anything about fishing for pink shrimp in Japan. He started asking the Japanese fishermen questions, like, "What horsepower is your engine? Tell me about your gear. What brand do you use?"

I didn't know why he was asking those questions and afterwards asked him what that was all about. He said, "Well, they told me what the horsepower of their engine was. I know where their fishing grounds are and what they get in the market for their fish. I can now estimate how profitable they are by how much fuel they burn to get the fish they sell."

Bringing fishermen to talk to fishermen. Bringing scientists to talk to scientists. Bringing managers and regulators or former government people to talk to their counterparts. That's the role that EDF plays, because all these conversations lead to better conservation and restoration of fisheries.

Why would a California fisherman make the time to travel to Japan to talk to fishermen there?

Bob has made a couple of trips to Japan. And he's not the only U.S. fisherman who has. They know how difficult their livelihood is on their families and communities when the fisheries they depend upon are in a state of chaos. EDF's approach to sustainable management of fisheries has made their lives better—and they want to spread the good news that fishing doesn't have to be a job that rips you apart. Bob is an excellent storyteller. Very engaging and good at connecting to other people. He is a great ambassador for the success of our rights-based fishing programs.



Meeting up with Japanese fishermen, U.S. Captain Robert Dooley shared experiences and insights from his 30-year career fishing in California.

You have a young family. Was it hard to pick up and move to Singapore?

My wife is so funny. We had some close friends in our neighborhood in Washington, DC, who passed on what we thought was a great opportunity to move to Europe. When they did, Cindy told me, "For the record, if this ever comes up for us, I'm willing to go to Europe."

When the possibility to move to Singapore came up, I thought, well, it's not Europe. Neither of us had ever been to Singapore. So we thought we better go and look. On the first morning after we arrived, we got up and I said, "Okay, you want to go check

out the botanical gardens and explore the city?" She said, "No. I don't have time. I've got a job interview." So, she ended up getting a job before we went. She's always been very adventuresome.

We'll probably be in Singapore for three to five years. Ironically, there may actually be some opportunities for Cindy that could keep us there longer.

Are you optimistic about what you can accomplish in Asia Pacific?

I'm totally optimistic. Seeing what the government wants to do in China gives me huge hope that this can happen. China is the largest fishing country in the world by far and officials had essentially given up on their domestic fisheries. They thought they were a lost cause and they'd pretty much decided to focus on aquaculture and sending their fishing fleets further abroad. When we sat down with government officials about two years ago, they said they had heard about how the U.S. and other countries were turning their fisheries around—that fishermen were making more money and the oceans were getting healthier. They thought if other countries can do this, why couldn't they?

China asked for our help overhauling and reforming fisheries management. At our first meeting with the man in charge of all of China's fisheries, he said, "I wish you'd

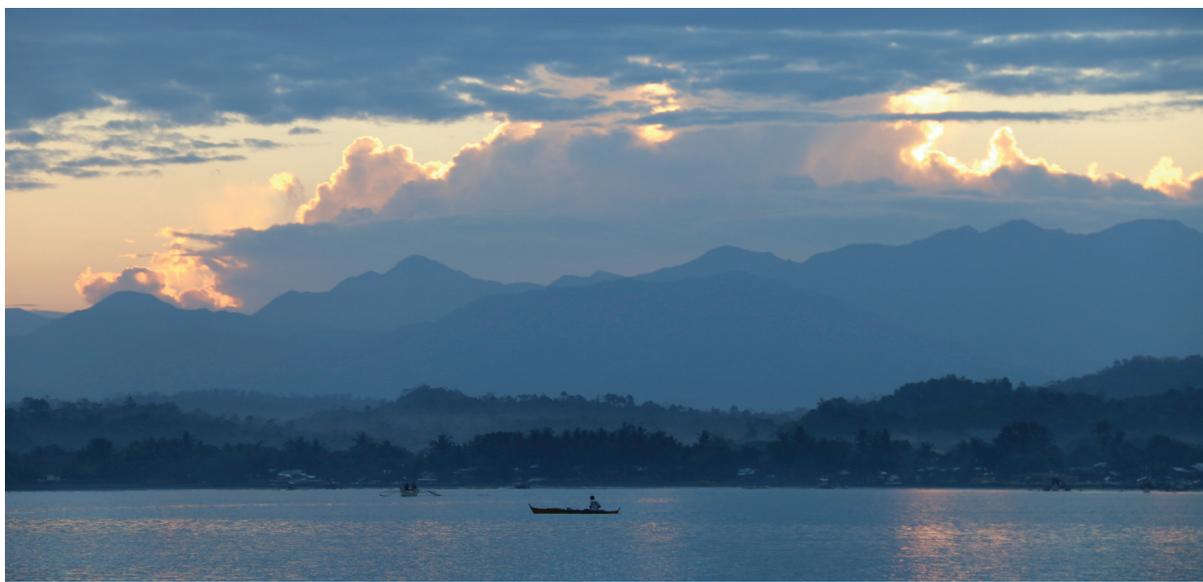


John, his wife Cindy, daughter Chloe, 9, and son Elia, 12, moved to Singapore in July 2016. They like being there, but Chloe misses snow.

come sooner.” We’re now helping the government plan and launch pilots in five provinces. We bring our experts—along with others from around the world who’ve had a variety of experiences—to work hand-in-hand with Chinese scientists and planners to create something new, strong and powerful.

That’s what we do, and that’s what we’ve seen work in many other places. Seeing the progress that we’re making in Indonesia. Seeing the government of the Philippines eager to partner with us to solve their challenges. Yeah. I’m optimistic. I know we can steer the world’s largest and most overstressed fisheries back to health and provide better and healthier lives for Asian Pacific fishermen and their families.

Not only am I hopeful, I’m lucky. My job couldn’t be more rewarding.



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