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{PART 1 OF 2}



-- 20th Anniversary Issue --

FRED TUTMAN / PATUXENT RIVERKEEPER

VOLUME 15, ISSUE 1 \$5.95





*On behalf of the professional
beauty industry, congratulations
to Waterkeeper Alliance on
20 years of helping to save
our planet.*

A handwritten signature in black ink, which appears to read "John Paul DeJoria". The signature is fluid and stylized, with a large loop at the end.

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MY IMPOSSIBLE CHOICE: 20 YEARS, 20 WATERKEEPERS

Deciding on 20 Waterkeepers to highlight for our 20th anniversary was a daunting task. How could we pick just 20? After all, every Waterkeeper is a warrior and a hero.

The Waterkeeper movement began when a gritty band of blue-collar fishermen mobilized on the Hudson River to reclaim it from massive pollution from several industrial facilities on the river that were destroying it and threatening many of their livelihoods. In 1983, they hired activist and former commercial fisherman John Cronin as the first full-time Riverkeeper and launched a 25-foot wooden outboard to patrol the Hudson for polluters. On his first patrol, Cronin discovered Exxon oil tankers rinsing their holds and stealing water from the Hudson for use in their corporate refinery. Exxon paid

\$2 million in fines and stopped the practice, and Riverkeeper became the Hudson Valley's beloved community coast guard. Inspired by Riverkeeper's success in restoring the Hudson, more than 340 Waterkeeper groups have formed in 46 countries and the State of Palestine, and now patrol and protect waterways from the Ganges to the Thames, from Belize's Placencia Lagoon to Cambodia's Tonle Sap Lake.

These courageous, energetic and resourceful grassroots leaders sue polluters, organize clean-ups, and defend the fundamental human rights to drinkable, fishable, and swimmable waters. Every Waterkeeper combines a river pilot's knowledge of his or her local watershed with an activist's unswerving commitment to the rights of the people who depend on those waters. Waterkeepers are the voices of the waters they defend.

Their backgrounds are as diverse as their waterways. They began their journeys as lawyers, scientists, surfers, fishers, journalists, engineers and, on Colombia's Rio Cravo Sur, an agronomist. All of them saw a treasured waterway in peril and cared enough to commit their lives to defending it.

I'm proud to know that a movement that started with just a handful of fishermen has blossomed into a global legion of water

/ 20

activists. Their victories, viewed together, are astonishing. Just a few:

- Mid Upper Yamuna Riverkeeper in India rejuvenated a once-vital stream of the Ganges that had been dry for more than 50 years, in the process replenishing critically needed wells in parched local villages.

- Bagmati River Waterkeeper in Nepal has organized more than 265 weekly clean-ups, mobilizing more than 1,700 organizations to collect more than 10,000 metric tons of waste.

- Costa Grande Waterkeeper in Mexico partnered with communities in coastal Guerrero to develop a recycling facility to recover marine and coastal plastic. It has recycled over 50 tons of post-consumer plastic and, as a result, decreased the amount of plastic on riverbeds, beaches, lagoons, and roads by 80 percent.

- Working with partners in agriculture, Upper Hunter Waterkeeper in Australia fought — and won — a 10-year lobbying battle with the province's government to block licensing of a coal mine in the watershed's upper reaches.

- Upper St. Lawrence Riverkeeper and partners fought for almost 20

years to secure a new water-level plan for Lake Ontario that returns natural levels and flows to the St. Lawrence River. The plan is the second-largest wetland restoration project in North America, after the effort in Florida's Everglades.

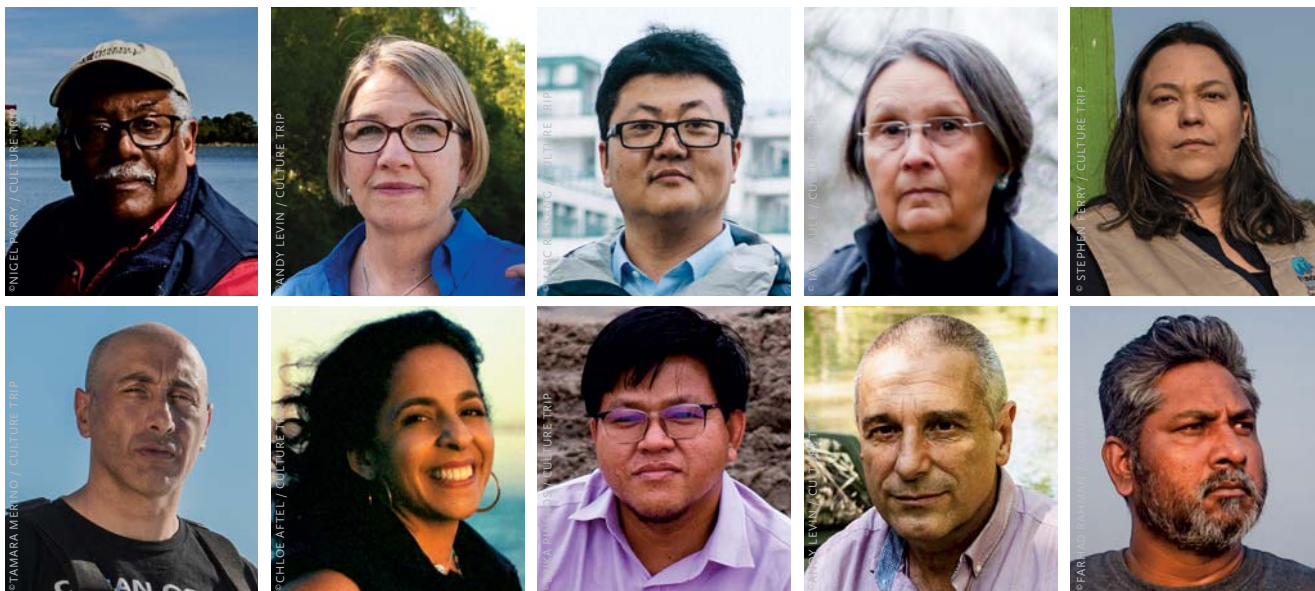
All those victories — and so many others, from successful Clean Water Act citizen suits to winning campaigns to build new sewage treatment plants — are the work of our Waterkeeper Warriors. I'm proud to call each of them my comrade.

While choosing just 20 to spotlight was an agonizing task, these Waterkeepers vividly demonstrate the breadth, depth and spirit of our movement. I'm delighted to honor them this year as ambassadors for all that we stand for.

- Megh Bahadur Ale, Karnali River Waterkeeper, protects one of Nepal's last wild rivers, which is being threatened by a plan for major hydroelectric-dam development.

- Liliana Guerrero, Bocas de Ceniza Waterkeeper in Barranquilla, Colombia, has been outspoken in her opposition to stop the destruction that multinational coal companies are wreaking on

LETTER FROM THE PRESIDENT, ROBERT F. KENNEDY, JR. (CONT.)

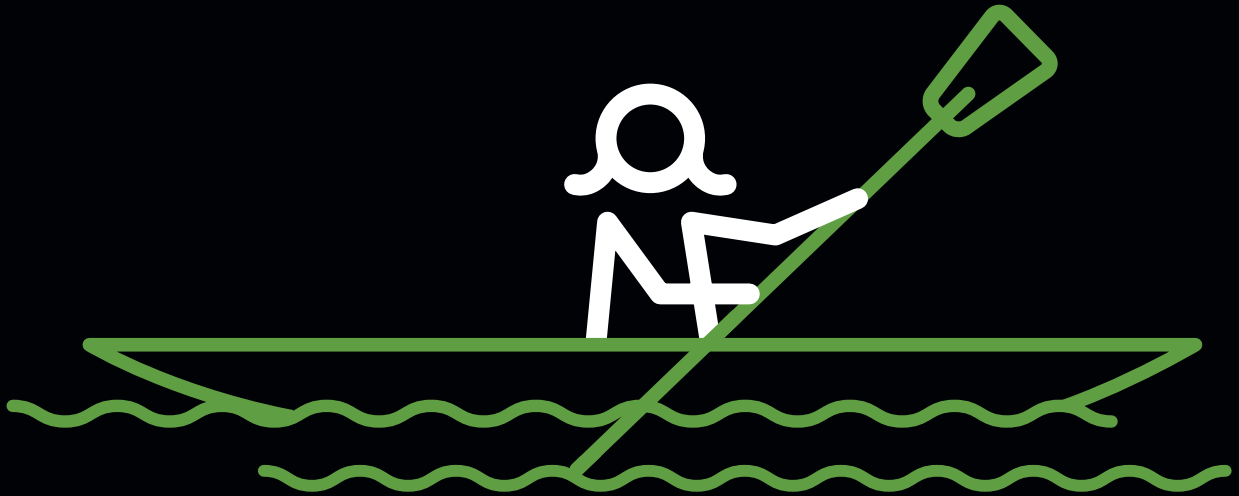



FEATURED IN THIS ISSUE, FROM LEFT TO RIGHT, TOP TO BOTTOM, PATUXENT RIVERKEEPER FRED TUTMAN, MOBILE BAYKEEPER CASI CALLAWAY, QIANTANG RIVER WATERKEEPER HAO XIN, TAR CREEKKEEPER REBECCA JIM, BOCAS DE CENIZA WATERKEEPER LILIANA GUERRERO, MAULE ITATA COASTKEEPER RODRIGO DE LA O, SAN FRANCISCO BAYKEEPER SEJAL CHOKSI-CHUGH, TONLE SAP LAKE WATERKEEPER SENGLONG YOUK, ATCHAFALAYA BASINKEEPER DEAN WILSON, AND BURIGANGA RIVERKEEPER AND HEAD OF WATERKEEPERS BANGLADESH SHARIF JAMIL.

her country.

- Mbacke Seck, Hann Baykeeper in Senegal and Africa's first Waterkeeper, secured a \$68 million clean-up project for Hann Bay, and has led the opposition to the construction of coal-fired power plants in his country. In 2016, Mbacke was awarded Senegal's most prestigious environmental prize, the Green Trophy, for his leadership nationally in advocating for a sustainable future for Senegal.
- Sejal Choksi-Chugh, San Francisco Baykeeper, is spearheading the charge to reduce agricultural pollution, industrial runoff, sewage-overflows, and oil spills in the San Francisco Bay estuary, which drains water from nearly 40 percent of California.
- Fred Tutman, Patuxent Riverkeeper, has provided a bullhorn to minority communities and led a legal challenge that earned citizens and organizations with aesthetic or recreational interests the standing to contest ill-advised and irresponsible development in Maryland.
- Rebecca Jim, Tar Creekkeeper and a member of the Cherokee Nation, founded Local Environmental Action Demanded (LEAD) in northeast Oklahoma. Since 1997, she has led her community's fight for environmental justice and remediation of the Tar Creek area, one of the largest and most polluted Superfund sites in the United States.
- Sharif Jamil, Buriganga Riverkeeper and head of Waterkeepers Bangladesh, is leading a national campaign to avert an environmental catastrophe for the country's 165 million people, who are already among those suffering the most from the effects of climate change and sea-level rise.
- For more than 20 years, Casi Callaway, Mobile Baykeeper, has been Mobile Bay's most tireless advocate and protector. Under her leadership, Mobile Baykeeper, now the largest environmental organization in the region, was a critical community force during the 2010 BP Deepwater Horizon disaster.
- Rodrigo de la O, Maule Itata Coastkeeper and Chile's first Waterkeeper, fought a successful seven-year campaign against the construction of a massive coal-fired power plant that would have contaminated the Maule and Itata rivers.
- Hao Xin, Qiantang River Waterkeeper in southeastern China's coastal Zhejiang province, is battling wide-scale development that has led to rampant pollution and water shortages in a region with 20 million people.
- Senglong Youk, Tonle Sap Lake Waterkeeper in Cambodia, is one of his country's leading environmental activists in the fight against

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LETTER FROM THE PRESIDENT, ROBERT F. KENNEDY, JR. (CONT.)

a spate of proposed mega-hydropower dams that threaten the ecological health of the Mekong River. At risk are the economic vitality and food security of 60 million people in the region, which is the world's largest inland freshwater fishery.

- Yongchen Wang, Beiyun Waterkeeper, waged a successful 10-year campaign to save the Nu River, one of China's last free-flowing rivers, from plans to build 13 large hydropower dams.

- Miami Waterkeeper Rachel Silverstein won a settlement with the U.S. Army Corps of Engineers to restore 10,000 federally protected staghorn corals damaged during the dredging of the Port of Miami. These corals provide extensive public benefits, including fish habitat and coastal storm-surge protection.

- After making his living as a commercial fisherman and hunter in Louisiana's Atchafalaya Basin for more than 16 years, Dean Wilson founded Atchafalaya Basinkeeper when landowners and timber companies developed plans to clear-cut Atchafalaya's cypress forest — the largest contiguous bottomland hardwood forest in North America and a refuge for half of North America's migratory waterfowl — to produce garden mulch. He succeeded in ending their operations.

- Born and raised along New Jersey's Hackensack River, the son of a barge captain, Captain Bill Sheehan founded Hackensack Riverkeeper in 1997 and is widely credited with the resurgence of the river and the Meadowlands Estuary.

- Marañón River Waterkeeper Bruno Monteferri, in Lima, Peru, is leading the resistance against a proposal to build 20 dams on the river, the main tributary of the Amazon River.

- Kemp Burdette, Cape Fear Riverkeeper in Wilmington, North Carolina since 2010, is leading the fight for clean water in the Cape Fear Basin, which has one of the highest densities of industrial livestock-feeding operations of any place on earth.

- Rashema Ingraham, Bimini Coastal Waterkeeper and head of Waterkeepers Bahamas, is fighting to protect the world-renowned waters of those islands, which are threatened by development, inadequate sewage-treatment, stormwater-runoff, and plastics pollution.

- Under the leadership of Jill Jedlicka, Buffalo Niagara Waterkeeper spearheaded a \$100 million effort, now nearly completed, to clean up the heavily polluted Buffalo River. It also secured a \$92 million commitment by the Buffalo Sewer Authority to markedly increase green infrastructure, and, in partnership with another local nonprofit, train workers to maintain it.

- Theo Thomas, London Waterkeeper, is leading the campaign to remedy the torrents of polluted stormwater runoff that flow into London's sewers and, ultimately, its rivers.

This issue features 10 of our 20 Waterkeeper Warriors; later this year, we'll run profiles of the other 10.

“In the face of so much discouraging news about our planet's environment, the work and dedication of the world's Waterkeepers shine. I can think of no better way to celebrate 20 years of Waterkeeper Alliance than reflecting on all they've done, and all they've yet to do.”

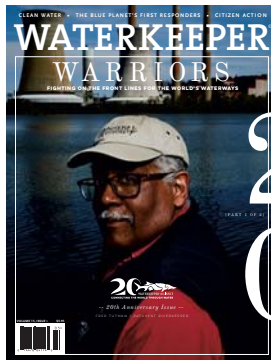


AbTech congratulates Waterkeeper Alliance on its 20th anniversary and all of its amazing warriors for their leadership in the battle against water pollution.

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ON THE COVER:

Patuxent Riverkeeper Fred Tutman on Swanson Creek, the site of an April 2000 oil spill on the Patuxent River from the Chalk Point power plant that fouled 80 acres of wetlands and shoreline, and killed thousands of fish and wildlife. As the result of a recent legal victory by Patuxent Riverkeeper, the Chalk Point plant will be closing in the not-too-distant future.








Photo by ©Nigel Parry, courtesy of Culture Trip

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The official magazine of Waterkeeper Alliance

MISSION: Waterkeeper Alliance strengthens and grows a global network of grassroots leaders protecting everyone's right to clean water.

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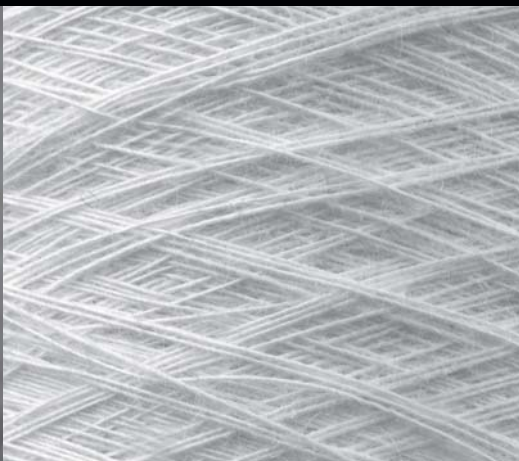
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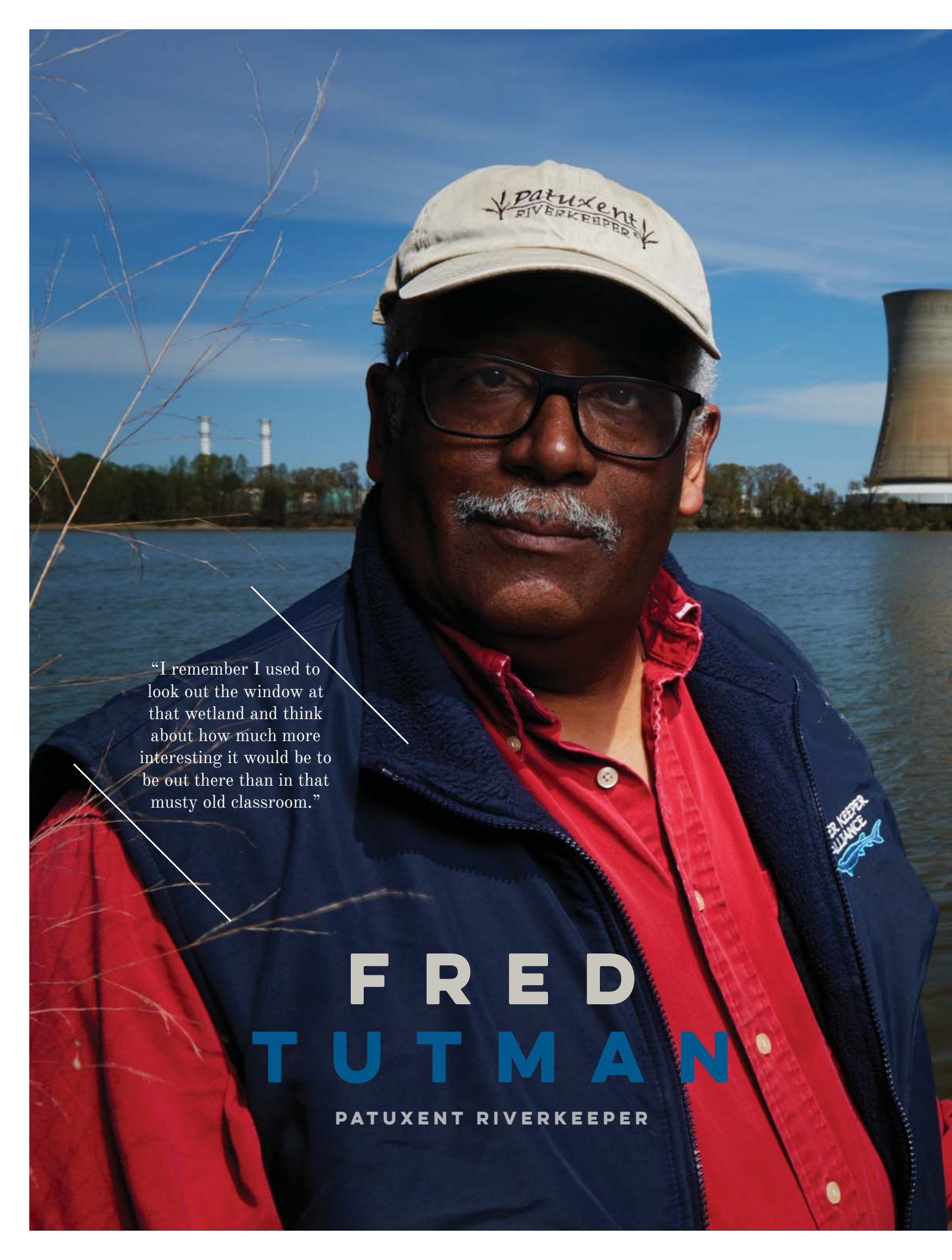
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A portrait of Fred Tutman, a Patuxent Riverkeeper, standing by a body of water. He is wearing a light-colored baseball cap with the Patuxent Riverkeeper logo, glasses, and a mustache. He is dressed in a red shirt under a dark blue jacket. The background shows a body of water, some bare branches in the foreground, and industrial structures like smokestacks and a large cooling tower in the distance under a clear blue sky.

“I remember I used to look out the window at that wetland and think about how much more interesting it would be to be out there than in that musty old classroom.”

FRED TUTMAN

PATUXENT RIVERKEEPER



NATIVE SON

FRED TUTMAN RETURNED TO HIS “HOME RIVER”
TO FIGHT ENVIRONMENTAL AND SOCIAL INJUSTICE.

BY TOM QUINN

PHOTOS BY ©NIGEL PARRY, COURTESY OF CULTURE TRIP

The Patuxent River is a tributary of the Chesapeake Bay and the largest and longest river entirely within Maryland. Its 900-square-mile watershed is also the largest completely within the state, extending into seven counties. The river lies between the Patapsco River to the northeast, which passes through Baltimore, and the Potomac to the southwest, which passes through Washington. It is home to more than 100 species of fish, including bass, catfish, chain pickerel, and bluefish.

“This is a nice compact river, but it has the deepest water in the Chesapeake region,” Fred Tutman, the Patuxent Riverkeeper, says. “It reaches a depth of 190 feet in the lower Patuxent.”

Fred’s love for the river runs just as deep.

Patuxent Riverkeeper’s office is located in Upper Marlboro in Prince George’s County, where Fred was born and raised, along the Patuxent, as were seven generations of his ancestors. He still lives on the farm where he grew up. For him the river has always been “a spiritual talisman of his farm upbringing” and life in rural southern Maryland.

“The river was our playground as kids,” he recalls. “It was where we got food. My family watered their crops from this river. My great-grandfather farmed tobacco and other crops, and fished for yellow perch there. In every respect, as much as I’ve lived in other places and enjoyed other rivers, the Patuxent is very much my home river.”

As a five-year-old he was the first black

child to integrate the kindergarten he attended in Upper Marlboro in the early 1960’s. He remembers that some white parents took their children out of the school because of it.

Behind the school there was a pond that emptied into the Patuxent.

“I remember I used to look out the window at that wetland,” he says, “and think about how much more interesting it would be to be out there than in that musty old classroom.”

When he was a teenager his father became a director in the Peace Corps, and Fred moved with his parents and two sisters to Sierra Leone in West Africa. They spent two years there and a year in Tanzania. “My early interest in water was sparked by riding river boats up the rural inland waterways where goods, people and livestock were ferried along river byways that were centuries old,” Fred says. “They were the lifeblood of these isolated communities.”

After college, Fred spent more than 25 years as a journalist, working in radio, video, films, and satellite communications.

“I covered news stories internationally for U.S., British, and Canadian news organizations, on a contract basis,” he says. “I worked around the world with CBS, ITN, CNN, and BBC, among others. I had an office in Rome and covered the Falklands War in the mid-1980s. I also ran a project for the Ford Foundation in West Africa.”

But he always returned to the farm, and finally he got tired of all the travel –



FRED IS PROUD THAT THE PATUXENT INSPIRED A LONG HISTORY OF ACTIVISM. IN FACT, IT WAS THE FIRST RIVER IN MARYLAND THAT THE STATE WAS FORCED TO CLEAN UP UNDER THE CLEAN WATER ACT.

“and of reporting about all the things that were wrong with the world. I came to the conclusion that it was time to start focusing on finding ways to make things better.” He decided to attend law school. In his third year he was at a meeting at the Maryland Department of the Environment, when “this guy walks into the room that has this incredible charisma and stage presence and he says his name is Fred Kelly, and he’s the Severn Riverkeeper, and I thought, wow, this guy’s got something going on. I’d never heard of a Riverkeeper before.” Fred decided to read Bobby Kennedy, Jr. and John Cronin’s book, “The Riverkeepers.” “I was completely blown away,” he says. “These underdogs were taking on government bureaucrats and powerful corporate polluters and they were winning. That seemed like such a huge thing – these Waterkeepers who were sort of water-quality guerillas unafraid to stand up to a woefully inadequate water-protection system!”

That’s when he decided to take on the

job of fighting for the river that was so close to his heart and heritage. “But I also saw it as a medium for making a better and more just society by fighting for something as essential as people’s right to clean water,” he says.” He founded Patuxent Riverkeeper in 2004.

Fred is proud that the Patuxent inspired a long history of activism. In fact, it was the first river in Maryland that the state was forced to clean up under the Clean Water Act. In the early 1970s, Calvert County Commissioner Bernie Fowler and county executives from Charles and St. Mary’s counties filed several lawsuits arguing that the EPA was allowing sewage-treatment plants in upriver counties to discharge too much waste into the river. And they won those lawsuits.

Maryland’s Chesapeake Bay Program ultimately came about because of the activism on the Patuxent, according to Fred. “Bernie and those other early activists lit the fuse and citizens on other rivers followed in their tracks,” he says. “I’ve always believed

that it’s our job at Patuxent Riverkeeper to keep that fuse lit.”

A lot of Fred’s work has been in the field known as “environmental justice,” which he prefers to call “environmental injustice.”

“When you say the words ‘environmental justice,’” he argues, “most people think you are talking only about black folks or people of color. We see it in a much more expansive sense. These are usually David and Goliath class-based fights where people with far less power are largely fighting people with an exorbitant amount of power and money. And that can be a white, black, Native American, Latino, or Asian community – any community except a rich community. You don’t find many rich white communities fighting off coal-fired power plants or factory farms or sewage discharges. Those, frankly, are placed where there is less money and less power, and the two seem to go together.”

He describes Patuxent Riverkeeper as “part of a social activist movement where

“ YOU DON’T FIND MANY RICH WHITE COMMUNITIES FIGHTING OFF COAL-FIRED POWER PLANTS OR FACTORY FARMS OR SEWAGE DISCHARGES. THOSE, FRANKLY, ARE PLACED WHERE THERE IS LESS MONEY AND LESS POWER, AND THE TWO SEEM TO GO TOGETHER. ”

the environment is key. The way I see it, we are community organizers where our community is defined by the track of the river.”

His favored approach is “to listen to what folks need and start helping exactly where they are – by taking our cues from the grassroots. It doesn’t have to be staffed out and it doesn’t take a lot of material. It’s all about having the willingness to listen, help and the spine to stand up for what’s right and fight.”

One of the prime examples of this has been his work with Eagle Harbor, one of Maryland’s smallest municipalities, which sits along the Patuxent in southernmost Prince George’s County.

“This town has been steeped in a legacy of racism and injustice since its founding,” Fred says, explaining that in the 1800s part of the town was a steamboat-landing site that transported slaves who worked the Maryland tobacco fields. In the 1920s, when people of color were barred from beaches in the area, black residents from the Washington vicinity formed Eagle Harbor as an enclave and resort.

“Like many places in our watershed,” says Fred, “the environmental problems that exist there now were shaped by the legacy of past disparities and injustices, and have their roots in racism and hardship. Pretending that the shortfall in public investment at Eagle Harbor is just circumstance or lack of ‘environmental literacy,’ is crazy, and no Riverkeeper could get anywhere by

pretending the same solutions would work here as they would in a white suburban neighborhood sitting on the bay.”

In the 1960s, the massive Chalk Point coal-burning power plant, one of Maryland’s largest, was built just south of Eagle Harbor. The plant is, by far, the leading polluter in Prince George’s County, and has been guilty of numerous unlawful discharges and other violations. Fred believes the siting of the plant next to this small African-American community was no accident.

“Just acknowledging the past context and present reality helps us connect to and serve this town,” Fred says. “But we would fight just as hard for any community, of any ethnicity. In some ways, Patuxent Riverkeeper is a cross-cultural bridge between the have and the have-nots in this watershed, fighting some of the most controversial battles and, frankly, the hardest to fund.”

He first identified some open questions at Eagle Harbor, such as how direct discharges to the river could be contaminating fish and crabs, and how the plant was making enormous freshwater drawdowns from the same aquifer as the town, which could adversely affect the quantity and quality of their water. But despite residents’ concern about Chalk Point they were reluctant to confront them because of the lopsided power dynamic. “There were some fights we were ready to fight through litigation that

they were disinclined to take on because they lacked the political or financial resources,” Fred says.

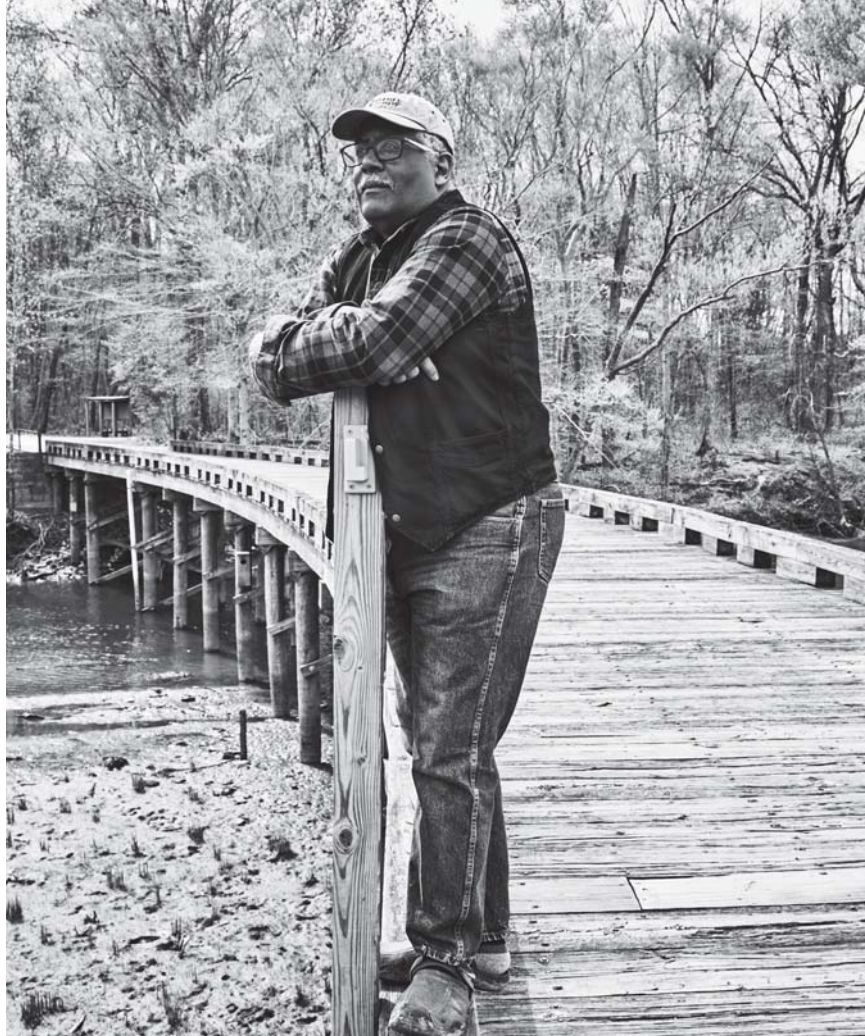
“It was Fred who opened our eyes to pollution and environmental issues in general,” says Eagle Harbor Mayor James Crudup. “Before Fred we didn’t have anyone that we could turn to and find out what was going on in regard to the town’s waterfront. Recently he was very instrumental in our receiving grants from the Department of Environmental Resources, including a \$100,000 grant to help creek flooding and erosion. Fred is my go-to-guy in regard to our environment. We’d be in a very different place without him.”

In 2015, the plant’s owner, NRG energy, announced plans to reduce discharges from a plant it owned along the nearby Potomac River and increase them along the Patuxent in a “pollution trade.” It was not the first time Fred decided to sue, but it was the most likely way to protect the river and the town from a gross inequity.

“It wasn’t an easy decision to make, because it meant walking away from a funder who disagreed with our stance on pollution trading – but I had to,” Fred says.

Ultimately, the company abandoned the idea of the trade. Since then, Patuxent Riverkeeper has filed several legal actions against the company for exceeding its discharge limits. Fred has also helped the town secure grants to improve a waterfront park and develop a comprehensive plan for its future.

"LIKE MANY PLACES IN OUR WATERSHED, THE ENVIRONMENTAL PROBLEMS THAT EXIST THERE WERE SHAPED BY THE LEGACY OF PAST DISPARITIES AND INJUSTICES, AND HAVE THEIR ROOTS IN RACISM AND HARDSHIP."



On April 26, Fred received an award for his outstanding service to Eagle Harbor at the town's 90th anniversary celebration. "Our conversations with towns like Eagle Harbor almost always start with us trying to determine what their needs are," Fred says. "James Crudup and the Eagle Harbor Town Council had a vision for bringing some new growth to the town. For example, they told me they wanted solar panels. So, I called some people I know that are familiar with solar panels. Now we're trying to put a deal together for the town and responding to what the community's vision is."

Fred was also able to connect them to another African-American community, Highland Beach, which exchanged helpful information on how they had obtained solar panels. "In a sense, we are building a far-flung sense of community around water and environment," he says.

Over the years, Patuxent Riverkeeper has litigated 19 cases. Twelve of those made it to trial and the organization prevailed in eight of those suits, and grossed nearly a half-billion dollars in judicial penalties, fines and reparations

from polluters. One of the victories he is proudest of occurred this year. It resulted in the closing of the Brandywine coal-waste disposal site, rated recently as the seventh worst in the nation in a report by the Environmental Integrity Project, which stated that "ash from three NRG coal plants has contaminated groundwater with unsafe levels of at least eight pollutants, including lithium, at more than 200 times above safe levels, and molybdenum, at more than 100 times higher than safe levels. The contaminated groundwater at this site is now feeding into and polluting local streams."

In his latest annual letter to members, Fred wrote, "Two of our board members, Dr. Hank Cole and Dr. Sacoby Wilson, were instrumental in testifying, framing our legal and activist strategy, and bringing home this victory that will give relief to the river and to the surrounding community after 44 years of what had originally been a 'temporary' special exception when first approved in the 1970s."

The closing of the Brandywine coal-ash site may also have an added bonus, profoundly affecting the quality of life and the future prospects in Eagle Harbor.

The Chalk Point power plant's coal waste was trucked to Brandywine, which is only about 18 miles from the plant. "Now NRG has to ship it to a site out of state, in West Virginia," Fred says, "and they claim it's costing well over \$100,000 a month."

NRG already has declared bankruptcy. "It will surprise the hell out of me if it closed," he says. "Some company will come along and figure out how the plant can still be a cash-cow. But the odds are this plant cannot stay within the law for long due to its outmoded design."

Fred has been the Patuxent Riverkeeper for 15 years now and it's been a job, he says, that he loves more than any other in his long and varied career. "I wasn't bad as a TV producer, but near the end my heart was no longer in it. I love working with these communities, where I can plant seeds that will last for a lot longer than any TV or radio show I ever produced."

But over the years, he has had five separate heart-related medical procedures,



culminating in a double-bypass surgery a little more than a year ago. “This work has never been easy, and it isn’t getting any easier,” he says. “What I’ve tried to do is to create a watershed protection movement that is truly representative of the hearts, minds and souls of the very diverse people and communities along the Patuxent River corridor. But now it’s time to put together a succession plan, which we probably should have done a while ago.”

In the annual letter he wrote, “Frankly, for a guy like me in his 60s with a very busy work career behind me, heart disease potentially lurks in nearly every one of these lawsuits, river campaigns and the continuing struggle...”

He knows the way forward is to build on what Patuxent Riverkeeper has accomplished in its first 15 years. And he also knows that, personally, it won’t be easy to retire from the Waterkeeper movement, and he’s passionate about why. Not long ago, he wrote this:

“The honest to goodness truth is that it was the ‘jazz’ in this movement that grabbed me in the first place. It was in 2003, when I heard Bobby Kennedy, Jr. give a speech

about how ‘God’ speaks to us in Nature in nearly every faith and every tongue.

“To me jazz fits the entire scheme of nature in the sense that it is syncopated, organic to its setting, improvised and unscripted, has multiple themes and voices, is capable of inciting and inspiring great passion and meaning.

“That, to me, pretty much described the diverse, grassroots and inclusive spirit of this Waterkeeper movement – at least as I saw its potential. Here, I thought was a movement where Jazz would be welcomed just as much as Classical, Bluegrass and virtually every other style of music. I still believe that is true.

“Every shade, facet and aspect of the human spiritual experience is embodied within our very human scale and heart-felt connections to sacred water. But if God is on our waterways (whichever God you endorse), then surely (to quote James McBride) he/she is the color of water and so is our movement.” **W**

Tom Quinn is the Senior Editor at Waterkeeper Alliance and the Editor of Waterkeeper Magazine.

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CASI CALLAWAY

MOBILE BAYKEEPER

"I signed up to do
this work because of
what I love.

I love our beaches,
I love Mobile Bay."



MOBILE'S STEEL MAGNOLIA TURNS RED TO GREEN

"YOU GO BIG OR GO HOME. WE WENT BIG."

BY ELLEN SIMON

PHOTOS BY ©ANDY LEVIN, COURTESY OF CULTURE TRIP

Casi Callaway couldn't have told you what day of the week it was — Sunday, Thursday, it didn't really matter — but she knew what number day of the Deepwater Horizon oil spill it was.

The days were the same, pretty much from Day 8 to Day 87, when the spill stopped. She'd go to sleep at one or two in the morning, convinced she hadn't done enough that day. She'd wake up at 4 a.m., swing her feet to the floor, and then start pounding through a welter of emails. At 7 a.m., she'd kiss her two-and-a-half-year-old son and go to the office, spinning through phone calls, meetings, messages. Back home around 6 p.m., she'd spend two hours with her son and husband, then answer emails until one or two in the morning, when she'd fall asleep with the same thought: "I didn't do enough."

Eleven men were reported missing on Day One, April 20, 2010. Within days, it became clear that all 11 were dead. What wasn't immediately obvious was that the environmental costs would be just as high, that this would be the worst oil spill in U.S. history.

Casi's first sense of that came on Day 6, with an unexpected call from Alabama's acting environmental commissioner. He told her that the spill wasn't much more than "a teaspoon in 18 Olympic-size swimming pools." That just didn't ring true to her.

She sent an email to the Waterkeeper listerv on Day 8. The first return email came from Bob Shavelson, the Cook Inletkeeper in Alaska, who had worked the Exxon Valdez spill in 1989.

"Everything they say, multiply it by five," Shavelson wrote.

That day, British Petroleum, which owned Deepwater Horizon, and the Unified Command team of government and company representatives responding to the spill said it was releasing 5,000 gallons of oil a day.

"I said, 'Oh my God, it's 25,000 gallons a day,'" Casi recalls. "Before a day had passed, they admitted it was 25,000 gallons a day. I said, 'Oh my God, it's 125,000 gallons a day.'"

"I signed up to do this work because of what I love. I loved our beaches, I loved Mobile Bay," she says. "I didn't really know that you could lose something forever, until then. That was the first time I faced — we could really lose everything, all the way."

"YOU TAKE CARE OF THE BAY"

Casi had a lifetime of memories floating in those waters. She'd grown up in South Alabama, spending sunburned summers as a child on the Gulf Shore's beaches, bare feet in sugar sand, falling asleep still feeling the rocking of the waves. As a teenager, she'd explored Mobile Bay and, occasionally, the delta's maze of flues and bayous and embayments.

Following her boyfriend's lead at Emory University in Atlanta, she joined an environmental group. He discouraged her, saying, "You have a sorority and this is my thing. You'll last for five minutes, then you'll move on." (He's a banker now.)

During her junior year in 1989, she took on planning for the university's Earth Day celebration. "For me, sweet home South Alabama girl, I thought, 'I can host a party,'" she says.

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Earth Day’s national campus coordinator, Owen Byrd, saw more than that in her, and encouraged her to become the event’s Southeast regional coordinator, working to ensure that every campus in a five-state area held an Earth Day event.

She dove into the work. “Got my first migraine,” she says.

“Made my first C.”

The result: 30 Earth Day events on her region’s campuses, one at every major college and university. Right then and there she knew what she wanted to be.

After graduation, she worked for six years at Clean Water Action in Washington, D.C., before moving back to the Mobile area and being hired as the first full-time director of Mobile Bay Watch, on August 1, 1998.

She knew that she faced a different kind of battle in her politically conservative, industry-minded hometown. “People down here didn’t like the word ‘environmentalist,’” she recalls, “but many of them were proud conservationists who were hunters and fishermen, with families who spent their summers on Mobile Bay. It was just a matter of showing people that we were all on the same team, whether or not they realized it at the time.”

In September 1999, Mobile Bay Watch joined Waterkeeper Alliance, and changed its name to Mobile Baykeeper.

“When we joined Waterkeeper Alliance,” says Casi, “I realized I had a larger family and they gave me the tools I needed to better understand our issues and translate them for our politically conservative climate.”

Shortly afterward, Rick Dove, then the Neuse Riverkeeper and now senior adviser at Waterkeeper Alliance, traveled down from North Carolina to conduct a site-visit.

Like her, Dove, who a few years earlier had retired as a colonel in the U.S. Marine Corps, was a Southern conservative, and she sought his advice regarding a conflict over a proposed local steel mill, telling him she didn’t want to be the one to kill jobs.

“I told her, ‘What you always need to do is visit the bay and ask — what do you want me to

do? That’s where you get your answer,’” says Dove. “Your job isn’t to fight for jobs. Your job is to fight for Mobile Bay. If you don’t step up and do something, then who’s going to?”

Nearly 17 years later, Casi evokes these words as a mantra whenever she encounters opposition.

Such inspiration and encouragement helped carry Mobile Baykeeper through some significant milestones. In 1999, it filed its first lawsuit, against the Mobile Area Water and Sewer System (MAWSS), for violations of the Clean Water Act, after Baykeeper discovered that the sewer system had been spilling 2.5 million gallons of raw sewage into the bay annually.

“One of the very first things we knew we were going to have to deal with was sewage,” says Casi. “Sewage spills kept occurring because MAWSS was putting Band-Aids on the system and not making the types of upgrades that were critical to prevent more spills.”

After nearly two years of negotiations, the parties reached a settlement that markedly improved the way MAWSS would operate. Under the settlement, the agency was required to make a significant investment to upgrade infrastructure, an amount that has now reached more than \$200 million.

Remarkably, what had started with a lawsuit eventually became a partnership.

Shortly after the settlement, the two organizations joined in a fight against the Alabama Department of Transportation (ALDOT), which had proposed construction of a new highway that would cross 13 streams within the Big Creek Lake Reservoir, Mobile’s primary source of drinking water.

“The whole situation was a giant mess,” says Casi. “They hadn’t even conducted an environmental-impact statement and were allowing massive amounts of red clay to be dumped in our drinking-water supply.”

The partnership finally settled with ALDOT in 2007, exacting tightened rules regarding the amount of dirt that could be uncovered while building new roads, and imposing more-stringent statewide stormwater regulations.

“Collaboration has been behind every successful campaign we have won,” Casi says. “This was such a unique scenario, that, despite being in a previous lawsuit with MAWSS, we were able to work together and win a huge battle that saved the drinking-water supply for hundreds of thousands of our citizens.”

“When Casi started, it was a huge uphill battle,” says Mobile Mayor Sandy Stimpson. “Today, because of her hard work and dedication, all the stakeholders work together well on clean-water issues.”

Rick Dove has visited Casi often since their first meeting. A skilled photographer, he even shot her wedding photos. “She just does not quit,” he says, “That’s not blood running through her veins, it’s water, Mobile Bay water.”

“THEY STILL DON’T KNOW”

On Day 12 of the Deepwater Horizon spill, Casi left home at dawn to be interviewed on the beach by CNN. She was still going at midnight, stumbling bleary-eyed through a grocery store as she talked on the phone with Marc Yaggi, Waterkeeper Alliance’s deputy director at the time and now executive director, strategizing about how they could get her in the room where the decisions about the clean up were being made.

Yaggi flew to New Orleans on Day 13 on three hours’ sleep, and then drove across Mississippi to Mobile with Justin Bloom, an environmental lawyer who’s now the Suncoast Waterkeeper in southwest Florida.

Their goal was to get Casi into “Incident Command,” where officials from federal and state agencies, such as the Coast Guard, NOAA, EPA and the Alabama Department of Environmental Management, and the representative from the responsible party

(in this case, BP) worked to plan, implement and fund a response.

As is usually the case — chillingly — the responsible party had taken the lead. The last person they wanted in the room was a local environmental leader. For a few days, Casi was refused entry by security guards hired by BP but, with Yaggi's help, she was in Incident Command by Day 17.

Looking around, Casi sussed out what she was up against. "Not a one of them was from here," she says. "Didn't know what to do with us. Didn't know what needed to be protected. Didn't know what was an important species." The representative from the state's environmental agency was seated, symbolically, in the farthest back corner.

"Everything felt guided by BP or the feds," she says. "They hadn't checked to see if the oil dispersant was toxic. What did it do to subsurface species? What would it do when mixed with oil? What would it do to the air? There were so many incredible people working for EPA, but they didn't know. They still don't know."

She was kicked out of Incident Command three times: twice early on and, a final time, about two weeks later. She was asking too many questions and sharing too much information with the public. The last time, the colonel told her, "You need to decide if you want to be in here or not. I think you need to be out there where you can speak freely."

She didn't come back.

REARRANGE, RECREATE, REBUILD

Everything around Casi was reshaped. She returned to a hyperactive office where the four full-timer staffers were working twice as hard and the two part-timers were working full-time. She worked 80-hour weeks. Her husband picked up everything else, running their home, becoming their son's primary caregiver.

Even a toddler could sense that things were off kilter. Her son had spent weekends at the beach since birth. She hadn't discussed the oil spill with him; how would she even begin? But he knew she wasn't around and that something bad had happened to their cherished waters.

"He looked at me one day," Casi recalls, "and said, 'The beach is over, Mommy?'"

During those months, Mobile Baykeeper's tireless response and restoration plan drew national attention, as well as financial support that allowed it to double its budget and staff. It recruited hundreds of volunteers, armed them with GPS units and phone-sized video cameras, and trained them to patrol one-mile grids of the bay in kayaks to painstakingly document the effects of the spill. It still runs annual beach checks and trains volunteers to alert Baykeeper and the National Response Center Hotline with concerns.

Today, Mobile Baykeeper is more than double the size it was on Day One of the spill, with 10 full-time staff, seven part-timers and a budget of almost \$1 million.


For Casi, the big lesson of the Deepwater Horizon disaster was, "You rearrange, you recreate, you rebuild. You go big or go home. We went big."

More than eight years after the spill, Baykeeper is still very much engaged in restoration efforts throughout coastal Alabama.

"We have a lot of money coming to the Gulf Coast that needs to be spent wisely on projects that restore and enhance what was lost," says Casi. "We're working hard to make sure that the majority of funds go toward projects that will make us resilient enough to withstand the next disaster, manmade or natural. I see it as my job to remind people that it happened, that it's not over, that we have more work to do." **W**

Ellen Simon is the Advocacy Writer at Waterkeeper Alliance.

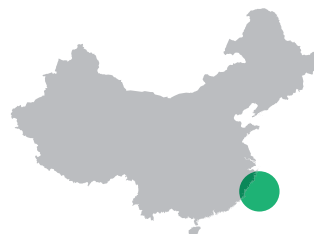




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HAO
XIN

QIANTANG RIVER WATERKEEPER



TOMORROW IS TODAY

HAO XIN IS USING GRASSROOTS ACTIVISM TO FORGE
INNOVATIVE SOLUTIONS TO SECURING THE FUTURE OF
CHINA'S WATER RESOURCES.

BY EUGENE K. CHOW

PHOTOS BY ©MARC RESSANG, COURTESY OF CULTURE TRIP

Though the waters of the majestic Qiantang River now flow clearer than they have in decades, every time Hao Xin gazes upon them, he cannot help but remember when some of the river's tributaries were fetid, stagnant and full of toxic industrial waste. He has never forgotten the devastation he saw and the raw emotions he felt when he first toured the Qiantang and its many tributaries as a teenager nearly 20 years ago. He had organized a 36-day, 2,000-kilometer bicycle ride across Zhejiang province in the summer after his freshman year at Zhejiang University in Hangzhou, the province's capital city. He had not set out to become an environmental advocate, but this calling found him.

He encountered many places where pollution had reached staggering levels. "There was a lot of trash, and wastewater being discharged from factories directly into the river," Hao recalls. Some rivers had "piles of garbage visibly floating in black, foul-smelling water." In other places, chemicals dyed the water in a variety of unnatural hues.

It was a stark awakening. "I was shocked. It was nauseating; I wanted to do something about it. I was 18 years old and wanted to save the earth."

He has not quite accomplished that, but in the two decades since, he has helped save much. With one of his university professors, Junhua Ruan, he founded Green Zhejiang in Hangzhou, the first and largest environmental NGO in Zhejiang (and the parent organization of Qiantang River Waterkeeper), and he has become a powerful, internationally recognized advocate for water. But his path has not been easy.

THE ENVIRONMENTAL COSTS OF AN ECONOMIC BOOM

The Qiantang is the "mother river" of China's eastern coastal Zhejiang province, providing drinking water to more than 20 million people. In the last four decades, Zhejiang has helped drive China's impressive economic growth. Since 1978, the province's GDP has risen more than 100-fold to \$7.6 billion. But, as in much of China, rapid economic development has taken a severe toll.

The province is home to several thriving industrial areas, including Fuyang, one of China's leading paper-manufacturing centers, with over 200 mills; Pujiang, renowned for crystal processing; and Zhuji City, the world's largest producer of socks, which is located in the heart of the Qiantang River Basin. At its peak, "Socks City," as it was nicknamed, produced 17 billion pairs annually, more than 35 percent of global production.

Zhejiang's economic success helped lift millions out of poverty and brought prosperity to the nation, but its waterways were among China's most polluted, with the factories lining its rivers routinely dumping a deluge of untreated wastewater and solid waste into them. In 2014, illegal dumping turned one river blood red. Across China, roughly one-third of all surface water is unfit for human use.

CLEAN WATER RUNS DEEP

The state of Zhejiang's waterways came as a particular shock to the young Hao because he had grown up on the northern shore of



picturesque Dongqian Lake, the province's largest body of freshwater.

"My childhood was basically lake life," he recalls. "I swam in the lake almost every day in the summer and we used to catch shrimp. I had a strong connection to water starting from when I was very young."

But even after returning from that bike trip and helping to found Green Zhejiang, he considered environmental advocacy to be not a profession, but a volunteer activity, a labor of love.

"My opinion was, 'I will always work for Green Zhejiang and I will always work for the environment, but I don't want to make money from it, so I would never think about doing it full-time.'" His view was largely shaped by the lack of nongovernmental organizations (NGOs) operating in China at the time. "In 2003, no one had even heard of NGOs," he says.

But in 2008, his horizons vastly expanded. After university, he was selected as a fellow in the Ford Foundation's International Fellowship Program and attended Clark University in Massachusetts, earning dual Master's degrees in environmental science & policy and geographic information science. While at Clark, he took several classes that opened his eyes to how NGOs could be powerful and effective agents of change. He also had the chance to meet staff from the Natural Resources Defense Council, Greenpeace, and other environmental groups and came to see the importance of having full-time staff.

"I also learned some important ideas, like stakeholders and lobbying," Hao says. "When you are a grassroots organization and fairly weak, you're better off not choosing to fight directly. You should try to find other people who share your interests and goals, who feel they, also, have a stake in what you're trying to accomplish, so they will fight with you. And then you must learn how to approach people in positions of power, people who make government policy, and how to make your case to them. These concepts really empowered me. That's when I started to think, if we really wanted to play an important role and to have a voice [in China], we would have to become professional and have full-time staff."

In 2009, he was invited by China's Middle Han River Waterkeeper Yun Jianli to attend Waterkeeper Alliance's annual conference, which was being held in New York City that year. There, he got to talk to women and men from different parts of the world who were Waterkeepers and who were working on many of the same problems he was. He also met President Bill Clinton, who was a speaker at the conference.

"He said how impressed he was with what the Waterkeeper movement was accomplishing," Hao recalls. "And he even shook my hand and said, 'Good job!' Can you imagine, a person like me? In China I had never met anyone of such a high rank."

His experience at the conference convinced him to join Waterkeeper Alliance and to establish Qiantang River Waterkeeper.

After graduating from Clark he returned to China with new skills, an expanded vision, and an even more ambitious plan. Not only would he try to work locally, but also internationally – and Waterkeeper Alliance would be central to Hao's vision.

Joining the Alliance allowed him to maintain ties to organizations in the United States and to work internationally. "That was very different from the other environmental NGOs in China,"

he says.

At home, Hao has played an increasingly crucial role in expanding the awareness of local residents about the roles they can play in combatting pollution and climate change. Over the past 10 years, Hangzhou's average temperatures have risen more than a quarter of a degree Celsius, and typhoons and severe rainstorms sweep across the city with much greater frequency, threatening its six million people.

Hao was able to convince the local television station to present a forum on climate-change issues in Hangzhou. The show featured meteorologists, environmentalists and officials from the state environmental protection bureau, as well as representatives from the community and local businesses in an open discussion about addressing air pollution in the city. "Internationally, I'm carrying the message of what we're doing in Zhejiang to conferences and forums throughout the world," he says. "In response to climate change, tomorrow is today."

Most recently, he helped create and organize the first-ever H2O Global River Cities Summit in Hangzhou this past November. Building on the G20 summit, which Hangzhou hosted in 2016, the conference brought together representatives from 20 cities in the world located on rivers to share knowledge and promote collaboration.

"Water doesn't separate us, water connects us," Hao said. "I wanted to have more people concerned about water and to use water to connect all of us – different politicians and people from different cultures and backgrounds – so we can work together."

Among the several other major initiatives that Hao has led, the two that he is, perhaps, most proud of are implementing the first real-time pollution-reporting app along the entirety of the Qiantang River, and successfully lobbying the provincial government to prioritize environmental issues and establish the Five Waters Treatment Project, a \$50-billion plan to treat contaminated water, prevent flooding, conserve water, and provide clean drinking water. In 2018, his work helped Zhejiang province earn the UN's highest environmental honor, the Champions of Earth Award.

Hao also became the executive director of the China River Watch Alliance, which is composed of 36 water-advocacy groups that he helped bring together. His work is particularly notable in that

“ WHEN YOU BECOME A LEADER, YOU TAKE ON THE RESPONSIBILITY OF HELPING MORE AND MORE PEOPLE. YOU ARE NOT PERSUADING THEM, BUT SOFTLY LEADING THEM, HELPING THEM CHANGE NATURALLY IN THE WAY THEY WISH TO CHANGE ALREADY. ”



REFLECTING ON HIS NEARLY TWO DECADES OF ENVIRONMENTAL ADVOCACY, HAO SAYS, "THE BIGGEST WIN WAS GAINING THE TRUST OF OUR GOVERNMENT AND FOR THE GOVERNMENT TO SEE NGOS NOT AS ENEMIES, BUT AS PARTNERS."

he has managed to build broad coalitions to curb environmental abuses during a sensitive time in the nation's history. Amidst growing social unrest and increasing protests over environmental pollution, China's ruling Communist Party has sought to keep strict order, curbing attempts to organize online, and jailing activists.

In this fraught political environment, Hao has found ways to forge close relationships with government officials and to have a positive influence on government policy. "I came to understand that if you work with government officials rather than directly challenge them," he says, "you have a much better chance of success."

He likens his approach to environmental work to stopping a car in heavy rain: You cannot brake hard or else you'll skid, so you must slowly apply pressure to the brakes. "We must learn this skill when we touch on a problem," he explains. "We must back off until we are stronger. We don't want to fail the first time we are challenged."

Hao has coupled this strategic approach with a nuanced understanding of how the Chinese government works.

"The government is not one organization," he says. "It is composed of many bureaus, and bureaus are composed of many departments, and departments are composed of many people who all have different opinions. By seeing government as made of many people, we can find allies and supporters, and utilize the differences in opinion."

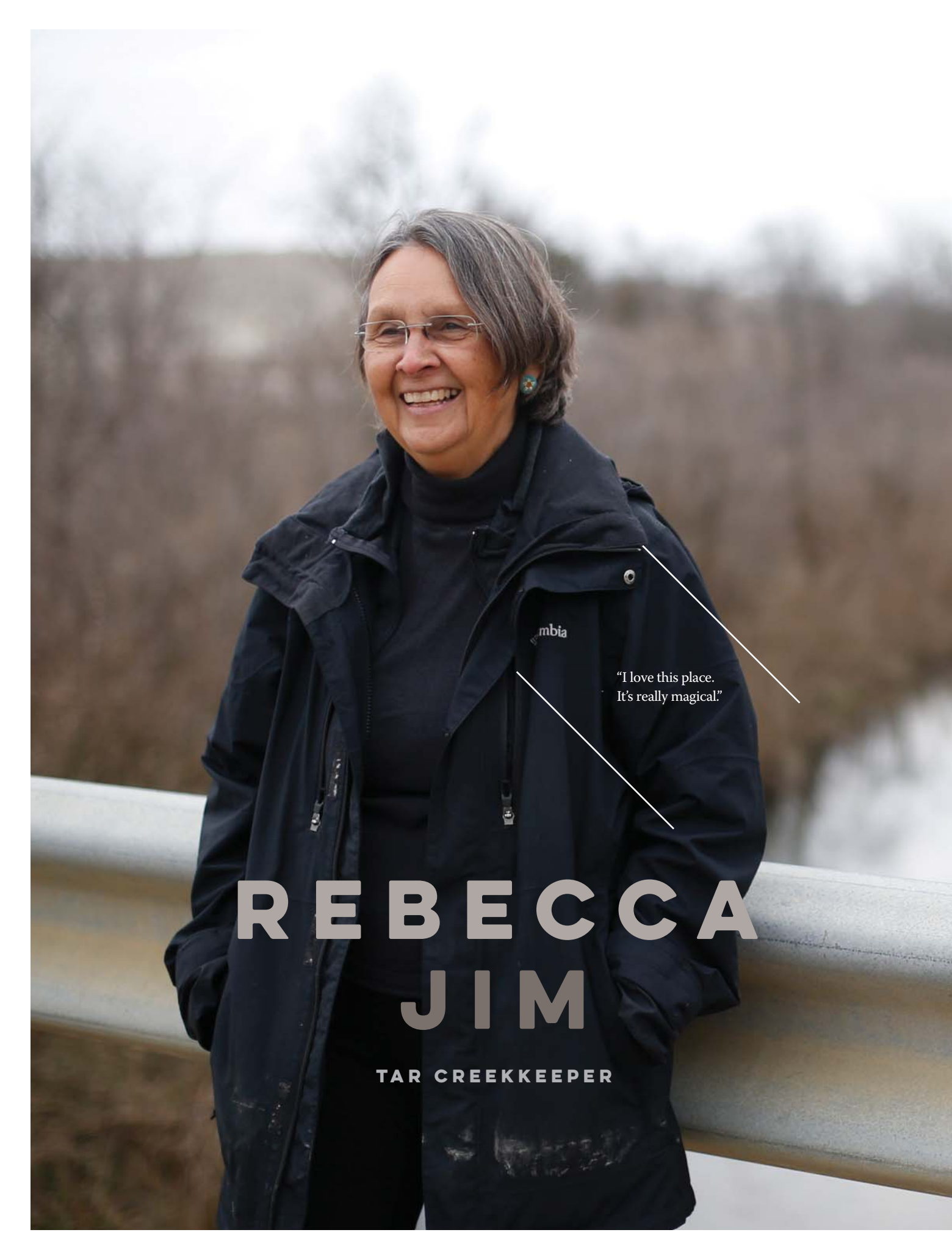
If that fails, Hao recognizes that time is on his side: "If a current official doesn't understand our point of view, then there's always the

next one. As an NGO we can keep at this work for 15-to-20 years, while government officials come and go much faster."

Reflecting back on his nearly two decades of environmental advocacy, Hao considers his greatest accomplishment to be building a relationship between the government and NGOs. More than any single program or legal victory, Hao says, "the biggest win was gaining the trust of our government, and for the government to see NGOs not as enemies, but as partners. Eighteen years ago, in many people's opinion, NGOs were seen as acting against the government. And that was a problem for many NGOs as well, where NGOs wanted to act like the enemy of government."

As he looks to the future, Hao hopes to engage even more people and to expand their understanding of the world around them. "Twenty years ago, when I organized the bike ride, it was simply because I loved cycling," Hao says. "But since then, I have realized that I am not just living for myself. I work with a group of people with a unified vision, to make deep change possible for the world. I feel self-actualized through this work. And consciously, or unconsciously, I have become a leader for these people. When you become a leader, you take on the responsibility of helping more and more people. You are not persuading them, but softly leading them, helping them change naturally in the way they wish to change already." **W**

Eugene K. Chow writes on foreign policy and military affairs. His work has been published in Foreign Policy, The Week, and The Diplomat.



"I love this place.
It's really magical."

REBECCA JIM

TAR CREEKKEEPER



THE DEATH & LIFE OF TAR CREEK

AT ONE OF AMERICA'S WORST SUPERFUND SITES,
REBECCA JIM KEEPS THE FAITH.

BY ROBIN MEADOWS

PHOTOS BY ©IAN MAULE, COURTESY OF CULTURE TRIP

Tar Creek springs from the ground in southeast Kansas, and then meanders through gently rolling farmland and tallgrass prairie. It's beautiful here. On a bright January day, the creek reflects the blue of the sky, trees with black bark line the banks, and brilliant red haw berries add a joyful splash of color. A turtle suns itself in the water, a cardinal wings by, and meadowlarks perch overhead.

"I love this place," says Tar Creekkeeper Rebecca Jim. "It's really magical."

The magic doesn't last long, though. Just a mile from its headwaters, where Tar Creek reaches Oklahoma, it runs through the heart of the Tar Creek Superfund site: 40 square miles of former lead and zinc mines. Set in the northeast corner of the state, the site is within the historic boundaries of the Quapaw Nation, and is surrounded by other tribal lands, including Miami, Ottawa and Peoria. The mining began in the early 1900s, and ultimately produced one of the highest outputs of lead and zinc worldwide, supplying raw materials for bullets for the U.S. military in both world wars.

Many Quapaws were cheated out of their fair shares of the mining profits and were stuck with the devastating environmental consequences. As mine operators milled the ore to concentrate the metals, they discarded the leftover mine tailings on the land. Today the Tar

Creek Superfund site is dominated by piles of tailings, called "chat," that are up to 200 feet high and have lead levels up to 15,000 parts per million (ppm), which far exceeds the U.S. Environmental Protection Agency (EPA) standard for lead in soil.

After the ores became depleted in the late 1960s, and the mining ended, Tar Creek's troubles began. When they were operating, the mines had been pumped dry. But when the mining stopped, so did the pumping, and groundwater seeped back in. Once in the mines, this water became acidic and laced with heavy metals, including lead, zinc, cadmium, and arsenic.

Eventually, the mines became so full of tainted water that it began to pour out of mine shafts, air-vents and exploratory boreholes, poisoning the adjacent land and Tar Creek. "One million gallons of tainted water every day since 1979," Rebecca says. "My creek is not a very long creek – it's 11 miles – but it's one of the most toxic creeks in the country."

Forty years after the contaminated water first surfaced from the mines, Tar Creek is still on the EPA's list of the nation's top 10 worst Superfund sites. "A lot of people are sick from the site, a lot of kids were lead-poisoned here," Rebecca says. "A lot of human potential has been lost."

Government agencies have made progress removing and replacing



“REBECCA REALLY CARES SO DEEPLY ABOUT THE COMMUNITY, THE ENVIRONMENT, AND OUR TRIBES, SHE STILL GETS A GLEAM IN HER EYE WHEN SHE THINKS THERE’S MORE SHE CAN DO TO HELP – SHE’S SHAPED MANY LIVES.”

contaminated soil in people’s yards and around area schools. They also bought out residents of two towns, Picher and Cardin, where the ground was so riddled with mine tunnels that it had become unstable. But, ironically, far less has been done for the creek that gives the Superfund site its name.

Rebecca came to the Tar Creek area to pursue her career as a middle and high-school counselor. She graduated from Southern Colorado State College, now Colorado State University-Pueblo, spending her last two years on the Southern Ute Reservation in Ignacio, Colorado, through Teacher Corps, a federally funded program for low-income areas. Then she went on to earn a master’s degree in counseling from Northeastern State College, in Tahlequah, now Northeastern Oklahoma State University.

Her first counseling job was in Sapulpa, Oklahoma, and Rebecca moved to the Tar Creek area in 1978, when she was in her late 20s, to work in the local school system. “I came the year before the creek turned bad,” recalls Rebecca, who is Cherokee and was hired with federal funding to be the Indian Counselor for the region’s many Native American students, a job she held for 25 years. “One of my students had been fishing the day before it happened. The next day all the fish were dead. It was a shock to see it ruined.”

And Tar Creek was an electric orange. The color comes from iron. When acid mine water surfaces and is exposed to oxygen in the air, that essentially rusts the iron in the water. The water stains everything it touches, from rocks in the streambed to tree trunks to bridge supports. They’re all orange. You didn’t need to test the water to know something was very wrong.

“Tar Creek looks like an orange ribbon from the air,” Rebecca says.

Rebecca initially became an advocate for her creek for the sake of her students. “In the early 1990s, I sponsored the Indian Club, which started doing service-learning projects,” she says. “I got the kids involved and they took on Tar Creek.” Cleanups were out of the question: anything her students touched would poison them.

But they could and did raise awareness with events like “Toxic Tours” of the creek, conducted by bicycle, as well as mock fishing tournaments, which highlighted the fact that people could no longer fish in Tar Creek. In recognition of these exceptional educational initiatives, the Corporation for National and Community Service honored Rebecca with its Learn and Serve Spirit of Service award.

In the meantime, Rebecca invited Earl Hatley to visit so her students could learn more about Tar Creek’s woes. Also of Cherokee ancestry, Earl was a community organizer who had worked at all of Oklahoma’s other Superfund sites. She had met him at environmental events; they became sweethearts, and he moved to the Tar Creek area in 1997 to be with her. They ultimately decided to try to raise awareness about the creek, focusing on adults, at community meetings. “The kids were doing their share, but adults could do more,” Rebecca says.

One of these things was to attend meetings with officials from government agencies charged with cleaning up the Tar Creek Superfund site. At a 1997 meeting, George Mayer took the assembled officials to task. Mayer owned the land where the toxic mine water had first emerged nearly 20 years earlier and was still pouring out. “George said, ‘You promised to plug the boreholes in 1979 – who is the lead agency on this?’” Earl, who became Grand Riverkeeper in 2003, recalls, adding that Mayer got no answer. The next day, Rebecca knocked on Mayer’s door. “I told him, ‘We’ll be the lead agency,’” she says.

Rebecca made good on her promise. In 1997 she and Earl co-founded a nonprofit group dedicated to environmental issues in northeast Oklahoma. Fittingly, they called it the LEAD Agency and decided the acronym stood for “Local Environmental Action Demanded.” “We’re the ones leading the way for environmental justice,” Rebecca says. “Tar Creek is very expensive to clean up, and this is a small, poor community with very little political clout.”

LEAD Agency initiatives have included ramping up the Toxic Tours, which are now taken by bus; Rebecca’s weekly newspaper column to keep local people in the loop on Tar Creek; and establishing the Tar Creek Environmental Conference. Free to residents of Ottawa County, the location of the Tar Creek Superfund site, the conference includes presentations from agency and tribal program managers working at the site as well as researchers and health experts. “It’s all about keeping attention on Tar Creek,” Rebecca says.

The conferences also led to Rebecca becoming, after many years of advocacy, the official Tar Creekkeeper in 2016. Waterkeeper Alliance Executive Director Marc Yaggi had been the keynote speaker, and encouraged her to apply.

“I felt that being part of Waterkeeper Alliance would give us an even stronger voice,” she says.

The Alliance recognized Rebecca and Earl individually



"TAR CREEK IS VERY EXPENSIVE TO CLEAN UP, AND THIS IS A SMALL, POOR COMMUNITY WITH VERY LITTLE POLITICAL CLOUT."

for their outstanding work at its annual conference in 2018. Each of them was honored as a first recipient of the Terry Backer award, named for legendary Long Island Soundkeeper Terry Backer, who was one of the founders of the Waterkeeper movement.

Last year marked the 20th Annual Tar Creek Environmental Conference, and speakers included Scott Thompson, executive director of the Oklahoma Department of Environmental Quality; Jim Reese, Oklahoma Secretary of Agriculture, Food and Forestry; Charles Lee, senior policy advisor for Environmental Justice at the EPA; and Daniel E. Estrin, Waterkeeper Alliance's general counsel and advocacy director.

Rebecca gives her all to being Tar Creekkeeper. Earl describes her as a "hummingbird" who "has two speeds – superfast and stop. Stop is when she lays her head down to sleep, otherwise she's go-go-go. You can't keep up with her."

A combination of dedication, optimism, and kindness helps

Rebecca keep people focused on the needs of her creek. "There's a warmth to her," Earl says. "She's the happiest person I know."

Earl credits Rebecca with helping the community fully understand the impact of the mines' toxic legacy. When he and Rebecca founded the LEAD Agency, "local people did not understand that Tar Creek was a problem," Earl says.

The Superfund site where tainted water pours into the creek is in a rural area north of the region's towns, where people generally have little reason to go. And most of the creek is flanked by thick riparian vegetation, which conceals the damage.

In fact, the impact of heavy metals in the water goes far beyond the creek. "What goes down my creek hits other tribal regions," Rebecca says. Tar Creek flows into the Neosho River, which in turn flows into the Grand River. The latter was dammed to create a lake for drinking water. "The lake carries the burden of Tar Creek," Earl, says. "The sediment has toxic metals."



Now, people in Ottawa County recognize that Tar Creek is still in deep trouble. “Rebecca has brought a lot of awareness to Tar Creek – it’s a huge turnaround,” Earl says. “They understand that it’s a problem and they want it fixed.”

Karen Fields, a Miami tribal member who played in Tar Creek as a child before the water went bad, is one of those people. “I think the local concern all started with Rebecca,” Fields says. “Nobody knew it was a hazard.” Fields met Rebecca in the late 1970s, when Rebecca was her children’s counselor, and decades later Fields worked as a research assistant on a Harvard-led study of heavy-metal exposure in local children.

“Rebecca really cares so deeply about the community, the environment, and our tribes,” she says. “She still gets a gleam in her eye when she thinks there’s more she can do to help – she’s shaped many lives.”

Government officials have designated Tar Creek as “irreversibly damaged” but Rebecca doesn’t believe that. Neither does Robert Nairn, a University of Oklahoma professor who specializes in environmental engineering. Over the last decade, Nairn has run a pilot project to see if he could treat the toxic mine water on George Mayer’s ranch. The treatment involves a series of ponds that use natural processes to rid the polluted water of heavy metals. The water starts out orange in the first pond, and ends up blue in the last one. “After treatment,” says Nairn, “the water meets stream water-quality standards.”

Rebecca was key to getting his project off the ground. “Local support is critical and she facilitates meeting local landowners,” Nairn says. “Then we can sit down with each other, have coffee, and talk about what we’re trying to do.”

Mayer Ranch is only one of several places where contaminants pour into Tar Creek. Nicholas Shepherd, who is a PhD student with Nairn, is working to extend Nairn’s technique to the part of the Superfund site where toxic mine water pours out most profusely. Shepherd, who grew up in the area and is also of Cherokee ancestry, began devising ways to clean up the creek as a student. Rebecca invited him to speak at a Tar Creek conference when he was in high school, and Nairn was in the audience. “Rebecca brings people together,” Shepherd says.

Shepherd is optimistic that his project will work but, he adds, toxic mine water is not the only source of heavy metals in Tar Creek. The discarded mine tailings, or chat, are also a major source. “Contaminated water pours out from chat piles – it will pour out for weeks after a rain,” Rebecca says. An estimated 40 million tons of chat looms over the Tar Creek Superfund Site.

“What they need to do is put a waste-water-treatment plant here,” Rebecca says. “We keep reminding the EPA that we want it to be better.”


In March 2019, the EPA released a five-year plan for the Tar Creek Superfund site “to improve cleanup progress.” The agency also committed more than \$16 million a year for the duration of the plan toward the cleanup effort.

Rebecca envisions a future where local people enjoy Tar Creek the way they did when she first arrived. “We want swimmable, fishable, drinkable water,” she says. “I’m still working for the day when we can say, ‘Yes, meet me at the creek.’” **W**

Robin Meadows is a science journalist in the San Francisco Bay Area. She is the water reporter for the Bay Area Monitor, and her work has also appeared in Audubon, Conservation, High Country News, Water Deeply and others.

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GOVERNMENT OFFICIALS HAVE DESIGNATED TAR CREEK AS “IRREVERSIBLY DAMAGED” BUT REBECCA, TOP LEFT, DOESN’T BELIEVE THAT. NEITHER DOES ROBERT NAIRN, A UNIVERSITY OF OKLAHOMA PROFESSOR WHO SPECIALIZES IN ENVIRONMENTAL ENGINEERING. NAIRN HAS DEVELOPED A PROCESS TO TREAT THE TOXIC MINE WATER. “THE WATER STARTS OUT ORANGE IN THE FIRST POND, AND ENDS UP BLUE IN THE LAST ONE,” SAYS NAIRN.

A portrait of Liliana Guerrero, a woman with long dark hair, wearing a tan vest over a dark blue shirt. She is standing in a mangrove forest with many tree trunks and roots visible in the background. The vest has a logo on the left chest that reads "Fundación Coordinadora de Ecologistas Marinos y Costeros Bocas de Ceniza WATERKEEPER".

"Environmental law is my passion. What motivates me is to help ensure that environmental rules and regulations benefit everyone and are observed, rather than simply being dead letters on a sheet of paper."

LILIANA GUERRERO

BOCAS DE CENIZA WATERKEEPER



HER WAY OF LIFE

COLOMBIA'S MAGNIFICENT MAGDALENA RIVER HAS
FOUND ITS FIERCEST ADVOCATE AND DEFENDER IN
LILIANA GUERRERO.

BY ANDRES BERMUDEZ

PHOTOS BY ©STEPHEN FERRY, COURTESY OF CULTURE TRIP

Liliana Guerrero is in a hurry as she navigates the busy streets of Barranquilla, Colombia, in her gray Renault. In fact, she always seems to be in a rush, accompanied by an ever-present smile and an unflappable work ethic.

She is on her way to a hearing on a water-pollution case at the city's environmental authority, where she is often called on for her legal expertise in environmental issues. The defendants are being prosecuted for running several informal carwash businesses along the Magdalena River that included cleaning gasoline tanker trucks and emptying the remaining petrol into the river. Liliana is pleased that the authorities are prosecuting the case but she laments that it is still "too rare an occasion" and that the enforcement of environmental regulations in the city is still far too lax.

For the past eight years, Liliana has devoted her life to this waterway that snakes along 1,540 kilometers from the snow-capped Andean peaks in southwestern Colombia until it reaches the warm Caribbean Sea at Barranquilla, her native city. It is an industrious port city and the business capital of Colombia's Caribbean region. It is also home to the Barranquilla Carnival, second only to Rio de Janeiro's in size and energy, and the hometown of celebrated songwriter and pop star Shakira. Not surprisingly, the city's residents, called barranquilleros, have a reputation for being both hard working and fun loving. Liliana Guerrero is no exception. She can be lighthearted but there is also a no-nonsense aspect to her, putting you on notice that once she starts something, she is deadly earnest about finishing it.

A LEGAL RIVER GUARDIAN

As a lawyer, Liliana is proud of her country's strong framework of environmental laws, but she is frustrated by the noticeably weaker track record in effective enforcement and compliance. Liliana grew up in a family of attorneys. But whereas her father, two brothers and four sisters all chose more conventional careers in civil law, Liliana has devoted her entire professional life to environmental law. "Environmental law is my passion," she says. "What motivates me is to help ensure that environmental rules and regulations benefit everyone and are observed, rather than simply being dead letters on a sheet of paper." After earning her law degree at the University of Cartagena, she practiced law there and worked as an administrator and taught at another law school in that city.

She met Elizabeth Ramirez when they were both teaching at the law school. Ramirez was, by then, also the Cartagena Baykeeper, and she introduced Liliana to the Waterkeeper movement. "When I learned of Waterkeeper Alliance from Elizabeth's work," Liliana says, "I loved that it was a network connecting people who share common ideals about safekeeping water and everyone's right to clean water. Elizabeth showed me it was possible to do this in Colombia, combining it with community-based work helping her city's socially vulnerable population."

Inspired by Elizabeth, Liliana decided to return to her native Barranquilla and to become the guardian of her beloved Magdalena River by establishing an environmental NGO. Liliana's family has lived in Barranquilla for at



"LEGAL EXPERTS MAY CLAIM THAT COLOMBIA HAS A 'GREEN' CONSTITUTION THAT ENSURES THE PEOPLE'S RIGHT TO A HEALTHY ENVIRONMENT AND CLEAN DRINKING WATER," LILIANA SAYS. "BUT THE GOVERNMENT'S COMMITMENT TO THIS ONCE-PROMISING LEGISLATION REMAINS LITTLE MORE THAN POLITICAL ORATORY DIVORCED FROM EFFECTIVE ENFORCEMENT."

least five generations (that is as far back as the records go), and she has a deep, almost palpable, love for the place.

The Magdalena River has been called Colombia's beating heart. Up until the 19th century, it was the main point of entry to the Andes Mountains where two-thirds of Colombians live. It has also been a mainstay of Colombian popular culture; it is a presence in the tale of impossible love between Florentino Ariza and Fermina Daza in Gabriel Garcia Marquez's celebrated novel "Love in the Time of Cholera," as it is many other popular stories, including a favorite children's song about an iguana drinking coffee on the riverbank.

However, Barranquilla ironically grew with its back to the Magdalena, a situation it is now trying to reverse by demolishing abandoned factories and building a one-mile-long promenade. Assisted by a strong conviction that legal analysis and strategic litigation can be instrumental in improving the environmental conditions of her city, Liliana founded Bocas de Ceniza Waterkeeper in 2011, naming it for the area where the Magdalena River empties into the Caribbean Sea, dubbed "ash mouth" since the 15th century because of the ashen color of its water.

"Legal experts may claim that Colombia has a 'green' constitution that ensures the people's right to a healthy environment and clean drinking water," Liliana says. "But the government's commitment to this once-promising ecological legislation remains little more than political oratory divorced from effective enforcement."

Emergencies are everything but rare on Colombia's most important river, proving Liliana's point. In August 2018, a barge carrying 200 gallons of diesel capsized and remained submerged for 23 days. The accident happened right next to the city aqueduct's main supply point, forcing a half-day water shutdown for most of Barranquilla's 1.2 million inhabitants. A week later, an overturned tanker truck poured 10,000 gallons of petrol into the river's estuary, a relatively well-preserved patch of mangroves protected under the name of Salamanca Island National Park.

"There's always a public outcry and some official reaction on the day of a serious spill and maybe for one more day," says Liliana, a specialist in civil liability and state liability whose self-proclaimed favorite pastime is finding loopholes in environmental legislation and challenging them. "Then authorities begin passing the buck from one to another instead of responding quickly to the emergency. That's our daily routine: we never allot any resources to risk management and we don't plan for contingencies."

This has become a staple of Bocas de Ceniza Waterkeeper's work, including legal challenges against lax regulation of coal transport and coal-dust pollution. Liliana and a group of friends from a variety of professional backgrounds, from environmental law to chemical engineering, have even started an academic research group to support their legal work, which they called Nature et lex – nature and the law.

"There are many tools for water-resource management, but

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they're in disarray," Liliana says as she shuffles through the pages of regulations. "We have many political and environmental authorities that do not enforce them properly. We are firmly convinced that the only way to produce permanent behavioral change is through laws that are clear in their intent and properly enforced."

This is why a group of legal and environmental NGOs from around the country came together at the end of last year to seek more effective avenues of legal protection for the country's rivers. Inspired by the U.S. Clean Water Act and its Wild and Scenic Rivers Act of 1968, this group of lawyers and scientists – including International Rivers, and a group of biologists from Atlantico University – are in the process of drafting a bill that seeks to ensure many of Colombia's rivers are protected from such major threats as domestic and industrial pollution, gold and coal mining, dams and illegal diversions and preserved in a free-flowing condition for future generations.

This is a critical issue in Colombia. From the Andes to the Colombian Amazon, the country is one of the world's most biologically diverse and home to one of every 10 of the world's species of flora and fauna, but it also ranks second as a biodiversity "hotspot," i.e. a place that is both biologically rich – and deeply threatened.

Safeguarding the country's rivers is not only crucial to maintaining its natural wealth, but also to providing safe and clean drinking water to its entire population. Liliana knows that for Barranquilla that means taking care of the Magdalena.

"We all have the same interest in protecting Colombia's water resources," she says. "We're pushing for more citizen participation in this process because we want to be stronger actors in the design of public policy."

FISHING FOR TRASH

On a warm Saturday morning in late October, donning a vest with Bocas de Ceniza Waterkeeper's logo depicting a river manatee, despite the sweltering sun, Liliana clambers down a ledge and reaches for a green plastic bottle tangled in a riverbank shrub.

This soda bottle is one of thousands of items of rubbish carried by the river to the open sea. Even though litigation is Bocas de Ceniza's priority, they have two other lines of work: environmental education and monitoring water quality. Today Guerrero is doing a bit of both.

In fact, Liliana just crafted an innovative agreement. Sitting to her right is Jesus Gonzalez, head of an association of 70 traditional fishermen who eke out a living from the diminishing schools of fish in the delta. To her left is Sidid Leones, a lively enterprising woman who created a recycling group a decade ago and helped turn it into a thriving business of 120 persons. Behind them is Bocas de Ceniza, the delta where the Magdalena and the Caribbean meet.

This unlikely trio is working together to try to

solve some of the pollution problems plaguing the river and devastating the surrounding legendary coastal mangrove stands in the Mallorquin marshes, in an example of coalition building for conservation of a precious resource.

The agreement is a win-win for everyone. The fishermen, who live in makeshift huts on the levee, are now collecting the trash piled on this narrow strip of land. Liliana is paying the railway cart operators to transport it every fortnight to the city and is also collecting data on the amount of trash that is being carried down the Magdalena to the Caribbean Sea. And the Universal Recyclers Association is taking it to a waste disposal plant and paying the fishermen for the plastic, even though most garbage processors consider it too dirty to be worthwhile.

"It isn't profitable, so most people usually don't receive it," Sidid says. "But this is about more than that: these are our surroundings and the ecosystem in which we live. You cannot leave everything to government."

In their first two weeks working together, they collected nearly 800 pounds of trash. With this system they think they can solve the local government's abdication of responsibility that has allowed trash to fester at the mouth of the Magdalena River. Even though the levee is only separated from the city by a 10-minute car ride, the city administration has refused to accept responsibility for anti-pollution efforts because of the costs. Also, it is a difficult place to reach and consequently has, for the most part, eluded widespread public attention save for a small group of environmentalists, of which Liliana is very much one of the most vocal.


It isn't the only public health issue in Bocas de Ceniza. None of the households on this delta have access to clean drinking water, and must resort to chlorine tablets to purify the dark liquid from the river.

Some things have improved though. "We no longer see as many as three or four bodies floating per day," a pensive Jesus says, a reflection of how much things have changed in Colombia over the past two decades and especially since the landmark 2016 peace agreement between the government and the Marxist FARC rebels that put an end to 50 years of violence.

In the end, Liliana believes that positive change will come about only if there are both governmental and behavioral transformations. "Creating a culture around water is a fundamental part of designing a comprehensive management of it," Liliana says. Despite the levels of water pollution, Bocas de Ceniza is still an awe-inspiring delta, with pelicans and cormorants diving from the skies to capture fish and Barranquilla's skyline glimmering in the horizon.

"Being a Waterkeeper isn't a job," Liliana says, "it's a way of life." **W**

Andres Bermudez is a Colombian journalist specializing in environmental, rural and peace-related issues.

A man with a shaved head, wearing a denim jacket and dark pants, stands in a field of tall, golden-brown grass. He is looking down and to his right. In the background, a dark beach leads to the ocean under a clear blue sky. Two thin white lines originate from the top left and point towards the quote.

"I always loved the beauty of this place. I thought that this was a good place to live, have children, and raise a family."

RODRIGO DE LA O

MAULE ITATA COASTKEEPER



MISSIONARY FOR CHILE'S WILD CENTRAL COAST

OVERSIZED COFFINS, MASSIVE RALLIES, BIG WINS.

BY ROCÍO MUÑOZ

PHOTOS BY @TAMARA MERINO, COURTESY OF CULTURE TRIP

At 3:34 a.m. on Feb. 27, 2010, a magnitude-8.8 earthquake struck Chile. The quake was so powerful that, according to NASA, it shifted the earth's axis and shortened the day by more than a microsecond. Afterward, Global Positioning System sensors in Chile and neighboring countries recorded subtle shifts in the locations of cities, including Concepción, Chile and Buenos Aires. The tsunami that followed pummeled the Chilean coast with waves as high as 50 feet. The earthquake and tsunami killed 500 people and damaged nearly 400,000 homes.

It struck the heart of Maule Itata Coastkeeper Rodrigo de La O's territory, and one of those thousands of destroyed homes was his grandmother's, which he had visited every summer as a child. Fortunately, she was unhurt.

Rodrigo was out of the country when the quake hit, but within three days he had flown back on a flight the Colombian government had chartered, full of Chileans returning to the country. They couldn't land at a commercial airport, so they landed at a Chilean Air Force base. Rodrigo had gathered relief donations from private sources, including tents, sleeping bags, and thousands of charcoal and ceramic water-filtration systems. The government had

declared martial law; soldiers patrolled the streets. Rodrigo and his team initially worked hand in hand with the local government; within days Rodrigo was running emergency relief services out of his house; among other things, he taught scores of marines and sailors how to assemble the filtration systems.

In the weeks that followed, Joshua Berry, the environmental director for a nonprofit organization called "Save the Waves," worked alongside Rodrigo 18 hours a day. The two traveled along the coast and acted as facilitators and translators for a team of medical first-responders who had flown in from California.

"We went through a war together," Berry says.

Firefighters, paramedics and a doctor parked their Jeeps and set up tents in Rodrigo's yard. Two weeks after the quake, there were seven tents in his yard and a small village of people coming in and out of his house to use his bathroom and kitchen.

"True to the Spanish saying, 'mi casa es su casa,' you could come in any hour and ask for anything," he recalls. "He was just this pillar of support. He threw open his whole life for us to come in and set up what was essentially this military operation. And he stayed calm that

“THE FIGHT BECAME RODRIGO’S FULL-TIME JOB. HE MET JOSHUA BERRY FROM SAVE THE WAVES, WHO, ALONG WITH MEMBERS OF THE CHILEAN ENVIRONMENTAL GROUP FISCALIA DEL MEDIO AMBIENTE ASKED HIM IF HE KNEW ANYONE WHO WANTED TO BE A WATERKEEPER. RODRIGO ANSWERED, ‘ME! I WANT TO BE A WATERKEEPER. HERE I AM.’”

RIGHT, RODRIGO IN THE MARISCADERO RIVER, WHERE, OPPOSITE PAGE, HE TOOK WATER SAMPLES TO TEST FOR POLLUTANTS DOWNSTREAM FROM A SEWAGE-TREATMENT PLANT.



whole time. That’s just the way he is. He’s always cognizant of the work at hand and keeping that work going.”

ENVIRONMENTAL MISSIONARY

Rodrigo is soft-spoken and self-effacing but beneath that calm exterior you can also sense a missionary’s zeal for the environment, and a relentless commitment to spreading the gospel of clean water to remote villages along his 70-mile coastal watershed in central Chile. Sergio Moncada, Waterkeeper Alliance’s organizer for Latin America, says he’s an idealist who quietly does work of critical importance.

“Chile and the world are in critical need of more Rodrigos,” says Moncada.

Today’s destination is a modest cabin that houses the fishermen’s union in the village of Cardonal, where he’s leading a workshop about taking care of the coast and

the nearby Chovellén River. Rodrigo’s four-wheel drive vehicle and the T-shirts that are his uniform are adorned with environmental slogans. Today’s shirt reads, “Clean coal is a dirty lie.”

At the meeting about 20 people, almost all women, listen, raptly. The group includes the mayor of the nearby hamlet of Pelluhue, María de la Luz Reyes. Rodrigo begins his presentation by showing a photo of a group of people washing cars with detergent beside the Chovellén River. A woman exclaims, “That water goes straight to the oyster farms!” Another photo depicts damage done by backhoes illegally removing sand and rock from the river to be used in construction. Jaws drop. This is less than one mile away from their homes.

Rodrigo answers questions and passes out brochures explaining how to file a report of an environmental violation with governmental regulators, and how to

contact him. He finishes his presentation with a bang. The local government, he reports, is considering a \$60 million project to build a shelter for the artisanal fishermen’s boats in nearby Curanipe, public money he feels would be better spent on replenishing fishing stocks.

Rodrigo wants to stop the planned project. Based on his history, he just might.

DAVID VS. GOLIATH

The Chilean power company AES Gener submitted plans in 2007 to build a \$1.3 billion 750-megawatt coal-fired power plant 20 miles south of the seaside city of Constitución in the Maule region. The Los Robles plant would be constructed on a fault line, and Rodrigo was having none of it.

A native of Santiago, Chile’s capital, where he worked as a graphic designer and in advertising, Rodrigo and his wife moved



to the Maule region in 2004, drawn by memories of summers at his grandmother's house in nearby Curanipe. He and his wife came here with a food truck to sell sandwiches. Then he worked as an artisanal fisherman. Later, he set up his own design-and-advertising office.

"I always loved the beauty of this place," he says. "I thought that this was a good place to live, have children, and raise a family."

When he heard about the plans for a power plant, his first thought was, "I had worked too hard to build a life here. I was not going to allow it to be destroyed by this monstrous project."

He began to meet informally with other residents of the area in groups of about eight or 10. He remembers that, in the early days, "people felt hopeless. They said, 'what could we possibly do against the power of this giant corporation?' I said, 'No. There is everything to be done.'"

In 2008 he began to hold meetings with other local activists, who, like him, were outraged that the project had moved along without the participation of neighboring communities. They formed a team to put together an action plan, and built a coalition of concerned citizens, local businesses and politicians, and labor groups, and named it *Acción Ciudadana Pro Maule Costero* (Citizen Action for Coastal Maule). They started a blog that chronicled the successes and setbacks of grassroots efforts to fight the plant; they organized a 300-person march through the streets of the Talca, the region's capital, a 400-car caravan through major roadways, and a 1,000-person march through Constitución, the region's largest city. They gathered 12,000 signatures on a petition to stop the project.

The movement won multi-party support from key members of the national legislature; all four senators and 10 representatives from the Maule region agreed to question the regional environmental commission that had given the green light to Los Robles.

The fight became Rodrigo's full-time job. He met Joshua Berry from Save the Waves, who, along with members of the Chilean environmental group *Fiscalía Del Medio Ambiente* asked him if he knew anyone who wanted to be a Waterkeeper. Rodrigo answered,

"Me! I want to be a Waterkeeper. Here I am." And in 2009, he became the first Waterkeeper in Chile.

SOMETIMES YOU WIN

Rodrigo brought all his skills as a graphic designer to the fight against the plant.

"They all got together and built this massive coffin on the beach, a 100-foot-long coffin, representing the death of this coastline if this power plant were to be built," Berry recalls. "It ended up being the destination for people to go to protests."

The activists built another prop coffin, and attached a pointed message to the president of Chile: "Ms. President: It's up to you to decide who gets buried." When a seven-member team of legislators visited the proposed site, *Acción Ciudadana* photographed them next to the coffin.

The group's success continued: In 2011 the government released a report revealing irregularities in the approval process. In 2014 *Acción Ciudadana* joined 30 other groups, including advocates for indigenous people, the disabled, women, and the environment, that converged in a 15,500-strong march in the streets of Santiago. The British Broadcasting Corporation called the march "a reminder of the clout that social movements have acquired in the country over the past few years, and of their willingness to scrutinize the government."

On January 26, 2015, the permit authorizing the construction of Los Robles expired, effectively cancelling the project. The newsletter *EndCoal*, published by an international consortium of environmental groups, wrote:

In a symbolic act, the Citizens Action for the Defense of the Maule Coast held a vigil to celebrate the death of the Los Robles coal plant after their epic seven-year struggle. They held a big bonfire that was fueled by rubble remaining from the massive 2010 earthquake



and tsunami whose epicenter was located in Maule. Rodrigo de la O, convener of the Maule Itata Coastkeeper and a member of the Waterkeeper Alliance, said, “For us, it’s a special day, hard to believe, but an important, historic day without doubt. The community was organized, was active and was emphatic in defining their own development path. Our victory is due to the importance of a more empowered society that demands more space to advocate for their own interests and for the preservation of our natural heritage for future generations.”

“We always knew it was a long-term fight,” Rodrigo says now – David against Goliath – that we would win by refusing to give up and by wearing down the opposition, and that’s how it was.”

SALMON FARMS, THE NEW THREAT

Rodrigo’s next fight: industrial salmon farming.

Maule is located 500 miles from the salmon industry’s axis along the country’s southern coast, and Rodrigo and his allies never imagined that they too would be in the crosshairs of the industry’s powerful lobby. But in late 2015, they learned that the company Inversiones Pelicano, S.A. had filed environmental-impact declarations for a proposed \$28.6 million salmon aquaculture project consisting of 11 sites along a scenic 30-mile stretch of the Maule

coast between the comunas (counties) of Cobquecura, Trehuaco, and Coelemu, an area famed for surfing and ecotourism, and home to sea lions and many other charismatic species, such as the Chilean dolphin (tonina) and 60-plus feet long sei whales.

Eight of those projects would be built a mile offshore from Cobquecura and would annually produce more than 3,000 tons of salmon. The 11 sites would cover approximately 454 acres of water and include cages as deep as 200 feet.

The news of Inversiones Pelicano’s looming arrival alarmed Rodrigo and many of the locals for good reason. Salmon are not indigenous to South America, and 25 years ago, Chile had no salmon industry to speak of.

As farming of this species grew, it brought with it a host of damaging effects to coastal communities in the south. With tens of millions of salmon confined in overcrowded pens, their excess food and feces falling to the sea floor, and dozens of processing plants dumping salmon entrails directly into the ocean, it was only a matter of time before disaster struck. Soon dead zones formed in the waters around the pens. And the industry’s overuse of antibiotics – not to treat disease but to prevent it – increased the risk of antibiotic-resistant bacteria infecting local communities and salmon consumers.

Hoping to avoid the fate of communities in southern Chile, and as he did with the coal plant, Rodrigo was one of the leaders



“RODRIGO LOOKS AT THE HORIZON OF THE PACIFIC OCEAN, BREATHES DEEP AND SAYS THAT IN 10 YEARS, HE WOULD LIKE PELLUHUE TO BE A SUSTAINABLE TOURIST DESTINATION, A MARINE-PROTECTED AREA, AND A WORLD-CLASS SURF-RESERVE. ‘MAYBE I’M A FOOL, BUT I WILL CONTINUE IN THIS.’ ”

in building a coalition of environmental organizations, grassroots groups, and local residents, this one called “We Are All Cobquecura” to stop the salmon farms.

“We began an ambitious campaign so that the wider public would come to understand and value what we have,” he says, “understanding threats, risks, impacts, the possible effects of climate change.”

The group managed to stop the operations that had been proposed by Inversiones Pelicano, but the threat still stands.

“The Norwegian companies say, ‘We are going to plant salmon farms in Chile because the laws are convenient, permissive,’” Rodrigo says. “But there cannot be private investments of such magnitude by private interests that pose such dangers to public goods.”

BEING A COASTKEEPER

No vehicles are allowed on Chilean beaches, but local politicians are loathe to make enemies of fishermen, who drive on and off the beach in large vans. Rodrigo watches them, with a look in his eyes that says he’s ready to pick his next battle.

In 20 years the area has changed dramatically. Before there was only a dirt road that connected Curanipe with the nearest city. His grandmother was originally from Cauquenes, which is 27 miles away. When Rodrigo was a child, it took two days to get there from Santiago.

“It was an adventure. There was only one phone in the whole town. Now the population has increased, and a month ago a bank opened. I would never have thought of such a thing.”

Sitting on the coastal rocks, he confesses that he is not always comfortable with the name “Coastkeeper” because it make it sound like it is only one person’s job.


“The coastkeepers are also the neighbors, the organizations, the fishermen,” he says. “The whole community has to be the protagonist. There has to be real empowerment.”

As he thinks about nearby industrial towns he’s visited with Waterkeeper staff, where pollution is widespread, he’s worried industrial pollution and agricultural chemical contamination might become so commonplace that people ignore them. “I am dismayed to think that my children may be exposed to drinking or breathing heavy metals. It is not possible for children to sacrifice for the profits of others.”

Rodrigo looks at the horizon of the Pacific Ocean, breathes deep and says that in 10 years, he would like Pelluhue to be a sustainable tourist destination, a marine-protected area, and a world-class surf-reserve.

“Maybe I’m a fool,” he says. “But I will continue in this.” **W**

Rocío Muñoz is a journalist based in Santiago, Chile. She writes about social and environmental issues and also hosts a radio show.

A woman with dark, wavy hair and large hoop earrings stands on the deck of a boat. She is wearing a dark, sleeveless vest over a dark top. She is looking off to the side, towards the horizon. The background shows a body of water and a distant shoreline with a bridge under a sunset sky. The text is overlaid on the left side of the image.

"There's a special feeling of freedom in zipping across the bay in our patrol boat with the wind in my face, the smell of salt in the air, and breathtaking skylines all around us."

SEJAL CHOKSI-CHUGH

SAN FRANCISCO BAYKEEPER



THE DOC OF THE BAY

SEJAL CHOKSI-CHUGH IS LEADING THE FIGHT TO
RESTORE SAN FRANCISCO BAY TO HEALTH.

BY ROBIN MEADOWS

PHOTOS BY ©CHLOE AFTEL, COURTESY OF CULTURE TRIP

San Francisco Bay is part of the largest estuary on the west coast of the Americas, with headwaters that tumble from the Sierra Nevada Mountains, swell California's longest rivers, and then rush through the Golden Gate to join the Pacific Ocean. The bay is also the heart of a bustling metropolitan area and touches nine counties, unifying the region known as the San Francisco Bay Area and providing respite from the crush of day-to-day living.

Sejal Choksi-Chugh is the San Francisco Baykeeper, and there's no place she'd rather be than out on the water.

"There's a special feeling of freedom in zipping across the bay in our patrol boat with the wind in my face, the smell of salt in the air, and breathtaking skylines all around us," she says. "It always renews my spirit and helps me feel inspired for the work I do."

Sejal's work is greatly needed. More than 500 wildlife species, from salmon to seals to shorebirds, depend on the vast wilderness of the bay, and more than seven million people live around it in one of the nation's densest urban areas. The region is heavily industrialized: a wide range of facilities, including sewage-treatment plants, metal recyclers and oil refineries ring the bay and discharge their waste into its waters.

Sejal grew up in the suburbs of Atlanta, Georgia, the daughter of immigrants from India, who, like so many others, came in pursuit of the American dream. When she thinks back to the childhood influences that shaped her, two moments stand out. The first was during a family visit as a young child to her parents' homeland, where she was shocked to see poor children drinking dirty water from puddles in the street.

"It was my first awareness that pollution affected people directly," she recalls. "I couldn't wrap my seven-year-old mind around why these kids didn't have clean water to drink. But even then I felt the injustice."

Later, she witnessed pollution closer to her Georgia home. A cement plant beside a creek near her high school often covered the area in a thin film of dust by the end of the school day.

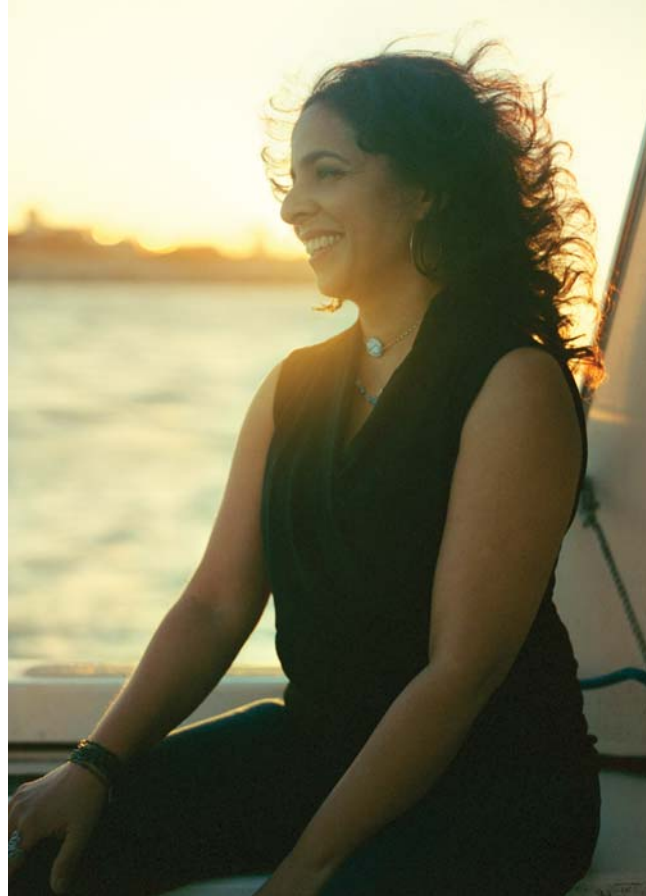
"The yellow dust coated everything from our cars to the surrounding school fields, and got into the creek," she remembers. "I recall feeling angry and asking my parents and teachers what could be done, and they said that's just the way it is. That was one of my first realizations of how powerful polluters could be."

As an undergraduate at Emory University in Atlanta, Sejal took an environmental-studies class and had what she calls "an 'aha' moment" that sparked her decision to go to law school. "The course opened my eyes to what a powerful instrument the law could be in stopping polluters and bringing them to account, and I wanted to see that change everywhere and be a part of making a difference."

She moved to the San Francisco Bay Area to attend the University of California, Berkeley, Law School. While there, she interned with several national environmental groups that had offices in the bay area. But Sejal felt like a small cog in these organizations and was dismayed at how long it sometimes took to get things done and how far away from the "action" she was. She started working at Baykeeper right out of law school, winning a competitive Equal Justice Works legal fellowship, and joined the staff full-time in 2004, after the fellowship ended.

"I was attracted to Baykeeper because it's

“ SEJAL ENVISIONS A TIME OF GREATER AWARENESS AND STEWARDSHIP OF THE BAY. ‘GOVERNMENT AGENCIES WOULD BETTER ENFORCE THE LAWS, COMPANIES WOULD STOP THEIR HARMFUL ACTIVITIES, AND RESIDENTS WOULD SHARE A SENSE OF RESPONSIBILITY FOR THE HEALTH OF THE BAY,’ SHE SAYS, IN FULL KNOWLEDGE THAT FOR HER AND BAYKEEPER THERE WILL BE MANY FIGHTS AHEAD BEFORE THAT VISION COMES TRUE. ”



a small, nimble organization that’s on the frontlines of defending the bay” she says. “And I was impressed by their legal and policy victories. They were stopping big polluters like Dow and Chevron and making a difference locally.”

Law school classmate Dave Owen, who is now a professor at Hastings College of the Law in San Francisco, highlights one quality that has made Sejal such a good fit with Baykeeper:

“Besides litigation, the job involves networking and fundraising, and Sejal is really personable and really good at making connections.”

Baykeeper’s success at holding big polluters accountable is equally strong. Sejal is particularly proud of Baykeeper’s success preventing sewage spills in the bay. Beginning in 2005, Baykeeper staff combed through the spill reports of municipal wastewater-treatment plants, which are required by law, and found that many cities in the bay area far exceeded U.S. Environmental Protection Agency standards for these incidents. The worst results were for the City of Richmond, which had over 100 sewage spills per 100 miles of sewer lines. The EPA’s standard is three spills per 100 miles.

Baykeeper focused on the top 10 polluting systems, and decreased the sewage spills from these cities by 75 percent.

“That’s millions of gallons less sewer water in the bay every year,” Sejal says. “Our track record is so strong because we have experts on staff who sit down with the cities and work out technically sound solutions.” She adds that this is the method behind all of Baykeeper’s litigation and points with pride to the fact that in about half of the cases the defendants actually express gratitude for helping them comply with the law. This approach taps another of Sejal’s talents.

“She’s tough and diplomatic at the same time,” says Peter Molnar, Baykeeper’s board chairman. “She can pivot from fighting to fixing the problem.”

Baykeeper has also gotten high marks for its work cleaning up mercury, which accumulates in fish and threatens local residents and fish-eating wildlife.

“The regional water board’s proposed plan was to let mercury flush out of the bay naturally over the next 120 years,” she says. “I said,

“That’s not a plan, that’s just running from their responsibilities.” So she led a push for a better plan: identifying, then ratcheting down on all sources of mercury, including stormwater, wastewater-treatment plants, and “tailings” from the region’s many former mercury mines. A revised mercury-cleanup plan, called a “Total Maximum Daily Load” (TMDL), was approved by the EPA for San Francisco Bay in 2008.

Andria Ventura, the California toxics-program manager of Clean Water Action, a national nonprofit group based in Washington, D.C., who collaborated with Sejal on the TMDL, calls it an “amazing victory,” and she credits Sejal with giving her the technical expertise to tackle subsequent TMDLs independently. “Sejal doesn’t just do great work at Baykeeper,” says Ventura. “She has influence beyond her own organization.”

Baykeeper also scored a major victory against the export of petroleum coke, which is produced at bay area refineries, and coal, which is brought into the bay area by train and truck from as far away as Utah. These dirty fuels are shipped overseas from a privately owned terminal in the Port of Richmond. In 2012, the Baykeeper team was patrolling the channel near the terminal while a container ship was being loaded, and they documented toxic coal and petcoke being spilled into the bay.

“It was just falling all over the place — on the dock, into the water,” she recalls.

After taking their evidence to the regional water board to no avail, Baykeeper sued the terminal. The ensuing fight lasted two years and the costs of the litigation nearly exhausted Baykeeper’s reserves. But Sejal’s resolve also rallied Baykeeper’s backers. Local funders learned about the budget stress and offered to provide one-time grants and no-interest loans to help Baykeeper see the litigation through to the end.

“We ended up not needing those kind offers, but the situation made our supporters realize how important it is that that Baykeeper be financially sustainable,” Sejal says. “They want us to be able to continue to fight big polluters, and that was the impetus behind our



"SEJAL DOESN'T JUST DO GREAT WORK AT BAYKEEPER," SAYS ANDRIA VENTURA, THE CALIFORNIA TOXICS-PROGRAM MANAGER OF CLEAN WATER ACTION, A NATIONAL NONPROFIT BASED IN WASHINGTON, D.C. "SHE HAS INFLUENCE BEYOND HER OWN ORGANIZATION."

board starting a legal fund. It's a separate reserve-fund that we now fundraise for to get us through tough cases."

The judge in the export-terminal case eventually ordered the parties to enter settlement negotiations. But the atmosphere was so hostile that the two sides were assigned to separate rooms in the courthouse, and negotiations dragged on for months. Finally, Sejal decided something bold had to be done to break the stalemate. She knew that the facility owner was worried about the costs of compliance, claiming that Baykeeper was seeking "blood" and wanted to put the company out of business.

"Our staff scientist was in the room and I asked him how much he thought it would cost for the facility to meet water-quality standards," Sejal says. "He literally did a back-of-the-envelope calculation. It turned out the cost to comply was going to be just shy of \$1 million." "So I went down the hall, knocked on their door while they were meeting with the judge, and said, 'I have a proposal that won't put you out of business.' There was a moment of silence and then they said, 'Come in and tell us more.'"

She proposed a cap on the dollar amount of the settlement and a provision that Baykeeper would set the terms of the mitigation. With the cap set at \$1 million, the facility was to be retrofitted to Baykeeper's specifications, with upgrades that included sealing the dock to keep the toxic materials from falling through the slats, switching to closed conveyor systems to load the coal and petcoke, installing barriers around the uncovered stockpiles, and spray-misting the piles to keep dust from blowing into the bay. This satisfied the terminal's owners


and operators, the case was settled within a few months, and the facility is no longer polluting the bay.

But Baykeeper is now engaged in another battle against coal, opposing a proposal for another export terminal in Oakland. It is also working to block the expansion of the five oil refineries around the bay, which are among the biggest polluters in the region. Another item on Sejal's long wish list for the future includes curtailing invasive species that hitchhike around the world in the ballast water of ships in such numbers that a new one is introduced to the bay every other week. Climate change is also a pressing concern, as rising sea levels could wash contaminants from more than a thousand polluted shoreline sites into the bay. And there is a statewide battle brewing that pits long-standing water diversions for industrial agriculture against the critical need to increase fresh water flows to the bay.

In spite of all the obstacles still to be faced, Sejal envisions a time of greater awareness and stewardship of the bay.

"Government agencies would better enforce the laws, companies would stop their harmful activities, and residents would share a sense of responsibility for the health of the bay," she says, in full knowledge that for her and Baykeeper there will be many fights ahead before that vision comes true. **W**

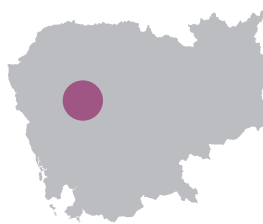
Robin Meadows is a science journalist in the San Francisco Bay Area. She is the water reporter for the Bay Area Monitor, and her work has also appeared in Audubon, Conservation, High Country News, Water Deeply and others.



Tonle Sap Lake, a vast inland sea that is commonly referred to as "the Great Lake," is Cambodia's beating heart. Senglong might be its soul.

SENGLONG YOUK

TONLE SAP LAKE WATERKEEPER



ENLIGHTENED, GREEN, AND FEARLESS

LONG A BUDDHIST MONK, NOW A WATERKEEPER, HE'S THE
CHAMPION OF MILLIONS OF CAMBODIA'S POOREST CITIZENS.

BY LAUREN EVANS

PHOTOS BY ©ERIKA PINEROS, COURTESY OF CULTURE TRIP

Cambodia is a country whose very origins are connected to water—specifically, the Tonle Sap Lake, along whose banks Khmer civilization sprang. The sprawling temple complex of Angkor Wat rose near its northern shore some 900 years ago, and its abundant biodiversity has long bewitched observers, such as Zhou Daguan, a 13th-century Chinese diplomat who described the Tonle Sap as being home to “giant soft-shell turtles,” prawns “a pound-and-a-half or more each,” and “crocodiles as big as boats [that] look exactly like dragons except they have no horns.”

He's far from the only documenter to be floored by the sheer size and abundance of life in Southeast Asia's largest freshwater lake, which has more than 300 fish species and was recognized as a UNESCO biosphere reserve in 1997. But Senglong Youk, the Tonle Sap Lake Waterkeeper, and the first Waterkeeper in Southeast Asia, does not get starry-eyed about it. He's too busy trying to save Tonle Sap's once-fecund waters from rampant destruction caused by overfishing, climate change and development, in particular, massive hydropower dam construction projects on the Mekong River and its tributaries, including the Sesan, Srepok and Sekong (3S) river basins, much of which is being funded by China.

The lake still yields 500,000 tons of fish annually and provides more than 75 percent of Cambodia's freshwater-fish catch, but, Youk says, “the people cannot really depend on fishing anymore. There are not as many fish, and the human population is continuing to grow, and now it's more competitive.”

Nonetheless, the Tonle Sap, a vast inland sea that is commonly referred to as “the Great Lake,” is known as Cambodia's beating heart. Senglong might be its soul.

Senglong was born to poor farmers in the northern province of Kampong Cham toward the end of Khmer Rouge leader Pol Pot's four-year reign of terror, during which three million Cambodians – 25 percent of the population – were systematically exterminated. Pol Pot's communist revolutionary government was contemptuous of intellectuals, such as Senglong's eldest brother, whom the regime seized and who never returned. When it was overthrown in 1979, all of the country's schools and universities were gone, along with nearly everyone who taught in them.

Pol Pot was also determined to entirely stamp out the country's Buddhist temples, but did not quite succeed, and after his fall they revived, once again a respected haven for intellectual thought and study. Senglong's parents were determined that he receive an education, and when he was eight years old they sent him to live in and study at a nearby temple.

“It was,” he said, “really the only chance for most poor Cambodian children to get an education.”

He may have begun his studies out of necessity, but he soon became enraptured by the teachings of the Buddha, and, an excellent student, learned Sanskrit, Pali and English. At age 14 he made the decision to become a monk, and spent 18 years in that calling. Buddhism's teachings are predicated on a concern for all living things, and one of its



IN HIS WORK AS A WATERKEEPER, SENGLONG HAS FOCUSED ON EMPOWERING COMMUNITY FISHERIES, MAKING SURE LOCALS KNOW THEIR RIGHTS, AND HELPING TO OPEN CHANNELS OF COMMUNICATION WITH GOVERNMENT AGENCIES.

basic tenets is that human beings live in harmony with their natural surroundings, something that resonated deeply with Senglong.

During Senglong's years as a monk, Cambodia's environment was quickly becoming imperiled. Timber was in high demand domestically and internationally, and loggers were eager to fell the country's magnificent forests in exchange for the substantial profits. Accelerated by government concessions that allowed local and international corporations to log in protected areas, Cambodia rapidly lost more than half of its forest cover and had one of the worst deforestation rates in the world. The expansive forests that once abutted Senglong's parents' farm receded at an alarming rate. Once he'd needed only to walk half a kilometer to reach the treeline. Now it was four kilometers or more.

"I started to be aware that someday all of the forest might be gone," he says. In Cambodia, as virtually everywhere else on earth, the fates of forests and water are deeply connected. During the wet season, the size of the Tonle Sap balloons from around 1,000 square miles to more than 6,000, inundating the surrounding forest, which becomes a crucial reproductive habitat for multiple species of fish, and is a haven for creatures such as phytoplankton and zooplankton. In the upper parts of the watershed, the forest slows water run-off and reduces erosion. Senglong understood that perserving one demanded preserving the other.

Senglong, along with the other monks at his temple, decided enough was enough, and in 1998 they formed the Buddhist Association for Environmental Development (BAED). Initially, their goal was simple: replant the trees that had been lost.

Cambodia is a poor country, and the waking hours of most rural farmers are spent trying to put food on the table. "Most villagers didn't really care about the environment," he says. "They cared about what they could put in their stomachs."

But now, in part because monks are highly respected in Cambodia, the group was able to mobilize members of the community. Seedlings were donated by the government's forestry department, and villagers not only showed up to help replant, but also offered aid from their minimal resources, be it a boat, a truck — or even food to share.

"We started with around 20 people," Senglong recalls. "Then it increased from 20 to 50."

When they invited the provincial governor to a replanting event, Senglong was amazed to find that 500 people showed up, ready to work.

BAED continued to expand its reach, and Youk continued his education. After finishing primary school in the town of Kampong Cham, he moved to Phnom Penh, Cambodia's capital city, to pursue his studies, ultimately earning a degree in business administration at Paññāsāstra University of Cambodia.

He also continued to work on his English, a skill that made him invaluable to BAED, and Senglong took on many of BAED's administrative duties, including the writing of reports and proposals, and communicating with the local people.

Youk's outward demeanor is deeply humble. But his reserved personality belies a powerful drive and sense of purpose. He was inspired particularly by a famous monk named Maha Ghosananda, who, in the wake of the Khmer Rouge, led peace marches across mine-riddled terrain, a powerful campaign that was instrumental in restoring the country's demolished spirit.

"I thought maybe, someday, I could have an impact like his."

Still, Senglong's ambition began to chafe against his service as a monk. He wanted to attend graduate school and to work internationally with NGOs. In 2005, he decided to leave the temple. "Disrobing the monkhood," he says, was the hardest choice he's ever made, but the only one his conscience would allow.

In fact, BAED began to flag without his gift for mobilizing the local populace, and in 2010, Senglong did return to help it. But by

“

YOUK'S OUTWARD DEMEANOR IS DEEPLY HUMBLE. BUT HIS RESERVED PERSONALITY BELIES A POWERFUL DRIVE AND SENSE OF PURPOSE. HE WAS INSPIRED PARTICULARLY BY A FAMOUS MONK NAMED MAHA GHOSANANDA, WHO, IN THE WAKE OF THE KHMER ROUGE, LED PEACE MARCHES ACROSS MINE-RIDDLED TERRAIN, A POWERFUL CAMPAIGN THAT WAS INSTRUMENTAL IN RESTORING THE COUNTRY'S DEMOLISHED SPIRIT. 'I THOUGHT MAYBE, SOMEDAY, I COULD HAVE AN IMPACT LIKE HIS.' ”

2013, he knew it was time to take on a new challenge: Not only did he want to continue to “upgrade himself,” as he puts it, but he also needed a salary in order to support his mother and siblings. “I was not a monk anymore,” he said. “I have to live, I have to survive.”

As the English-speaking member of BAED, Senglong regularly had attended the conferences and events of larger NGOs, including the Fisheries Action Coalition Team (FACT), a collection of Cambodian NGOs focused on empowering local fishing communities around the Tonle Sap, the Save the Mekong Coalition, a regional NGO network working on mega-dam development issues on the Mekong's mainstream, and Rivers Coalition in Cambodia, working on dam-development issues on major tributaries of the Mekong. When an opening for a program manager at FACT became available, Senglong took it. (He now serves as deputy executive director.) Soon after, he heard about Waterkeeper Alliance from a fellow advocate, and the idea of founding a Waterkeeper organization to protect the Tonle Sap immediately piqued his interest. He reasoned that as a member of the Alliance he would be able to connect with Waterkeepers in other parts of the world who were engaged in similar struggles, and acquire new tools and learn new approaches for his own work. In 2015 Senglong founded Tonle Sap Lake Waterkeeper, under the auspices of FACT.

In his work as a Waterkeeper, he has focused on empowering community fisheries, making sure locals know their rights, and helping to open channels of communication with government agencies. “This,” he says, “represents the best chance of protecting the lake against the threats of overfishing, pollution and other harmful practices.”

Despite the size of the task, Senglong's efforts have yielded results. Local stakeholders have started to take charge and “to declare their rights.” He has also helped forge relationships with the government. “In the past we were like the enemy,” he says. “We always fought, and we did not have a chance to sit together to identify the issues. But now we have a platform where we can discuss issues peacefully.” As the Tonle Sap Lake Waterkeeper, Senglong has helped orchestrate meetings between the government's fisheries administration and dozens of NGOs and community fisheries, as well as three annual national public forums with stakeholders covering issues like illegal fishing, land encroachment and the impact of climate change on fisheries resources.

His focus as the Tonle Sap Lake Waterkeeper, however, still

involves tackling several daunting, often dangerous challenges.

The old Khmer Rouge still casts an ominous shadow over Cambodia. Hun Sen, the country's prime minister since 1985, is a former Khmer Rouge battalion commander, and under his rule some of Cambodia's most prominent environmental activists have been murdered.

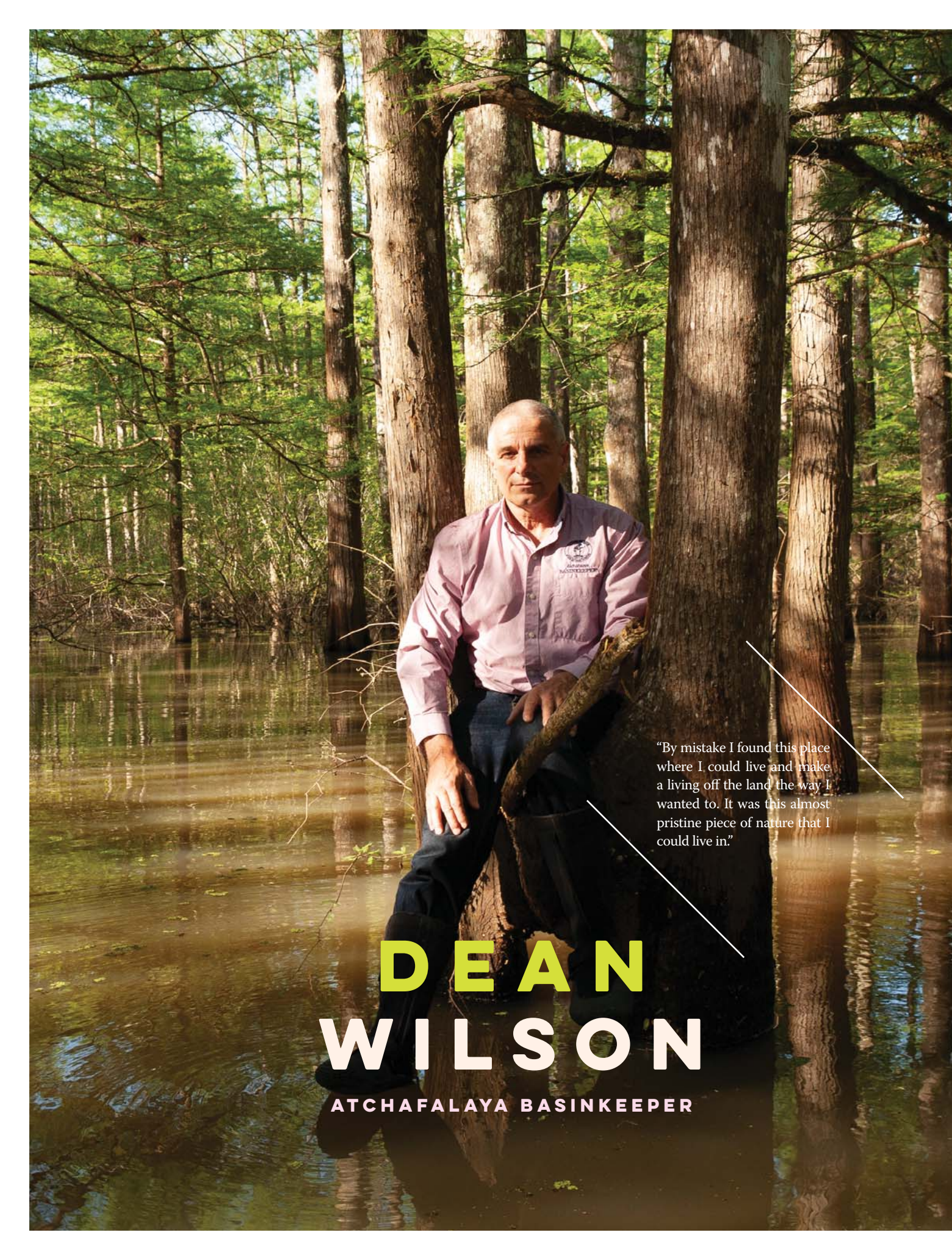
Senglong's work and that of other environmental NGOs hardly seems controversial on the surface – their day-to-day efforts involve empowering local stakeholders, assuring that they're aware of their rights, and educating the populace about alternate sources of income besides fishing. Yet, while Senglong has said that he has personally never been threatened outright, he knows that the government has kept its eyes on the work that he and other NGOs are doing, and that it regularly flexes its power against movements it doesn't like. He reports that, during elections in 2013, the regime accused FACT of supporting the country's main opposition party, which was ultimately dissolved by the Supreme Court.

The government's fisheries administration, however, has supported Senglong's work, and attempted to protect Senglong and his colleagues from further criticism by the regime. But major challenges persist. Illegal fishing remains widespread, and the proposed Chinese-backed hydropower dams are dire threats to Tonle Sap's struggling ecosystem. Flash storms, a relatively new phenomenon thought to be caused by climate change, stir up mud from the lake's bottom and suffocate fish. Thousands of hectares of flooded forest have been unwisely destroyed by wealthy commercial interests and replaced with rice-growing operations.

In the face of these major obstacles, why does Senglong keep at it? He may have left the temple long ago, but he answers like the monk that he was for almost half his life. He cares about the people who rely on the Tonle Sap for their livelihoods, feeling that if he doesn't, who will?

“The government has shown concern but has limited human and financial resources,” he says. “And there are even some government officials who seem to care more about their pockets. The people have no place else to turn. So I, myself, and also the other organizations, have to care about them. We are their last, best hope.”^W

Lauren Evans is a freelance writer who covers the environment, gender and the developing world. You can follow her on Twitter at @laurenfacevans.



"By mistake I found this place where I could live and make a living off the land the way I wanted to. It was this almost pristine piece of nature that I could live in."

DEAN WILSON

ATCHAFALAYA BASINKEEPER



LOUISIANA PURPOSE

ON HIS WAY TO THE AMAZON, DEAN WILSON STOPPED IN LOUISIANA'S ATCHAFALAYA BASIN. HE NEVER LEFT AND HAS DEVOTED HIS LIFE TO SAVING IT.

BY MICHAEL QUINN

PHOTOS BY ©ANDY LEVIN, COURTESY OF CULTURE TRIP

The Atchafalaya Basin is many things: natural floodplain for the Mississippi River, the most vast wetland of swamps and bayous in the United States, cultural home of Cajun Country, haven for almost half of North America's migratory waterfowl, home to a startling array of wildlife, and one of the last remaining bastions for cypress trees in the Western Hemisphere. But these days, this richly endowed basin is fighting for its life, and Dean Wilson, the Atchafalaya Basinkeeper, is leading the fight, as he has for almost two decades.

Water that is diverted from the Mississippi River into the basin by the large-scale earthen levee system built over decades by the Army Corps of Engineers is silt-and-sediment rich. Over the last half-century this silt and sediment have slowly accumulated in many of the basin's wetland ecosystems, threatening to eliminate them and the organisms living there. This sedimentation is rampant, but is not obvious to the untrained eye.

Additionally, decades of logging, and gas-and-oil-pipeline and canal construction, and continuous efforts to fill in wetlands further threaten the ecosystem.

Motoring through the canals, lakes and bayous of the basin in his flat-bottom aluminum skiff, Dean Wilson is able to describe the processes at work, and identify the profound transformations and destruction that have occurred.

The 1.4 million-acre Atchafalaya Basin is the largest expanse of bottomland hardwood forest and marsh in North America, and one of the largest in the world, and Dean Wilson insists it's bigger than that.

"There's inside the levees, and there's outside the levees," he says. "There's still a lot

of swamp outside the levees that we're trying to protect."

Dean Wilson founded Atchafalaya Basinkeeper in 2004, but his connection to the basin began long before that. He arrived in the area in 1984 at the age of 24. Son of a U.S. serviceman and his Spanish wife, he had spent most of his youth in the coastal city of San Sebastian, Spain, and after attending college he set his sights on the Amazon. "I wanted to experience the rainforest and live with some of the forest's tribal people," he says, "and to see if I could help in opposing its destruction." Realizing that a period of acclimation to a hot, humid, mosquito-rich environment was necessary before traveling to the rainforests of the Amazon, he moved first to the southern United States.

Dean had never heard of the Atchafalaya Basin, and first noticed it as a large area devoid of roads on a map of Louisiana. He decided to visit this apparent patch of wilderness, and there he met a local landowner who allowed him to camp on a piece of his land in the forest. For the next four months, equipped with a tent, a canoe, a longbow, a spear and some rudimentary fishing gear, Dean proceeded to live alone in this swampy terrain, hunting, fishing and exploring the intricate bayous, sloughs, and cypress forests he would eventually come to call home, and for which he would develop a devotion and passion that would define his personal and professional life.

"By mistake I found this place where I could live and make a living off the land the way I wanted to," he says. "It was this almost pristine piece of nature that I could live in. At least I thought so when I was young and first arrived."

He never did make it to the Amazon.

“

AT HEART, HE IS A NATURALIST, EXUDING A BOYISH FASCINATION WITH WILDLIFE, AND HE IS COMPLETELY AT HOME IMMERSSED IN THE SHADED, OBSCURE BAYOUS OF HIS BASIN. BUT HIS WORK HAS BECOME MORE AND MORE DESK-BOUND. DEDICATING HIS LIFE TO PROTECTING THE BASIN HAS MEANT NO TIME TO MAKE A LIVING IN THE BASIN, AND MORE TIME IN FRONT OF A COMPUTER SCREEN.”

The house where Dean has lived for the last 32 years is situated between two small ponds coated with duckweed, beside a dirt driveway in the forest. Inside, the house feels like a natural extension of the swamp. Segments of cypress wood and photos and paintings of the basin adorn almost every wall. It is decidedly dim and cozy, reminding you of the closeness and quietude of a cypress forest.

Shortly after arriving in the basin, Dean began to fish for crawfish, learning on the fly and using a single net. He gradually acquired additional gear, and for the next 16 years supported his family as a commercial fisherman. He eventually joined the Louisiana Crawfish Producer's Association West (LCPA West), an Atchafalaya Basin trade group with more than 600 members that advocates for the interests of fishermen and fisheries. Finding common ground between environmental conservation and commercial fishing, they are some of the foremost advocates of preserving and restoring the basin's natural waterways and traditional way of life.

Jody Meche, president of LCPA West, recalls that the first time he met Dean Wilson they were, in fact, on opposing sides of an issue brought before the state legislature regarding the size of the wire-mesh nets used to catch crawfish.

“Dean made a good argument,” Meche says. “He had our senator squirming when he brought in a little bitty tiny crawfish onto the floor of the State House that was stuck in the smaller wire mesh that we used to fish. And when all of the legislators saw that, it made it look like we were crippling the industry and the resource!”

Jody's side eventually prevailed, but later encroachments on the rights of crawfishers to freely operate in the basin, and continued development by landowners and pipeline companies that disrupted parts of the basin's natural hydrology, brought Jody and Dean together. “Eventually,” Jody says, “we came to an understanding that we as fishermen and environmentalists really shared the same interests and faced the same problems, and so we started working together.”

Increasingly, though, Dean and his fellow fishermen began to notice that the dredging of oil-and-gas-industry canals, illegal roads and dams, the draining of lakes, and sedimentation and declining water quality were beginning to threaten the basin's abundant fishery. Around 2000, Dean also learned that landowners and timber companies were planning to clear-cut the Atchafalaya's vast cypress forests and to shred the trees to provide mulch for flower gardens. That's when he decided that he had to stand up to the forces that would destroy the basin.

Dean first joined the local chapter of the Sierra Club, then learned about Waterkeeper Alliance from someone who was taking one of the swamp tours that Dean conducted. He happened to be a friend of Bobby Kennedy, Jr., and later that same day Kennedy called Dean. After the call, Dean decided that developing his own Waterkeeper group was the best way forward.

“I was attracted to the way they used the law so effectively to protect natural environments,” he says.

He researched environmental regulations, sought out allies in the relevant state and federal agencies, followed logging trucks, staked out mulch plants. He conducted numerous flights to

determine where the logs were coming from, and where they were being processed and sold. And he proved that cypress mulch was not the “forest-friendly” product that national retailers claimed it was.

At the peak of activity in 2006, cypress stands were being cut and ground into mulch at a rate of 20,000 acres per year, filling the coffers of the logging companies. But cypress swamps are more valuable in nature, where they can cut the force of storm-surges by 90 percent. It has been estimated that Louisiana's cypress swamps are worth a staggering \$3.3 billion in storm-protection and other ecosystem services every year.

Ultimately the almost decade-long campaign headed by Dean led to commitments from major retailers such as Walmart, Lowe's and Home Depot to only sell cypress mulch from Louisiana that was harvested sustainably, and this support ended the logging of cypress trees for garden mulch within the Atchafalaya Basin and the entire Louisiana coast.

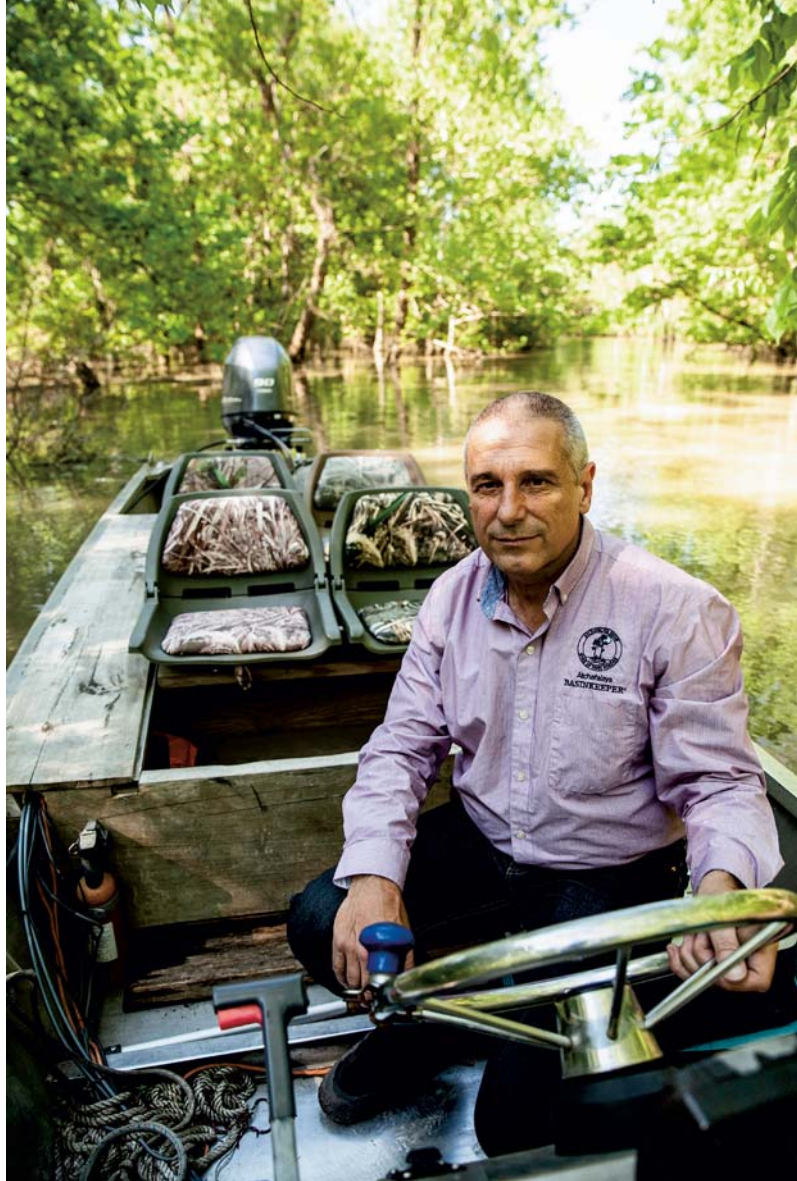
The campaign to stop cypress mulching was a major victory for Basinkeeper and Waterkeeper Alliance, which provided extensive support for Dean's efforts. State and federal regulation to protect cypress stocks, however, has been lacking, and Basinkeeper's monitoring flights (provided by the volunteer pilots of the environmental group SouthWings) are the only thing standing between the loggers and the basin's coastal cypress forests.

Dean's connection to the Atchafalaya Basin has largely been informed by livelihood and the sustaining bounty of the swamp, but that connection is also rooted in an ardent admiration and love for the natural world. At heart, he is a naturalist, exuding a boyish fascination with wildlife, and he is completely at home immersed in the shaded, obscure bayous of his basin. But his work has become more and more desk-bound. Dedicating his life to protecting the basin has meant no time to make a living in the basin, and more time in front of a computer screen.

Prior to his early forays into conservation and environmental activism, Dean's familiarity with the law and its proceedings was minimal. But through his involvement with the local chapter of the Sierra Club, starting in 2000, and a working relationship with a veteran member of the Army Corps of Engineers, he began to develop a nuanced legal and procedural knowledge. And now when he discusses legal statutes and processes, it would be easy to mistake him for a lawyer.

Still, handling the Basinkeeper's workload of litigation requires the indispensable commitment of its one full-time attorney, Misha Mitchell. (The organization's only other full-time staff member is Outreach and Development Coordinator Monica Tramel Fisher.) And only the assistance of the Tulane University Environmental Law Clinic over the last dozen or so years has enabled Basinkeeper to function at the legal capacity that it has.

By 2017, the Tulane law clinic had represented Basinkeeper as a plaintiff 26 times. Other functions of the organization, such as reporting violations of construction permits, mapping, and fly-over photography are donated services, many provided by more than a thousand dues-paying members.



DEAN WILSON IN HIS PATROL BOAT ON BAYOU SET, ONE OF THE MANY SWAMPS TARGETED FOR LOGGING THAT HE MANAGED TO SAVE.

Dean has wielded the lawsuits and the notices of intent-to-sue with careful consideration. These are, he says, “really the only weapons we have. It’s like a poker game.”

Basinkeeper’s numerous victories in the basin include the prevention of the construction of fracking-waste-injection wells, pipelines and pipeline-access canals, and the draining of wetlands by landowners. The most recent conflict is with pipeline-giant Energy Transfer Partners, which has a long history of violations in the basin. Its latest project, the 162-mile Bayou Bridge Pipeline, is the final leg of a cross-country pipeline that connects to the Dakota Access Pipeline, and will transport volatile and explosive Bakken crude oil from North Dakota to refineries and export terminals in Louisiana.

“It is negligent for government agencies to continue allowing unrestricted oil development in the basin without enforcing environmental laws,” Dean stated in a press release.

But much of the work of Atchafalaya Basinkeeper is unpublicized. Some of its most important victories are wrought through the dogged, daily monitoring and oversight of violations. In addition to strategizing legal opposition, Dean is constantly fighting, challenging, monitoring, reporting, organizing membership,

requesting donations, and seeking (but rarely finding) grants. He holds meeting after meeting, handles a steady stream of interview requests, stares down the prospect of insolvency. It’s a life lived on the brink, just as Dean sees the Atchafalaya Basin on the brink. The unrelenting confrontation takes its toll.

“He’s definitely sacrificed a lot,” says Dean’s oldest son, Al. “He’s sacrificed his own time and time with his kids to try and save the basin, but it was something we all understood. He was doing something for the greater good. In a way, he might want me to continue the work, but in another way he wouldn’t, just because of how stressful the work is and the type of life he lives – his life being threatened over the years, the constant fighting, constant struggle, constant stress. Nobody wants to live like that, not even him. But he has so much passion for the swamp that he just deals with it.”

One morning, Dean embarked by boat on one of his monitoring-and-enforcement trips, along the active construction site of the Bayou Bridge Pipeline. The area is a sprawling, ridged swath of dark, churned mud and vegetation debris extending as far as can be seen in both directions along the access-canal’s right-of-way. It’s a shocking microcosm of what has threatened and continues to threaten this place that he loves.

“Since I’ve been Basinkeeper, I’ve seen the construction of five different pipelines through the basin,” Dean recalls. “This is easily the worst one yet.”

He is accompanied by a local photojournalist, Julie Dermansky, by his outreach coordinator, Monica, and his 13-year-old German Shepherd, Shanka.

He identifies numerous violations within a roughly mile-long stretch, and one in particular stands out. Slowing down, he stands up and points to his left where the long ridge of dredged mud and debris is piled particularly high.

“That’s Bayou Set,” he says, somewhat incredulously. “They’ve blocked Bayou Set,” which will block the flow of water through the bayou and,

essentially, destroy it.

He used to fish there, he explains, and his son Al still does. He motors further down the canal away from the active construction site, and gets more and more pensive.

“I’m gonna go talk to them,” he says. “See if they can’t get Bayou Set opened up.”

Julie Dermansky, who knows Dean well, argues that he should wait to report it to the Army Corps of Engineers later on if the construction company does not remove the blockage, but Dean is obstinate. He’s afraid that the Corps will deliberate too long, as they often have in the past, that the construction company won’t act, and yet another bayou will be filled in with sediment and lost, along with much of its wildlife.

“I gotta think,” says Dean, chin in hand and elbow resting on his leg and as he guides the boat gracefully through a marshy stretch of the canal. “Either way, it’s a risk.”

But, for better or worse, confronting risk is the way Dean Wilson has conducted his life. **W**

Michael Quinn is a writer based in New York, specializing in issues related to the environment, rural development and food security.

SHARIF JAMIL

BURIGANGA RIVERKEEPER

"Sharif's job puts him at risk of death every day. When you truly believe, and you have the power to do something about it, you have a certain strength about you. He has that strength, this level of irrational fearlessness that comes from knowing you're doing the right thing – and if it takes your life, it does. There's a peace that goes with that."





BATTLING FOR BANGLADESH'S WATERS AND ITS PEOPLE

SHARIF JAMIL LEADS WITH "A LEVEL OF IRRATIONAL
FEARLESSNESS THAT COMES FROM DOING THE RIGHT THING."

BY ELLEN SIMON

PHOTOS BY ©FARHAD RAHMAN, COURTESY OF CULTURE TRIP

When the water reeked and the villagers had armed to destroy the fish-food factory that was fouling their canal and making their cattle sick, someone thought to call Sharif Jamil.

The urgent call in 2010 came from a regional politician, Zakir Ashim, visiting Ektiarpur village in Northwest Bangladesh, where the factory was pumping raw waste into a canal, making the water undrinkable.

The people had appealed to local politicians; the politicians had done nothing. The people had formed a human chain on the local highway; the police had pulled them apart. Now they were preparing to rip down the factory with hammers and shovels.

The factory owners were powerful, well-connected, unscrupulous. If the villagers destroyed the factory, the factory owners might destroy the village. The politician's call to Sharif was as much a plea as a request. Come, and come right away!

Sharif drove himself, as he always does. Kidnappings in Bangladesh are rampant. If he's in the driver's seat, he knows if he's being followed, and he can decide what to do if another car rams his Toyota Probox wagon from behind. He arrived around midnight, after a four-hour drive, and found a crowd of about 5,000 people on the playground outside the village mosque.

Sharif listened to them, then he spoke.

"Give me one month of time," he told them. "Do not take the law into your own hands. I will stay tonight; I will talk to the people tomorrow. Don't go for any violence."

The restive crowd listened respectfully. Eventually, he convinced them. Sharif got back into the driver's seat to search for a place to rest. But a man of about 80, dressed in a

traditional panjabi, stood in front of the car, his thin body lit by its headlights. The crowd stood on either side of him. He was weeping.

"Why did you stop us?" he demanded. "We will be dying one year later, two years later. They will evict us anyway. Why did you talk the young people out of it?"

Pollution from the factory had cut his rice yield from 120,000 kilos a year to 1,200, he tearfully told Sharif. But his fall into deeper poverty, his hunger, wasn't the worst of it. The worst was what had happened to his daughter. He'd found a good man for her to marry, which was no easy task for a poor father. But when men from the groom's family made a traditional visit to his family's home to present her with a ring, the stink of the water polluted by the factory drove them away. The family canceled the wedding.

"Why did you talk the young people out of it?" the old man in the dirt road asked again.

THE FLOODS ALWAYS COME

Floods are among 46-year-old Sharif's earliest memories. Bangladesh, which separated from Pakistan in 1971, is part of the largest active delta in the world, where the Ganges, the Brahmaputra and the Meghna Rivers meet the Bay of Bengal. This is a nation on a floodplain — two-thirds of the land is less than two yards above sea level. (Think Holland, with no dikes.) As a result, Bangladesh is familiar with catastrophe. One-quarter of its land floods every year, and every five years or so floods cover 60 percent of it. In 1998, the floods lasted for two months and left 30 million people homeless.

"Every monsoon, my mother would be taking me on her chest and waiting for the



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Buriganga was existential: Would the river continue to exist at all? “If the water is not there, there is no question of swimmable or drinkable,” says Sharif.

THE PRICE

The echo of the old man’s plea in the dark rings everywhere along the banks of the Buriganga.

Dhaka is industrializing at a head-spinning pace. According to World Population Review, the number of residents, which was six million in 2002, grew to 14.4 million in 2018. The city now has a density of 19,447 people per square mile, and the Environmental Justice Foundation reports that one-to-two thousand new residents arrive daily.

The new residents who find work end up in textile and garment factories. Bangladesh has become the second-largest garment exporter in the world, after China, over the last decade.

Per capita income increased 150 percent during that period, rising to \$1,751 a year for 2017-2018, pulling 16 million people out of poverty. But the nation has paid for growth in blood. The industry expanded with little regard for worker safety. A 2012 fire at Tazreen Fashions factory in Dhaka killed 112 people, a toll far surpassed the next year when the collapse of the Rana Plaza and its clothing factories killed 1,100, after factory owners had ordered the workers to return to their jobs the day after structural cracks were found in the building. The nation has also suffered dire environmental destruction. The Buriganga remains one of the world’s most polluted rivers, biologically dead.

With no room left in Dhaka for newcomers — or new factories — both families and businesses have expropriated the Buriganga riverbank, building shantytowns on platforms over the river and sometimes fortifying those platforms using garbage as landfill. This encroachment is demolishing the Buriganga’s banks and narrowing its channel.

The river has long carried Dhaka’s untreated sewage; now it also carries the effluent from its textile and garment factories. Time magazine reported in 2014 that the Bangladeshi government estimates that about 21,000 cubic meters of untreated industrial sewage are released into its waters every day.

When Sharif started his work in 2003, the textile industry along the Buriganga already included 250 tanneries piping toxic dyes directly into the river. Sharif mobilized the city’s population to protest

river to flood,” Sharif recalls.

His strict father refused to let him play with the poorly behaved, slang-talking village children. At the time there were few schools. His mother cared for neighborhood children during the day, and his parents later opened a free school for the village on land granted by the government. Named for his sister, Jamina, the school was built by volunteers out of bamboo and sticks.

Amid endemic lawlessness and corruption, Sharif says, “I saw myself how hard life was for my parents, because my father was an honest man. But,” he adds, “this is how I got to know about working together and working for the nation,”

Sharif, now with a wife and two sons, grew up along with the new country of Bangladesh, a nation that cannot tell itself uncomplicated stories about good guys winning. Mujibur Rahman, its first elected prime minister, was a hero of the 1971 war of independence, but devolved into an autocrat who was assassinated, along with most of his family. The nation endured four coups during its first decade. And though it now holds elections and seats a parliament, democratic stability still eludes it. Caretaker governments, suspiciously large landslide victories for the ruling party, and jail terms for opposition leaders remain a way of life.

From the time he was a young volunteer taking notes at meetings of Poribesh Andolon, one of Bangladesh’s pioneering environmental organizations, Sharif knew that he wasn’t starting out on the path of a peaceful, uncomplicated life. But it led to his becoming a leader, by 2003, in the fight against environmental degradation, focusing on the Buriganga, the river that flows through the crowded, smog-choked capital of Dhaka. He became Buriganga Riverkeeper in 2009, the first member of Waterkeeper Alliance in Bangladesh. His first priority was documenting the main threats to the river. In a way, that was easy, because the main threat to the



FISHERMEN IN THE PASHUR RIVER, WHOSE LIVELIHOODS ARE BEING THREATENED BY THE CONSTRUCTION OF MASSIVE COAL-FIRED POWER PLANTS NEARBY. SHARIF IS LEADING THE MOVEMENT TO HALT THESE DESTRUCTIVE PROJECTS.

the tanneries. Finally, in 2017, a third of the tanneries agreed to move to a location with a wastewater treatment plant, 30 miles upstream, but, according to Sharif, the plant doesn't function properly and the water isn't being treated consistently.

"Buriganga gave life to Dhaka," Sharif says, "and Dhaka killed it."

THE MOST DANGEROUS FIGHTS

It's risky to take on industry in a rapidly developing nation, and even riskier to take on the nation's security forces. But that's what Sharif did.

Bangladesh's anti-terrorism force, Rapid Action Battalion-10, is known for committing extrajudicial killings and causing disappearances. In 2012, after it had applied for land to build its offices, the District Administrator near Lalbag, on a channel of the Buriganga, allocated a spot that would have encroached on the river, destroying seven acres of its banks. Sharif collected data about the site and mobilized protests that made front-page news. He met with government ministers and members of parliament. Eventually, he wore everyone down. A member of parliament agreed to allocate land for Rapid Action Battalion-10 near the central jail, away from the river.

"He is endowed with a rare gift of leadership," says Sultana Kamal, a lawyer, author and activist who is a veteran of the country's 1971 war for liberation. "He's mobilized the public, and, along with them, acted vigilantly to prevent river grabbing. His actions resulted in the government taking up the policy of recovering the major rivers of the country from their grabbers."

Sharif has picked many other dangerous fights. He's led a movement to halt construction of new coal-fired power plants. He's fought a proposed 1,320-megawatt coal-fired power plant in Rampal that threatens the Sundarbans, the world's largest contiguous mangrove forest and a UNESCO World Heritage Site, as well as a second phase involving the construction

of two 660-megawatt plants.

By fighting the electricity industry, Sharif is seen as threatening Bangladesh's ability to become a developed country, says Tonya Bonitatibus, who leads Savannah Riverkeeper:

"Fighting the power industry, you become an enemy of the state," she said. Sharif's job puts him at risk of death in a serious way every day. When you truly believe, and you have the power to do something about it, you have a certain strength about you. He has that strength, this level of irrational fearlessness that comes from knowing you're doing the right thing — and if it takes your life, it does. There's a peace that goes with that."

Kamal adds: "His role as a Waterkeeper entails harassment, financial insecurity, and even threats to his life. Sharif, however, has stood resilient."

Sharif has remained resilient not only when the fight has been dangerous, but even when victory seemed improbable.

An example: He's been working since 2007 with an indigenous community on the India-Bangladesh border that grows betel leaves, which are primarily used as wrappers for areca nuts and tobacco. The leaves grow in forests, but a nearby tea plantation had been trying for years to evict the indigenous people and cut down the trees that bear these leaves. In 2008, Sharif got a call informing him that workers from the tea plantation were razing trees and attacking villagers. Sharif traveled to the site with two friends, a military officer and the officer's wife — in a four-wheel-drive vehicle, since the village was 15 kilometers from regular road service. Nonetheless, as they drove closer to village, their car got stuck. It was dark; his companions grew worried, but Sharif was unperturbed.

Then, atop the highest hill in the vicinity, lights appeared, as if hundreds of lightning bugs had taken flight.

"Women came, children came; everyone had a stick and a torch light," Sharif remembers. "I said, 'They are coming to take us to the village.'" Sharif and his

companions managed to restore peace, at least temporarily.

A decade later and the indigenous people in the village are still fighting the hired thugs from the tea plantation. But the beauty of that moment stays with Sharif. "Sometimes movements get momentum, and it feels different," he says. "That is why I'm doing this."

STORIES WITHOUT END

If this were a Hollywood script, the story of the crowd beside the mosque at midnight protesting against the fish-food factory would have a satisfying ending. The villagers would organize, they'd demonstrate, they'd sue; there would be a courtroom showdown in which a shaft of sunlight falls on the handsome profile of a charismatic young lawyer. The people would prevail. The water would get cleaned up. The old man's daughter would get married. The closing credits would roll over scenes from their wedding.

But what really happened is this: The Department of Environment shut down the factory, but the factory reopened. Then its owners, government administrators and Sharif sat down together. The owners pledged that they would build an effluent-treatment system, and did so. But sometimes they use it, and sometimes they revert back to discharging untreated waste into the waters that are the lifeblood of the village. Nine years later, Sharif and the villagers are still fighting the same fight, against the same foe.

There is a Bangladeshi word with no English equivalent that may best describe such frustration. The word is *obhiman*, one meaning of which is "to torture oneself for love."

When Sharif Jamil arrives alone at midnight to calm an angry crowd, he comes out of love — for his country, its people, and its waters. His vocation, at its core, is *obhiman*. Each day he gets up, he takes every call as it comes, and he tortures himself for love. **W**



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At Waterkeeper Alliance, we know the importance of local advocates. We have grown and connected a global network of grassroots activists for 20 years. These activists, known as Waterkeepers, share a vision: drinkable, fishable, swimmable water for everyone, in every place. Today, we are more than 300 Waterkeeper groups strong and growing—with a plan to protect 20 million square miles of waterways over the next 20 years.

Culture Trip has partnered with Waterkeeper Alliance to present the Waterkeeper Warriors project, which chronicles 20 Waterkeepers who are fighting and winning some of the most important clean-water battles of the past 20 years, as well as confronting some of the greatest environmental challenges of our time. Culture Trip captured stunning images of these true environmental heroes, such as Rodrigo de la O, the Maule Itata Coastkeeper and Chile's first Waterkeeper. He fought a successful seven-year campaign against the construction of a massive coal-fired power plant that would have contaminated the Maule and Itata rivers, and is presently leading a coalition of local groups opposing a proposed industrial-scale salmon-farming scheme that is a massive pollution threat to the pristine waters of Chile's central coast. Another guardian of our waters is Rebecca Jim, the Tar Creekkeeper in northeast Oklahoma, who is leading her Native American community's fight for environmental justice and remediation of one of the largest and most polluted Superfund sites in the United States.

Culture Trip photographers were dispatched to locations around the globe

to capture the spirit of these Waterkeeper Warriors who are at the heart of a global movement that protects clean drinking water and the irreplaceable water sources of nearly a billion people. Nigel Parry, best known for his award-winning portraits of celebrities, politicians, and cultural icons, photographed Fred Tutman, the founding Patuxent Riverkeeper in Maryland, who has provided a bullhorn to minority communities opposing development and won a precedent-setting case for citizen rights. Farhad Rahman, a Bangladeshi documentary photographer, photographed Sharif Jamil, the Buriganga Riverkeeper and head of Waterkeepers Bangladesh. Jamil is one of Bangladesh's most outspoken and impassioned environmental advocates, and is leading a countrywide campaign to avert an environmental catastrophe for the country's 165 million people. And award-winning Chloe Aftel, who has a strong focus on narrative photography, captured Sejal Choksi-Chugh, the San Francisco Baykeeper and driving force behind her organization's high-impact policy, science, and law programs, who is spearheading the campaign to reduce agricultural pollution, industrial runoff, sewage overflows, and oil spills in the San Francisco Bay estuary.

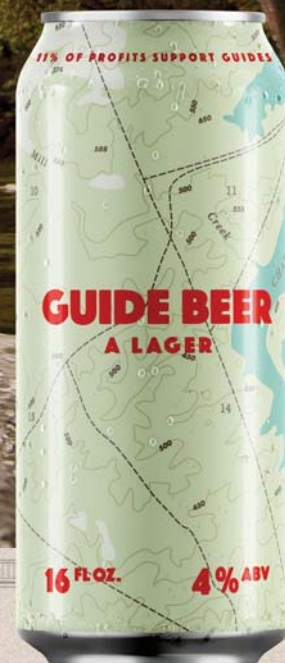
The full body of work will be presented online, in the two 2019 20th Anniversary editions of Waterkeeper Magazine, and as a traveling photo exhibit that invites global citizens to discover the diversity of the world's waterways, from Cambodia and Senegal to London and Peru, and the important role Waterkeeper Alliance is playing in protecting them. **W**



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