AFRICAN WILDLIFE FOUNDATION®

SUMMER 2014

Why conduct censuses? Page 4

Going beyond bonobos Page 5

Best Africa books Page 7

African Wildlife NEWS

Your support at work in Africa's landscapes

Billy Dodson

Anti-poaching efforts, aided by technology, are helping to protect these zebras on Manyara Ranch Conservancy.

Africa's Digital REVOLUTION

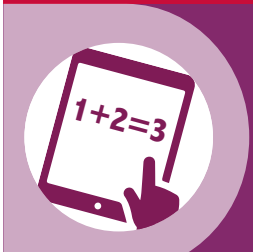
Africa is finding creative ways to overcome the infrastructure obstacles that have often hindered economic growth.

MOBILE PHONES

Mobile network operators in various countries have developed mobile money transfer and micro-finance services.

CYBERTRACKING

New technologies like CyberTracker ecological monitoring devices are helping to make the work of rangers and game scouts faster and more efficient.



TABLETS

Entrepreneurs from Nigeria, Zambia, and beyond are designing and launching their own low-cost tablets that meet the needs of local markets.

DESKTOP COMPUTERS

AWF and the Annenberg Foundation built a computer lab at Manyara Ranch School to ready students and teachers for the 21st century.

Closing the Technology Gap

From mobile phones to CyberTrackers, technology is transforming Africa and how we do conservation

Almost as ubiquitous as the acacia tree on the savanna is the mobile phone in Africa. That tidy assemblage of circuit board and battery in a handheld box has increasingly become an indispensable part of daily life for Kenyans and Ugandans as much as for, say, Americans and Europeans. Africa is the fastest-growing mobile market in the world, with subscriptions expected to hit 1 billion by 2015.

The surprising thing, however, is not necessarily Africa's fast and furious adoption of the mobile phone but its *adaptation* of the phone. Necessity breeds innovation, and in many countries in Africa, where the need for basic services—such as electricity, communications, or banking—can be great, innovators are redefining the functions a mobile phone can perform.

"People in rural areas have little to no access to today's technologies, yet they are the ones who stand to gain the most from it," says James Mithamo, AWF's director of information technology and infrastructure. "Technology makes it possible to bypass poor infrastructure and connect remote areas directly with the tools and services that enrich our lives."

Take banking, for example. In 2005, 20 million South Africans owned mobile phones, while only 13.5 million had bank accounts. For the same year in Uganda, 100 automatic teller machines served a country of 27 million people. In Kenya, instead of waiting for the traditional banking infrastructure to catch up, mobile phone operator Safaricom developed a mobile money transfer and microfinance service called M-Pesa. Suddenly Kenyans could send and receive money with a simple text message, whether they were sitting in their Nairobi apartment or their far-flung manyatta. (Other telecom providers in Africa have come out with their own versions of M-Pesa.)

Mobile technology & conservation

Mobile money transfer services have even been adopted by conservation groups. AWF's partner, Honeyguide Foundation, leads anti-poaching operations in and around Manyara Ranch Conservancy in the Maasai Steppe

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AFRICAN WILDLIFE FOUNDATION®

The African Wildlife Foundation, together with the people of Africa, works to ensure the wildlife and wild lands of Africa will endure forever.

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Teaching and Learning, in Ways Both Old and New


Craig R. Sholley

In the Kilimanjaro landscape, it's not unusual to come across a Maasai dressed in full traditional garb—with a cell phone clipped to his belt. On the one hand, this image is startlingly incongruous. On the other, it's the embodiment of how Africa works: embracing its cultural history while also welcoming future innovations.

As our cover story explains, one of the best things about this mix of Old World and new technology is how it can level the playing field for those who live—and work—in Africa's rural areas. AWF has leveraged innovations as varied as VSAT and handheld GPS devices to work more efficiently in the field. As important, we've brought new technologies directly to rural communities, allowing them to leapfrog over gaps in infrastructure and resources.

Our efforts have been particularly effective through the AWF Conservation Schools (ACS) program. In northern Tanzania, AWF built an IT lab at our flagship Manyara Ranch Primary School, enabling students to learn desktop computing skills from a young age. We supplied solar panels for the teacher houses at Lupani Primary School in rural Zambia so teachers can plan their lessons even after night fell. We're now experimenting with the idea of tablets that contain both academic lessons and books—and continue to learn more about how best to use technology for conservation.

Technology can level the playing field for those who live in rural areas

Of course, education is sometimes most effective when delivered the old-fashioned way—i.e., in person. In the Congo landscape, arguably one of the most remote areas on the continent, AWF has worked closely with communities for the past 10 years to increase their understanding of the benefits of conservation. And we've been very successful. Credit goes to our staff on the ground who, along with our partners, has accomplished a lot by listening, learning, and teaching—through countless workshops, community meetings, and one-on-one discussions. Turn to page 5 to learn how these communities are now actively protecting the forest and wildlife.

Whether we employ methods new or tried-and-true, the one common factor in our work continues to be the tremendous support we receive from people like you. With your commitment to Africa, we can surely continue to build conservation capacity among Africa's people and protect its wildlife for years to come. In the meantime, I encourage you to check out page 7. We have some Africa-related book suggestions that might be of interest for your own personal education!

With heartfelt thanks,

Patrick J. Bergin, Ph.D.
Chief Executive Officer


Perrin Banks

RIGHT: Just as AWF has provided technology for students at Tanzania's Manyara Ranch School, it is also looking into options via a school in Ethiopia's Simien Mountains. This will provide new advancement opportunities for local communities and conservation opportunities for AWF.

AWF roundup


Perrin Banks

Graduating With Honors

In rural Africa, secondary schools can be located far from local villages, with tuition out of reach for many poor families. In Zambia's Sekute Chiefdom, AWF established an education trust fund to enable a select group of deserving students to continue on to secondary school. One such recipient was Clement Masangu, an 18-year-old from Kazungula, Zambia, who lost his father in 2008. "When my dad passed away, we didn't have money to pay high tuition fees," he explained.

With AWF's support, however, Clement recently graduated—with impressively high marks, we should add—from a prestigious secondary boarding school in Livingstone. In a moving thank you letter to AWF, Clement wrote, "It is because of the help you rendered that I am a proud holder of this kind of result. I would … humbly urge you to continue sponsoring students in Sekute Community, as this will help wipe out illiteracy in the community, Zambia, and later, Africa." Clement will be attending the University of Zambia next year to pursue a degree in electrical engineering.

In the past four years, AWF has sponsored more than 420 students from Sekute to attend secondary school.

Ivory demand-reduction efforts gain momentum


Billy Dodson

Momentum builds in our ivory demand-reduction efforts: In March, former NBA star Yao Ming—who is part of our demand-reduction campaign with WildAid and Save the Elephants—delivered a petition to the Chinese government asking it to ban domestic trade in ivory. That same month, Chinese Arts & Crafts, Hong Kong's largest ivory retailer, announced it had stopped selling elephant ivory in its stores—a claim verified by spot checks by WildAid. This was followed by announcements by Hong Kong retailers Wing On and Hue Ywa that they had banned ivory sales in its stores.


Sarah Davies

8,376

No. of patrol man days conducted in Lower Zambezi National Park in 2013 by NGO Conservation Lower Zambezi, thanks to an AWF Species Protection Grant. In 2013, the park experienced the lowest level of elephant poaching in the organization's history.

AWF back in South Sudan

James Kahurananga had been working as an AWF advisor to the government of South Sudan during 2013 to help protect the country's rich wildlife resources, such as the white-eared kob. But when fighting erupted there in December, AWF was forced to evacuate him. We're happy to report that Kahurananga is back in the capital city of Juba, once again supporting the Ministry of Wildlife Conservation and Tourism. AWF will also soon be doing some work in the Imatong Mountains in the southern part of the country.

Ape workshop facilitates partnerships

Great apes in Africa face a number of threats, including the illegal pet trade, bushmeat trade, habitat loss, and disease. To maximize conservation efforts, AWF in April—with support from the Arcus Foundation and the Great Apes Survival Partnership (or GRASP)—organized a two-day great apes workshop in Kinshasa, Democratic Republic of Congo (DRC), where protected area authorities, policymakers, and researchers developed great ape action plans for Cameroon, Senegal, and DRC. This was followed by a seven-day anti-poaching and biomonitoring training exercise in the Lomako–Yokokala Faunal Reserve for ecologists and rangers.

"The great ape populations in these countries face very serious threats to their survival," said Jef Dupain, technical director for AWF's great apes program. "This was about finding solutions for better partnership, communication, and greater transparency."


Martin Harvey


Paul Runze / PCRimages.com

Census as STRATEGY

How the necessary task of counting animals aids elephant conservation work

Count sheep. That's the advice given to people having trouble falling asleep—a clear indication that most don't consider counting animals an exciting task. Yet the counting of animals is crucial to conservation efforts. Wildlife censuses help gauge population patterns and distributions across habitats and time.

This is especially critical for Africa's elephants, given the extent of the illegal wildlife trafficking crisis. According to a recent study, which involved data collected by numerous conservation organizations, including AWF, 65 percent of all forest elephants had been killed for their ivory over the past decade.

Purpose of counts

A 2014 census conducted in Selous Game Reserve in southern Tanzania, which boasts among the largest elephant populations in East Africa, found that the reserve's population had fallen an astounding 67 percent since 2010. The census, coordinated by two AWF partners and conducted at the behest of the Tanzanian government, estimated that only 13,683 elephants remain in the ecosystem—compared to 110,000 only 30 years ago.

"There was a time when the Selous ecosystem looked safe from poaching, because of the sheer number of elephants in that expansive landscape. But in conservation, you can never be safe," observed Philip Muruthi, AWF's senior director of conservation science.

And that's the purpose of such counts, to affirm the stability—or not—of wildlife populations. In response to the current elephant poaching crisis, AWF identified 10 critical populations across sub-Saharan Africa, comprising nearly two thirds of the continent's total elephant population. Populations were prioritized in part on size, threat severity, and feasibility of intervention. Under this strategy, AWF last year began channeling discrete amounts of funding via our Species Protection Grants program to support counter-poaching efforts in some of these priority sites. Existing elephant conservation work also continues in AWF's landscapes.

Turning the tide

In addition to illustrating where interventions are needed, censuses can be used to confirm whether certain strategies are working. In the Amboseli–West Kilimanjaro area between southern Kenya and northern Tanzania, AWF initiated a collaborative large-mammal count between Kenya Wildlife Service and Tanzania Wildlife Research Institute in the 2000s to enhance common conservation practices in this cross-border area. The partners now conduct an integrated aerial and ground census of large herbivores every three years.

The 2013 census found that the savanna elephant population increased slightly from 2010, from 1,420 individuals to 1,930—confirming that the population had steadily recovered from the severe drought of the late 2000s. Meanwhile, the number of observable elephant carcasses had declined 40 percent.

According to the report, the resilience of the population "is largely attributable to the transboundary nature of their distribution … and successful anti-poaching operations and cross-border meetings conducted between community scouts and wildlife authorities from both countries, with support from AWF."

It's this kind of data that lends credence to how we work and defines where we need to focus our efforts. For AWF, counting animals will continue to provide the backbone for our conservation work.—*Mike Rooney*

Kenya Wildlife Service

ABOVE and RIGHT: Wildlife censuses require significant coordination and prior planning, but can also provide useful information about conservation strategies being used. At right, AWF Kenya Country Director Fiesta Warinwa (foreground) directs efforts during the 2013 Amboseli large herbivore census.

Beyond Bonobos

AWF puts the community at the center of its conservation efforts, ensuring long-lasting land and species protection in the heart of the Congo Basin

It's hard to overstate the ecological value of the Congo Basin. The second-largest tropical rainforest in the world after the Amazon, the Basin is sometimes referred to as the world's second lung for its ability to absorb carbon dioxide and release oxygen. It's also a treasure trove of endemic species.

Little wonder, then, that AWF's Congo landscape is located in the heart of the Basin, in one of the most undeveloped parts of the Democratic Republic of Congo (DRC).

Unfortunately, the area's 800,000 human residents—who live in poverty and have few income opportunities—have turned to unsustainable agricultural practices and illegal bushmeat hunting to survive, felling trees and diminishing wildlife populations in the process.

Community involvement

For the past 10 years, AWF has worked to reverse these trends. It has made some meaningful conservation gains, thanks to two rounds of funding support from the U.S. Agency for International Development (USAID) and a philosophy of involving the community at all levels of land planning, species protection, and livelihood improvement.

For example, AWF developed a land-use plan with residents that designated certain parts of the forest for agriculture or resource extraction and other parts as permanent forest. The resulting plan saves almost 200,000 hectares (now designated as permanent forest) across 33 communities. More importantly, says our Congo Landscape Director Charly Facheux, "we worked with the community to keep the forest protected." AWF's participative planning process has been recognized by the Congolese government as a model for other land planning efforts in DRC.

In the area of species protection, AWF again put communities at the center of its efforts, establishing two community reserves—Lomako–Yokokala Faunal Reserve and Iyondji Community Bonobo Reserve—that provide officially protected areas for critical bonobo populations, create jobs, and bring in tourism income.

Unfortunately, residents have turned to unsustainable agriculture and illegal bushmeat hunting to survive

Finally, we've addressed residents' lack of sustainable livelihood opportunities. Through microgrants funded by the World Bank, for example, AWF has looped in local organizations to train more than 3,000 people in agroforestry, fishing, sanitation, sustainable agriculture, crop processing, market access, and more.

These efforts have worked wonders. Household revenues in one town, Djolu, have increased by 15 percent since the start of our engagement here. Farmers have been able to get more from their land: Where once they abandoned their agricultural plots every year to raze a new part of the forest for farming, people are now working their fields for four years before moving to new land.

Finally, a 2012 general census confirmed increases in the wildlife population across the landscape.

Ambitious goals

AWF is continuing this momentum under a new round of funding from USAID. Goals include establishing a third community reserve and transforming our Lomako Conservation Science Centre into the area's first Centre of Excellence dedicated to training in anti-poaching and ecological monitoring. AWF is separately addressing the lack of quality education in the region by building an AWF Conservation School in the community of Ilima.

"If communities get income from tourism, sustainable agriculture, and climate change mitigation, and receive a good education, it will change their perceptions about conservation," Facheux observes. "They won't destroy the environment." All of which bodes well for the Congo Basin's ability to continue providing valuable ecological services to not only DRC but to all of Central Africa.

AWF has been in the Congo landscape for 10 years—but Nakedi Maputla, our South African leopard researcher, is new to the landscape. Check out awf.org/nakedi-qa to find out why Nakedi is now in the Congo, and how he's doing!

ABOVE: Life for the bonobo hasn't always been serene, but AWF's involvement in the Congo landscape has provided greater protection for this great ape and its habitat.

LEFT: Technology is opening doors for both AWF and local communities. In landscapes like Maasai Steppe, for example, AWF has engaged communities in the conservation of lions and other wildlife in part by providing access to education–and to technology through an IT lab at the school.

Continued from page 1

landscape. Honeyguide's rangers often rely on tip-offs from informants to catch poachers, with informants paid for their intel through M-Pesa.

"Payment by mobile phone offers a transparent, direct, and immediate way to reward them for their good intel," says Damian Bell, Honeyguide's executive director.

When there are no informers about, though, it can be difficult for wildlife authorities to know where to focus their limited staff and resources. At the Lomako–Yokokala Faunal Reserve in AWF's Congo landscape, AWF has trained rangers and protected area managers to use rugged handheld computers called CyberTrackers to collect and analyze ecological information. By tapping a few buttons, rangers can quickly record the location and description of whatever they are seeing on their CyberTracker.

"It's difficult for managers to do their job when the information they get from the field is days old and not very reliable," says AWF Biologist Alain Lushimba, who has trained rangers and ecologists at protected sites in West and Central Africa. "This changes that."

Retaking the battlefield

Some "new" technologies aren't new at all but merely new in their deployment in the service of conservation. Unmanned Aerial Vehicles (UAVs), commonly known as drones, are being piloted in different parts of Africa to perform a variety of tasks, whether it's an anti-poaching patrol over a vast park or counting chimpanzee nests in the tree canopy from the air. AWF is exploring how drones could be used to monitor human and wildlife activity on properties like Manyara Ranch.

While having eyes in the sky may give rangers that needed edge over poachers on the move, the information provided is only as good as the coordination, communication, and preparedness of rangers on the ground. In the Kilimanjaro landscape, for example, game scouts spend an inordinate amount of time writing up reports by hand in the morning and evening, conveying the information over radio to their commanders, and trying to get through to their counterparts in another country to share information about transborder poaching activity.

"Technology itself is just the beginning. What matters most is how you use it."

—James Mithamo, AWF director of IT and infrastructure

In consultation with mobile network operators and software companies like Ushahidi, AWF, through a USAID program called the PREPARED Project, is looking to leverage technologies that would create a data management system that better collects and analyzes information on poaching-related activities. The system could predict poaching hotspots, allow scouts to instantly record and transmit information via a smartphone, and create a transborder communications platform for wildlife authorities to share critical information without delay.

Bridging the divide

The Sekute Chiefdom lies in a remote, semi-arid landscape just north of where the boundaries of Namibia, Zambia, Botswana, and Zimbabwe meet. It was here that AWF, together with the Sekute community, established the Sekute Conservation Area to protect a critical wildlife corridor. Though only an hour's drive from the town of Livingstone, the chiefdom is just far enough to be off the electrical grid. The area's remoteness makes it attractive to elephants, lions, and other wildlife—but its isolation comes at a price for Sekute residents, who often have no access to basic services such as running water, electricity, and quality education for their children.

For the Chiefdom's Lupani village, AWF's strategy addressed a critical need—education—in return for conservation concessions from the community. In 2011, AWF replaced Lupani's tumbledown primary school with a new brick-and-mortar facility that has six classrooms and an office; teacher housing equipped with showers and solar-powered lighting; a sports field; and, more recently, a school garden. Since the opening of the new school, enrollment and pass rates have both increased, and the school is fast becoming one of the best in the district.

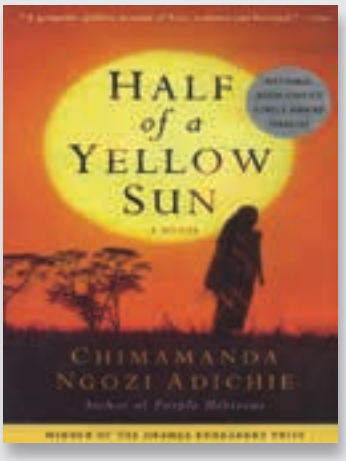
Now, as part of the AWF Conservation Schools initiative, AWF will help Lupani Conservation Primary School take the next step by adopting new technologies, such as solar-charged tablets, to enhance the educational experience.

When it comes to technology, AWF is increasingly at the forefront of putting it in the hands of those who stand to benefit most. But, cautions Mithamo, "Technology itself is just the beginning. What matters most is how you use it."—*Kathleen Garrigan*

The Book Nook

AWF highlights a few books on Africa to interest readers of all stripes

The continent of Africa is a rich, deep well from which fiction and non-fiction writers continue to draw. Whether the topic is the rebirth of Gorongosa National Park in Mozambique or the growing pains of a young Nigeria shortly after independence, readers have a plethora of materials from which to choose. AWF has highlighted a handful of books below. Happy reading!



FICTION

Half of a Yellow Sun

By Chimamanda Ngozi Adichie

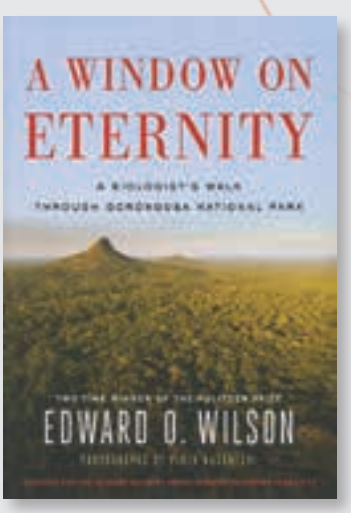
A houseboy, a revolutionary professor, beautiful twin sisters, and a British expatriate are at the center of this story, which unfolds during the 1960s—a time when the Igbo people of southern Nigeria attempted to break away from the rest of Nigeria and form a separate republic called Biafra. Through the eyes of key characters, Adichie introduces the reader to the other main character in the novel: a young Nigeria struggling to overcome the divisive policies of the former colonialist government and its own inner demons.

NON-FICTION:
Consumer Markets

Africa Rising: How 900 Million African Consumers Offer More Than You Think

By Vijay Mahajan

Too often the world sees Africa as a continent defined by conflict, poverty, and corruption instead of recognizing it for what it really is: an emerging continent full of smart, resilient, creative entrepreneurs and consumers with considerable influence and buying power. Mahajan explores one of the fastest-growing consumer markets in the world.

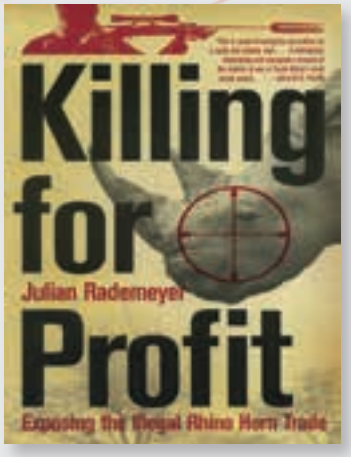


NON-FICTION:
Natural History

A Window on Eternity

By Edward O. Wilson

Scientist, naturalist, and famed writer E. O. Wilson takes the reader on a biologist's journey through Gorongosa National Park, one of Mozambique's premier parks. The national park's wildlife was nearly destroyed by a brutal civil war that lasted for 15 years.



NON-FICTION:
Illegal Wildlife Trafficking

Killing for Profit

By Julian Rademeyer

South African journalist Julian Rademeyer investigates the decades-long illegal trade in rhino horn in Southern Africa and exposes the operations of Asia-based criminal syndicates involved in today's current trade.


Billy Dodson

A children's book on the migration

Monica Bond and Derek Lee are currently conducting scientific monitoring of 20 ungulate species, including the wildebeest, in the greater Tarangire ecosystem in northern Tanzania, where our Maasai Steppe landscape is located. The researchers have enlisted the help of 10 villages to help safeguard the migratory route. As part of their awareness campaign, they co-wrote this English–Swahili–Maa children's book, which tells the tale of a wildebeest calf as he migrates from the plains south of Lake Natron to Tarangire National Park, the wildebeests' main source of water during the dry season. AWF provided funding for the printing of this book and has also helped distribute it to Manyara Ranch Primary School and other schools in the region.

wildlife WATCH *Walia Ibex*


Brian McBrearity

The beard makes the man—or in this case, the Walia ibex male. Endemic to the Simien Mountains of northern Ethiopia, this rare species makes its home along steep, rocky cliffs that top out at heights of almost 15,000 ft. At these elevated plateaus, the ibex grazes on a diet of bushes, herbs, lichens, and other assorted low-lying shrubbery. Moving expertly above the deep valleys and gorges in herds of as many as 20 individuals, this endangered goat relies on a female-based social structure in which the more mature males will follow the herd from a distance and only engage with the females during mating season.

Due to their solitary nature, the Walia ibex males live the life of a single, oftentimes quarrelsome, bachelor. They drop in on their respective herds during late fall and early winter, then just as quickly jump back to their single lifestyles. It's during this season, not surprisingly, that males are seen engaging in displays of dominance for their female counterparts. They use their curving, scimitar-like horns—which can grow to lengths of up to 43 inches—to defend against possible intruders to their territory.

After surviving significant instability and outbreaks of war in its habitat decades past, the Walia ibex is now threatened by human encroachment brought on by those returning to the area. Livestock grazing currently threatens the ibex's foraging grounds, forcing many herds to feed on nearby crops—thereby exacerbating the human–wildlife conflict.

To mitigate this conflict and at the request of the Ethiopian Wildlife Conservation Authority, AWF has formulated a detailed tourism plan for Simien Mountains National Park to help create an equitable tourism development plan in the area. AWF is in the process of improving the park's trails and tourism capacity, having recently underwritten a week-long training program for area trekking guides. Ultimately, the plan is for local communities to benefit from increased tourism to the park, which will urge them to conserve the ecosystem and ease their need to encroach onto park boundaries for other activities.

All of which will be a boon for Walia ibex populations—these sure-footed, cliff-loving ungulates need all the solid ground they can stand on if they're to make a full recovery.—*Mike Rooney*

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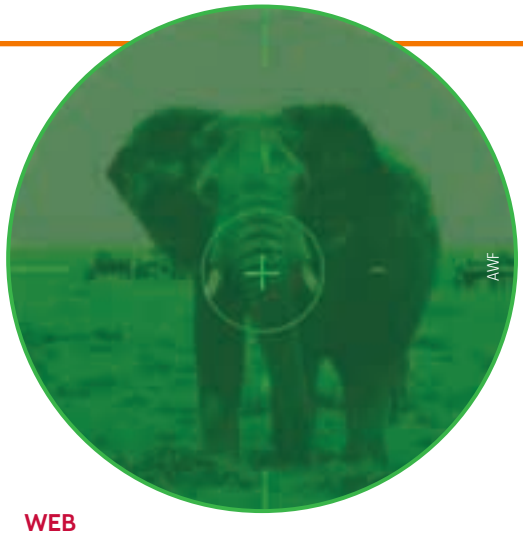
AWF

WEB

The Modern POACHER

To illustrate the destructive impact of the modern poacher, we created an interactive experience that lets you directly experience Africa's landscapes and wildlife through a poacher's night-vision goggles. You'll learn about the latest technologies—military-grade hardware and helicopters, for example—that are being used by today's poachers to target Africa's wildlife.

Take a look for yourself: awf.org/themodernpoacher

what's new ONLINE

VIDEO

Saving South Africa's Rhino

More than 75 percent of the world's rhinos live in South Africa. This is one of the reasons we provided a grant to Great Fish River Nature Reserve in South Africa, to help protect its critical rhino population.


AWF

Learn how they protect their rhinos: awf.org/greatfishrhinos

VIDEO

Rhino Horn Fight Heads to Vietnam


WildAid

In March, AWF expanded further into the Asian market with the launch of a rhino horn campaign in Vietnam. The event involved partners WildAid and CHANGE, and Vietnamese celebrities like action star Johnny Tri Nguyen. As of mid-July, more than 558 rhinos have been killed in South Africa due to rhino horn demand.

Watch and share Nguyen's video: awf.org/johnnynguyen