

African Wildlife Foundation's AFRICAN LANDSCAPE

2016.ISSUE 1



Simone Sbaraglia

Thanks to AWF support, the wildlife authority in Cameroon's Dja Faunal Reserve can now plan and conduct its patrols where threats to wildlife are greatest.

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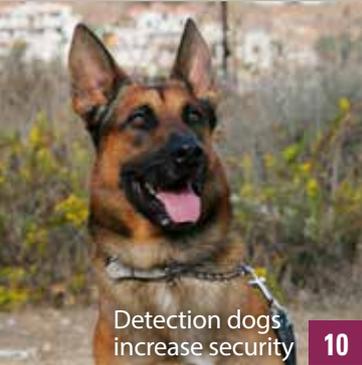
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In Central Africa, Predictive Modelling for Additional Intelligence

By David Williams *Director, conservation geography*

The Dja Faunal Reserve in Cameroon is one of the few places on Earth where a fortunate person could see the endangered central chimpanzee, the critically endangered western lowland gorilla and the vulnerable forest elephant in a day's outing. The iconic wildlife and their habitat, however, face accelerating threats from sophisticated poaching networks, as well as from commercial hunting, logging and agriculture. Commercial logging and agriculture further spur demand for bush meat and facilitate access to hunters.

Dja's *conservateur*, or warden, is charged by Cameroon's wildlife authority—the *Services de Conservation* (SdC) for the Ministry of Forestry and Wildlife—with managing this World Heritage Site. Dja is a remote, 5,300-km² reserve with poor transportation and communication infrastructure. Law enforcement patrols serve as one of the most effective tools and significant investments to address the range of threats here. Limited financial resources and the small number of trained rangers, however, mean such patrols are only able to cover a fraction of the reserve area in a given year. Decisions on where and when to deploy patrols must be made with consideration of available intelligence on threats.

Specifically, the conservateur is continually striving to answer the following questions:

- What and where are the most pressing threats to habitat and wildlife inside the reserve?
- From where are these threats emanating?
- Where are the vulnerable wildlife populations?
- Where should scarce resources be directed to maximise the impact of law enforcement and best address the threats?

Intelligence sources

Until recently, the conservateur's sense of where the threats and wildlife were located was largely based on experience, prior patrol reports and occasional insights from community members. Up-to-date information and maps about the distribution of wildlife and threats was scarce. The result was a Dja Faunal Reserve in danger of being reclassified as a World Heritage Site in Danger, owing to the severe impacts of the escalating threats.

Today, however, the conservateur has significantly more intelligence to work with. In 2014 and 2015, African Wildlife Foundation (AWF) provided training and equipment to Dja's SdC

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African Wildlife Foundation's AFRICAN LANDSCAPE



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A Commitment to Conserve?

I recently moved to Nairobi, Kenya, where AWF is headquartered, to serve as its new president. Like my hometown of Kampala, Uganda, Nairobi is busy and bustling. It is also constantly changing. Though I am now a resident of this vibrant city, I still see with the eyes of a newcomer the incredible amount of roadwork being laid down, buildings being put up and infrastructure development being undertaken, throughout Nairobi and beyond.

Nairobi's development in many ways represents the path that so many African cities will be taking: rapid population growth, a flurry of infrastructure development, an ever-expanding urban

That is where NGOs such as AWF—and our funding and implementing partners—come in. As this issue of *African Landscape* shows, AWF is supporting efforts across the continent to protect our wildlife and conserve critical ecosystems. In Central Africa, that means providing geographic information systems (or GIS) support that guides protected area authorities in making the best use of their limited resources with patrols (see cover story). In Southern Africa (page 4), AWF is combatting elephant poaching through a long-term strategy that will build up a rapid-response unit at the gates of Mana Pools National Park. In East Africa, the combination of AWF's Conservation Canine Programme and judicial sensitisation workshops is



Craig R. Sholley

“The conservation of wildlife and wild lands is an essential part of a prosperous Africa”

footprint. It can be a path to modernity and economic might. If we are not careful, however, we may inadvertently travel down a path that leads us toward short-term gain at the expense of long-term prosperity.

Too often, wildlife and wild lands are sacrificed in a society's drive toward modernisation. When that happens, the ultimate sacrifice ends up being paid by a society's people. Consider that Africa's natural heritage makes considerable contributions to our national economies and through ecological services such as clean air and potable water, and it's clear the conservation of wildlife and wild lands is an essential part of a modern and prosperous Africa. The continent's national economies are rapidly growing now, but they will need resilient ecosystems to sustain their growth in the long run, and healthy ecosystems need wildlife.

making it increasingly difficult for ivory and rhino horn traffickers to smuggle their contraband off the continent—and get away with it (see pages 10 and 11).

There is no substitute for government action, however. It is therefore imperative that we secure political commitments at the highest levels to allocate adequate resources toward the protection of wildlife and ensure that conservation is central to Africa's economic plan. Advocating for such a commitment to conservation is one of my primary directives as AWF's new president. You only need to look outside, at the streets of Nairobi or whatever part of Africa you sit, to know it's a commitment Africa must make sooner rather than later.

Sebunya

Kaddu Kiwe Sebunya
AWF president

What the Paris Agreement Means to Africa

By Kathleen Fitzgerald Vice president for land protection

In December, a small delegation of AWF staff participated in the UN Framework Convention on Climate Change (or UNFCCC) 21st Conference of Parties in Paris. There, under the global spotlight, 195 nations came to a historic agreement. The main aim of the Paris Agreement is to keep global temperature rise this century below 2°C but to strive to limit the temperature increase to 1.5°C above pre-industrial levels. The agreement also covers:

- Mitigation, by reducing emissions;
- Adaptation, by strengthening the ability of countries to deal with climate impacts;
- Loss and damage, by strengthening nations' ability to recover from climate impacts;
- Financial support to countries; and
- A transparent accounting system to track progress.

Climate change is predicted to become the biggest single driver of biodiversity loss over the next 50 to 100 years, bigger than habitat loss, overexploitation, poaching and the introduction of invasive species. AWF is engaging in climate change programmes throughout the continent, both mitigation and adaptation.

While Africa contributes little to climate change through CO₂ emissions, it is believed to be the most vulnerable to its consequences because of expansive aridity, its emphasis on natural resource-based development, high levels and prevalence of poverty, and limited resources available to cope with impacts. Most of the communities with whom AWF works lack the resiliency to adapt to climate change.

If executed properly, the Paris Agreement will help Africa in the following ways:

1. The impact of climate change on Africa will decrease because of a global commitment to reduction mechanisms.
2. African countries will be equipped with the resources needed to mitigate climate change, adapt to its impacts and recover from loss and damages.

Ahead of COP 21, countries outlined what climate actions they planned to take under a new international agreement, referred to as their Intended Nationally Determined Contributions. These form a blueprint from which AWF will continue to scale up its efforts to support national governments in addressing the enormous challenges presented by climate change. ■



AWF is changing the lives of communities in Tanzania and elsewhere by providing them with knowledge and skills in sustainable agriculture and watershed management.

Goodlisten Muthya



IN BRIEF

- > AWF's 2015 annual report is now out! Visit: awf.org/2015AR
- > In March, the Zimbabwean government signed the new Hwange National Park management plan, which was developed by AWF in partnership with stakeholders.
- > AWF has launched a new programme, Biosphere Reserves as Model Regions for Anti-Poaching in Africa, that will pilot approaches to counter the illegal hunting of wildlife in sub-Saharan Africa's biosphere reserves.
- > In January, AWF President Kaddu Sebunya hosted U.S. Secretary of the Interior Sally Jewell for a policy discussion during her Africa tour.
- > AWF continues demand-awareness campaigns with a new rhino horn campaign featuring Virgin Group founder Sir Richard Branson. View the first PSA at: awf.org/branson-nailbiter.
- > The AWF-supported Ilima Conservation Primary School in the Maringa-Lopori-Wamba landscape was recently named a SEED (Social Economic Environmental Design) Award winner.
- > With the UN Development Programme, AWF supported a law enforcement workshop in Tanzania in late December to foster greater interagency cooperation. Another training is planned in Dar es Salaam at the end of April.
- > AWF provided training and support to 32 women to get involved in a soap production micro enterprise in the Maringa-Lopori-Wamba landscape. From April to September 2015, the group accrued US\$7,940 in revenues, of which US\$2,383 were profit.



ON THE RADAR

- > Construction on the first phase of Kenya's standard gauge railway network, from Mombasa to Nairobi, has begun. AWF is part of a coalition of conservation organisations concerned the railway has the potential to negatively impact not only Nairobi National Park but also parts of the Great Rift Valley ecosystem.
- > The Hong Kong government has announced it will ban the sales of ivory and increase maximum penalties for endangered species trafficking to 7 years in prison. A timeline has not yet been announced.

AWF Steps Up Investment in Lower Zambezi Valley

By Alistair Pole *Director, land conservation*

AWF is supporting the establishment of a base camp at the Nyakasikana Gate of Zimbabwe's Mana Pools National Park, to maintain security for elephants in the Lower Zambezi Valley.



Patrick Bentley / patrickbentley.com

The Lower Zambezi River Valley remains an important refuge for elephant and encompasses wildlife land in Zimbabwe, Zambia and Mozambique. Aerial surveys from the early 2000s indicated that more than 80 per cent of the 23,200 elephant in the Lower Zambezi Valley were found in Zimbabwe's network of parks, safari areas and community wildlife areas. At the centre of this vast wilderness area is Mana Pools, a 2,196-km² national park with World Heritage Site status.

All is not well in the Lower Zambezi Valley, however. An aerial survey conducted at the end of 2014 indicated that the elephant population in the Zimbabwe section had decreased by 36 per cent since 2001, to 11,657 individuals. There is little doubt that poaching has been the main driver of this reduction. When expected population growth rates are factored in, this represents a loss of 20,000 – 25,000 elephant over the 13-year period. At this rate, the elephant in the Zimbabwe area of the valley will disappear in the next five years.

The problem does not exist solely in Zimbabwe. Zambia has also seen a spike in elephant losses in 2015, and though

there is scant data on Mozambique's elephant population, it is likely there have been some losses there as well.

Base camp at gate

AWF has identified the Lower Zambezi Valley as one of its top 10 elephant priority landscapes in Africa in need of conservation assistance and is stepping up its investment in the area. As part of this effort, we have provided Urgent Response Fund grants in Zambia to a local NGO, Conservation Lower Zambezi. Conservation Lower Zambezi is using AWF funding to support Zambia's Department of National Parks and Wildlife with antipoaching efforts in and around Lower Zambezi National Park.

In Zimbabwe, where the main challenges are those of resources and capacity, AWF investment has come in the form of support to establish a base camp at Nyakasikana Gate. Nyakasikana Gate is the main entrance to Mana Pools National Park and provides access to the other areas within the valley. We are working with two local NGOs, The Tishinga Initiative and the Zambezi Elephant Fund, to finish this base.

After construction is complete, the base will be able to house up to 40 rangers who will form the main anti-poaching reaction unit

for the Lower Zambezi Valley. The base will have modern accommodations, operations room, stores, canteen and ablutions. In addition to becoming the nerve centre for coordination of anti-poaching operations in the Zambezi Valley, it will provide a centre for ongoing training of rangers based at various stations throughout the valley.

AWF has secured funding for the provision of a technical assistant to work with the Zimbabwe Parks and Wildlife Management Authority reaction unit stationed at Nyakasikana Gate. ZimParks and AWF will soon interview candidates. It is hoped that this person will be able to provide critical logistical support to efforts by the wildlife authority in the Lower Zambezi Valley and that more funding can be raised to assist with equipment and other necessary resources to better enable rangers to carry out their critical role.

Currently, we are losing the war on the Zimbabwe side of the Lower Zambezi Valley. Elephant numbers are decreasing. We hope that we will be able to play our part by working with and supporting ZimParks to turn this around and ensure the entirety of the Lower Zambezi Valley becomes a safe refuge for elephant once again. ■

New President: AWF in Unique Position for Conservation Advocacy

Kaddu Kiwe Sebunya was born into a political, pan-African household. As such, he was introduced to international affairs and global issues early in life—an introduction that initially started him on a career focused on rural development and humanitarian relief.

While studying in France, however, the Ugandan native became more attuned to issues around the environment. Sebunya eventually earned a masters of science in sustainable resource management and policy—one of only two African students in a class of 17—from the Imperial College of London. (He also holds a Master of Arts in Law, Policy and Diplomacy from the Fletcher School at Tufts University in the United States.) He went on to work for the International Union for Conservation of Nature (or IUCN) and Conservation International, among other organisations. Most recently, he led the U.S. Agency for International Development/Uganda Biodiversity Program for AWF.

In January, Sebunya was elected president of AWF, responsible for advocating for wildlife as part of Africa's future. Following are his thoughts on his new role.

Q: Congratulations on becoming AWF president. What will be your primary responsibility in this new position?

A: Thank you. I am excited to be stepping into this role at a time when the continent is developing rapidly and decisions are being made about how Africa will manage its natural resources going forward. In addition to being a primary advocate for the AWF mission, as AWF president, it will be my responsibility to explain not simply what we are doing but why it is imperative. My task is to inspire African leadership at every level to incorporate wildlife and conservation into a vision for the continent's future. We want to build a network of supporters for AWF's mission across Africa, leveraging our already successful technical programmatic efforts to show why wildlife conservation is so important for Africa.

Q: Why should AWF take on an advocacy role on the continent?

A: The African continent is moving toward rapid economic modernisation—with the largest young population in the world. We ended 2015 with Africa's labour productivity rising. Trade between the continent and the rest of the world have increased by 200 percent since 2000. These realities will challenge AWF's mission and pose threats to Africa's wildlife and wild land conservation as competition increases exponentially between people and wildlife for food and space. The search for ways to safeguard Africa's environmental future in sustainable ways is more urgent than ever before.

At the same time, public funding agencies and businesses are increasingly recognising that conservation and



AWF/Rodger Bosch

New AWF president Kaddu Kiwe Sebunya notes that the centrality of the environment, wildlife and wild lands in Africa's economies means these issues need to be accounted for by African governments.

development are often inherently compatible and have mutually supporting goals. The divisions that once separated the conservation and development communities are breaking down.

It is therefore timely to strengthen our advocacy now. Economically driven issues on the continent represent some of Africa's greatest challenges, but also its greatest opportunity. And the centrality of the environment, wildlife and wild lands in Africa's economies dictates the need for it to be principal to all discussions around Africa's future. As the most experienced, largest and most truly African environmental organisation, AWF is in a unique position to ensure wildlife and wild lands thrive in a modern Africa.

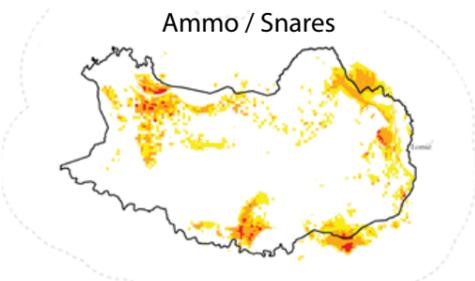
Q: What would you say are the most critical conservation issues the African continent is facing?

A: In many parts of the continent, food production lags behind population growth, famine strikes with dreadful persistence, soils are degrading, and wild lands, forests and trees are disappearing at unprecedented rates. While some people may argue that AWF's mission is narrower in perspective in the context of socioeconomic development, the reality is that the issues surrounding wildlife and wild land management are inseparable from Africa's broader crisis of population, food, poverty, land and natural resource management. Africa's economic development is intertwined with the conservation of Africa's wildlife and other natural resources. Increasingly leaders understand this—but many have yet to act upon it. I look forward to building a true African network for conservation. ■

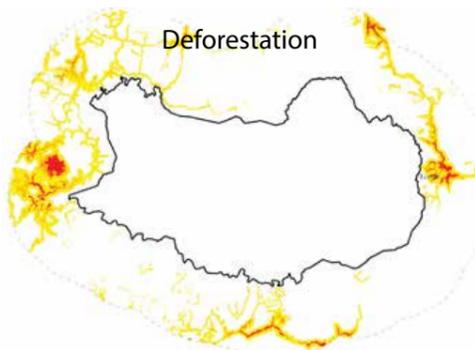
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Map A: Threats

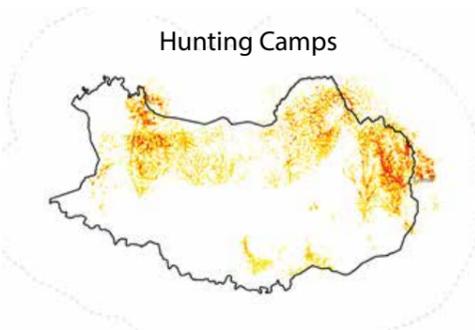
Ammo / Snares



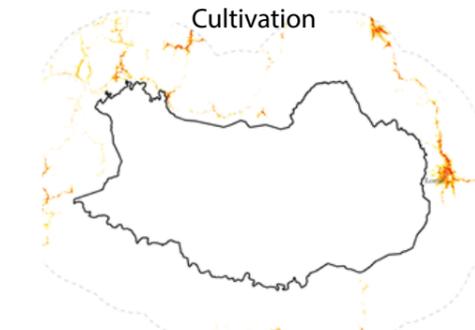
Deforestation



Hunting Camps



Cultivation



to conduct patrols using a package of new tools. The tools are designed to make law enforcement monitoring easier and more effective. Dja rangers now record wildlife and threat observations while on patrol using rugged handheld smartphones equipped with CyberTracker software. Once back at the base, they download the observations into the Spatial Monitoring and Reporting Tool (SMART) software on a computer. The observations can then be integrated with prior patrol data for mapping and analysis—providing the conservateur a powerful snapshot of wildlife and human activity dynamics at a glance. The conservateur also likes being able to track and compare the patrol hours and distances logged by each of his charges.

AWF has gone a step further: We are using the ranger observations to create spatial models that highlight areas with high concentrations of wildlife facing high levels of threats. Representing less than 5 per cent of the Dja Faunal Reserve region, these high wildlife/high threat areas inform more targeted, impactful and cost-effective law enforcement responses. The spatial models intersect patrol observations of hunting camps with environmental and socio-economic factors thought to influence the distribution of specific threats, such as road density, distance from agriculture or distance from settled areas. The

model essentially extrapolates relationships between observed hunting camps and such independent spatial data to predict the distribution of hunting camps across those expansive areas not surveyed by law enforcement patrols.

To create these maps, AWF used patrol observations to construct models showing hunting camps and ammunition and snares left by poachers. Using inputs derived from related satellite image products, the GIS team additionally created threat models of deforestation, cultivation/settlement expansion and forest fires—a harbinger of deforestation and human development in moist tropical forests. We then combined the five threat models (Map A) to generate a threat index (Map B). We applied a similar process to produce wildlife distribution models for chimpanzees, elephants and lowland gorilla in Dja, synthesising them to generate a wildlife index. By combining the threat and wildlife indexes, we were able to then identify high wildlife value and high threat level areas (Map C).

Broader context

Are the models just pretty pictures?

The AWF GIS team confirmed the utility of the individual predictive models by validating them later on with independently acquired reference data. For

instance, our deforestation model captured 81 per cent of observed 2014 deforestation area that the University of Maryland derived from satellite image classification. Further, the deforestation rate inside our model's predicted deforestation areas turned out to be 4.2 times that of other areas. We also compared the threat indexes with independent observations from a 98-km survey that AWF staff and partners conducted across the faunal reserve in April 2014.

From this data, it became clear that the encounter rate for threats was 3.8 times higher *inside* threat index areas while the encounter rate for wildlife was 8.6 times higher *outside* the modeled threat index areas. The validations suggest the models are indeed useful for predicting threat and wildlife occurrence across Dja.

Scientific papers have further concluded that mapping predictions of threat

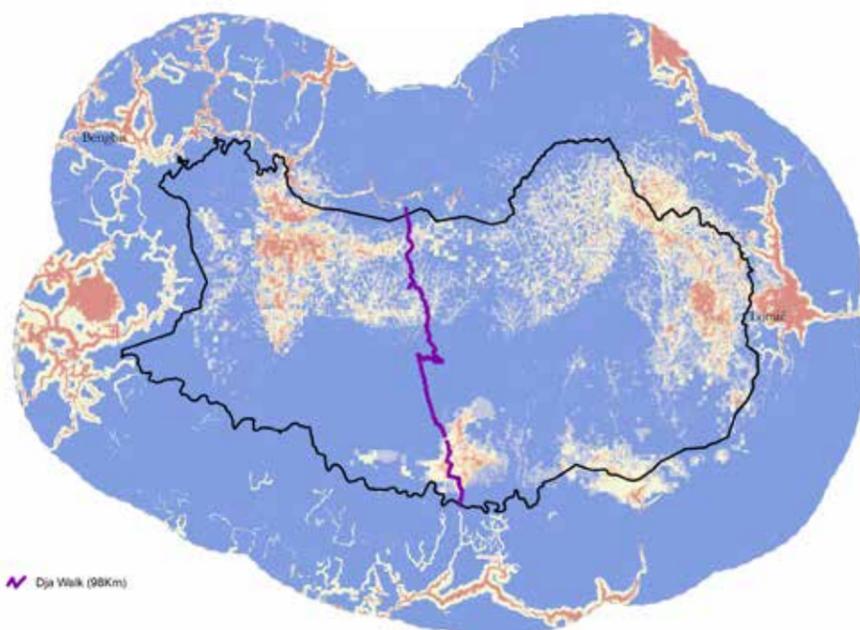
occurrence has been effective in helping law enforcement reduce deforestation and can result in cost-efficient prevention of illegal activities. We built on that premise by modelling threats and wildlife target distribution in Dja—providing SdC managers with actionable, timely information to inform more effective adaptive management decision-making.

Witnessing the dramatic declines of the African elephant, black and white rhino, African great apes and other iconic species, policymakers and members of the wildlife conservation community are calling for the development of more effective tools and systems that harness technological advances for improving wildlife conservation. The Dja platform that combines systematic data collection tools with predictive modelling is a step toward answering that call.

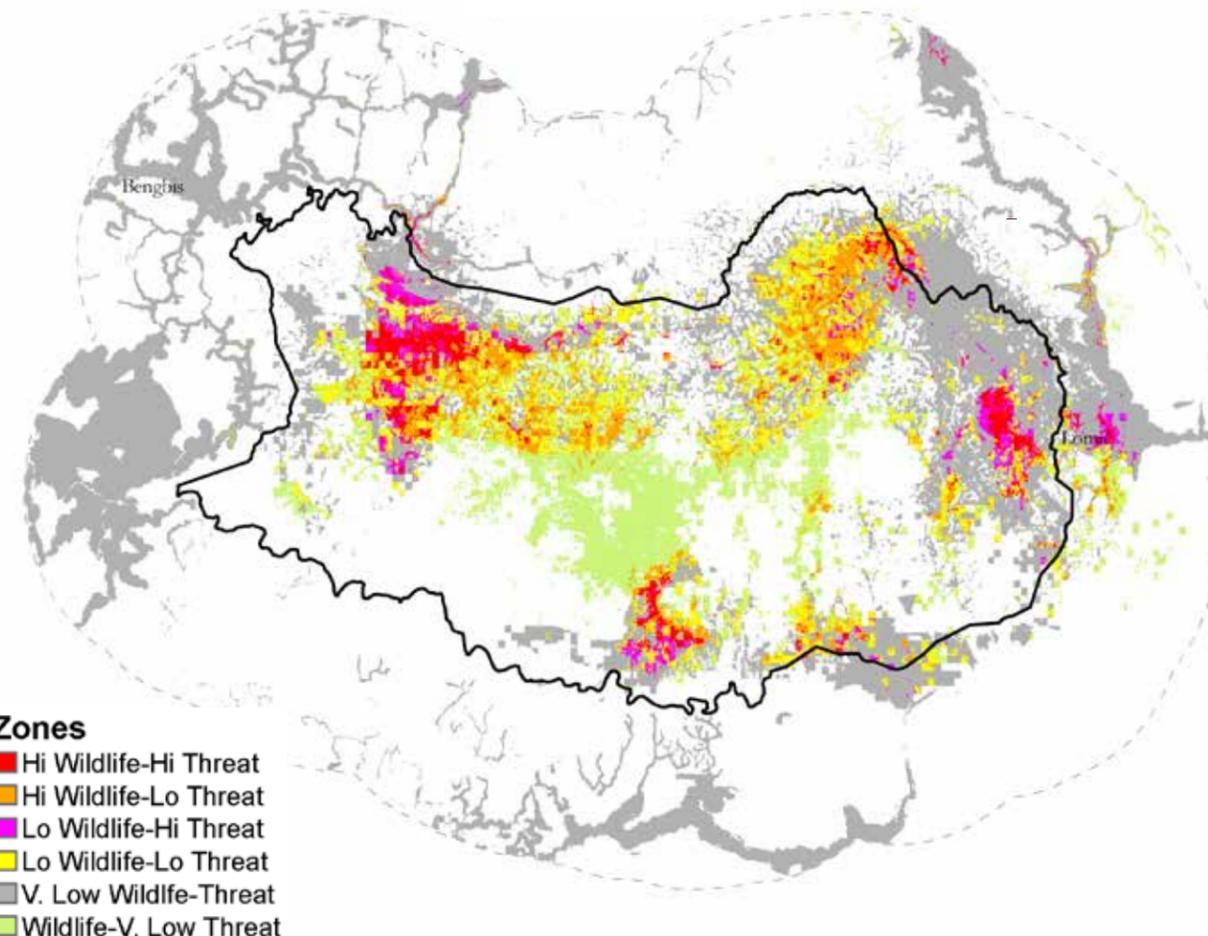
We are also entering the Age of Big Data: Many of the data streams driving the predictive models are increasingly available—and updated regularly. Deforestation and fire incidence data, for example, is updated regularly on the GIS databases AWF consults. This offers the potential for much more accurate and dynamic characterisations of threats than ever before, which could enable more agile law enforcement responses.

All that said, implementing such an adaptive law enforcement platform is not without its challenges. The human resources capacity can vary significantly across protected areas. In Dja, the level of technical know-how with CyberTracker and SMART has on the whole been relatively high. In 2015, AWF provided CyberTracker/SMART training to rangers at Murchison Falls National Park in Uganda, where the Uganda

Map B: Threat Index



Map C: Wildlife vs. Threats



- Zones**
- Hi Wildlife-Hi Threat
 - Hi Wildlife-Low Threat
 - Low Wildlife-Hi Threat
 - Low Wildlife-Low Threat
 - V. Low Wildlife-Threat
 - Wildlife-V. Low Threat

ABOVE: AWF's GIS team combined the threat index with wildlife distribution models for key species to create a map that visually identified areas of high wildlife value and high threat levels. The predictive model then allows for intelligence-based patrols, crucial for resource- and time-strapped wildlife authorities.

ABOVE: Using both patrol data and inputs derived from related satellite image products, AWF's geographic information systems (GIS) team created threat models that illustrated the prevalence of ammunition and snares, deforestation, hunting camps and cultivation.

RIGHT: A threat index was generated by summing the five threat models from Map A.



Wildlife Authority had years of experience using a software similar to SMART. The Uganda Wildlife Authority rangers were able to navigate the new system quite readily. The remote Bili-Uele landscape in the Democratic Republic of the Congo—one of the sites where AWF is replicating the Dja law enforcement monitoring platform—presented the other end of the spectrum. The Bili rangers were newly minted ecoguards with no experience in law enforcement monitoring. In addition, most had never held a mobile phone or touched a computer, slowing the rangers' ability to pick up the training.

One of the most significant elements, of course, remains AWF staff investment. The GIS team consists of between three and five full-time staff (one of whom reports to a field office rather than directly to the GIS team), a part-time volunteer and a seasonal intern. Providing the level of spatial modelling expertise that we would like is not always possible given funding and staff time. And, while the software is free, significant finances are also needed to buy the smartphones and laptops for each site.

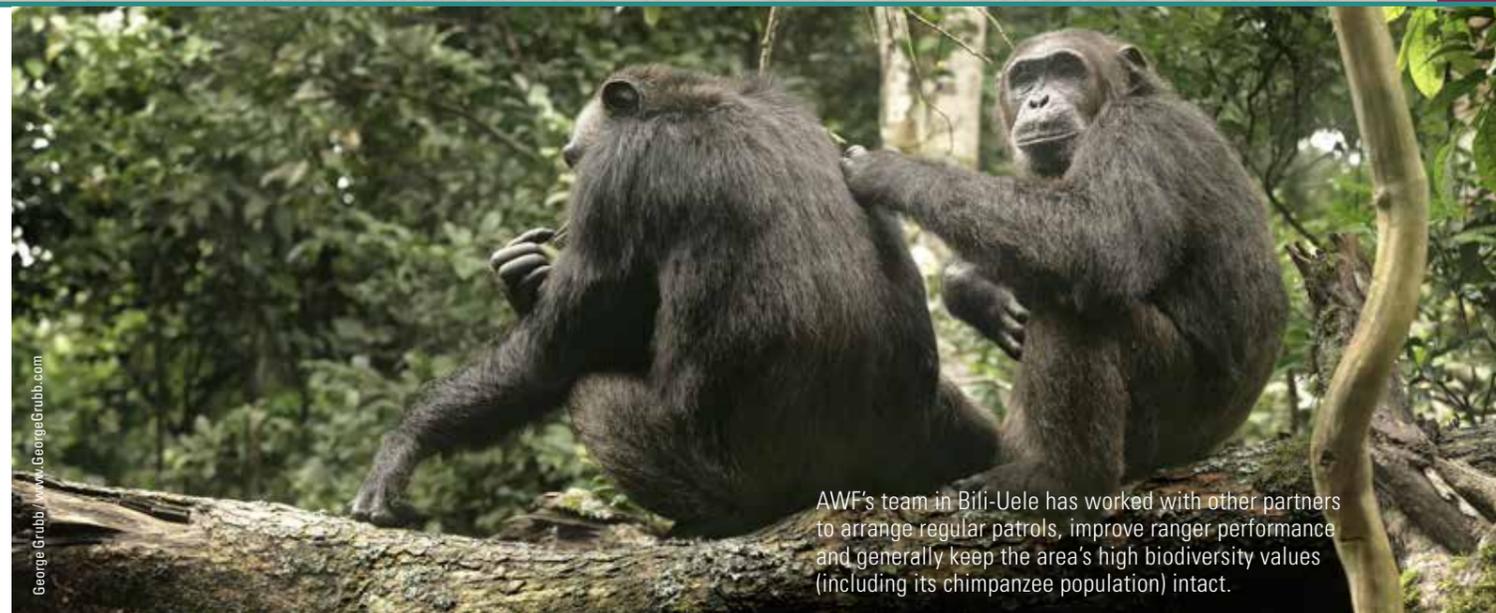
Next phase

In the next phase of work, we aim to work with the SdC team in Dja to streamline the data flow process to enable more frequent updating of the models. By exploiting multiple high-frequency data-input streams—patrol observations and remotely sensed inputs for fire and deforestation—we will be able to provide updated models on a quarterly basis.

This will give the conservateur a dynamic picture of threat and wildlife distributions, revealing seasonal patterns and trends to inform more agile management. Further training to key SdC managers is also being planned, to better assimilate the models into their decision-making processes. ■

TOP LEFT: Pictured here is Campo Ma'an National Park in Cameroon, where AWF also provides training and support in certain adaptive law enforcement measures.

LEFT: AWF staff—such as Alain Lushimba, pictured here recording a wildlife sighting via CyberTracker—provide valuable training and feedback to our wildlife authority partners and are critical to ensuring success with adaptive law enforcement platforms.



AWF's team in Bili-Uele has worked with other partners to arrange regular patrols, improve ranger performance and generally keep the area's high biodiversity values (including its chimpanzee population) intact.

Bili Stakeholder Workshop Lays Groundwork for 2016

By **Jef Dupain** *Technical director, West and Central Africa*

AWF Bili-Mbomu work in northern Democratic Republic of the Congo (DRC) has progressed quickly since on-site scoping first took place in February 2014. By February 2015, just one year later, a local office had opened, housing the *Institut Congolais pour la Conservation de la Nature* (ICCN), the Congolese wildlife authority; AWF; and Maisha Consulting, a security firm contracted by AWF. In the course of the next few months, the partners selected, hired and trained 20 rangers from the local community. And by the second half of 2015, the first anti-poaching patrols had begun.

The patrols immediately confirmed that local communities were involved in hunting activities. Even so, the protected area's chimpanzees still seemed widespread and present, even close to the villages and road. Elephant traces were equally encountered on a relatively frequent basis. It was clear the biodiversity values were high (and indeed both chimpanzee and elephant still appear to be prevalent), but threat mitigation was urgently needed if we did not want to lose this unique place.

To ensure that all parties were in agreement on next steps for 2016, ICCN and AWF jointly hosted an inclusive stakeholder work-planning meeting in November 2015 in the field. About 50 people attended. We had thorough representation from all the relevant groups: traditional authorities, local communities, vulnerable groups and minorities, the DRC government and ICCN–Kinshasa, the Congolese army, local and international NGOs and associations, and Maisha Consulting. A special U.S. delegation—which included representatives from the U.S. Fish and Wildlife Service, U.S. Agency for International Development's (or USAID's) Central Africa Regional Programme for the Environment (or CARPE), U.S. Africa Command (or Africom) and the Central African Regional Operating Unit—was also present.

Solidify presence

Following three days of frank and constructive discussions, ICCN, AWF and Maisha translated workshop conclusions

into a work plan, with timeline and budget. The aim with 2016 activities is to solidify our presence in the Bili-Uele Protected Area Complex. We intend to also increase patrols to maintain security in the Bili-Mbomu target area. These will be accomplished through a number of efforts.

Over the next 12 months, four mixed patrols involving ICCN and the Congolese army will be organised to push elements of the Lord's Resistance Army out of the 10,000-km² target zone. At the same time, monthly patrols will be conducted to identify existing hunting camps and discourage hunting in the protected area. These patrols will also allow rangers to collect much-needed information on the distribution of large mammal target species, such as chimpanzee, elephant, bongo, derby eland and lion. ICCN is recruiting a community conservation outreach person who will support the antipoaching patrols with awareness-building and information-sharing activities throughout the local communities.

In order to improve ranger performance, AWF and Maisha intends to procure and equip a state-of-the-art mobile patrol post with solar energy, communication tools and more. The rangers will receive extra training to bring their skill levels up.

Meanwhile, AWF's technical advisor in Bili-Mbomu, Alain Lushimba, is working on outlining the methodology for a large-mammal census in the southern 5,000 km² of the target zone. The census is planned for the first half of 2016.

AWF plans to supplement these efforts with a land-use planning strategy that considers the whole of the 60,000-km² Bili-Uele landscape. A first meeting is planned at the provincial level in the second quarter of 2016. This land-use planning exercise is key if we want to make sure that the Bili-Mbomu target zone is appropriately embedded in the landscape and any infrastructure and economic development will be compatible with the ecological services provided. ■



Detection Dogs Increase Security in E. Africa

By Will Powell Director, AWF Conservation Canine Programme

Less than one year after graduating from AWF's Conservation Canine Programme, AWF-trained detection dogs and handlers are making a positive security impact in some of East Africa's most notorious trafficking hubs. In July 2015, we graduated eight dogs, plus 13 handlers from Kenya Wildlife Service (KWS) and Tanzania Wildlife Division. This first class deployed to provide coverage in Mombasa and Nairobi, Kenya, and in Dar es Salaam, Tanzania.

The on-boarding process took longer than originally anticipated. But with time, and thanks to the persistent relationship-building efforts of the Conservation Canine Programme staff, we have successfully integrated into the security procedures at Moi International Airport in Mombasa, Jomo Kenyatta International Airport in Nairobi and Julius Nyerere International Airport in Dar. AWF further worked with KWS and Wildlife Division to ensure nearly all flights coming into and departing from airports are covered by a detection team.

In both Kenya and Tanzania, the AWF-trained detection dogs now work almost every day. They also take turns covering the night shift. To minimise potential for corruption and insider tips to traffickers, handlers are not given information ahead of time on where they and their dogs might work on a given day.

Confirmation

In January, we received confirmation that these systems are effective: In a single week, AWF-trained detection dogs found ivory hidden in luggage at Jomo Kenyatta on four separate occasions. In each case, the contraband consisted of small pieces of ivory that had been fashioned into necklaces, rings, bangles or other items. In some cases they were hidden in plastic bags or empty cigarette boxes. The fact that AWF-trained dogs can find even these small pieces of concealed, dry worked ivory means any illicit shipments—including larger shipments—will be discovered.

"This should put all travelers attempting to smuggle wildlife products from Africa on alert," says Philip Muruthi, AWF's vice president for species protection.

All the travelers arrested in connection with the finds were traveling to China: three to Guangzhou, where the Chinese government destroyed 6 tons of confiscated ivory last year. At least two of the travelers were transiting through Kenya from Ghana and Mozambique. All four pleaded guilty to possessing ivory and were fined.

With these finds, the detection teams are more motivated than ever to search for ivory and other illicit wildlife products.

“The detection dog coverage has led to more seizures of bush meat and other illicit wildlife products”

AWF's detection dogs have enhanced security in Kenya's and Tanzania's seaports and airports, and has led to significant busts (such as the ivory cargo pictured in the middle photo at Jomo Kenyatta International Airport in Nairobi, Kenya). Pictured at left is a dog-and-handler team at the Port of Dar es Salaam; above is a team at Jomo Kenyatta.

In December, dogs Ram and Diva and their handlers went on special assignment to work a border checkpoint in Lunga Lunga, Kenya, on a road that leads from Tanzania up to Mombasa. Meanwhile, in Dar es Salaam, the dog teams have begun working at the seaport in addition to the airport. We have worked out a process whereby the canines quickly search cargo while the shipping containers are being processed for paperwork—ensuring that the busy seaport does not experience any bottlenecks even with the enhanced security. We have recently been given access to similarly provide coverage at the Port of Mombasa in Kenya.

AWF through this programme is successfully supporting these governments in creating a greater security presence at their airports and seaports. Indeed, the dogs' presence is improving the efforts of other security organs working at the airport and encouraging all agencies to work together more effectively to reduce trafficking of all wildlife products. In addition to the four ivory finds in Nairobi, in fact, the detection dog coverage has led to more seizures of bush meat and other illicit wildlife products. Since the beginning of the year, the AWF-trained detection dogs have been involved in at least 14 such finds. We are now training the next class of canines for ivory and rhino horn detection work. The dogs will be paired with handlers from Uganda, Mozambique and Ethiopia, and, after further training, will begin enhancing security in those countries as well. ■

New ARREST Programme Goes Beyond the Arrest

By Didi Wamukoya Manager, wildlife law enforcement

In March 2013, Tian Yia was arrested at Jomo Kenyatta International Airport in Nairobi, Kenya, and charged with the possession of two pieces of worked ivory weighing 16.6 kg. He pleaded guilty and was fined US\$300. In January 2014, Leo Leilonge was arrested at the Addis Ababa Bole International Airport in Ethiopia and charged with possession of six ivory items. He pleaded guilty and was fined US\$330.

In both cases, it took vigilant officers to intercept the well-concealed contraband. The officers likely had to carry out further investigations, including interviewing the suspects, taking down their statements, recording witness statements, taking the seized ivory to experts for identification, preparing charges, compiling case files and finally taking the suspects to court. It is unfortunate that after all this time and effort, all the suspects got away with a mere slap on the wrist. The judicial system had failed the officers and had failed conservation.

Crucial role of the law

These cases reinforce the notion that successful wildlife law enforcement goes beyond the arrest of offenders. The law and its application play a crucial role. For laws to be effective, they must include penalties that serve as strong deterrents. As well, with strong laws must come a robust, sensitised and effective judicial system. AWF recognises these gaps in criminal justice systems within some African countries and has put in place effective strategies to assist countries in addressing such weaknesses. One strategy is regional judicial and prosecutorial trainings, being carried out under a continentwide program, ARREST (Africa's Regional Response to Endangered Species Trafficking). ARREST is designed to increase capacity and communication at the national, regional and international levels to combat wildlife trafficking and poaching. The implementers—AWF, the International Fund for Animal Welfare, and Freeland Foundation, with support from the U.S. Department of State's Bureau of International Narcotics and Law Enforcement Affairs (INL)—have developed a strong partnership in this effort.

Under the partnership, AWF conducts a rapid analysis of wildlife laws in African countries and advises on ways of filling the gaps identified in the legislation. AWF has already analysed the wildlife legislation of South Africa, Botswana, Swaziland, Mozambique, the Democratic Republic of the Congo (DRC), Kenya, Uganda, Tanzania and Ethiopia.

From the outcomes of the legislative and case analyses, AWF is able to focus the judicial trainings toward proper detection, investigation and adjudication of wildlife crimes. Target trainees include investigators, prosecutors and judicial officers, with the aim of assisting officials to

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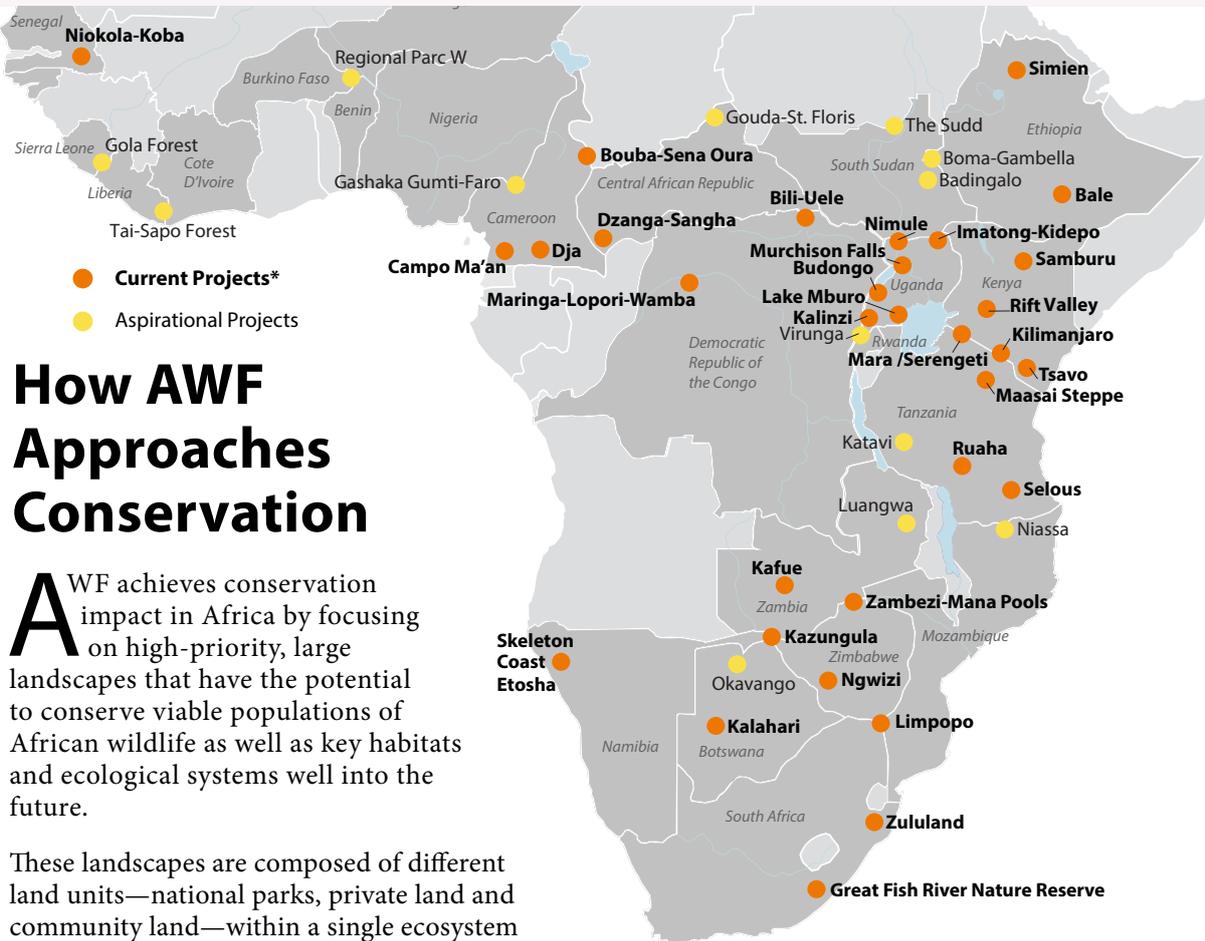
better understand their national wildlife laws, overcome weaknesses in investigations and prosecutions, establish interagency collaborative frameworks, and ensure proper case management.

AWF has held trainings in DRC, Kenya and Ethiopia and is planning to carry out trainings in Uganda, Tanzania and Mozambique this year.

The trainings have been a great success. Ethiopia is reviewing its wildlife legislation based on recommendations from the AWF legislative analysis and the judicial trainings we conducted in that country. In Kenya, AWF has been instrumental in assisting national authorities to amend the new wildlife law, including reversing some errors that had fundamentally affected wildlife crime prosecution. We are further seeing quality

investigations and prosecutions being conducted. Higher penalties are also being meted out in those countries where we have carried out trainings. For example, in Kenya, a magistrate who attended one of our trainings fined an ivory dealer US\$590,000. In Ethiopia, one of the prosecutors who attended our training there successfully argued for, and won, a three-year prison term for an ivory smuggler.

"While there is no one silver bullet in combatting wildlife trafficking, strong laws and a criminal justice system capable of seeing the whole process through—arrest, prosecution, and conviction of wildlife traffickers with appropriate sentences—are a major deterrent to poachers and traffickers," said Jessica M. Graham, senior advisor, environmental crime team lead for INL. ■



How AWF Approaches Conservation

AWF achieves conservation impact in Africa by focusing on high-priority, large landscapes that have the potential to conserve viable populations of African wildlife as well as key habitats and ecological systems well into the future.

These landscapes are composed of different land units—national parks, private land and community land—within a single ecosystem ranging in size from 7,000 km² to 95,000 km². Many extend across the borders of multiple countries.

Target landscapes are selected based on a detailed analysis that examines the region's biological, ecological, social and economic opportunities. AWF works closely with partners and stakeholders—including national and local governments, communities, research organisations, NGOs and the private sector—to develop priority conservation actions specific to the area.

* Current projects represent both AWF-operated and AWF-funded programs, and include holistic programs as well as individual projects.

AWF works in the following strategic areas: habitat conservation and management, species protection and conservation science, conservation enterprise and conservation schools. Policy, climate change, advocacy and capacity building are cross-cutting themes that underscore all of AWF's programmes. ■

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