



Making Elephants Matter

Uganda's protected area authorities were deeply committed to conservation, but needed extra help in getting communities to care

ganda was once a country marked by natural beauty and scarred by civil war—particularly evident in the northern stretches of the country. Palm trees dot expanses of wide-open grassland, while people who decades ago fled the terror of the Lord's Resistance Army now battle to keep elephants off their farmland.

It is in this context that AWF has been implementing the U.S. Agency for International Development (USAID)/ Uganda Biodiversity Program for the past four years. The program works to achieve sustainable biodiversity conservation around five protected areas while also promoting local economic growth. The projects support both the wildlife authority and communities living around the protected areas, which include Murchison Falls, Kidepo Valley and Lake Mburo National Parks, and Kalinzu and Budongo Central Forest Reserves.

Four years in, these protected areas are objectively better managed. At the same time, a number of local communities are on their

way to earning more money than they had been just a few years prior.

Improving monitoring systems

To help the Uganda Wildlife Authority (UWA) improve their systems for monitoring and mitigating threats to biodiversity, AWF provided equipment and trained 21 UWA data managers in the use of the Spatial Monitoring and Reporting Tool (SMART). Additionally, 120 rangers were trained in the use of CyberTracker software, which allows them to record data on smartphones while on patrol. The collected data is downloaded into SMART software on computers for analysis and decision-making.

The ability to collect data in a seamless manner has been helpful, especially given the sheer amount of land rangers are covering. "Here at Murchison Falls headquarters, we can have more than five patrols that go out at the same time," reported the head of monitoring and

Continued on page 5

Elephants are not the only wildlife benefitting from AWF's work in Uganda. The country's diverse ecosystems are home to a wide range of forest and savanna species:

Leopard

Leopards can adapt to savanna and forest landscapes. Kidepo Valley, Lake Mburo and Murchison Falls National Parks all provide suitable habitats for these elusive cats.



Chimpanzee

To reduce encroachment and protect the 800 chimps residing in Kalinzu and Budongo Central Forest Reserves, AWF helped local people increase their incomes through beekeeping.



Kori bustard

With its semi-arid plains, hills and mountains, Kidepo Valley National Park boasts an incredible 475 bird species, including the kori bustard—the heaviest bird in the world capable of flight.





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

AWF Senior Staff

Patrick Bergin CFO

Kaddu Sebunya President

Jeff Chrisfield C00

Craig Sholley Senior vice president

Charly Facheux Vice president for conservation projects

Kathleen Fitzgerald Vice president for conservation strategy

Tyrene Haralson Vice president for finance & administration

Lindsay Kosnik Vice president for philanthropy

> Philip Muruthi Vice president for species protection

Daudi Sumba Vice president for program design & government relations

Editorial Staff

Mayu Mishina Director of content and messaging

> Grant Wheeler Graphic designer

African Wildlife News is published four times a year. © 2016 African Wildlife Foundation

African Wildlife Foundation

Washington, DC 1400 16th Street, NW Suite 120 Washington, DC 20036 **AWF Conservation Centre** Ngong Road, Karen P.O. Box 310, 00502 Nairobi, Kenya

Toll Free +1 888 494 5354 Phone +254 20 2765000 Phone +1 202 939 3333 Fax

+254 20 2765030 +1 202 939 3332

email: africanwildlife@awf.org





Hard Work and Progress



aving our headquarters in Nairobi means we get a front-row seat whenever there is big news in Kenya. And the past several months have been significant with regard to Kenya's progress against wildlife trafficking. In April, there was the historic ivory burn where the Kenyan government destroyed 105 tons of ivory and more than 3 tons of rhino horn—the entirety of its ivory and rhino horn stockpile. It was a momentous occasion and one I hope will be repeated elsewhere across the continent.

Then, in July, the Kenyan courts sentenced a notorious ivory kingpin, Feisal Mohamed Ali, to 20 years in jail. Given the light regard many African courts still have for wildlife crimes, to say we were anxious about the outcome of the case was an understatement. The guilty verdict was a testament to Kenya's determination to rid itself of the scourge of wildlife trafficking. We are seeing a move here toward zero tolerance of wildlife poaching and trafficking.

I credit all of AWF's hardworking staff for the results they have been able to achieve

The question becomes: Is this just a phenomenon occurring in Kenya—or is there improvement globally in efforts to shut down wildlife trafficking?

I would like to think the improvement is global, not just local. As you'll read in our special wildlife trafficking supplement, African Wildlife Foundation (AWF) has been doing its part to make sure progress is as broad-scale as possible. We've hosted judicial workshops to sensitize magistrates and prosecutors throughout Africa about the seriousness of wildlife crime, deployed detection dog units to stop illicit wildlife products from heading off the continent and continued to provide anti-poaching support to on-the-ground partners to stop the killing of elephants and rhinos. This concerted effort has been supported by our outreach to governments on the importance of protecting our natural resources (see "Advocating for the AWF message" on p. 3).

I credit our hardworking staff for the results they have been able to achieve—not just in fighting wildlife trafficking but with advancing conservation in other ways on the continent. Take our team in Uganda. Working in concert with Uganda Wildlife Authority and local communities, our staff there has enhanced livelihood opportunities for people who, decades after fleeing the terror of the Lord's Resistance Army, are still fighting for survival—this time against elephants. Read more about our efforts there in our cover story.

Of course, our Uganda team and our other staff throughout Africa (such as Alain Lushimba, whose first-person account on p. 7 of working in northeastern Democratic Republic of the Congo is a must-read) would not be able to make these impacts were it not for your generosity. Your support of AWF is what has allowed us to see progress against wildlife trafficking, to help the Cameroonian wildlife authority work smarter in the Dja Faunal Reserve (p. 6) and much, much more. We could not do it without you!

With heartfelt thanks,

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

> Is there any hope in the global fight against wildlife trafficking? Find out in our special supplement, located on page 4.



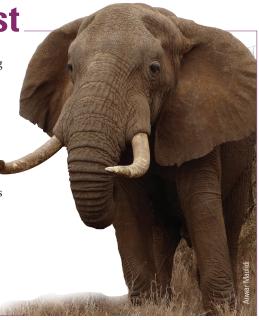
AWF roundup

Elephant numbers dropping fast

Africa's savanna elephants are dropping rapidly and poaching is primarily to blame, according to the Great Elephant Census, the first-ever pan-African survey of savanna elephants. The census, which took three years and counted elephant populations across 463,000 sq. mi. in 18 African countries, found that the savanna elephant population now hovers around 352,271. For the 15 countries where comparative data is available, this reflects an average decline of 30 percent between 2007 and 2014.

The biggest drops in population were reportedly in Tanzania and northern Mozambique, but overall decline rates were also on the higher end, at an estimated 8 percent annually. In somewhat more positive news, however, many of the sites where elephant populations are stable or increasing are those where AWF is active or has invested significant resources.

The census results were released shortly before the 2016 IUCN World Conservation Congress in September, which several AWF staff attended. The census results prompted a motion to be brought to the floor of the congress to urge all governments to shut down their domestic ivory markets. The non-binding motion passed, despite opposition from select countries, including Japan, South Africa and Namibia. Currently international trade in ivory is prohibited, but domestic ivory trade is governed on a country-by-country basis.



Proof there's chance for recovery



AWF helped establish the Lomako-Yokokala Faunal Reserve in the Democratic Republic of the Congo (DRC) as a protected area in 2006. The reserve has since been protected by ecoguards from the wildlife authority, Insitut Congolais pour la Conservation de la Nature (ICCN), with ongoing support from

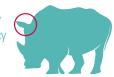
AWF. Ten years later, camera trap photos are showing a flourishing wildlife existence, proof of how regular patrols and protection can increase wildlife populations!

Environmental crime pays

The U.N. Environment Programme released a report in June that finds the value of environmental crime is 26 percent greater than just a couple of years ago. Environmental crime includes wildlife trafficking as well as illegal fisheries, deforestation, the trafficking of hazardous waste and more. Today, this "industry" is valued at somewhere between \$91 billion and \$258 billion. This is up from 2014, when environmental crime was reported to be generating revenues from \$70 billion to \$213 billion per year. Environmental crime is reportedly growing two to three times faster than global GDP, fueled by weak laws and poorly funded security forces.



Number of rhinos that were recently ear-notched at OI Pejeta Conservancy for easier identification, through an **Urgent Response Fund grant**





Advocating for the AWF message

Since starting his position as AWF president in January, Kaddu Sebunya has been traveling around Africa advocating for land conservation and wildlife protection to be built into countries' national policies. Following is just a sampling of the meetings at which AWF's conservation viewpoint has been represented:

- Sebunya represented AWF at a World Heritage Committee meeting in Arusha, Tanzania, in June. The meeting was co-hosted by the U.N. Educational, Scientific and Cultural Organization (or UNESCO) World Heritage Centre and the governments of Tanzania and China.
- At the **27th African Union Summit** in July, Sebunya (at right in the above photo) met with former Tanzanian President and AWF Trustee Benjamin W. Mkapa (center) and current Ugandan President Yoweri Museveni (left), among others.
- In September, the AWF president presented at **The Global** African Investment Summit in Kigali, Rwanda, hosted by the Common Market for Eastern & Southern Africa (or COMESA) and the government of Rwanda.



In southern Tanzania, where agriculture is the greatest threat to biodiversity, AWF is instead using it to bring about conservation

anzania is known for its wildlife tourism, but in reality, 91 percent of tourism arrivals in the country head to northern Tanzania. The southern swath of Tanzania, with its fertile soils and temperate weather, is prime agriculture country.

Even so, making ends meet is not easy for the smallholder farmers who comprise 80 percent of the region's population. The average household in southern Tanzania earns only about US\$300 per year. Take Frank Adamson. For the past 20 years, he has been eking out an existence as a potato farmer. Like other farmers here, Frank struggled to get the best prices for his crops. At the same time, his harvests were declining.

Frank took out loans to buy fertilizers and pesticides, which he thought would maximize his yields. He was unknowingly making things worse: The chemicals were leaking nutrients from the soil, diminishing crop production. Each subsequent year, Frank would take out more loans. He ended up in a vicious cycle of debt.

Breaking the cycle of debt

"Agriculture presents the greatest threat to biodiversity conservation in southern Tanzania," says Godlisten Matilya, who oversees AWF's conservation programs in the Mbeya region of this part of the country. "Yet agriculture is the No. 1 income generator in southern Tanzania."

So rather than try to convince farmers to not farm, AWF instead decided to use agriculture as an entry point for conservation. We identified 181 demonstration farmers—including Frank—willing to try sustainable farming techniques. Then we gave them training and other support.

The southern swath is prime agriculture country

AWF taught farmers how they can use locally available materials to make environmentally friendly farm inputs. They also learned other sustainable crop-production methods. On average, switching to organic methods shaved production costs by a whopping 80 percent.

Farmers like Frank were also having trouble getting the best prices for their crops at local markets. AWF therefore linked potato farmers to a market information network that connects them to vendors who buy the

potatoes in bulk, directly from the farms, and sell them in larger markets.

For Frank, being a demo farmer has made a tremendous difference in his, and his family's, life. In the past, he used to harvest 24 bags of potatoes per acre, earning him US\$660. In his first season as a demo farmer he harvested 72 bags per acre, making \$1,980—a three-fold increase. With the extra income, Frank was able to install electricity in his house. He had enough money left over to buy the necessary seeds and other items for the following season without taking out a loan—breaking the vicious cycle of debt.

And, with Frank and other demo farmers having agreed to share their training with their neighbors, it looks like the impacts will spread rapidly. "We can expect that up to 2,000 smallholder farmers will be switching to sustainable methods every year," concludes Matilya.

TOP: While AWF's projects in northern Tanzania are more centered around protecting wildlife corridors, our work in southern Tanzania focuses more on ensuring conservation-friendly agricultural corridors.



Continued from page 1

research at Murchison Falls National Park. "With this data-collection system, we have been able to see hotspots of illegal activities and areas where community engagement is required."

"The protected area authorities are now undertaking activities based on strong data—enabling them to achieve more using less time and fewer resources," explained Samuel Mwandha, chief of party for the Biodiversity Program.

Alleviating poverty

The Biodiversity Program also developed conservation awareness materials for national park visitors and students. But this awareness raising wasn't necessarily getting to the people living on the borders of Uganda's national parks, who were bearing the brunt of the problem of living with wildlife. For example, farmers struggled with elephants wandering outside of protected areas to graze on their crops. When asked what crops elephants eat, one community scout declared: "Everything."

Everything, it turns out, except for chilies. Therefore, around Murchison Falls and Kidepo Valley National Park in northern Uganda, AWF has worked with UWA to implement an agricultural project to grow chilies. A total of 200 households in 13 community groups received support to cultivate the new crop. The chilies, which do repel elephants, are bringing in more income for the farmers. Within the first harvest season, each household reported an increase in revenue by at least US\$50—and some by as much as US\$300. Seeing the improvement in income, the communities have now planted their own chili gardens, increasing their

plantings from 12 acres to more than 65 acres this year.

Positive participation

Thanks to these efforts, relations between the communities and the protected areas authorities have improved

significantly. "Communities know the importance of biodiversity conservation as was evident when we developed a land-use plan with two subcounties neighboring Kidepo Valley National Park," said Mwandha. "They have a life to live, however, and that requires various resources. When communities cannot get the resources by other means, they turn to biodiversity and wildlife. It is therefore important that we all support these communities in accessing the resources they need, especially income, so they can participate positively in biodiversity conservation."

Following AWF's success to date, USAID recently extended the program until November 2017, and provided for an additional US\$1.6 million in support. In the coming year, AWF plans to work with landowners in communities surrounding protected areas to form conservancies, where wildlife living on community land can be protected and provide direct income to the

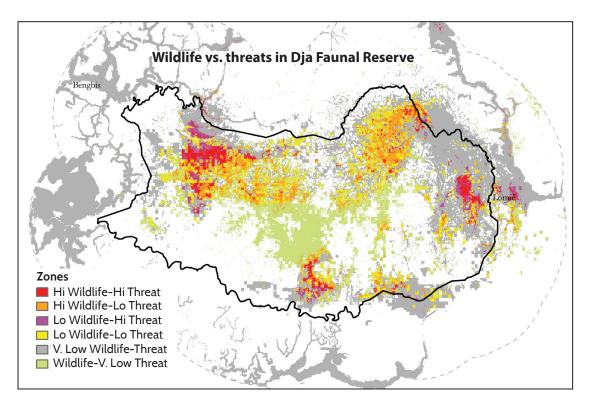
landowners. This will provide yet another opportunity for communities to earn revenue from engaging in conservation.



ABOVE: Since AWF has trained Uganda Wildlife Authority (UWA) rangers in technology-based data collection, UWA has been able to more easily detect poaching trends and hotspots of illegal activities. TOP: It turns out that these chilies are not only anathema to elephants, but also a steady income generator for Ugandan communities.

A Targeted Plan for Cameroon's Wildlife

Leveraging satellite imagery and data from patrols, AWF gives a resource-strapped wildlife authority an evidence-based approach to protecting its wildlife



n Cameroon's Dja Faunal Reserve, wildlife—including chimpanzees, western lowland gorillas and forest elephants—often contend with an increasing array of threats. People enter the forest to hunt bushmeat for commercial purposes. Sophisticated poaching networks operate in the area. And loggers and farmers fell trees and cultivate prime wildlife habitat.

Standing between the wildlife and its threats is Camerron's wildlife authority, which is understaffed and poorly equipped. Tasked with protecting a vast area of 1.3 million acres using limited resources, Dja's park warden, Ndinga Hilaire, grappled with one primary question every day: Where would patrols make the greatest difference for wildlife?

Handwritten reports from prior patrols provided some information on where the threats lay within the reserve. Occasionally, local community members provided tips. And Hilaire had his experience to go on. Even so, having to base his decision on these scant threads of information essentially amounted to him making his best guess each time on where to send patrols.

"With current maps of the distribution of wildlife and threats, the warden could make better-informed decisions on where to send patrols," relays David Williams, director of conservation geography for AWF. "Unfortunately, up-to-date information has been scarce in Dja."

In 2014, AWF provided training and equipment for ecological monitoring to Dja's wildlife authority. Suddenly, rangers could easily record their observations—wildlife sightings, discoveries of hunting camps and snares, incidences of illegal logging—into a rugged smartphone while on patrol. Back at the base, their data would be downloaded into the Spatial Monitoring and Reporting Tool (or SMART) software on a computer. The program would collate all the patrol recordings and spit out hard data on the wildlife and threats that had been observed, and where they were located.

This was a marked difference from how Hilaire had had to operate before—and he liked that he could now compare the performance of each ranger in terms of patrol hours and distances logged. But to maximize patrol efficiency, Williams and his GIS team wanted to take things a step further. They wanted to create spatial models that would show where int he reserve there was both a high concentration of wildlife and a high level of threats.

Multistep process

The GIS team first took the data that rangers had collected on hunting camp locations and combined them with factors believed to influence the occurrence of certain threats, such as road density, agriculture and settled areas. Explains Williams, "The model extrapolates relationships between hunting camp locations and environmental or geographic features—such as proximity to a road or trail—to predict the distribution of hunting camps across those areas not surveyed by law enforcement patrols."

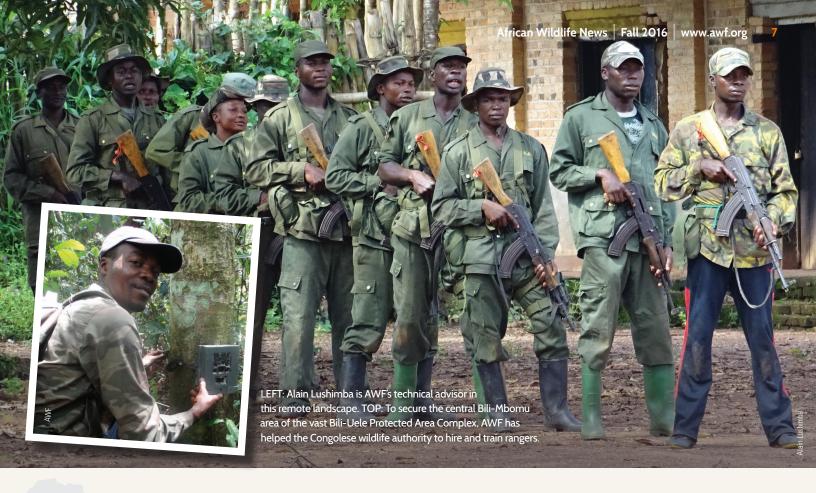
After extracting data on human activity from satellite imagery, the team followed a similar process to create other threat models. These showed where deforestation, cultivation, human settlement

and forest fires are most likely to occur in the reserve. The individual threat models were then combined to create a full index of potential threats to wildlife in the reserve.

Next, the GIS team produced a spatial model from ranger patrol data that showed the distribution of key wildlife within the reserve. The team overlaid the wildlife map atop the threat index. The result is a spatial model that highlights where wildlife distributions and threats tend to coincide.

"These areas—where high levels of wildlife and threats intersect—represent less than 5 percent of the Dja region," explains Williams. "They provide a sound basis for where to direct resources, allowing the warden to plan more targeted and impactful law enforcement efforts."

So successful have these spatial models been for anti-poaching efforts in Dja that the GIS team has adopted the same approach for the vast Bili-Uele Protected Area Complex in northeastern Democratic Republic of the Congo (see opposite for more on AWF's efforts there). Plans are also underway to apply it in Campo Ma'an National Park, located in southern Cameroon.



NOTES FROM THE FIELD: Bili-Uele

AWF Technical Advisor Alain Lushimba shares what it's like to pursue conservation in a remote area teeming with wildlife and rebels

he animal world has been my passion since childhood. It has since become my career. Today, I am AWF's technical advisor in the Bili-Uele Protected Area Complex in northeastern Democratic Republic of the Congo. I support the Bili managers in management planning, biomonitoring and data collection during anti-poaching patrols. Priority has been on recruiting, training and equipping eco-guards and securing the area. We are working in partnership with security firm Maïsha Consulting and the Armed Forces of DRC, the Congolese army.

Huge challenges

The challenges? They are huge. First, there are safety concerns. The presence of the Lord's Resistance Army (LRA) is a major handicap for conservation. Every kilometer we traverse in the forest, we do so under stress, as there is always a risk of encountering them—and if we cross paths, it will not be friendly.

Nevertheless, securing the central Bili-Mbomu part of the complex is our top priority. We organize joint patrols between the *Institut Congolais pour la Conservation de la Nature* (ICCN, the Congolese wildlife authority) and army to track down poachers.

Another big challenge is the communities. People's primary livelihoods are hunting, agriculture and artisanal mining. With lingering ancestral beliefs, including a belief in mysticism, residents have little to no knowledge about conservation. So we had a lot of hard work to do.

But there is hope. To date, with 25 eco-guards trained, we have conducted more than 2,000 km of anti-poaching patrols, covering about 5,000 sq. km of this protected area. We have already educated more than 300 men and women on the country's conservation laws. Finally, we conducted the first census of large mammals in the area. We found a large population of chimpanzees, buffalo, various antelope species, primates and carnivores, including leopard and hyena. We were also able to confirm the return of the "king"—the forest elephant—whose once-strong population in this region had very nearly become nonexistent due to poaching.

So important is the wildlife here that earlier this year, an NBC News team visited to film Bili's chimpanzee population. The 14-day expedition proved to be an interesting mission that also left me wondering whether the mystical beliefs of the Zande people here are perhaps not so misplaced!

Ten days into the trip, we were finding chimps—but unable to film them because they always fled. Then we got a tip from the head of the chiefdom. We trekked to a location 4 km from the village and bedded down for the night. In the morning, we followed in the direction of some chimpanzee calls, with no success. But just when we were about to head back, the cameraman observed some chimps watching him quietly—allowing him to finally get them on film.

Was it just chance—or could it have been Zande mysticism? —Alain Lushimba. ■

wildlife WATCH Rothschild's giraffe

ou've seen one giraffe, you've seen them all, right? Not so fast. A new study has found genetic evidence pointing to the existence of four separate giraffe species—not just one species with nine subspecies, as was previously thought.

The Rothschild's giraffe is a subspecies of the newly identified northern giraffe species (the other three are the southern, the Masai and the reticulated), and when it comes to distinguishing this giraffe subspecies from the rest, there are a few telltale signs. To start, these giraffes appear lighter in color than most, due to the wide, cream-colored lines in between their chestnut-brown patches. Plus, there's the stocking factor: These darker markings stop above the knee, which can create the appearance of a giraffe wearing tall socks!

The keen observer can identify a Rothschild's giraffe by looking not just at its legs but also at its head—specifically, at the ossciones (or the horn-like protuberances, to us laypeople) on top of its head. While most giraffes only have two ossciones, a Rothschild's giraffe has

five: a large pair like all giraffes, plus a smaller pair behind its ears and, for good measure, a small one on its forehead.

Rothschild's giraffes historically roamed throughout Kenya, Uganda and South Sudan. But habitat loss and poaching have taken a toll, and today they are only found in small pockets in Kenya and Uganda. With fewer than 700 individuals remaining, the IUCN has declared the Rothschild's giraffe an endangered species.

AWF's work through the USAID/Uganda Biodiversity Program is helping to protect what little Rothschild's giraffe habitat remains. AWF training and support has allowed the Uganda Wildlife Authority to collect better data and make more informed decisions about their patrols (see the cover story, "Making Elephants Matter"), leading to increasingly effective management of the protected areas that Rothschild's giraffes call home.

Learn more about the discovery of the four giraffe species—and its implications—at: www.awf.org/4GiraffeSpecies



what's new ONLINE

CONNECT WITH US



awf.org/facebook



awf.org/twitter



awf.org/instagram



awf.org/youtube



awf.org

Years of living dangerously

AWF will be a part of the second season of "Years of Living Dangerously," which started on Sunday, Oct. 30, and features some of Hollywood's biggest influencers talking about the effects of climate change across the planet. In the AWFcentered episode, Indian-American actor Assif Mandvi visits Africa and talks with AWF staff about how climate change is affecting ecosystems—and elephants in Kenya and elsewhere in Africa. Tune in to the National Geographic Channel this fall to watch the entire series!

Watch the Season 2 trailer: http://bit.ly/Years-season2



Test your poaching IQ

What methods do poachers use to kill African elephants? How many rhinos now remain on the continent? What is the world's most trafficked animal (which happens to also make its home in Africa)? We've put together a short

quiz to test how well-versed you are on Africa's poaching crisis. Take the quiz—then share with your friends to see how their score compares to yours!

Take the 5-question quiz: www.awf.org/awf-quiz



Predator: human

The king of the jungle has one deadly predator: humans. The killing of Cecil the lion last year brought to light how trophy hunting, especially when poorly regulated or illegally conducted, can be damaging for certain wildlife populations in Africa. On the one-year anniversary of Cecil's killing, AWF came out with an infographic that shows why lion populations across Africa are dropping rapidly. While trophy hunting isn't the only culprit, the sad fact remains that humans are the reason behind all the causes of their decline.

Check out the infographic: www.awf.org/remembering-cecil