





Previous pages and above: Francis Nzioka says bee boxes have kept elephants off his farmland.

Elephants can be lousy ambassadors for conservation. Just ask Francis Nzioka, a farmer in southeast Kenya. "I can't sleep. I hear the elephants all night long," he says as he strides across the plowed rows on his five acres of red, iron-rich soil. He's just waiting for the first big rain so he can plant his beans and black-eyed peas, but that's also when his worries grow.

His problem is that his land is the first stop for elephants in search of water when they wander off the neighboring Chalongo Conservancy. Last year, elephants uprooted his fruit orchard, made a happy meal of his crops, and trampled fences he can barely afford to replace.

Despite all that, Nzioka still calls himself a conservationist, and the African Wildlife Foundation (AWF) helps support his farm on which he's also a good neighbor to elephants. AWF supplied him with boxes of bees that hang from his fences every 10 yards, because elephants really, really don't like bees. Or the taste of aloe vera, which Nzioka plants along his fence line, where eight-inch-long sheet metal strips hanging from the fences chime in the wind, yet another elephant deterrent.

According to a 2019 report by McKinsey and Co., more than 60 percent of the population of sub-Saharan Africa is made up of smallholder farmers like Nzoika. He personifies Africa's conservation challenge—the struggle to thrive economically while protecting wildlife and the lands animals need. That challenge plays out across the second-largest continent on Earth, and we all have a stake in the outcome.

In the 1800s, White colonial overlords drove "fortress conservation," the creation of protected areas in Africa. The colonists walled off lands from Indigenous communities and evicted millions, while ensuring their own ability to hunt big game or to exploit the forests, animal skins, or ivory tusks that created European fortunes.

Since the independence movements of the 1960s, and some before then, African nations have managed their own lands. But Western funding and traditional fortress conservation still guide much of the continent's approach.

Africa has put the world on notice that it will set new terms: it will find a way to protect forests, jungles, savannas, and coastlines while raising the standard of living through city-building, agriculture, and ensuring that economic rewards can flow to all. It will do conservation for Africans, by Africans.

Kaddu Sebunya, AWF chief executive officer, preaches that gospel, using GIS tools to shape a new brand of conservation. He's not the first African leader to stress the importance of partnerships and communities. In 2003, Nelson Mandela said, "I see no future for parks unless they address the needs of communities as equal partners in their development."

Nzioka and his wife, Jane, truly are community partners. Jane greets us with a smile and

an outstretched hand. She holds a volleyball-sized chunk of dry elephant dung in the other. She makes parchment-like paper from the dung, dyed in a range of pastel colors, to help support the farm. Their farm is also a heartbreaking example of what happens to people living close to poverty in climate change-induced extreme weather. Three dry years have left the bee boxes empty, but you know what they say about elephants' memories. They remember the bees, and the boxes still work. With promising early rains, Nzioka asks AWF for more boxes and for seeds so he can plant sunflowers this year to attract even more bees.



Nzokia hangs tin strips from his fence, noisemakers that bang in the wind to keep elephants away.

## New leaders, new demands, and long odds

In July 2022, just shy of a century after a White European king established the first national park on the African continent, 2,400 conservationists came together for the first time as the African Protected Areas Congress (APAC). Representatives of 53 African countries laid out an economic, political, and environmental case that conservation must be done for and by Africans. "We do not beg, we demand an end to colonial conservation," read one statement from the event in Kigali, Rwanda's capital.

Along with the International Union for the Conservation of Nature (IUCN) and the government of Rwanda, AWF cosponsored the congress, positioning itself in the powerful role of an agenda-setter.

APAC wasn't so much a declaration of rights as it was a statement of blinding necessity: Africa's nations will play an outsized role in the future of our planet. The massive Congo Basin, known as Earth's Second Lung, is second only to the Amazon as the filter of 20 percent of Earth's breathable air. With 30 percent of Earth's biodiversity, Africa has become a pivot point for the entire planet's conservation efforts.

The continent's impact on the future of the global economy is just as profound: nearly a fifth of the world's population lives in Africa. Astonishingly, 70 percent of those 1.5 billion people are under 30—a stark contrast to aging Western, Japanese, and Chinese populations. By 2100, nearly 40 percent of Earth's population will be African.

GIS is central to a new, African conservation vision. AWF uses GIS-driven maps, data, and futuristic geodesign tools to decide its own conservation priorities and to get buy-in from ministers and villagers alike.

Fortunata Msoffe built what experts call the conti-







Dr. Fortunata Msoffe, creator of TANAPA's GIS-based model for national parks management.

nent's model for GIS-based management of wild spaces and wildlife in all 21 of Tanzania's national parks with TANAPA (Tanzania National Parks). She has a once-in-a-lifetime opportunity to bring GIS to bear on all major land-use decisions in Tanzania—potentially creating a continent-wide model.

Sebunya and Msoffe are both children of teachers, acceptable university-trained roles for Africans under colonial rule. Both had fathers active in politics who taught them to work for Africans. Both laugh easily, radiating optimism. Both stepped forward in crisis. After spending

parts of six months with them, I've seen their intensity, their strong values, and a deep, shared belief that what they're doing matters for their countries, for conservation, and for the continent.

## "Imagine the French telling you how to run Yellowstone"

From Sebunya to Msoffe and the leaders at APAC, conservation embraces a broad African agenda. It includes erasing colonial-era tariffs that hold back economic growth, enrolling more kids in schools, and investing in leadership training to build civic muscle.

The baritone-voiced, 6-foot 5-inch Sebunya hacks an unconventional, contrarian path for AWF. He thinks the old ways of doing conservation in Africa are patronizing—and unsuccessful. "I could travel to California and (tell donors), 'The sky is falling. We are losing elephants every minute. Every second a rhino is killed.' But for me, that demonstrates the total failure of our sector." He's also outspoken about the costs of the militarization of wildlife protection. "South Africa is even using helicopter gunships now, protecting rhinos 24 hours a day. It's unsustainable."

He and others in Kigali are done with Western countries and nongovernmental organizations (NGOs) determining Africa's conservation priorities. He closes his fundraising pitches

Even as elephants cross a highway undeterred, human-wildlife conflict (HWC) is one of the biggest conservation challenges across African nations.



to US audiences by saying, "Imagine the French telling you how to run Yellowstone."

Elephants, giraffes, zebras, and the big cats don't know the boundaries between parks, conservancies, buffer zones, Community Management Areas, and communities themselves. Wildlife wander freely across endless lands—even on rutted dirt roads before safari trucks scatter them to the side. It's the elephants, Sebunya says, that reveal the gap between the West and the continent. Elephants in Kenya are tourist magnets. In the Democratic Republic of the Congo, they've been killed to exchange their tusks for guns and ammunition to fuel that country's endless civil wars. And in tiny Botswana, an estimated 150,000 elephants strain ecosystems that can support only half that number.

Westerners see every one of the giants as precious, but villagers talk about them as enormous pests that stand in the way of their children getting to school or that destroy vegetable gardens that provide daily meals.

So it seems obvious to Sebunya that Africans are best suited to understand their own local conservation challenges, and they've turned to GIS for help. "GIS can define a legitimate elephant corridor from random sightings over 15 years," explains Nancy Githaiga, AWF's country director for Kenya.

Sebunya has even been known to tell donors such as billionaire Jeff Bezos's foundation, "I don't want your money for 'caring' about wildlife. We have much more to do if we're to succeed." He needs their money to also bring about policy changes, to train law enforcement, and to hire more GIS staff. He says, "We can't love Africa out of charity any longer. That time has passed. Instead, we can love it for our common future."

AWF's model trusts tens of millions of Africans like farmer Francis Nzioka to be stewards of wildlife. Sebunya says, "Conservation in Africa is no longer a science issue. It's an economic, social, and political issue."

That's a big lift. Sebunya frequently quotes an African head of state whom he asks me not to name, "You know, Kaddu, I've never met a voter that is asking for more national parks or elephants. You know what they want? Jobs."

While Africa's middle class has tripled in the last three decades, now nearly the size of the 340 million residents of the United States, another 450 million Africans live below the global poverty line of US\$1.90 per day. Most African nations devote less than 1 percent of their budgets to conservation. It falls to AWF, TANAPA, and others to prove that conservation can support development while development respects conservation.

Africa's nations aren't the first to try to thread the development/conservation needle. I worked in the NGO environmental world for 15 years. I saw oil companies raise gas prices in the summer of 2009, cratering the US's best shot at climate legislation. Park rangers in Belize told me about how Chinese loggers illegally cut precious mahogany trees in the dead of



Wildlife doesn't respect human boundaries—a lioness on the hunt crosses a road in Tanzania.

night. In Africa, the pressure to turn wild lands into corporate farms or much needed infrastructure will be relentless.

But the opportunity in Africa transcends any other: with 86,000 protected areas, nearly a fifth of its landmass, Africa may be the world's last best hope for finding a way to harmonize the two competing forces. There's actually no alternative but to try, because development won't stop.

While all the big Western charities and hundreds of dedicated, continent-based partners contribute mightily to Africa's environmental future, Sebunya points out he's the only Black African-born-and-raised leader of a major conservation nonprofit on the continent and says that's "tragic."

Sebunya leans into a conversation as if he can change the world just by force of personality. TANAPA's Msoffe is less outspoken and equally determined, working inside her government. But the scale of change Africa needs will require more than determination. It will take continent-wide commitment. AWF, TANAPA, and others are charting a new course, but they're facing off against history and money.