



| DISPATCHES | SOUTH CHINA SEA

A SEA'S FADING BOUNTY

**Amid a power play
by China, a great
fishery is at risk.**

A worker uses a mallet to dislodge frozen tuna aboard a Chinese cargo vessel docked at the port of General Santos, in the Philippines. Overfishing, compounded by a maritime dispute, has caused fish populations in the South China Sea to plummet.



Martin and other high-value fish, such as tuna, are increasingly hard to find in the South China Sea. The failure of one of the world's great fisheries would jeopardize the livelihood and food security of billions of people.



One time Christopher Tubo caught a 660-pound blue marlin in the South China Sea. That was years ago, when the fishing there was good, he says. He would come home from a trip with dozens of valuable fish like tuna and a haul of other species. "Here there's none of that," he says, looking toward the Sulu Sea, where he's been fishing for the past four years. His two boats, traditional Filipino outriggers called *bancas*, float in the shallow water nearby, baking in the sun.

Tubo sits on a wooden bench in front of his home, which is perched on stilts above the bay. One of his four kids wraps an arm around his leg. Worn T-shirts and shorts flutter on clotheslines behind them. Glancing at his wife, Leah, and the other children, he says, "It's just chance, whether or not we can feed our families now."

Tubo lives in Puerto Princesa, a city of 255,000 on Palawan, a long finger of an island that faces the Sulu Sea and the Philippine archipelago to the east and the contested South China Sea to the west. He's one of the more than 320,000 fishermen in the Philippines who have traditionally made their livelihood from the South China Sea—and one of a growing number who are now fishing in other, less ecologically rich waters.

That's because about eight years ago China took a more assertive posture in the region, ramping up its intimidation of other fishermen and eventually building military installations on contested islands. It was after a Chinese coast guard vessel attacked a friend's boat with water cannons that Tubo quit fishing the South China Sea. "One minute you'll see an airplane, then there's a naval boat," he says. "If we keep going over there, maybe we won't be able to go home to our families."

Tubo's decision is a reflection of the rising tensions in the region, which have ignited an increasingly fierce competition for natural resources, among other things. Encompassing 1.4 million square miles, the South China Sea is of critical economic, military, and environmental

significance: Some \$5.3 trillion in international trade plies its waters annually. It is richer in biodiversity than nearly any other marine ecosystem on the planet, and its fish provide food and jobs for millions of people in the 10 surrounding countries and territories.

Of those, seven—Brunei, China, Indonesia, Malaysia, the Philippines, Taiwan, and Vietnam—have competing claims. If a military conflict were to break out, it could involve two world powers, China and the United States, a longtime ally of the Philippines. That's why the dispute has commanded worldwide attention.

Another serious yet less publicized threat looms: overfishing. The South China Sea is one of the world's most important fisheries, employing more than 3.7 million people and generating billions of dollars every year. But after decades of free-for-all fishing, stocks are dwindling, threatening the food security and economic growth of the rapidly developing nations that rely on them.

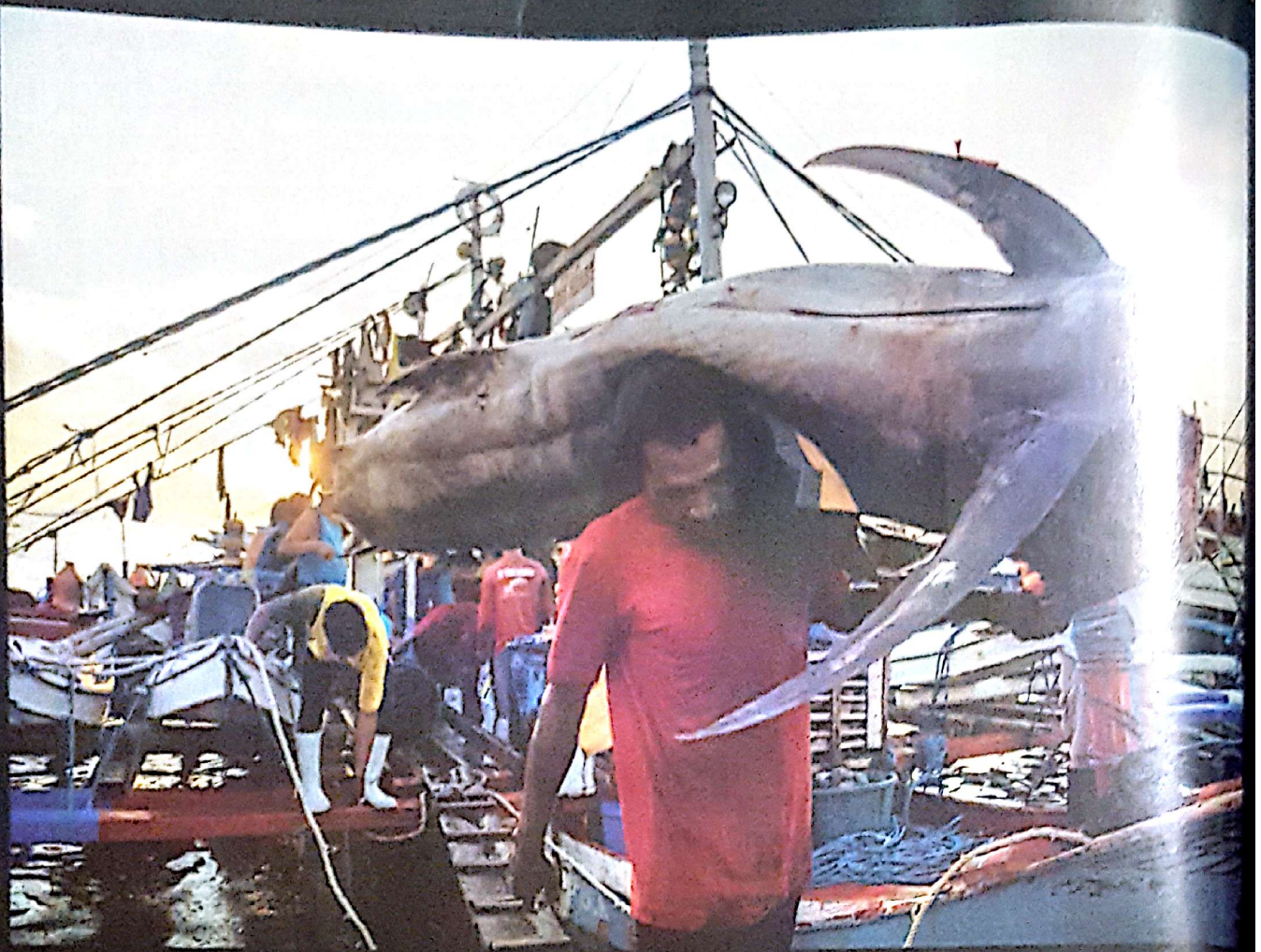
China asserts a right to almost the entire sea. It has demarcated a broad area that it says has historically been China's but that under international law includes the waters of other nations. Every other country in the South China Sea dispute, including the Philippines, bases its claims on the United Nations Convention on the Law of the Sea, the international pact that defines maritime zones and first went into effect in 1994.

In 2013 the Philippines brought a case against China before a tribunal at the Permanent Court



A Filipino fisherman wades to shore with part of his crew's catch. Yellowfin tuna (below) are the most valuable species caught in General Santos, which is called the tuna capital of the Philippines. The South China Sea provides more fish than almost anywhere else, but that may not be the case for much longer.





A fisherman (above) carries a marlin caught in the South China Sea, where international disputes have whetted competition for dwindling resources. Conversely, competition for fish has exacerbated the disputes. On this occasion (below) Filipino fishermen chose to stay in national waters.



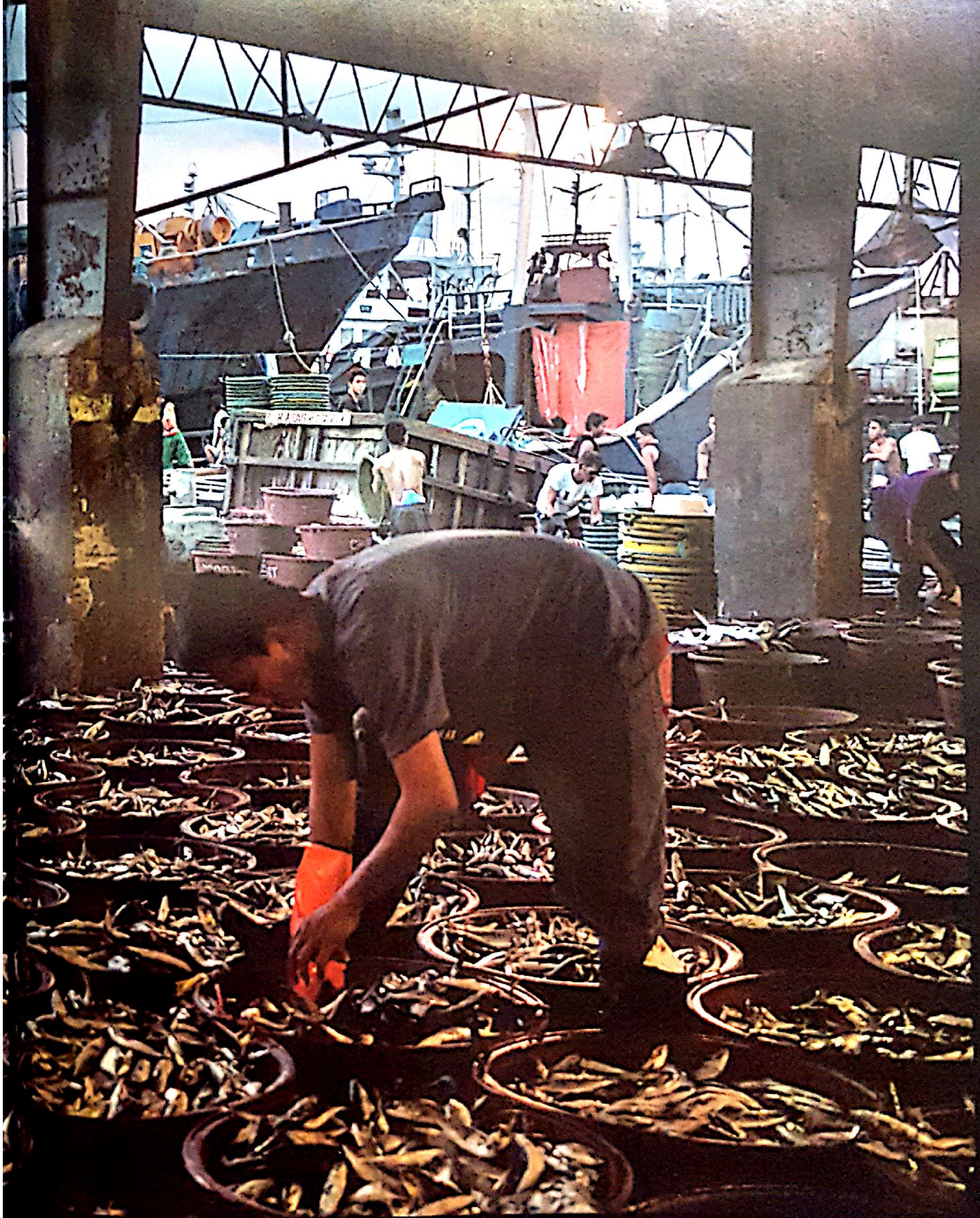


The lights on the *Melissa*, a Filipino boat, attract fish toward the vessel and up to the surface. Filipino, Chinese, Vietnamese, and Taiwanese fishermen all ply these waters, which are virtually unregulated. A Filipino man (below) fixes his net in a fishing community in Puerto Princesa.



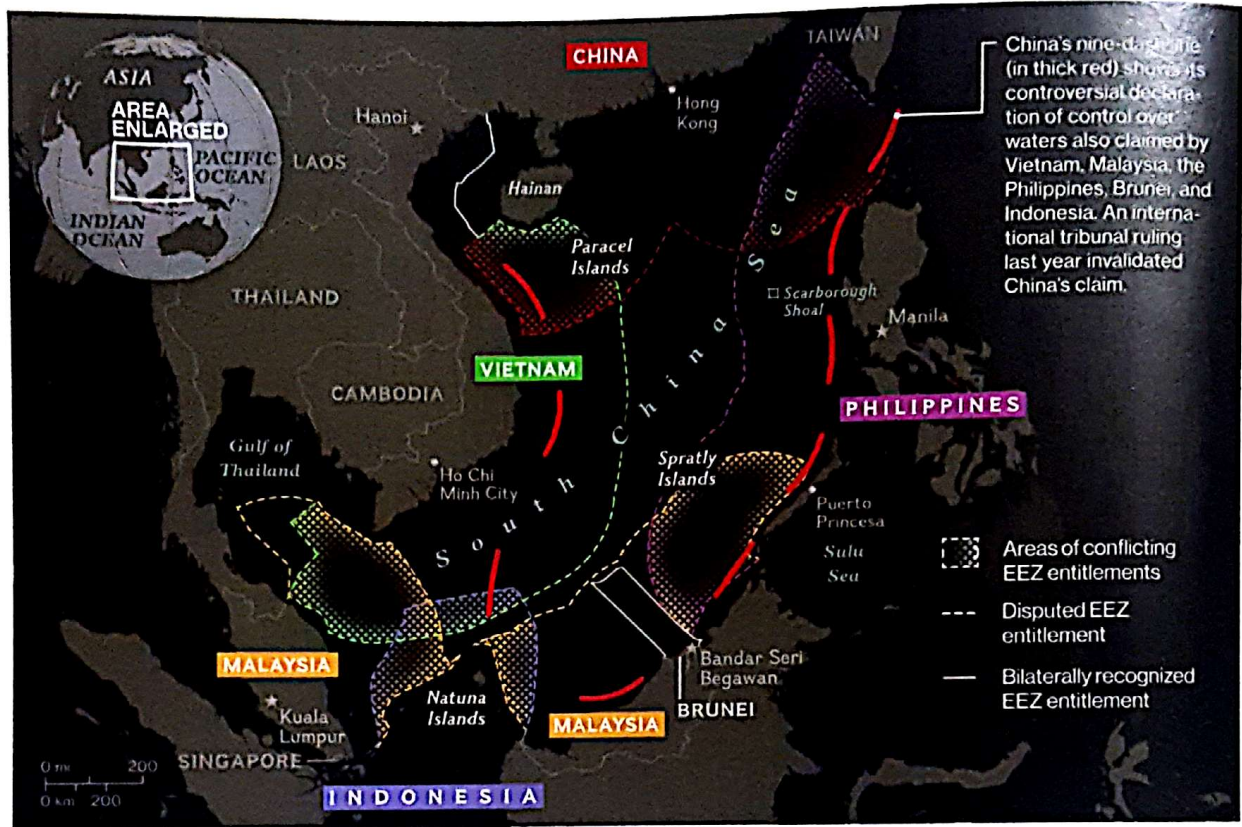


Workers at the Navotas Fish Port Complex, the largest in the Philippines, sort the take from boats that have returned from the South China Sea. Fish are a major protein source for people in the region, so a collapse of the fishery could be disastrous.



TROUBLED WATERS

Under international law, coastal countries are entitled to maritime rights – including the authority to explore and exploit natural resources – within 200 nautical miles of their shores. But these exclusive economic zones, or EEZs, can be hotly contested in areas such as the South China Sea, where nations are densely packed and nautical claims and entitlements can overlap.



of Arbitration, a forum for settling international disputes, in The Hague. China refused to participate. On July 12, 2016, the tribunal ruled in favor of the Philippines on almost all its claims, declaring that China had forfeited the possibility of any historically based rights when it ratified the UN convention in 1996. China vowed to ignore the tribunal's ruling.

THIS DISPUTE over the South China Sea intensifies competition among fishermen, and the resulting scramble for fish inflames the debate. Today some waters have less than one-tenth of the stocks they had six decades ago.

“What we’re looking at is potentially one of the world’s worst fisheries collapses ever,” says John McManus, a marine ecologist at the University of Miami who studies reefs in the region. “We’re talking hundreds and hundreds of species that will collapse, and they could collapse relatively quickly, one after another.”

When coastal waters became depleted, many fishermen ventured beyond national limits and into disputed areas to make a living. Meanwhile China began bolstering its claims by aggressively supporting its fishermen. It has consolidated the coast guard, militarized fishing fleets, and promoted its subsidies for fuel and better boats. There’s even a subsidy specifically for Chinese fishermen to work the waters around the contested Spratly Islands, more than 500 miles to the south of China’s southernmost point (a port on the island of Hainan).

“The only reason that smaller [Chinese] fishermen go out to the Spratlys is because they’re paid to do so,” says Gregory Poling, with the Center for Strategic and International Studies, a Washington, D.C.-based think tank. The aggressive move by the Chinese has sped up the depletion of fish stocks, he says.

The Chinese also are building artificial islands atop reefs in the Spratlys to support military

installations there. "Possession is nine-tenths of the law," says Zachary Abuza, an expert on Southeast Asian politics and maritime security at the National War College, in Washington, D.C. "China is trying to enforce its sovereignty through the construction of these islands and by denying other countries access to natural resources."

Eugenio Bito-onon, Jr., is a former mayor of the Kalayaan municipality that includes islands in the Spratlys. An outspoken advocate for the Philippines' claims, he has seen firsthand how China uses its fishermen to strengthen its claim to the region. I met Bito-onon in the municipality's cramped satellite office in Puerto Princesa, where the wall of one room displays a large map of the South China Sea marked up with handwritten labels and colored dots showing which countries claim which features.

He pulled up Google Earth on his laptop and found Thitu Island, in the Spratlys, where some 200 Filipinos, including a small number of troops, live part-time, their presence demonstrating his country's claim to the island. Bito-onon pointed out just how close Chinese-claimed Subi Reef is to Thitu. So close, he said, that on a clear day residents can see it on the horizon.

Even closer are Chinese that he says have fished the reefs empty. "For the past three years, Chinese fishing boats come and go, replacing each other," he told me, adding that the boats are always within sight of the island.

AS LONG AS the conflict in the South China Sea continues, it will be nearly impossible to regulate fishing. "It's unclear whose laws you're enforcing when you have seven overlapping sets of fisheries laws," Poling says. "States have a vested interest in purposely violating fishing laws of other states." That's because abiding by another nation's fishing law amounts to accepting that nation's jurisdiction over the region.

When one country tries to protect its fishing grounds, tensions flare. In 2012 a Philippine Navy warship tried to arrest Chinese fishermen at Scarborough Shoal, about 138 miles from the Philippine coast, on suspicion of illegal fishing and poaching rare corals, giant clams, and sharks. A Chinese coast guard ship intervened to prevent the arrests, forcing a standoff. Ten weeks later both sides agreed to withdraw, but after the Philippine warship left, China's ship remained,

effectively seizing control of the shoal.

Because of overfishing, fishermen have seen their catches—and the fish themselves—getting smaller, setting off a dangerous cycle. Some Filipino fishermen have resorted to perilous, illegal fishing methods, including blast fishing with homemade bombs, and cyanide fishing, which uses the poison to stun and slow the fish to make them easier to catch. Both practices kill coral and other fish, collateral damage that's pushing the sea closer to an overfishing crisis.

More destructive to the reefs, however, are China's island-building and giant clam poaching, happening on a large scale. The poaching, which entails digging up entire areas of reef to get to the clams, has caused most of the documented reef destruction in the sea. That in turn affects fish stocks. When a reef is destroyed, the ecosystem unravels. Reef fish lose their habitat, pelagic fish such as tuna lose an important source of food, and fish larvae from one reef can no longer replenish fish on other reefs.

"It's quite possible we're seeing a serious decline in about half the reefs" in the South China Sea, McManus says. "It's just total destruction."

Experts say that cooperative regional management, including dramatic cutbacks in the number of fishing boats and restrictions on certain fishing methods, would go a long way toward making the South China Sea fishery sustainable. But Poling questions whether such a plan could be devised in time to prevent the fishery from collapsing.

"What that requires is setting aside the disputes," Poling says. "It's possible. It's just not likely. To have a successful joint management system, the first step is to agree on what area you're talking about." If China clings to its expanded jurisdictional claim while other countries base their claims on international law, agreement won't be possible, he says.

And so, the South China Sea's fish—its principal resource—are disappearing, even as nearby countries stand passively by or encourage their fishermen to keep taking more. □

This is the debut of **Dispatches**, a series of field reports from National Geographic writers and photographers. This story was produced by National Geographic's Special Investigations Unit, with grants from the BAND Foundation and the Woodtiger Fund. Aurora Almendral provided additional reporting.