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Central Africa Regional
Program for the Environment

Getting SMART About Combating WILDLIFE TRAFFICKING



KAHUZI-BIEGA NATIONAL PARK, DRC – NOVEMBER 2014: Tito Biriandwa, an ICCN ranger at Kahuzi-Biega National Park, uses a mobile device to record his patrol and the gorillas he observes in the park. With support from CARPE, the data will be downloaded into SMART (Spatial Monitoring and Reporting Tool) software to help park management more effectively plan patrols and better protect wildlife. Photo by Natalie Bailey, USAID

Erasme Ngoy, Coordinator of the Punia Gorilla Reserve in Eastern Democratic Republic of Congo (DRC), has a responsibility to work with the local people who created the community reserve and to protect the gorillas, chimpanzees, and other species that live there. Not only does he need to know where the animals are, but he also needs to know where poachers may be found. In addition to local hunters that trap antelope and shoot monkeys for personal consumption or local trade, well-armed rebel groups operate throughout much of Eastern DRC, and are known to illegally kill elephants and sell ivory to finance their operations.

For Erasme, one solution to meet his data needs has been ranger-based monitoring: collecting data on wildlife and threats, often on paper data sheets. This low-tech solution has some obvious advantages in a resource poor environment, and can provide data on wildlife presence-absence or document signs of illegal activity. However, file cabinets full of paper and a backlog of data entry do not allow for rapidly assessing threats and

deploying resources where they are most needed. Park managers throughout the developing world are drowning in data but losing a literal battle with poachers and the organized criminal networks responsible for recruiting locally, paying bribes, and transporting illegal shipments. Well-heeled crime bosses pocket most of the profits from the \$10-\$20 billion illicit wildlife trade.

To overcome this challenge of too much data and too little actionable information, a coalition of conservation organizations banded together to create a simple but game-changing solution: the Spatial Monitoring and Reporting Tool (SMART). SMART is a new approach to ranger-based monitoring that allows rangers to instantly capture data in the field and provides managers with near real-time analysis to better focus conservation actions. It is an open-source, free tool for measuring, evaluating and improving the effectiveness of wildlife law enforcement patrols and other site-based activities, making better use of limited human resources.



KAHUZI-BIEGA NATIONAL PARK, DRC – NOVEMBER 2014: For many years, rangers have collected information on data sheets, filling up filing cabinets with reams of paper that have to be sifted through to find relevant information. With SMART, information on poaching encounters, areas patrolled, and wildlife sightings is recorded digitally on the SMART app and can be easily accessed to make protected area management more effective and efficient. Photo by Natalie Bailey, USAID

First and foremost, SMART enables managers to more efficiently mobilize ranger patrols to areas threatened by poaching, agricultural encroachment, charcoal making or other threats. Getting personnel in the right place at the right time is critical for catching law breakers and deterring others from even considering illegal activities. The tool also provides protected area managers with a better understanding of the population size and range of large mammals, especially those in dense forests like gorillas and forest elephants. By making good data immediately useful, SMART is boosting motivation, increasing efficiency, and promoting credible and transparent monitoring of conservation efforts.

In Tanzania, SMART has been piloted in the Waga Wildlife Management Area, and will be rolled out to Ruaha Reserve and all Tanzanian national parks in the coming years with USAID support. New partnerships in Mozambique will spread SMART to that protected area system, and a recent USAID project in the Philippines helped adapt and apply SMART to marine patrols by fisheries authorities.

SMART generates rapid results wherever it is deployed. For example, in two landscapes in DRC, SMART informed 85 to 100 percent of wildlife patrols. In the 8,100 square mile Maringa-Lapori-Wamba (MLW) landscape of DRC (approximately 2.5 times the size of Shenandoah National Park), rangers effectively patrolled between 55 to 70 percent of the critical habitat for elephants and apes. In MLW's Lomako Reserve alone, 68 poachers were apprehended and prosecuted in 2014. In the Salonga landscape south of MLW, managers used SMART to identify hotspot routes frequented by elephant poachers, then used this information to establish a patrolling post to block access to the Yenege River. In the southern sector of the park, they also established two specialized patrol posts to protect bonobos.



KAHUZI-BIEGA NATIONAL PARK, DRC – NOVEMBER 2014: Aline Chibombo is a SMART database manager at Kahuzi-Biega National Park in Eastern DRC. With support from CARPE, she is working to convert the many years of paper data sheets into digital records for improved wildlife conservation and park management. Photo by Natalie Bailey, USAID

SMART was first field tested in Asia, but USAID brought this proof of concept to scale in 2013 and 2014 through three regional SMART workshops for wildlife law enforcement professionals and trainers in Central, East, and Southern Africa. In total, 78 professionals representing 32 organizations and agencies from 17 African countries took part, and have gone on to train their colleagues in data collection and database management, as well as how to use the data for adaptive management to make informed decisions.

In 2014, USAID provided SMART training and equipment to 309 park rangers in critical protected areas. Using SMART, conservationists are better able to plan ranger patrols, record evidence of poaching, and identify areas in need of greater protection. USAID's Central Regional Program for the Environment (CARPE) has made SMART a critical component of its work to strengthen wildlife law enforcement in eight landscapes across DRC and the neighboring Republic of Congo.

As the major U.S. government funder of international biodiversity conservation, USAID applies a variety of approaches to conserve elephants, tigers, rhinos, turtles

and other species threatened by wildlife crime. Among U.S. interagency partners carrying out the National Strategy to Combat Wildlife Trafficking, we are a leader in fostering innovation to reduce demand for wildlife products, detect and deter poachers, and disrupt trade in illegal wildlife products. SMART is an important new tool in the toolkit for securing our global wildlife heritage and fighting the criminal networks that exploit humans and nature.

Back in the Punia Gorilla Reserve, Erasme Ngoy rests a little easier. Poachers are more likely to get caught or stay away from well-patrolled areas, and tourism has a chance to increase with safer parks and less fearful wildlife. Community scouts are also more motivated to do their best, part of a new culture of accountability that ensures higher quality personnel, more productive patrols, and fewer opportunities for corruption. With more security and prospects for higher income, the community that established the reserve finally has a chance to realize the benefits they hoped it would bring.