



Palau vs. the Poachers

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By IAN URBINA FEB. 17, 2016

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Late on a January 2015 evening in Shepherdstown, W.Va., a data analyst named Bjorn Bergman, surrounded by whiteboards scribbled with computer code, was orchestrating a high-stakes marine police chase halfway around the world. Staring at his laptop in a cramped ground-floor office, he drank from his sixth cup of coffee and typed another in a long series of emails: “Try and cut them off rather than making for the last known position.” Nearly 9,000 miles away, the Remeliik, a police patrol ship from the tiny island nation Palau, was pursuing a 10-man Taiwanese pirate ship, the Shin Jyi Chyuu 33, through Palauan waters. Bergman, working for a nonprofit research organization called SkyTruth, had mastered the use of satellite data to chart a ship’s most likely course. Instead of pointing the police to where the pirate ship was, he would tell them where it was about to be. He took another sip of coffee, studied his screen, then typed again: “It may be advisable for the Remeliik to turn southeast.”

Caught fishing in a marine sanctuary, the Shin Jyi Chyuu 33 was fleeing to Indonesian waters, beyond Palau’s jurisdiction. Once across the boundary, the crew could easily unload its catch at a local wharf and disappear among the thousands of small Filipino or Indonesian islands of the western Pacific. Determined not to let that happen, the Remeliik’s skipper, running on Bergman’s coordinates, was pushing 15 knots — a pace that worried its engineer. But the police were desperate to keep up. In the previous six months, they had spotted but failed to capture nearly a dozen other pirate fishing ships. If the Remeliik’s officers miscalculated their heading by

even a small fraction of a degree, they would miss their target.

Bergman had been tracking the Shin Jyi Chyuu 33 for weeks, and emailed an alert about possible illegal fishing two days earlier. Before moving to West Virginia to work for SkyTruth, he spent three years working as a marine observer on Alaskan fishing boats, logging the details of the daily catch, as required by federal and state fishery authorities. At SkyTruth, Bergman did his surveillance work from a far greater remove, monitoring ships by satellite. For months, he had been studying a satellite feed from above Palau. He knew its squiggles and slashes by memory. A passenger boat out of Pitcairn Island appeared every few weeks; a United States Navy ship from Diego Garcia conducted regular maneuvers; a Chinese research vessel was doing a survey of some sort in a grid pattern; a Taiwanese ship that never seemed to fish made repeated trips out to meet other long-line fishing vessels. The Shin Jyi Chyuu 33 stood out, however. Switching among registries of fishing permits, regional tuna licenses and blacklisted vessels, he could tell it had no license to fish in Palau's waters, even though its zigzag trajectory indicated it was doing just that.

In response to Bergman's alert, an international team gathered into the cramped, second-floor police command center on Koror, Palau's most populous island. There were three local police officers, an adviser from the Pew Charitable Trusts and two Australian Navy officers, on loan to Palau to advise on everything from running the Remeliik (which the Australians had also donated) to using satellite-data analysis software. Working through the night and the following day, the team radioed the information they received from West Virginia to Allison Baiei, a Palauan marine police officer, aboard the Remeliik.

Police efforts like these, coordinated and international in scope, are a rarity when it comes to enforcing the law at sea, but the alternative is usually no enforcement at all. More than two-thirds of the planet is covered by water, and much of that liquid expanse is ungoverned and potentially ungovernable. Criminal enterprise has flourished in the breach. The global black market for seafood is worth more than \$20 billion, and one in every five fish on American plates is caught illegally.

After a 51-hour push, much of it through heavy seas, the Remeliik's unrelenting

pace finally paid off: It caught up with the Taiwanese ship just a few miles before the boundary with Indonesian waters. The officers escorted the ship back to port in Palau, and when they inspected the hold, Baiei told me, they found an especially grim haul. Inside, among the stacks of tuna, were hundreds of severed shark fins. The officers piled the contraband onto the Shin Jyi Chyuu 33's deck and, when they ran out of room there, piled the rest into a bloody heap on the dock. They counted, measured and photographed the fins to use for the eventual prosecution, then dumped them into the sea. "Disgusting," was all Baiei would say about the scene.

Few places on the planet are as isolated as Palau, or as sprawling. Its 21,000 residents are scattered across a handful of its 250 islands, which take up just 177 square miles combined. Relatively poor, and with no military of its own, Palau employs a marine police division with just 18 members and one patrol ship. Yet it has authority over roughly 230,000 square miles of ocean. Under international law, a country's "exclusive economic zone," the waters where it maintains fishing and mineral rights, extends 200 nautical miles from its coasts. That means that a country roughly the size of Philadelphia is responsible for patrolling a swath of ocean about the size of France, in a region teeming with supertrawlers, state-subsidized poacher fleets, mile-long drift nets and the floating fish attracters known as FADs.

In the face of this challenge, Palau has mounted an aggressive response. In 2006, it was among the first nations to ban bottom trawling — a practice not unlike strip mining in which fishing boats drag large weighted nets across the ocean floor to catch the fish in the waters just above, killing virtually everything else in their path. In 2009, it prohibited commercial shark fishing in its waters, creating the world's first shark sanctuary. In 2015, it announced plans to require observers aboard all its tuna longliners. (Elsewhere in the region, observers are aboard just one in 50 tuna longliners.) Palau has also teamed up with Greenpeace, which helped patrol its territorial waters, and it started a campaign on Indiegogo, a crowdfunding platform, raising more than \$50,000 to support its conservation work. Palau's most radical move, though, was creating a "no take" reserve in 2015. Within this zone, which encompasses 193,000 square miles, all export fishing (along with any drilling or mining) will be strictly prohibited.

From one perspective, Palau's work suggests a hopeful future. It offers a model

for successful ad hoc collaboration among countries, companies and nongovernmental organizations. Palau has also emerged as a testing ground for some of the technology — including drones, satellite monitoring and military-grade radar — that might finally empower countries to spot and arrest the pirates, poachers, polluters, traffickers and other scofflaws who prowl the seas with impunity.

But Palau's conservation efforts are really motivated by a more immediate sense of self-preservation. In September, I sat down with Palau's president, Tommy Remengesau Jr., in his cluttered, wood-paneled office in Koror. A sturdy man with an intense stare, Remengesau explained to me that more than half of Palau's gross domestic product comes from tourism, mostly people visiting to dive on Palau's reefs, which house more fish, coral and other invertebrates per square mile than virtually anywhere else on Earth. Remengesau boiled the problem down to simple economics, noting that sharks were an especially big draw for undersea sightseers. Alive, an individual shark is worth more than \$170,000 annually in tourism dollars, he said, or nearly \$2 million over its lifetime. Dead, each can go for a hundred dollars — and usually, he added, that money winds up in the pockets of a foreign poacher.

The poachers calculate differently, of course. More than a dozen countries, including Palau and Taiwan, have banned shark-finning. But demand for the fins, especially in Asia, remains high. Shark-fin soup, which can cost more than \$100 a bowl, has for centuries signified wealth and status, and it became especially popular in the late 1980s as a status item for China's rapidly expanding middle and upper classes. Ship captains often allow their crew members to supplement their income by keeping the fins for themselves to sell at port. Shark carcasses take up valuable hold space in smaller ships, and as they decompose, they produce ammonia that contaminates the other catch. Deckhands usually cut off the fins, which can sell for 100 times the cost of the rest of the meat. They then throw the rest of the shark back into the water. It's a slow death: The sharks sink to the sea floor, where they starve, drown or are eaten by other fish.

In a given year, Palau faces 50 to 100 incursions by pirate vessels. Fish ignore borders — and, it turns out, so do many of the people pursuing them. While port

inspections, wheel-room cameras, locational transponders and onboard observers are essential to better monitoring the oceans, policing is the only thing that will make Palau's new reserve, and others like it elsewhere in the world, more than just lines drawn on the water.

Poachers are by no means Palau's only threat. Ocean acidification, warming marine temperatures, mega-cyclones and a Texas-size gyre of floating trash imperil the region's marine life. The islands themselves are threatened as well: As global warming raises sea levels, Palau's land, and the territory it protects, will diminish. One atoll on Palau's southernmost tip is sinking fast, and when it finally submerges completely, it will take roughly 54,000 square miles of territorial authority with it.

The oceans belong to everyone and no one, and the general perception is that they are too big to need protection. We also tend to think of fish as an ever-regenerating crop, there forever for our taking. But roughly 90 percent of the world's ocean stocks are depleted or overexploited; one study predicts that by 2050, the sea could contain more plastic waste than fish. Though most governments have neither the inclination nor the resources to patrol the oceans, Palau is trying a different approach, and whether it succeeds or fails may have consequences for the entire planet.

Early one calm morning shortly after I arrived in Palau, I met Baiei and several other police officers at their headquarters in Koror, where they had invited me to join them for some routine patrols. Though Koror is the nation's commercial center, it feels more like a remote resort — everywhere lushly green, its roads narrow and winding. The headquarters and dock sit in a more ramshackle part of town, tucked alongside a sewage-treatment plant and down the road from a brewery. Like a Humvee parked in front of a thatched hut, the 103-foot Remeliik stands out. Tall and steel-hulled, it is young in ship years, built in 1996.

The plan was to patrol the waters near Kayangel, an atoll in the country's far north, an area popular for sea-cucumber and coral-fish poachers. A tiny, rugged fleck of land, roughly half a square mile, Kayangel has perhaps 60 year-round residents; there is no airstrip, and power and cell service are erratic. Local fishermen had spotted poachers near the atoll, and our patrol was meant to show a police



Members of Palau's marine police perform a routine search for illegal catch on the Sheng Chi Huei 12. Benjamin Lowy/Reportage, for The New York Times



Fishermen set fish aggregating devices, or FADs, like this one in hopes that their prey will huddle around them. But the floats in Palau's waters are drawing fewer fish.

Benjamin Lowy/Reportage, for The New York Times

presence in the area.

For any given patrol, the chief of the marine police weighs a list of variables — credible threat, distance to target, available crew, sufficient fuel, weather — and decides if it's worth dispatching the Remeliik. Today, we would head out instead on one of the department's two much smaller fiberglass boats, which they use in shallow waters closer to shore. When we pulled out of port, the sea was glass-flat, but as the land behind us fell beneath the horizon, we began rolling in 10-foot swells — it was clear why this smaller boat was ill-suited to chasing poachers into deeper water.

Policing the area around Kayangel has become more difficult as its population has dwindled. In December 2012, Typhoon Bopha leveled Kayangel, ravaging its nearby coral reefs. Eleven months later, Typhoon Haiyan did it again. With winds of more than 170 miles an hour, these were among the strongest tropical cyclones ever recorded on Earth. Many scientists agree that climate change is the reason for these increasingly intense storms. A 2014 study, which modeled the economic consequences of climate change on fisheries in the territorial waters of 62 countries, predicted that Palau would be hit harder than any other nation. "I guess we can't arrest the climate," Baiei later told me. "We can just arrest people who come here to take our fish." After a long silence, another officer muttered a retort — something in Palauan, which was later translated for me as "easier said than done."

Baiei said the turning point for Palau, the moment when the nation realized that it needed help, was March 29, 2012. The other officers shook their heads at the mere mention of the date. The agonizing story began earlier that month, when two Chinese poacher boats were spotted near the atoll for several days in a row. They kept escaping: Each was equipped with three 60-horsepower outboard motors, while the local wildlife rangers had only a Zodiac with one outboard motor.

Around 7 a.m. on March 29, the Palauan rangers saw one of the Chinese boats again. This time they got close enough to try to shoot out its engines, Baiei said. They hit an engine, but they also hit a Chinese deckhand, Lu Yong. (Palauan rangers say they were not aiming for him; the bullets ricocheted off the engines.) The rangers called for help to rush Lu, 35, to a nearby island where a nurse lived, but he bled to death before they got there. He had a 9-year-old son and a 3-year-old daughter in

mainland China. But the day would only get more tragic from there.

Boarding the Chinese boat and interrogating the rest of the crew, the Palauan rangers soon learned that there was a larger “mother ship” farther at sea, orchestrating the poaching raids. This was too far for the small Zodiac to travel, so two Palauan policemen, Willie Mays Towai and Earlee Decherong, along with an American pilot, Frank Ohlinger, were dispatched in a rented single-engine Cessna to find the ship and call in its coordinates.

As night fell, the pilot got lost, and the plane vanished. Meanwhile, about 35 miles from shore, another team, aboard the Remeliik, finally discovered the 80-foot mother ship, which immediately bolted, ignoring several warning shots fired across its bow. After several hours of running, though, the mother ship drifted to a halt. It was soon engulfed in flames, most likely from an intentional fire set to hide any evidence of poaching. The pirate crew scrambled into a lifeboat just before the ship sank, and they were arrested shortly thereafter.

The Cessna pilot and the two policemen were still lost, wandering somewhere above the Pacific. The authorities on land came up with an idea: If they could illuminate the islands brightly enough, the pilot might see them and find his way back home. The public safety director ordered all emergency vehicles to drive to the highest points in Koror and turn on their flashing lights. “Aim spotlights upward,” yachters were instructed. The stadium lights at Palau’s Asahi baseball field were switched on. Residents were asked to turn on all household lights. Some stood in the streets waving flashlights. Paul Allen, the billionaire co-founder of Microsoft, who happened to be vacationing in Palau, provided the two helicopters on his 414-foot mega-yacht, the Octopus, for search and rescue. Allen’s crew was instructed to fire 49 flares, one per minute, into the air. An official in Angaur, an island on the nation’s southern tip, suggested setting some of the outer-atoll wooded areas on fire — a plan that was quickly dismissed.

Back at the command center on Koror, several police officers were trying in vain to contact the plane. Its radio was malfunctioning. They could hear Ohlinger, but he could not hear them. For nearly five hours, culminating in a mayday call at 8:16 p.m., they listened to his growing panic, his rage at the plane’s broken GPS unit and

compass and, ultimately, his request that someone alert his next of kin. “On a good glide slope, heading north,” Ohlinger said, as he explained that he and his two passengers planned to crash-land into the sea. “We are at 6,000 feet, doing 65 knots, out of fuel,” were his last words. The wreckage was never found.

The debacle was the subject of newspaper headlines internationally for weeks. The Chinese government sent a diplomatic envoy to Palau to discuss the shooting. Palau’s president and attorney general opened an investigation. “Palauans are a very proud people,” Baiei said. “The whole thing was a tragedy and a really embarrassing one.” A little over a year later, Palau began working with SkyTruth and Pew to monitor its waters.

In the span of one human lifetime, humankind has become brutally adept at plundering the seas. In the late 1940s, the annual global catch was roughly 16.5 million tons; now, after decades of innovation, this number is about 94 million tons. “That’s equivalent in weight of the entire human population at the turn of the 20th century, removed from the sea each and every year,” Paul Greenberg, an author of books about fish and seafood, told me.

The major innovation, the one that in the 1930s helped transform fishing from hunting to something more akin to industrial mining, was the giant-scale purse seiner — a ship that surrounds an entire school of fish with a curtain of netting, sometimes nearly a mile around, then cinches it like a laundry bag. But more innovations followed. World War II gave incentive to the creation of lighter, faster, more durable ships that could travel farther on less fuel. Submarine combat drove improvements in sonar, which turned the ocean top into a glass table, making visible the unseen fathoms below. Subzero onboard freezers freed fishermen from their race against melting refrigerator ice. Innovations in plastics and monofilaments lengthened fishing lines from feet to miles. Lightweight polymer-based nets enabled supertrawlers to rake the ocean even more brutally.

But, as the Palauans and their allies are discovering, technology can also be deployed for conservation. Just as authorities can use tracking devices and satellite data to monitor the activities of people on land, they are increasingly able to do so at sea. Since the 1990s, ships have deployed the Automatic Identification System, or

A.I.S., a once-voluntary collision-avoidance system whereby onboard VHF transmitters convey their position, identity and speed continuously to other ships and to satellites. In 2002, the United Nations' maritime organization mandated A.I.S. for nearly all passenger ships regardless of size, and commercial ships, fishing vessels included, with a gross tonnage of more than 300 (typically, that's a 130-foot long vessel) in international waters.

A.I.S. has its shortcomings. Captains are allowed to turn the transponders off when they perceive a credible danger of being tracked by pirates — a gaping loophole for poachers. The system can be hacked to give false locations. Many of the ships involved in the worst crimes, like the *Shin Jyi Chyuu 33*, are smaller than 300 tons and thus exempt from the system entirely. Partly as a response to the deficiencies of A.I.S., many countries now also require fishing vessels to carry an additional device called a vessel-monitoring system, or V.M.S. Typically, this takes the form of a cone-shaped antenna on the roof of the wheelhouse, wired to a locked transceiver and the ship's control panel, that transmits their location and other data to local fishery authorities at all times.

More sea-traffic data may become available soon as countries consider deploying devices in the water — sonar and camera buoys, as well as low-cost floating hydrophones — to catch ships approaching restricted areas. Even storm clouds, which long concealed many crimes at sea, no longer pose as much of an obstacle. Satellites armed with synthetic-aperture radar can detect a vessel's position regardless of weather conditions. All this data becomes especially useful when coupled with sophisticated software whose algorithms can trigger alerts — if, for instance, a vessel goes “dark” by turning off its transponder, if it zigzags in certain formations that indicate that it's fishing or if it enters a forbidden area. Now, instead of blindly patrolling broad swaths of ocean, the police can target their efforts.

Still, the most reliable form of ocean law enforcement continues to be real-time direct surveillance, which is neither easy nor cheap. Generating close-in imagery from the sky depends predominantly on military-grade drones. Ordering up high-resolution photographs from space is still extremely costly, sometimes more than \$3,500 per picture, and the company or government that operates the satellite often requires the request for the image to be made days in advance, so operators

can aim the lens at the right location on its next trip hurtling around the Earth. Palau experimented with smaller, commercially available drones in 2013, in a project funded by an Australian mining magnate, Andrew Forrest. But the drones proved to be too expensive and hard to fly, and the cameras mounted on the drones gave too tightly circumscribed a view of the waters below.

The eventual dream is to create systems that pull all the antipoaching intelligence together in real time, giving the police and their helpers a God's-eye view of their adversaries. In 2014, SkyTruth joined with Google and the nonprofit group Oceana to build Global Fishing Watch, a website that will allow an army of would-be Bjorn Bergmans to track A.I.S. data on roughly 80,000 vessels worldwide. Last year, Pew teamed up with a British company called Satellite Applications Catapult to create a virtual "watch room" program that, drawing on live satellite tracking data, displays a map of the world traversed by lighted dots, each one a fishing vessel. Even as the vastness of the oceans makes it easy for poachers to escape, technology is also making it harder for them to hide.

For all the attention paid to hidden illegal fishing, the bigger problem is legal overfishing, which takes place in plain sight. Most of the fish that are consumed around the world — about four of every five served in the United States — is caught in full compliance with the law. In the Western Pacific Ocean, near Palau, much of that fishing occurs with help from specially designed buoys called fish aggregating devices, or FADs. In Palau, local fishermen can still use simple FADs. Often the devices consist of little more than plastic and bamboo flotsam strung together with old nets. But elsewhere they can also be impressively sophisticated.

Many valuable fish species — including tuna, blue marlin and mahi-mahi — huddle near floating objects for protection and mating. FADs take advantage of this instinct, attracting fish in spectacularly dense schools that fishermen quickly scoop up. "Drifting" FADs are unanchored: Fishermen track them by following the currents. "Moored" FADs are tethered to the ocean floor, typically with concrete blocks. Increasingly, fishing companies are deploying "smart" FADs equipped with sonar and GPS, enabling operators to sit back and wait for an alert when it's time to retrieve their haul.



The crew quarters on the Remeliik, the single patrol ship of the Palau Marine Police.
Benjamin Lowy/Reportage, for The New York Times



A reef shark — officially protected from commercial fishing in Palau's 230,000 square miles of ocean territory — and its neighbors. Benjamin Lowy/Reportage, for The New York Times

The global popularity of FADs is, at least in part, an unintended consequence of the movement to save dolphins. Commercial fishing fleets once found tuna by looking for dolphins, which follow tuna schools and swim near the surface above them. In the 1980s and 1990s, the push for “dolphin free” tuna drove many of these fishermen from the Eastern Tropical Pacific, near Baja, to the Central and Western Pacific Ocean, near Palau, where the dolphins typically don’t follow tuna. In making this move, many of these ships turned to FADs as their new tactic — even though the devices are widely criticized for further industrializing the harvest of fast-disappearing species like sharks, sea turtles and tuna.

On one patrol with Baiei, we stopped at a FAD so that I could dive in for a closer look. Bathwater-warm, the ocean was translucent turquoise, the current as strong as a river. The FAD was low-tech and anchored, just a plastic buoy attached to a thick, mollusk-coated rope tethered to the ocean floor more than 500 feet below. Large bamboo leaves ran down the first 50 feet of the rope, flapping like fuzzy moth wings. Hundreds of tiny silver fish darted under the shade of the leaves. Not one fish was more than a foot long.

We visited three more FADs during the patrol that day, traversing more than 100 miles. All were barren. The fish, Baiei explained, were all being taken before they could even come to the reserve. Tuna, like many large ocean fish, are migratory. Even if their natural path might take them to the safety of Palau’s asylum, they can be picked off beforehand in any number of ways — including by being netted at one of the more than 50,000 floating FADs in the Western and Central Pacific, most of which are perfectly legal.

In recent years, a handful of countries have tried to slow the ocean plunder. They have limited trawling, put caps on FAD numbers and imposed rules to limit “bycatch,” the unwanted species caught in the hunt for prized fish. Perhaps the most promising tactic has been to create more no-take reserves like Palau’s. In 2014, the Obama administration added 400,000 square miles of similarly protected territory to United States waters. In 2015, the British government announced its intent to establish the world’s largest continuous marine reserve (322,000 square miles) around the Pitcairn Islands. But these reserves work only if they are well policed. Otherwise, they become magnets for poachers who see them as robust and

competition-free zones. And, as we saw at our own little FAD, even a well-policed reserve is not enough to protect the fish who freely swim outside their safe zones. Presently such reserves cover around 2 percent of the world's seas, but many oceanographers say we need to cover at least 10 percent to make a substantial difference.

As the sun set, one marine officer said he wanted to check a final FAD near an islet called Orak, this time in hopes of landing a few fish for dinner. After dragging their longline in circles around it for an hour, they gave up, empty-handed. Docking instead at a nearby island, the officers bought some chicken stew from the local market.

On another patrol, this time aboard the Remeliik, about 80 miles from shore, we spotted a weather-beaten fishing ship, the Sheng Chi Huei 12. A tuna longliner from Taiwan, rusty and stacked with tackle, it could have been just passing through — or it could have been poaching. After radioing its captain, the Palauan police pulled up alongside for an inspection. Several officers boarded and quickly corralled the six-man Indonesian crew into the front of the ship.

I wanted a better view, but as I started to climb onto an upper deck, one of the Indonesian crewmen lunged forward and grabbed my wrist. My hand was inches away from touching an electrified steel cable that the fishermen use to stun catch that flop wildly when first pulled on deck. The crewman pointed to a six-inch black burn mark on a shipmate's arm, warning me of what the cable could do.

I watched the Palauan officers struggle to get basic answers, relying on one of the Indonesian crew who spoke a tiny bit of Chinese and English to translate: *How old are the men in your crew? Spell their names.* (The captain was illiterate.) *Tell me the date when you entered our waters.* The paperwork checked out, and the officers could find no illegal fish.

As the officers questioned the ship's captain, I wandered to the back of the ship. A ladder down a hatch led to a four-foot high tunnel, where crawling on hands and knees was the only option. Running the length of the vessel, the tunnel was lined with a dozen six-foot-long cubbies, each with wadded-up clothing at one end serving as pillows. The trip from Taiwan to these waters (about 1,400 miles) takes a little

over a week. In high seas and heavy weather, staying on deck is out of the question. The farther I crawled, the darker and muggier it got and the heavier the flow of fumes, heat and noise. A rat scurried ahead. A rancid-smelling liquid dripped from above. The captain later told me that this was runoff from the upper-deck cutting tables.

At the deepest end of the tunnel, I came to the ship's huge diesel engine, churning furiously. I sat in that tight space for a couple of minutes to take in the scene. It dawned on me that the passageway I had just descended was not just the men's sleeping quarters. It was also the engine's main exhaust pipe.

Back on the Remeliik, I passed the time reading a confidential investigation report about the 2012 Cessna incident, which had been leaked to me by a Palauan official. It included transcripts of interviews with the 25 fishermen from the illegal Chinese boats, who had been arrested and held in the Koror jail for 17 days. Most of the men had never been to sea before, nor did they know the name of their ship, the fishing company or even their captain. Most had handed their identity cards over to the fishing company, which had hired them only several months earlier. Many claimed that they fled that day because they thought the Palauans, who were not in uniform, were planning to rob them. "He claims that he does not know about any fishing permits," a police investigator said of one deckhand. "They only follow what the captain tells them."

The crew members pleaded guilty and were fined \$1,000 each. Their small fast boat was destroyed, their gear confiscated. They were then flown home, with their slain colleague, Yong Lu, in a coffin, on a charter flight sent by the Chinese government. One line in the investigation report struck me. It said that in several days of poaching, the Chinese crew caught fewer than a dozen fish, primarily lapu lapu, and several large clams, most of which they later threw overboard as they fled the authorities. It seemed a tragically small yield.

In the wheel room of the Remeliik that night, the officers did a post mortem about the day's boarding, and the discussion turned to the crews that work on these poacher ships. "Aren't they the enemy?" I asked. Several officers shook their heads to say no. Once the authorities take the foreign crews to shore, there is no guarantee

that Palau will have the translators to communicate with them, jail space to hold them or even the laws to effectively prosecute them. Many of the poachers they arrest are from family-owned businesses and are unable to pay the \$500,000 fine Palau has the option to levy. The government can seize the ship, but the cost to feed, house and repatriate the crew is often more than its resale value.

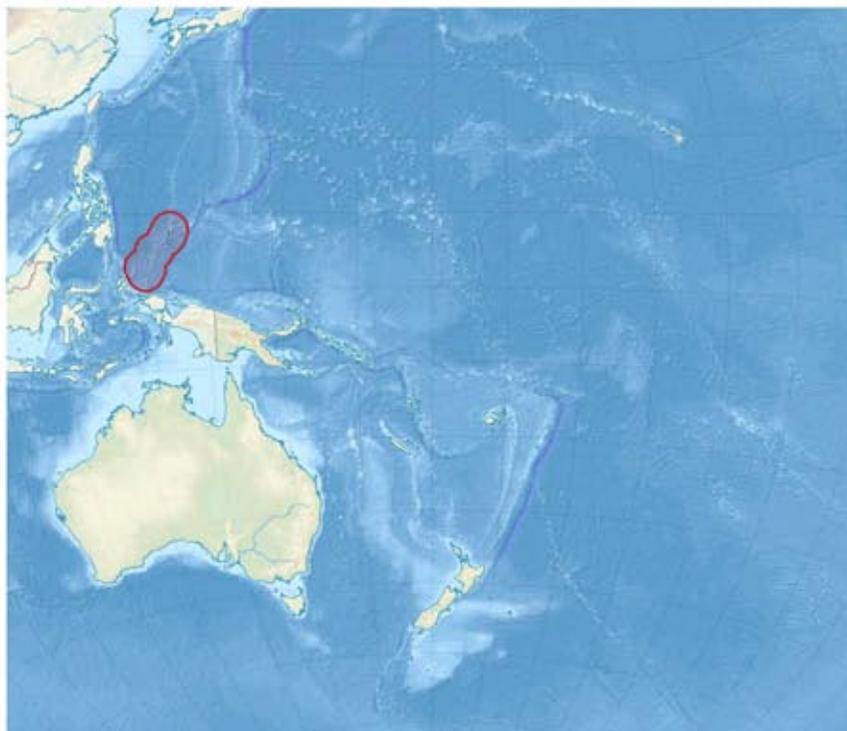
Near the end of our patrol, Baiei asked me if I had ever seen a diver with the bends. I said I hadn't. He explained that many of the poachers they chase are Vietnamese, young divers who target sea cucumbers, which live on the ocean floor and look like giant, leather-skinned slugs. The Vietnamese crewmen hold rubber hoses in their mouths attached to an onboard air compressor, strap lead weights around their waists, then dive, often deeper than a hundred feet. During an arrest last year, Baiei said, one of these divers shot to the surface too quickly, causing excruciating bubbles to form in his joints and elsewhere. They took him to a hospital to recover. "He just kept moaning for days," Baiei said.

One of the other officers, who had been listening to the conversation quietly, looked up from his inspection logs. "They're the real bycatch," he said. For Palau's police, the catch — the far more elusive target — was the fishing companies who send these desperate men to sea to flout the law. But in a sense, even those bosses are bycatch, too, in a worldwide fishing economy where sanctioned corporations, far more than poachers, are stripping the oceans of life. To save Palau's fish, and the world's, the law and its enforcers need to bring an entire industrial system to heel: a mission that requires a level of international cooperation and political will that has yet to materialize.

Ian Urbina is an investigative reporter who has been on the staff at The New York Times since 2003.



One of Palau's two small patrol boats, used in shallow waters close to shore.
Benjamin Lowy/Reportage, for The New York Times



Location of Palau, in the Western Pacific
Wikimedia commons