

IMPACT BEYOND BORDERS | 2017 HIGHLIGHTS

NATIONAL | TNC played a strong role in the Southern Agricultural Growth Corridor of Tanzania (SAGCOT) Annual Forum, sharing expertise and solutions with an influential cohort of agribusiness investors, government agencies, and farmer organizations.

REGIONAL | TNC organized and co-hosted the African Great Lakes Conference, convening more than 300 stakeholders from seven lake basins and partners around the world to strengthen collaborative management of freshwater resources.

GLOBAL | TNC Africa strengthened alignment with the organization's shared global priorities:

- Protect large-scale natural lands and waters
- Provide food and water sustainably
- Tackle climate change
- Build healthy cities

TNC Africa formalized three cross-border strategies to accelerate uptake of proven solutions (see map above) and launched pilots on emerging strategies, including sustainable woodfuels.







- Our circle of partners at home in Africa and around the world
- The global network of TNC experts that we tap for solutions and additional knowledge
- At the center, our generous supporters and Africa Council

"OUR GOAL IN AFRICA is

to conserve nature and all the benefits that it provides: clean drinking water, healthy land for grazing and growing food, fish stocks, and wildlife that generates tourism revenue. Even beyond that, our unique landscapes and wildlife are a source of pride for all Africans — that's reason enough to ensure they endure as nations grow."

—CHARLES OLUCHINA, Field Program Director, TNC Africa

THE JOURNEY AHEAD

Dust stirred up by thousands of hooves fills the truck, mingling with the smell of sweat and dung. Braying and mooing distract from the mechanical noises. As we move faster with the herd, I begin to understand what it's like to be a wildebeest.

The Serengeti envelopes you. Grass merges into sky on one horizon and back into grass on the other. One big endless plain now filled with life. This is migration. A million-plus wildebeest and zebra will move in slow marches, punctuated by stampeding bursts, across the southern short-grass plains where they calve, then to the dry-season grasses along the Mara River in northern Tanzania and Kenya.

The circuit they trace is the largest — and one of the last — unbroken wildebeest and zebra migrations on Earth. It's hard to believe that other similar migrations have been stopped by roads, or rather by what they bring: farms, homes, shops, schools. Things people need.

But development doesn't have to happen in the path of millions of animals. That belief is what brought us to Africa — and what still drives us.

Over the past 10 years, we've found the right partners and made each other stronger. We've trusted the people we live with to guide us. And we've also made mistakes. We learned and we grew. That's what we do at The Nature Conservancy. That's who we are.

As rain begins to fall on the Serengeti, the wildebeest around me hunch their shoulders in the chill; and the pace slows and the dust settles. On the granite boulders of Moru Kopjes, I see the full manes of two male lions, and in the distance, several spotted hyenas lope across a small gulley. This scene has played out for millennia.

Racing across the plains, dodging aardvark holes with the wind and rain in my hair, I think about how rapidly Africa is urbanizing. Our best chance at saving what is unique and bold about this place is to band together and tackle the biggest challenges head-on. That's what we do.

-DAVID BANKS, Regional Managing Director, TNC Africa

KENYA | 2017 Highlights

Kenya Wildlife Conservation Trust Fund | In partnership with the Kenya Wildlife Service, TNC launched the development of a sustainable source of funding for protected areas and community conservancies.

Sustainable Woodfuels | A new TNC program is piloting innovations to drastically improve the supply chain of firewood and charcoal, which account for 50 percent of forest degradation in Africa.

FishPath | A software application developed by TNC and the Science for Nature and People Partnership (SNAPP) is now being used to improve the monitoring and management of key fisheries.

2007 | Lewa Wildlife Conservancy

Wildlife Conservancy, a sanctuary for

wildlife and an anchor for surround-

ing community conservancies, by

mobilizing millions in funding and

deal to hold the property in trust.

helping engineer the innovative land

Began working to secure Lewa

When TNC landed in Africa in 2007, KENYA was our first stop.

"Our goal has been a healthy landscape in the north where people and nature thrive. With our partners, we have made great progress: Loisaba Conservancy and Lewa Wildlife Conservancy are critical private land pillars. Northern Rangelands Trust is now a successful umbrella organization. Today there is more tourism, more business, and more support from local and national government.

Our impact in Kenya with partners over the last 10 years is inspiring: 8,832,689 land acres and 3,862 marine acres under improved management and 510,808 people benefiting. While there remain obstacles to overcome, we are well-positioned for the next 10 years."

-MATT BROWN, Conservation Director, TNC Africa

"Our priority is nurturing grassroots conservation. We use technical terms like 'building capacity,' 'business planning,' and 'improving governance' — all of which mean helping local communities gain greater rights to their resources, the tools they need to use them sustainably, and ways to collaborate peacefully to share them. When that happens, they become the conservationists. That's what is different about our work, and why it will last into the future."

-MUNIRA BASHIR, Kenya Program Director, TNC Africa

SPOTLIGHT | Facing Challenges Head On

If the American Dream is a house with a white picket fence, the Kenyan pastoralist's dream has 100 head of cattle on the lawn behind it. In northern Kenya, livestock define cultures, shape landscapes, and drive the local economy. Here, good conservation is about finding ways for elephants and other wildlife to be on that same lawn.

For the past seven years, we have been supporting partner Northern Rangelands Trust (NRT) to explore ways of providing financial incentives to pastoralists who abide by the sustainable grazing plans of their conservancies.

The LivestockWORKS business involves NRT buying cattle from conservancies that hit conservation targets, cutting out the middlemen, and putting more money in the hands of local people. Once NRT, in partnership with private ranches, has fattened, processed, and sold the cattle, and covered their costs, any profits are intended to be returned to source conservancies.

Political, cultural, environmental, and financial challenges have tested this model since its inception — from "outsider" cattle barons infiltrating NRT markets to the higher-than-anticipated costs of processing scrawny livestock in times of severe drought. And emerging data show that sheep and goats — not cattle — have the most devastating impact on grasslands. It is clear that this pioneering business must adapt to survive.

Sustainable business on this scale has never been done in this complex landscape before. Facing these challenges, despite having expert local knowledge, is both humbling and motivating.

Learning from these experiences, we will support NRT to improve the quality of the cattle being purchased; for example, it has already employed a veterinarian as the rangelands coordinator. Finding ways to mitigate other risks will allow us to adjust this promising model to keep the Kenyan pastoralist's dream alive, with wildlife on the same lawn.





2008 | Northern Rangelands Trust

Began partnering with Northern
Rangelands Trust to strengthen the
community-based conservation model.
Brought TNC's globally tested tools
for capacity building, business and
conservation planning, sustainable
grazing, and science.



2012 | Africa's First Water Fund

Launched work on the Upper Tana-Nairobi Water Fund, an innovative model in which urban water users invest in upstream watershed conservation, including support for the 19,000+ farmers helping keep soil out of the waterways.



2013 | Coast Expansion

Brought expertise in fisheries management to NRT coastal conservancies, and are now improving marine management at local and national levels by leading the development of a new app — FishPath — and strengthening policy reform efforts.



2014 | Loisaba Conservancy

Played lead role in establishing the 56,000-acre Loisaba Conservancy — now held by the Loisaba Community Trust — which provides jobs, supports community-led conservation, and serves as a hub for wildlife research and sustainable grazing practices.



Present | Broad Impact

TNC is working at greater scales for ever-greater impact, such as strengthening the Kenya Wildlife Conservancies Association and the Maasai Mara Wildlife Conservancies Association, and advancing national policies supportive of community conservancies.

2 3

REGIONAL STRATEGY | Indigenous Landscape Protection

Drawing on our work over the past 10 years, TNC has created a cross-cutting regional program to accelerate the community-led conservation movement in Kenya, Tanzania, and Zambia.

"In much of east and southern Africa, the richest natural areas are home to the poorest communities. Historically, these lands and waters were governed by and owned communally by indigenous people.

For decades in Africa, conservation was about strict preservation and resulted in moving people off communal lands, causing conflict. In recent years Africa's population growth has increased demand for its natural resources.

My 18 years of working in southern Africa have shown that the most effective way to reduce the threats to the natural environment is by strengthening resource rights and benefits from conservation for communities.

At TNC we are focusing on strengthening local institutions and governance, promoting sustainable resource management, and ensuring financial and other incentives for rural people to engage in conservation. Our strategy is to scale up as we succeed on the ground."

-PATRICIA MUPETA-MUYAMWA, Indigenous People and Local Communities Strategy Lead, TNC Africa

Under a sparkling sunrise in Kafue National Park in May, a puku wades through a sea of grass, haunch high.

In the rainy season, the park comes alive with lush, green grass. Through the long dry season, the grass slowly parches into spark-ready tinder. Fire is a natural process, but it now often occurs too frequently and at the wrong time. Late-season fires can burn too intensely, and the grasslands can't bounce back. Even the soil suffers.

Fires set intentionally in dry conditions — many by poachers — often rage out of control. An average of 70 percent of the national park burns every year.

The quarter-million tourists who visit Zambia annually bring \$500 million a year to the economy and employ 60,000 Zambians. But if tourists see only charred land-scapes empty of wildlife, that income will dry up.





ZAMBIA









GREATER KAFUE ECOSYSTEM | A Three-Pronged Strategy

MANAGE FIRE so that the park is healthier and there is more wildlife in it. Since 2012, TNC's Zambia and Arkansas chapters have worked with Zambia's Department of National Parks and Wildlife (DNPW) on fire management in the park, including training more than 200 people from government, safari lodges, and communities, reducing land lost to late-season fires by about 1 million acres.

"By setting a controlled burn early in the dry season, you reduce the amount of dry grass, undergrowth, and fallen tree branches that would fuel intense and unstoppable infernos later in the year."

-JONES MASONDA, Zambia DNPW Principal Ecologist

STRENGTHEN SECURITY to add another layer of protection against poaching and habitat degradation. TNC has trained and equipped more than 80 village scouts, and provided support to DNPW scouts. The 24 rangers at the Kaindu Game Ranch have arrested 55 poachers since 2015.

"We have a big job to protect these animals and to talk to the community about why they should help to conserve wildlife."

-GREENWELL KABINDA, Kaindu Scouts Commander

TURN NEIGHBORS INTO PROTECTORS by increasing benefits to local people. TNC is helping communities flanking the park secure a greater percentage of tourism income and is providing them with training in accounting, meeting facilitation, and strong collaborative governance.

"At first it was difficult for people to understand the value of conservation. But now they do. They understand that we have to stop poaching so that we can have more animals. More wildlife will generate more income so that we can have what we want, such as buildings and schools.

We learned from TNC that we should allow villagers to participate in meetings. It's not the Village Action Group's job to tell everyone what to do with the money [earned from tourism]. Instead, we can all come up with one idea that the community is happy with.

So far, we have built a kitchen and bathrooms at a hospital, refurbished a primary school, and built a small pharmacy in a very remote village."

 $-{\tt PRUDENCE}$ MWANZA (pictured left), Misamba Community Liaison



Home. Everyone in NORTHERN TANZANIA defines it differently.

For nomadic tribes, it refers to wherever pasture is greenest or fruit is ripest. For a herd of elephants, it is the ancient migration routes that cross village, county, and national borders — led by a matriarch and followed for generations.

Here, home isn't so much a place as a journey. And now, the 8-million-acre landscape that has hosted these journeys for hundreds of years is becoming a jigsaw puzzle. Climate change, rapidly expanding row-crop agriculture, and population growth are shaping the pieces. At the same time, Tanzania's economic development depends on managing this landscape so that natural resources can continue to provide food and job security. The survival of elephants and traditional ways of life for indigenous people rests on ensuring they also have a say in this design.

No single village — or organization — can tackle this alone.

That is why we collaborate with nine partners in the Northern Tanzania Rangelands Initiative (NTRI) to help communities secure tenure over their traditional lands and apply good land management practices that benefit themselves and wildlife.

Just as each puzzle piece in the landscape is unique, so is the land tenure or resource rights solution that works best for each community. Communities now have new tools, such as communal Certificates of Customary Rights of Occupancy (CCRO) and other innovative schemes, that can address their specific needs and challenges.

Together, we are ensuring that indigenous communities have the knowledge, technical support, incentives, and legal frameworks they need to keep their journeys alive.

2017 Highlights

24 CCROs were awarded in the last two years, bringing the total of land secured this way to just over 1 million acres.

A Conservation Action Plan was completed for the Makame community Wildlife Management Area (WMA) — which spans nearly 600,000 acres — that will guide community development and natural resource management.

Scientists completed baseline surveys for wildlife, vegetation health, and human well-being, enabling us to accurately track progress and adjust conservation strategies based on solid scientific data.

SPOTLIGHT | Saving Grass Saves Livelihoods

"Most of Tanzania has been experiencing drought for the last year, and a lot of livestock have been dying. On a recent drive from Arusha to Randilen WMA, I saw many cattle carcasses near the road. Other cows were still alive but were struggling to even stand on their feet. But as I entered Randilen I saw hundreds of healthy cattle. They were feeding in a large area of good grass that was preserved to use in times of drought.

I immediately began to worry that all this pasture would be quickly depleted by a massive influx of cattle and there would be nothing left for the wildlife. But a village scout calmly told me: 'We have plenty of grass that can rescue the cattle and still support wildlife. In fact, we are even hosting cattle from far away villages that are not part of our community.'

During my day of meetings with community leaders, the rains poured heavily. After the rain ended, I began my journey home and was shocked to see the big herd of livestock exiting Randilen. The rain signaled to the herders that there would now be pasture in other places, so they left Randilen's extreme drought refuge.

If we can scale this behavior — if every community has a working 'extreme drought' grazing area — then we will build resilient livestock and wildlife populations in northern Tanzania. I think that this is possible."

-ALPHONCE MALLYA, Conservation Coordinator, TNC Africa



Land Easement
An area on which a village agrees to conservation regulations, including restricting use for agriculture and settlement expansion, in exchange for payment by tour operators.







Certificate of Customary
Right of Occupancy (CCRO)
A form of land tenure that in the
NTRI landscape is used to secure
communal land for communal use.
This protects continued access
to land for grazing and/or forest
use while keeping critical wildlife
corridors open.



Management Area (WMA)
A protected, community-managed area made up of a portion of land from multiple villages. Land use is split between wildlife conservation, tourism, and seasonal grazing.

















Imagine if the U.S. conserved 30 percent of its land mass, roughly everything east of the Mississippi River.

With TNC's support, the small island nation of Seychelles is doing essentially that: conserving 30 percent of its marine territory, resulting in the largest marine protected area (MPA) network in the West Indian Ocean.

A \$21.6 million debt buyout negotiated by TNC from four lending countries is enabling Seychelles to redirect funds to a local trust — SeyCCAT — creating a sustainable source of funding for conservation. In addition, a Marine Spatial Plan covering the country's entire ocean territory (530,500 square miles) will define where different uses are allowed.

2017 Milestone

Our new West Indian Ocean (WIO) program has been championed as a top conservation priority for the organization. The WIO covers approximately 8.6 million square miles from Somalia to South Africa. By building on both the pioneering Seychelles marine protection program and the community-led fisheries management work on Kenya's north coast, we can quickly expand innovative models for marine conservation across this global biodiversity hotspot.

SPOTLIGHT | A Lifelong Commitment

The local person leading the marine spatial planning (MSP) effort is soft-spoken Seychelloise marine biologist Helena Sims. For more than two years, she has patiently shepherded a near-endless stream of meetings and public hearings to get buy-in from the tourism sector, all fishery stakeholders — artisanal, industrial, and sport fishing — scientists, legal advisors, and even the petroleum sector.

"This is what I've always wanted to do since I was 6 years old. My dad was a marine engineer, and he also built his own boats. On weekends we would go out fishing and sailing.

My first dive was on my 10th birthday, the minimum age to SCUBA. I went into a cave and there were sea fans (Gorgonias) everywhere. They look like bouquets of flowers — orange, red, and white. I was gobsmacked.

I wanted to study marine biology in university but at that time, the government's priorities for full scholarships were teaching or medicine. I had to make a case that marine biology should be just as much a priority.

They said yes but only if I earned triple As [perfect scores on the Cambridge International exams]. I spent ages 16-17 preparing. I studied all the time.

My mom got worried because I became so thin. I wanted it so badly.

You have to wait four months to get your test results! My dad was the one to open the envelope. I was at sea on a study tour. My first chance to call home was during a stop in Mumbai. He just said, 'You did it!' and I started crying.

I studied Marine Biology in Australia and came straight home once I graduated. After several years working with different entities to build my experience, I was recruited by the United Nations Development Programme [Global Environment Facility] to conduct research to set priorities for the expansion of the marine protected area system of Seychelles.

At first I didn't want to take on such a big job because my son had just been born. My father was very sick, and I was with him in the U.K., where he was undergoing chemotherapy. He told me to go for it. It was his dream job, and he was my idol. I did it for him.

For five years our team didn't know if our efforts would actually result in MPA expansion. Then the government made the 30 percent commitment, and I moved with the data to TNC.

Some of our stakeholders in the MPA process have known me my whole life. They say, 'Oh, Helena — she wants to save everything.'

But the zoning design has to work for everyone, and that's what TNC is committed to.

As often as possible I go out fishing and snorkeling with my 8-year-old son, Kyan. [His name is derived from a word for the blue-green color of near-shore waters.] I'm looking forward to telling him stories about his grandfather. He can't understand yet. He's autistic and nonverbal, but he has an infinite love for the ocean. Often when he was a baby, the only way to calm him down was to put him in a bucket of water!

For all Seychellois, the sea is within us. It's not only in our blood; it's our life.'

—HELENA SIMS (pictured left), MSP Project Manager, TNC Africa







The world comes to life early in this remote area of WESTERN TANZANIA.

Under hazy pink skies, kanga-draped women hurry to the edge of Lake Tanganyika to scoop up silver sardines from landing boats. Schoolchildren spill out of their classrooms and fly through the dusty village for their morning jog, while chimps swing through the forest canopies in search of a first meal.

Here, TNC is partnering with Pathfinder International on the Tuungane Project, which takes a 360-degree approach to tackle the interconnected challenges of Population, Health, and the Environment to create healthier families, fisheries, and forests.

FISHERIES

"After attending Tuungane Project seminars, I realized that my community was going to have a problem very soon. This really touched my heart. And I thought that if other villages didn't know about these issues, it would affect my resources, too."

-BAKARI ITEMBE (pictured right) recruited neighboring villages to form Beach Management Units (BMU). Through BMUs, communities enact their own sustainable fishing regulations, such as outlawing beach seines. This year, **3,287 acres** of fish breeding sites have been demarcated and protected.

"I was so disappointed by beach seining — it was catching larvae, fry ... everything. When people caught fish that were too small, they threw them on the ground. Before the BMU, I had no idea how to deal with this."

-SADOKI NFUKAMO, one of the volunteer fisheries data collectors that look at trends in fish catches to inform management decisions.

HEALTH

"I saw many women suffering from a lack of education. I knew it wouldn't be a paid job, but I wanted to help other women."

—FARIDA KATUNKA (pictured far right) with fellow community health worker SIKITU MUSTAFA (pictured right). Volunteer community health workers receive training and then educate men and women about reproductive health. Between 2011 and 2016, familiarity with family planning increased from **43** percent to **59** percent.













LIVELIHOODS

"It would take five hours a day to collect water [before we built our rainwater harvesting system]. I wasted a lot of time that otherwise I would have spent working as a tailor. My daughters also came with me, and they can now use that time to play or study."

-ASHURA KATUNKA and her family are among **1,300 Model Household Motivators** who demonstrate healthy behaviors to their communities.

"When you take your fish to the market, those who dry theirs on the sand sell last. Those who dry on the racks get about 1,000 shillings more money per bucket."

—VERONICA KONDO MWATANO rents space on a fish rack, which elevates fish to drip-dry, decreasing spoilage and contamination. Villagers earn more from fewer fish, ultimately decreasing pressure on the fishery. The popularity of 44 racks built during trainings by the project team inspired community members to build more than 70 of their own. A portion of revenue from BMU-owned racks is invested in community projects, such as the purchase of school desks.

AGRICULTURE

"In the training sessions, I learned about the benefits of Climate Smart Agriculture (CSA). My crop has increased from 450 to 700 crates of tomatoes per acre. Now my farm is used as a demonstration plot to teach others about CSA."

—KENETH CHUBWA, a young farmer from Igalula village. A total of **952 smallholder farmers** from 16 project villages have been trained in sustainable agriculture methods.

FORESTS

"Chimpanzees are incredibly hard to track from the ground, so we've recently taken to the sky with drones. The data we're collecting can help the government and NGOs, like TNC, determine how best to protect the forests that the chimpanzees need and local communities depend on."

—ALEX PIEL is a lecturer in Animal Behavior at Liverpool John Moores University and director of the Ugalla Primate Project. To date, **more than 500,000 acres** have been set aside by local communities as Village Land Forest Reserves.

WATER FUNDS

Over the last 16 years, TNC-designed water funds have revolutionized freshwater conservation in more than 30 cities around the world. Urban water users invest in upstream watershed conservation strategies, creating benefits for both themselves and rural populations.

With soaring populations and more frequent droughts, nowhere are these water solutions more important than in Africa. The continent's first two water funds — in Kenya and South Africa — are underway, and TNC scientists have identified dozens more cities in Africa where watershed conservation could nearly pay for itself. But we can't do it alone.

That's why we've developed a toolkit to train others on how to design and implement water funds. By sharing our successes, we can exponentially increase the number of water funds in Africa and worldwide.









KENYA | Milestone Spotlight

The Upper Tana-Nairobi Water Fund (UTNWF), launched in 2015, focuses on helping farmers keep soil on their farms and out of the rivers that provide more than 9 million people with their drinking water and 50 percent of the country's power. In 2017, the UTNWF began fundraising for a \$15 million endowment. The capital will not be drawn down; the annual earnings will be directed to scaling up and sustaining achievements in the watershed.

"Water is everyone's business. That is why we have formed this public-private partnership to conserve the resource at its major source. Business leaders look for return on investment. With the water fund, scientists have made a clear case: Every \$1 invested in conservation will yield \$2 in economic benefits.

Yet water fund investors are not simply contributing to our own welfare; we are contributing to the common good by preserving water sources for future generations. The endowment will ensure that our impact will endure for our children's children."

-EDDY NJOROGE, UTNWF President

To learn more about the UTNWF Endowment contact Cori Messinger at cmessinger@tnc.org.

MEASURABLE IMPACTS IN KENYA

19,000+ farmers are applying soil conservation and water-saving methods.

175,000 trees are planted annually in the watershed.

72,300 acres are under improved management.

5,400 farmers are enrolled in a mobile data-monitoring platform.

SOUTH AFRICA | Strategy Spotlight

When you step off a plane at Cape Town's airport, you are stepping into one of the most biodiverse areas on Earth. Approximately 70 percent of the plants in the Cape Floral Region are found nowhere else. Much of the vegetation is fynbos: fine-leaved shrubs that often flower spectacularly, supporting birds, insects, and other wildlife.

The region is recognized as a World Heritage site, and parts are protected by nature reserves. But fynbos still faces a major threat: invasive plants.

Pine plantations, established by the forestry industry to provide lumber, disperse their seeds by wind. Other invasive plants like eucalyptus and nonnative grasses have similarly spread around the region.

Without natural predators, these species can outcompete native plants and fundamentally change the ecosystem. Nonnative plants change the fire regime, with fires burning 10 to 15 times hotter. In fact, invasive species exacerbated the fires that recently nearly destroyed the town of Knysna.

They also change soil chemistry and cause erosion and landslides. But perhaps most significantly, they're water hogs. These plants, with roots that go deep in the soil, suck up precipitation. Watersheds in the Western Cape Province lose up to 31 percent of the mean annual runoff and about 9 percent of registered water use due to invasive plants. In a city where every drop of water counts — the 2016-17 drought led to the most stringent water restrictions ever — those losses are significant.

The newly launched Greater Cape Town Water Fund — beginning with a pilot project in the Atlantis Aquifer — will focus on controlling thirsty invasive plants and restoring wetlands, an immediate benefit of which will be new jobs in areas with unemployment rates as high as 40 percent.

Addressing water in Cape Town is complicated: Most water catchment areas lie outside city boundaries, under the control of different government agencies. By replicating the lessons learned from the Upper Tana-Nairobi Water Fund and others around the world, we are confident we can bring all stakeholders together to find sustainable solutions to source water protection.

12 13







GABON

The Ogooué River curls through thick, wild forest for days. Rare forest elephants and lowland gorillas hide in shadows of the deep-green fortress. Tree roots reach like hands into water the color of tea with cream. *What's in there?*

The Gabonese government invited TNC to help find out. The nation plans to double its hydropower production by 2025. We are leading a years-long effort to equip leaders to generate energy for a booming economy, save wildlife habitat, and keep fish on dinner tables.

For decades, TNC has built expertise globally on minimizing the impacts of dams on nature. For example, we worked with partners to remove a series of dams in Maine, opening the way for migrating fish — without net loss of energy generation. But national-scale sustainable hydropower has never been done before.

If we can prove in Gabon that it's possible to get it right the first time, we can bring Hydropower by Design methods — and potentially preempt avoidable damage — to an untold number of rivers across Africa, and could inspire and inform restoration of damaged rivers around the world.

POWERING A NATION | 2017 Highlights

BUILD A SCIENCE CASE

Led two scientific expeditions with Gabonese and international researchers.

Facilitated learning exchanges with the U.S. and Kenya.

Published peer-reviewed science on freshwater benefits at the national level.

CREATE TOOLS FOR DECISION-MAKING

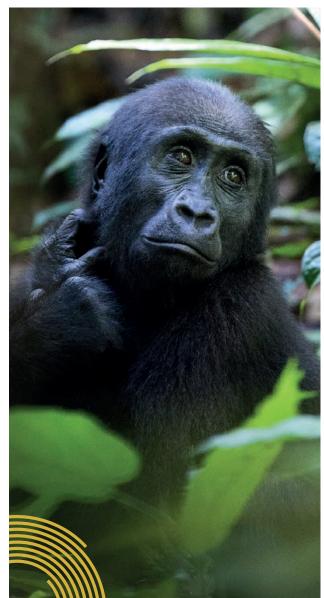
Completed a nationwide digital freshwater atlas that combines information about biodiversity with analyses of the threats posed by different land uses.

Created models that demonstrate the economic impacts of diverse land use scenarios in a key watershed.

TURN SCIENCE INTO POLICY

Secured commitment from government to incorporate the freshwater atlas into Gabon's first-ever National Development Plan.

Signed a formal agreement with the Ministry of Energy to collaborate on hydropower planning and contributed a chapter to the nation's Hydroelectric Master Plan.



SPOTLIGHT | Scientists Race Against the Clock

"We've been in the field for two months, and it has rained continuously for a week. Everyone's tired and crabby, thinking about home, hot showers, and hot meals. At about 3 p.m. we had placed three 90-foot-long gill nets in the Louetsi River at Idembe village, and as the sun begins to set, we dutifully head back out into the rainy evening to see what specimens we'd caught.

Jean Hervé, Edouard, and I climb into our folding 14-foot rickety-raft with an 8-horsepower motor. Jean Hervé pushed 'Nina T' off from the bank, and the current swept us quickly downstream. I start yanking the pull cord ... 10 times ... 20. I pull the choke. Nothing.

Jean Hervé starts paddling frantically toward shore, but we're completely out of control and picking up speed. I look up to see that we're careening helplessly towards a big tree. I shout, 'Watch your head!' and we snap our way into branches hanging out over the water. Edouard grabs hold of one and we stabilize.

Then he starts screaming. I yank faster on the pull cord; it sputters a couple of times and finally coughs to life! I gun it and we shoot through the brush in a cloud of blue smoke. Edouard pulls off his shirt and grabs at cricket-size ants that are biting his chest, head, and neck.

As we pull into open water, I quickly check myself for ants, pulling a few off my collar. At times like this, it's important to remember why we're here.

Gabon plans to increase its number of hydropower dams from three to 30. Our team of six scientists, sponsored by TNC, was tasked with assessing fish biodiversity at the sites of three of the proposed new dams. Before this expedition, scientists knew very little about what fish species are found in these locations! As a scientist studying freshwater fish, this terrifies me: More than 25 percent of the species driven to extinction in the last 200 years were from freshwater systems.

The rain begins to pick up. I point the bow upstream and push the puny motor to its limit, knowing that we're racing decisions that will change the river forever."

—JOE CUTLER (pictured above, far left) is a Ph.D. candidate at University of California Santa Cruz and a National Geographic Young Explorer. Jean Hervé Mve Beh and Edouard Nzengue are with Gabon's Scientific Research Center.

14 15





SOLUTIONS FOR WILDLIFE AND PEOPLE

Children the world over grow up hearing tales of hulking elephants, gentle giraffes, and ferocious lions. But the animals can tell us stories, too. By understanding "indicator species," we learn how to best protect entire landscapes for the benefit of all species — and people — that live there.

Lions and People Can Coexist

Laikipia's lions are being watched. Satellite GPS collars beam information about lion locations and behaviors to our partner Lion Landscapes in northern Kenya, providing powerful insight into how these animals are affected by settlements, drought, and livestock grazing. A pilot project will use radio collars to alert pastoralists to approaching feline hunters. In communal lands, reducing human-wildlife conflict is essential to landscape-scale conservation.

Rhinos Support Local Communities

Namibia's 25-million-acre Kunene region is home to the world's largest free-ranging population of black rhino, and in 2016 more than \$300,000 of the tourism revenue they attracted went to local communities, creating buy-in for conservation. With TNC's support to Save the Rhino Trust, locally hired rangers implement monitoring and anti-poaching activities, which have quadrupled the rhino population.

AFRICAN ELEPHANT INITIATIVE

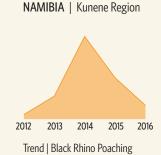
TNC takes a holistic approach to conserving elephants — stronger protection for key lands, better frontline security, and new incentives for community support for conservation.

The tide may be turning on the poaching crisis, perhaps due in great part to China enacting a ban on domestic ivory sales. Yet about 80 elephants are being killed each day for their tusks. As some partners keep heavy focus on illegal trafficking, we are increasing efforts to protect habitat that elephants need in order to survive.

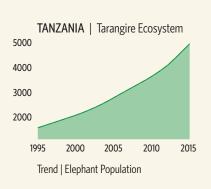
2017 Highlight | Shaping National Growth

Forty-five elephants could help determine the placement of Kenya's next highway, railway, or pipeline. Collars funded by TNC and partner Save the Elephants (STE) have been transmitting data on the elephants' whereabouts for two years.

Now TNC and STE will provide the Kenyan government with detailed maps that show exactly where elephant movements and planned infrastructure projects overlap. Because the areas elephants use are the same areas other species need, this data can help us create an inclusive conservation map for all of northern Kenya.









You Make Great Things Happen. **THANK YOU.**

There are many ways to give:

MATCH | Gifts of any size designated to Gabon will be matched 1:1 by a generous member of TNC's Board of Directors. A gift of between \$200,000 and \$1 million to support the Africa region could be eligible for a 1:2 match through the Robert W. Wilson Charitable Trust Challenge.

LEGACY | You can continue supporting the Africa conservation efforts that are important to you today by making a future gift through your will or trust.

TRAVEL | Your safari could help support TNC's work in the places you love.

Contact Cori Messinger at cmessinger@tnc.org to learn more.

REFLECTIONS FROM SUPPORTERS

Seeing the Future in Silhouette

"One night I was in the northern section of Kruger National Park. There are these big, high grasses, and to get back to the camp, you have to go on a road that's barely wider than a vehicle, and the elephants love it. We were coming back at the end of the night and it was nearly pitch black; a little bit of moon gave everything a sheen. We were about to enter this section of road, and there's this enormous bull elephant blocking the way and there's nothing you can do.

So the guide said, 'I'm going to shut off the car and we're going to wait.' And this elephant walks straight towards us. In just that little bit of moonlight, you see this shadow walking.

We're still in this fairly narrow alley and he has to get around the car. He walks by and he's so close you could touch him. We could smell him, and we could hear that gentle sound of skin crackling. He stopped beside the car and all we could see was this real light haze. Then, without a sound, he walked beyond the car, and it's this ghost walking down the road. That beautiful and amazing moment sticks with me as a reminder: We can't let elephants become ghosts."

-BRIAN MAKARE, Africa Council Member

Growing With the Program

"We're very proud to have encouraged and supported TNC's entry into Africa 10 years ago, and we're thrilled with the results we have achieved. There is still much to do, but we have a great foundation and it's been rewarding to be a part of it.

We've watched as TNC has brought partners on board to help with several issues that are crucial to Africa. Just look at the breadth of their work and the projects they've used to build knowledge, create models, and solve some of the most important issues in Africa!

The exchange of knowledge that TNC facilitates is just so important to the world, and we'd like to see that continue over the next 10 years. Some of the challenges we have in Illinois are the same as those we see in Africa or Latin America. So for Bloomington, Illinois, to be able to learn from Nairobi, Kenya, how to create a water fund — that's really powerful."

-DENNIS AND CONNIE KELLER are longtime TNC supporters. Connie has served on the Africa Council since the group's inception, and Dennis has served on the Council since 2015.

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The mission of The Nature Conservancy is to conserve the lands and waters on which all life depends.

Wito wa The Nature Conservancy ni kuhifadhi ardhi na maji ambayo maisha yote hutegemea.

La mission de The Nature Conservancy est de protéger les terres et les eaux dont toute vie depend.

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with **27** receiving direct TNC investment to improve organizational effectiveness



ACRES UNDER CONSERVATION MANAGEMENT

