



**YANKARI GAME RESERVE**  
**WCS ANNUAL REPORT 2020**



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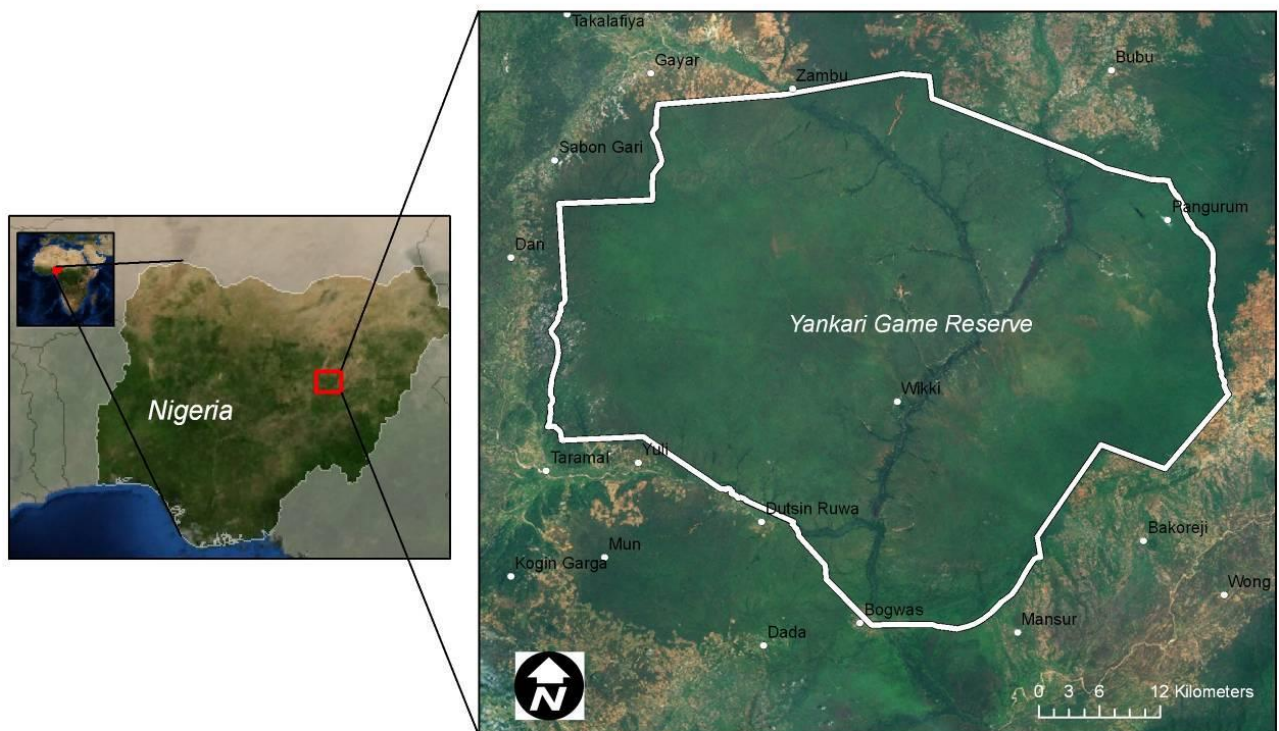
## **SUMMARY**

This report describes law enforcement efforts and ranger patrols managed by the Wildlife Conservation Society (WCS) in Yankari Game Reserve for the period January to December 2020. Despite the challenges due to Covid-19, we were able to maintain essential ranger patrols throughout the year and make good progress in other areas. A total of 168 anti-poaching patrols (8,185 patrol man days) were completed in 2020. This has further reduced the levels of hunting and illegal livestock grazing within the reserve and resulted in the arrest of 37 people (23 hunters, 11 livestock grazers, 1 elephant poacher, 1 fisherman, and 1 person for collecting firewood for commercial purposes). The majority of those arrested received jail sentences although prosecution rates are insufficient to deter offenders and due to the Covid-19 outbreak, some of the offenders could not be sent to jail because the prisons were being decongested. One elephant carcass was recorded with sign of gunshots and the suspected poacher was arrested. The elephant guardian program continues to be helpful in developing our relationship with surrounding communities and reducing levels of human-elephant conflict. Elephants often raid farms at night, and crop damage was reported from Pali, Mainamaji, Debigi, Kafi, Kuka, Dan, Rahama, Natsira, Yelwan-Duguri, Gaji-Gamu, Shira and Gum communities. Illegal cattle grazing in the reserve remains a problem, and a long-term solution to this problem requires rehabilitation of grazing reserves and stock routes in Bauchi State. A total of 19 school visits to Yankari were organised for 400 schoolchildren and 80 teachers from nineteen different schools around Yankari. Two stakeholder consultation workshops were held with surrounding communities were successfully held, focused on mitigating cattle encroachment into the reserve and reducing levels of human-elephant conflict within surrounding communities. The strategic Borkono Bridge, destroyed by heavy floods over a decade ago, was repaired providing greatly improved access to the eastern side of the reserve. Seventeen joint patrols with the army were completed to improve levels of security for wildlife and local communities. A new ranger barracks was constructed and fully equipped in Wikki. Sustainable cooking woodstoves were provided to 692 women in 37 communities surrounding Yankari.

In response to the Covid-19 pandemic, WCS developed an extensive set of recommendations and measures to protect the health and safety of WCS staff and their families and our partners, and to help slow down and stop the spread of Covid-19 in the country. In March these guidelines and measures were adapted and adopted as a Covid-19 Response Action Plan for Nigeria, which was later revised in July. The plan takes into account the guidance of the WHO and the Nigeria Center for Disease Control (NCDC), as well as best practices identified around the world. To reduce the risk of Covid-19 to the communities where we work, we suspended all non-essential activities including education and livelihood support from April. Essential law enforcement patrols continued throughout 2020 following robust and strict WCS Covid-19 response plan. Following careful evaluation of the local Covid-19 situation in Bauchi State, we were able to restart education and livelihood support to local communities in August by strictly following a detailed protocol developed by WCS for working in local communities. By implementing the action plan, we were able to improve health and safety measures for staff, rangers and the communities with which we work as well as implementing essential wildlife conservation and natural resource management activities.

## INTRODUCTION

WCS has provided support for anti-poaching patrols in Yankari since 2009 through the provision of camping allowances, arrest bonuses, field rations, equipment and training. Much of this work was funded by the United States Fish and Wildlife Service, and more recently with additional funds from the Elephant Crisis Fund, Lion Recovery Fund, UNEP African Elephant Fund, the Government of the Federal Republic of Germany, French Embassy in Nigeria, Tusk Trust, North Carolina Zoo, Omaha Zoo, and the A.P. Leventis Conservation Foundation. In 2014, WCS signed a four-year co-management agreement with Bauchi State Government for the management and supervision of rangers as well as all conservation activities in the reserve. The co-management agreement was renewed in 2018 for ten years due to the successes recorded. This report presents summary data from 2020 and compares this data with previous years. More detailed information can be found online at <https://nigeria.wcs.org> and on our Facebook page at <https://web.facebook.com/YankariWCS/>



*Map 1: The Location of Yankari Game Reserve in Bauchi State, Nigeria*

## **LAW ENFORCEMENT AND RANGER PATROLS**

The most important conservation activity in Yankari is undoubtedly ranger patrols. All ranger patrols at Yankari Game Reserve use SMART technology to monitor law enforcement efforts and results. Despite the Covid pandemic we were able to sustain four ranger teams on camping patrol each week, a significant achievement with the limited funds and resources available. A total of 168 patrols (8,185 patrol man days) were organized in 2020. The year was not without incident and in February a gang of poachers attacked a patrol team. One ranger received a gunshot wound to the hand and has since made a full recovery. Three of the poachers were arrested and transferred to the police for prosecution, currently on bail due to the Covid-19 pandemic.



*Rangers on an anti-poaching patrol, Yankari Game Reserve, October 2020*

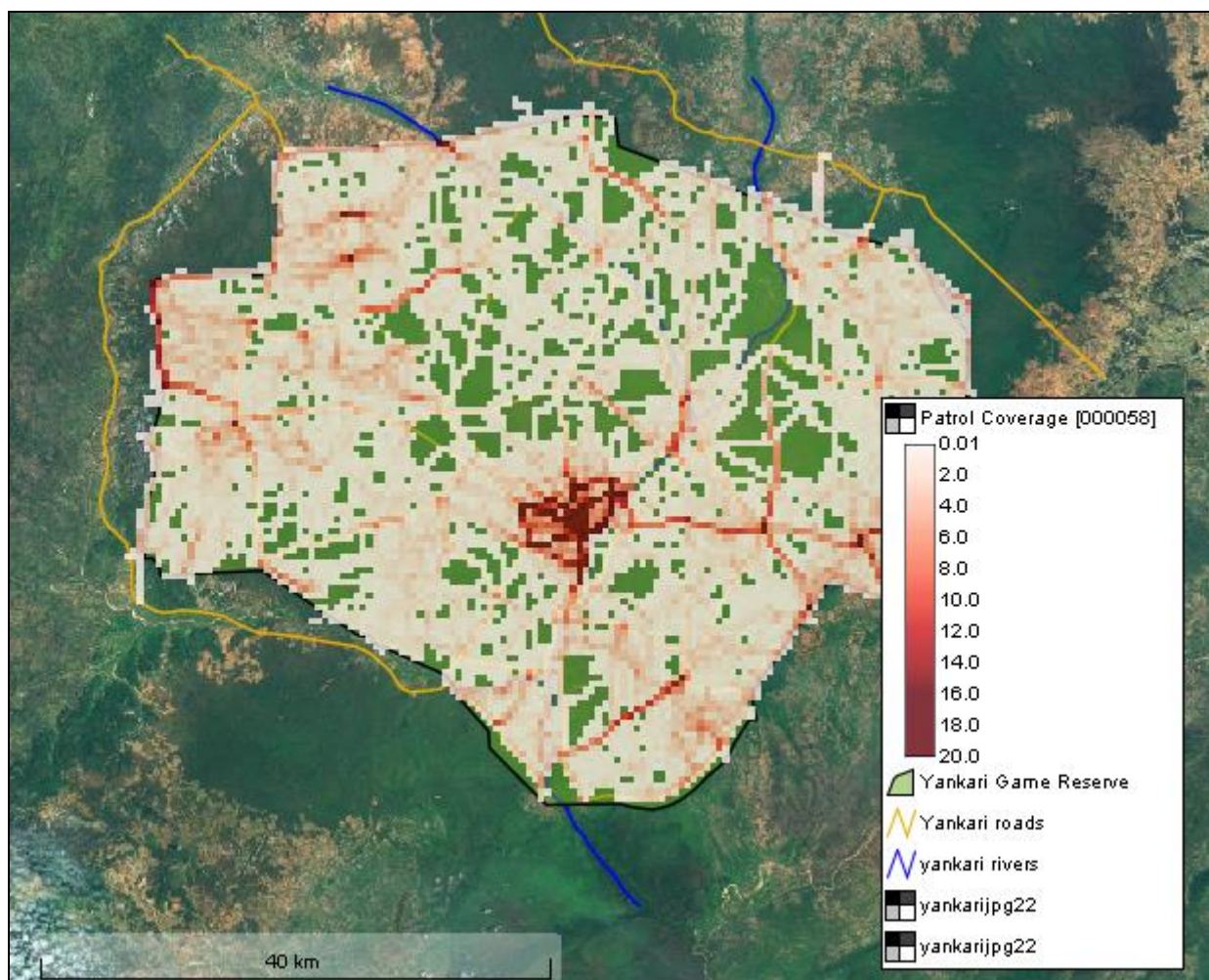
### **1. Patrol Strategy**

The current patrol strategy is limited by the number of firearms available. Ranger safety is paramount and every single ranger who goes on patrol now carries a functional firearm and sufficient ammunition. We currently have 25 usable firearms available for ranger patrol and safety. The rule that states that all rangers on patrol *must* now possess a fully functional firearm and sufficient ammunition is strictly enforced, and has reduced attacks on rangers. Unfortunately, with this limited number of firearms, we can only send out four teams on camping patrol each week. Camping patrols normally combine both vehicle patrols and foot patrols. Vehicles only assist to drop off rangers and only data on foot patrols were recorded. Thankfully both discipline and morale among rangers has continued to improve and is currently very good. Seventeen joint patrols with the army were carried out to

strengthen security for the communities surrounding Yankari and to reinforce law enforcement efforts by the rangers.

## 2. Patrol Effort

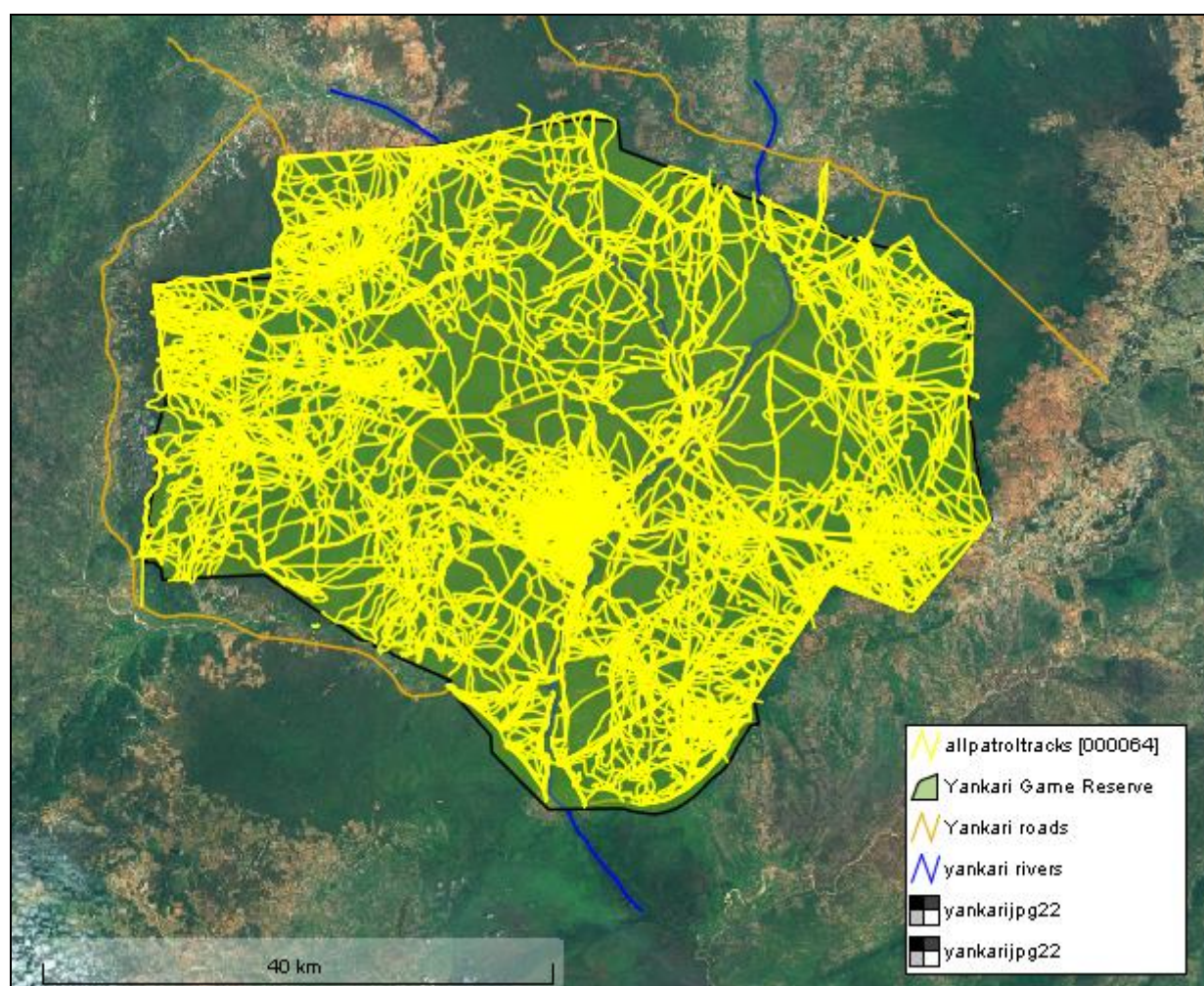
Maps 2 & 3 below shows the patrol coverage and patrol track log executed during the year. In *Map 2*, the red parts of the grid map indicates areas that were more frequently patrolled, the grey portion represents areas that were less patrolled while the un-shaded parts of the grid represents areas that were not patrolled. A total of 8,185 patrol man days (168 patrols) were completed in 2020 covering a total distance of 16,683km.



Map 2: Patrol effort in km walked per grid cell for January-December 2020. Darker red colour indicates areas of more intense patrol coverage.

Table 1: Summary of patrol effort for the period 2010 to 2020

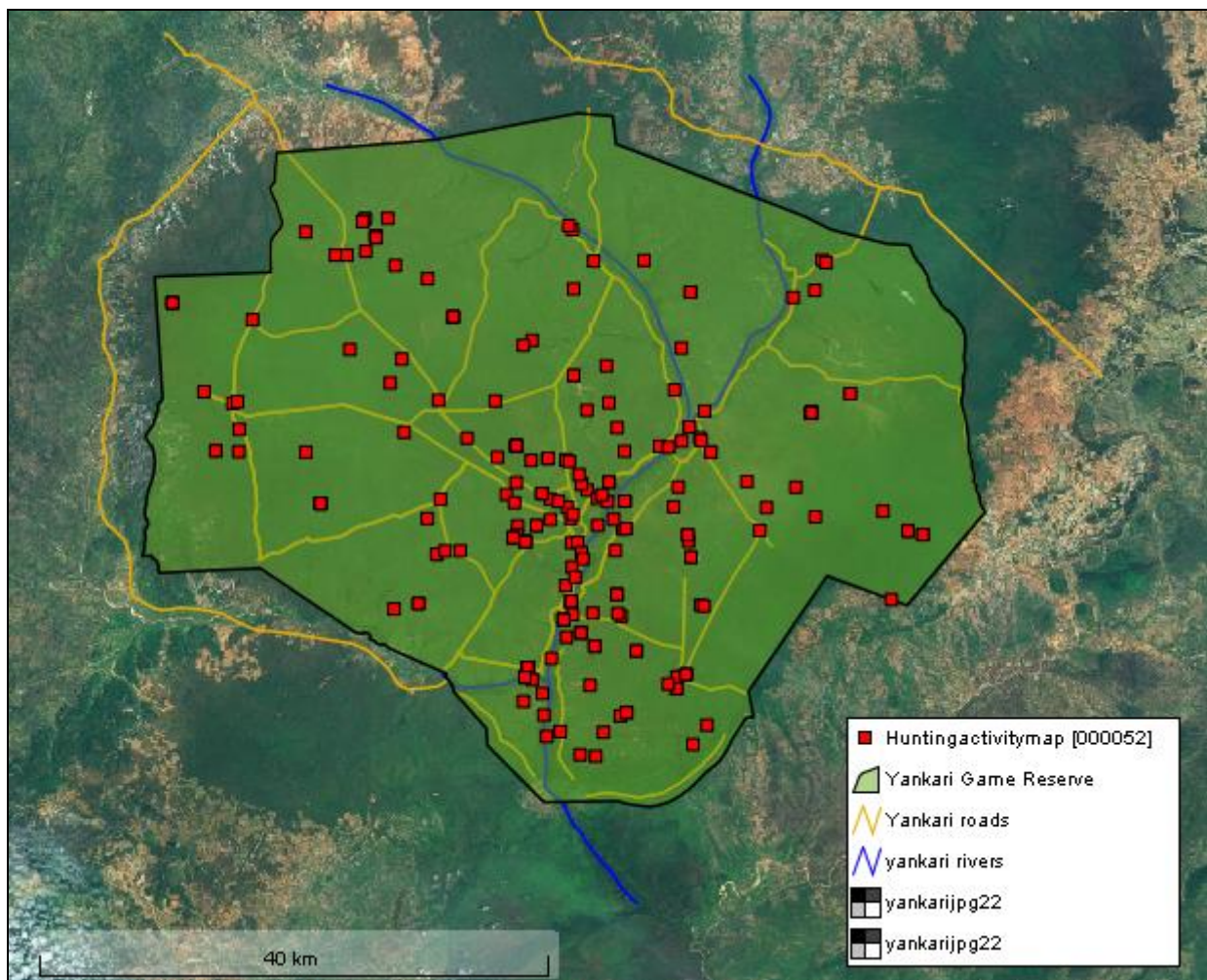
Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
No. of patrols	NA	NA	NA	NA	144	195	201	190	188	189	168
No. of patrol days	668	467	480	375	558	1124	1,107	1,261	1,409	1,333	1,264
No. of patrol man days	NA	NA	NA	NA	NA	NA	NA	7,439	8,080	7,612	8,185
Total distance covered (km)	22,023	11,351	9,540	10,398	11,007	19,655	13,167	15,256	16,441	17,477	16,683



Map 3: Patrol track logs for January-December 2020

### 3. Hunting Evidence

Hunting signs<sup>1</sup> recorded in 2020 are shown in Map 4 below. The level of hunting in Yankari (as measured by the number of hunters arrested each year) is steadily declining. A total of 23 persons were arrested for hunting related offences in 2020 compared with 35 persons arrested in 2019, 43 arrested in 2018 and 52 arrested in 2017. With only limited resources available the current patrol strategy focuses on vulnerable areas of the reserve rather than trying to cover the entire reserve each month. This strategy also enables us to focus more attention on proving close protection to the remaining elephants and also to chase crop-raiding elephants back inside the reserve.



Map 4: Hunting Activity Recorded by All Ranger Patrols January-December 2020

### 4. Arrests Made

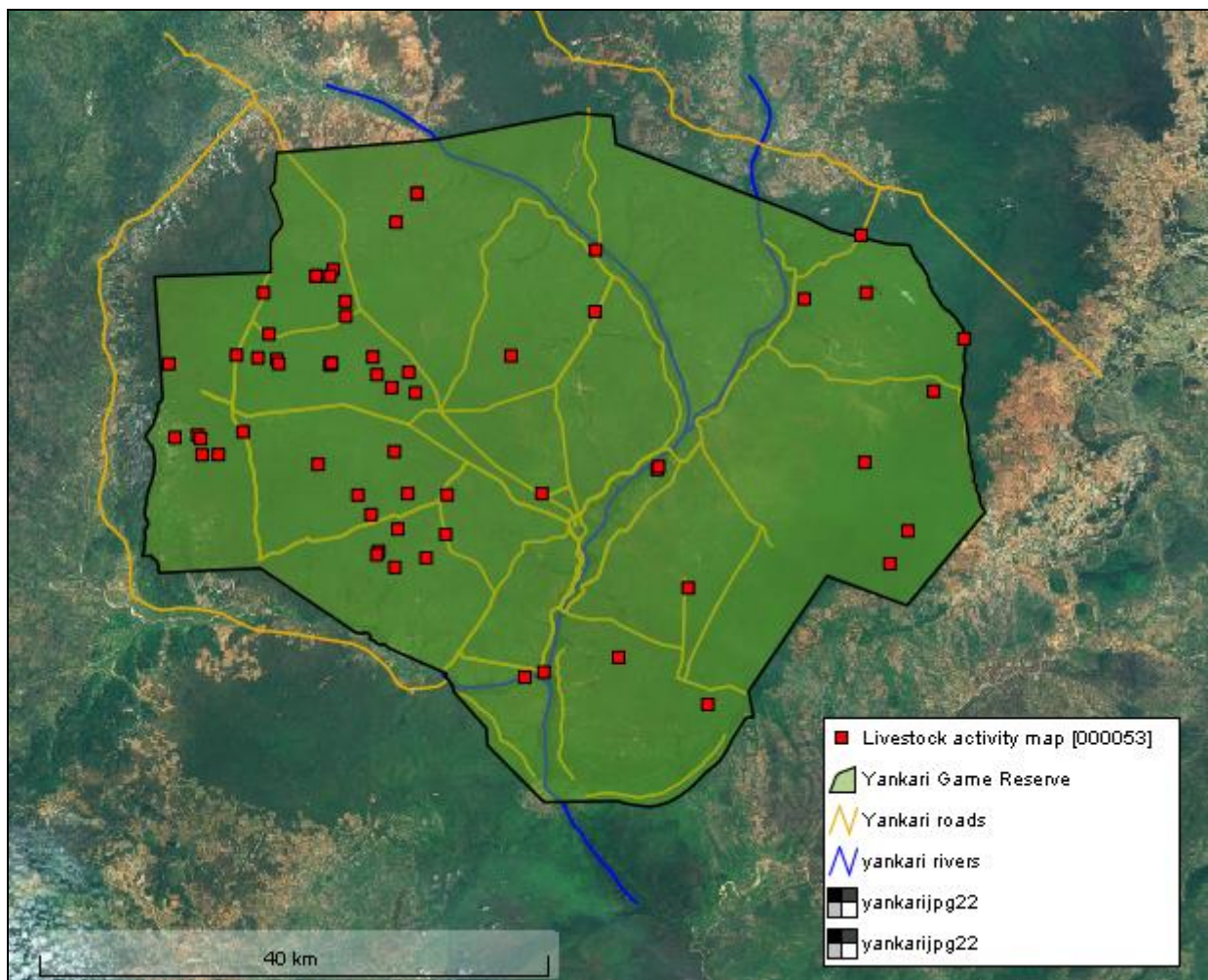
A total of 37 people (23 hunters, 11 livestock grazers, 1 elephant poacher, 1 fisherman, and 1 person for collecting firewood for commercial purpose) were arrested. Rangers are paid a bonus of \$15 per poacher arrested and \$80 for the

<sup>1</sup> Hunting signs include footprints and cooking places.

arrest of an elephant poacher. The bonus system is a good incentive and motivation for rangers.

## 5. Livestock Grazing

Cattle grazing in the reserve continue to be a major challenge (see map 5 below). Although the number of cattle grazing has reduced, it remains a threat. A total of 11 people were arrested for cattle grazing in the reserve. A workshop was organized between the Fulani chiefs (*Ardos*) and Yankari management to discuss the problem of cattle grazing in the reserve, and to seek solutions such as alternative grazing areas. Schoolchildren from nomadic schools surrounding Yankari were also involved in our school visit program.



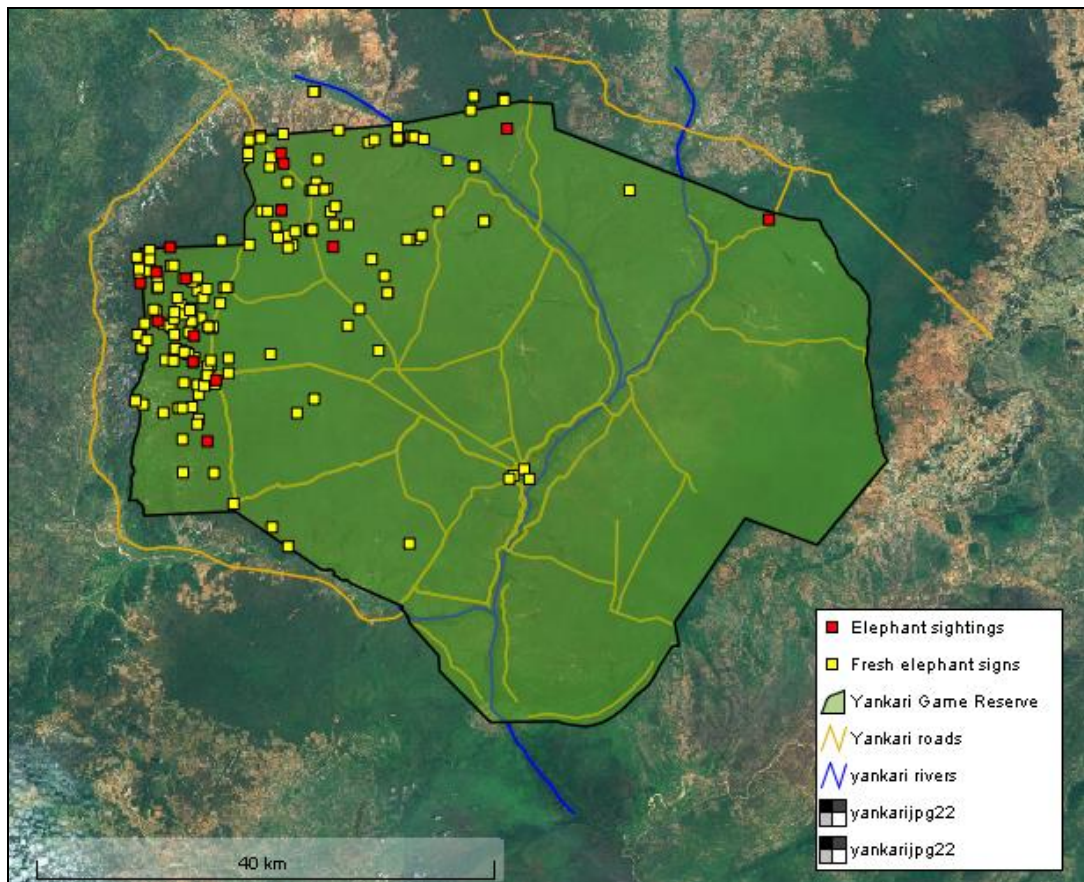
Map 5: Livestock grazing activities recorded during January-December 2020 patrols



*Fulani Ardos and Yankari rangers after the workshop, December 2020*

## **6. ELEPHANT CONSERVATION**

The satellite collars placed on elephants in 2019 continue to help us track the location and movements of the elephants and provide close protection. Elephant activities were concentrated around the North-Western part of the reserve and around Wikki camp (see Maps 6 & 7 below). Crop raiding by elephants was a major problem in 2020 affecting several communities (Pali, Mainamaji, Debigi, Kafi, Kuka, Dan, Rahama, Natsira, Yelwan-Duguri, Gaji-Gamu, Shira and Gum). With zero compensation paid to the affected farmers by the state government, local communities are understandably disaffected. As a result, elephants are equally at risk from irate farmers seeking revenge for crop damage as well as hardened poachers seeking ivory. The existing elephant guardian program in those communities most affected by marauding elephants (Yelwan-Duguri, Duguri, Dagudi, Dan, Natsira, Gale, Mainamaji, Shira, and Kuka) has helped to calm tension and improve levels of tolerance. The 18 elephant guardians act as an early warning system and first line of defence to help prevent or minimize damage to crops. The guardians immediately contact Yankari rangers for assistance. As surrounding communities have often complained of government inaction over the crop raiding issue, the elephant guardian programme helps to demonstrate our commitment to finding mutually agreeable solutions to the long-standing problem of crop raiding around Yankari. Six of the elephant guardians were provided with new motorcycles in July 2020 to improve mobility so that they could also cover neighbouring villages and extend their reach (see picture on p.18).



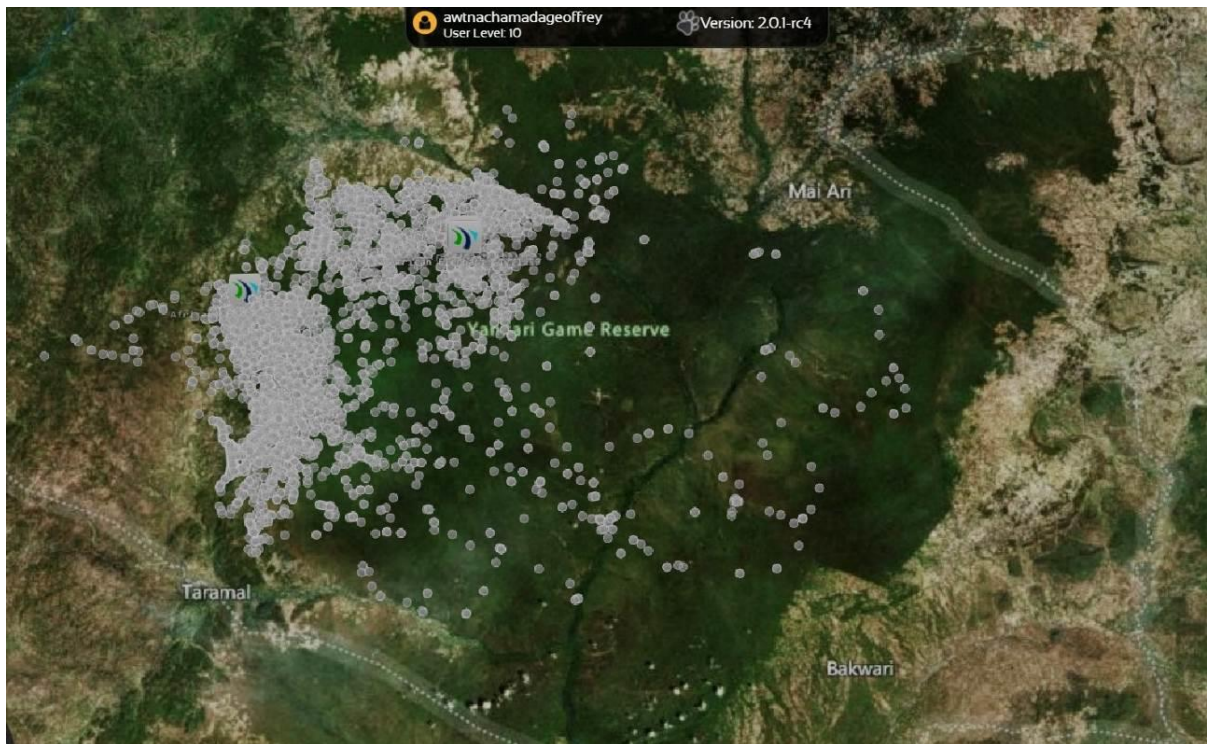
Map 6: Elephant Activities Recorded by All Ranger Patrols January-December 2020



Elephant carcass discovered during a ranger patrol, August 2020



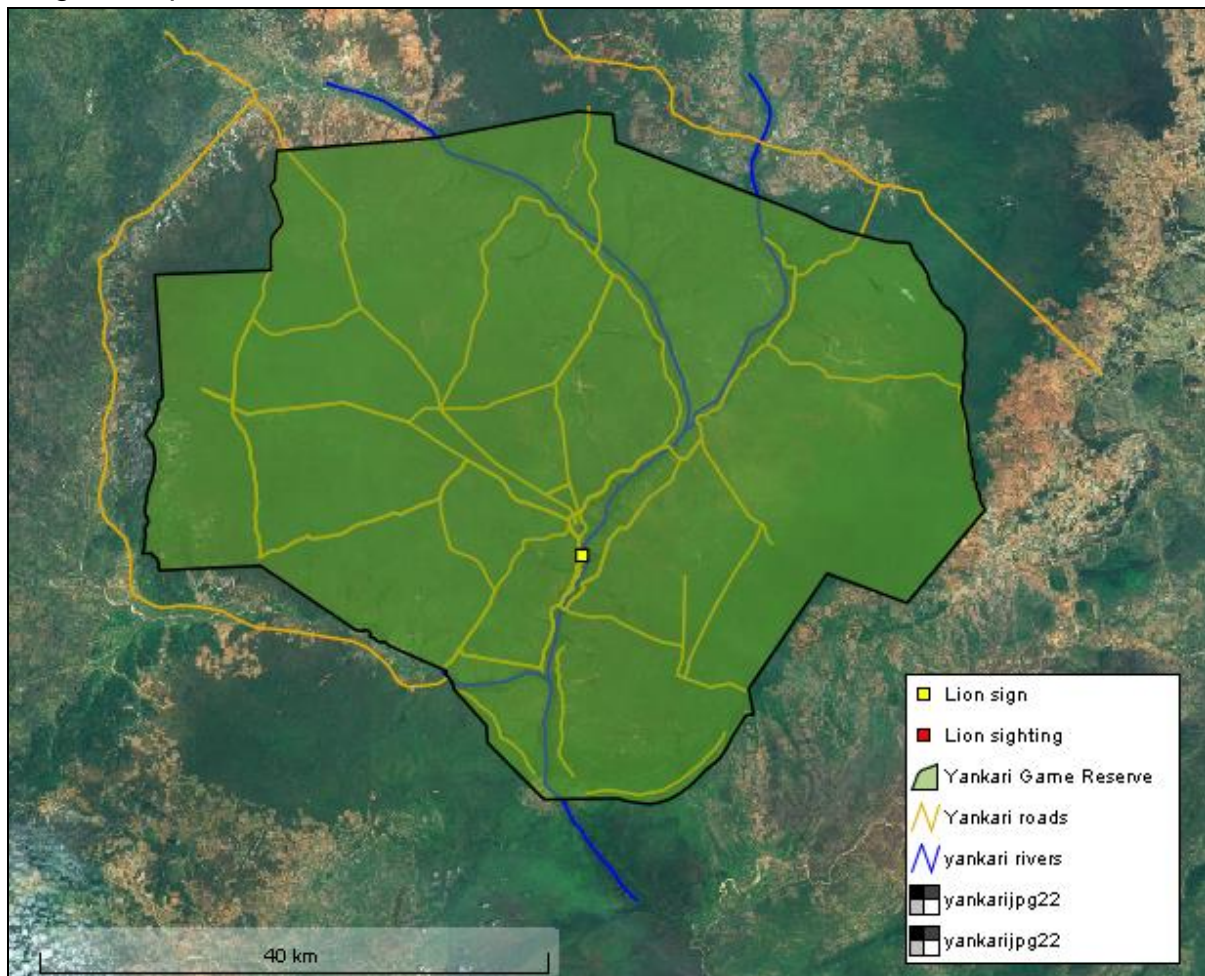
*Baushe Danjuma Adamu, elephant poacher arrested, September 2020*



*Map 7: Elephant Movement Data from Satellite Collar Recorded January-December 2020*

## 7. LION CONSERVATION

Numerous lion sightings, fresh signs (1-3 days old) and roaring during the night around Wikki were reported in 2020 although only one fresh sign was recorded by rangers on patrol.



*Map 8: Lion Activities Recorded by Ranger Patrols January-December 2020*

## 8. OTHER LARGE MAMMALS

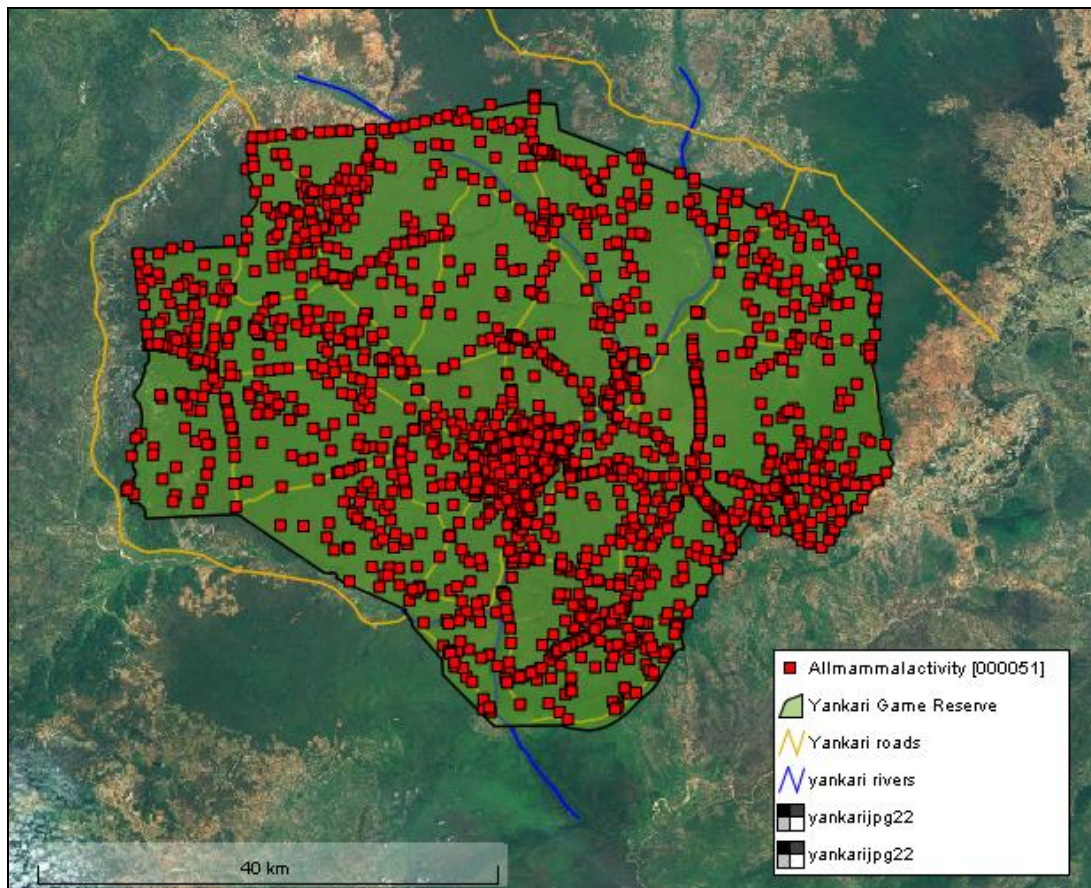
There were various other large mammals sighted within the reserve including leopard, hippopotamus, hyena, baboon, waterbuck, roan antelope, buffalo, hartebeest, patas monkey, tantalus monkey, duiker, bushbuck and warthog. Some of their photos are shown below.



*Camera trap photo of waterbuck, January 2020*



*Camera trap photo of hartebeest, January 2020*



Map 9: All Other Mammal Activities Recorded by Ranger Patrols January-December 2020



Camera trap photo of buffalo, April 2020



*Camera trap photo of roan antelope & hartebeest, December 2020*

### **RANGER BARRACKS**

The former ranger barracks in Wikki was built more than 30 years with mud blocks, and had become dilapidated. A new ranger barracks was built on a new site that is more secured and isolated from the rest of the camp. The new ranger barracks provides accommodation for 42 rangers (double-bunk beds) with a separate toilet block consisting of 4 toilets and 4 showers (supplied by 2 overhead water tanks). The ranger barracks is used as a central base for rangers in Yankari from where we organize weekly camping patrols. Work has been completed and rangers have since started using it (see pictures below). A solar system was also installed.



*Interior view of the completed ranger barracks, December 2020*



*Completed ranger barracks with toilet & shower block, water tanks & solar panels*

### **BORKONO BRIDGE**

This strategic bridge across the Gaji River had been impassable for more than 10 years, making access to the eastern side of the reserve more difficult and entailing a lengthy drive. The work involved adding an extra span to the bridge (see pictures below) after the original course of the river deviated. The renovated bridge has made patrols easier, allowing rangers to respond more rapidly to any cases of poaching and/or crop raiding by elephants on the eastern side of the reserve. The bridge is also used by tourists for access to the Marshall Caves and other parts of the reserve.



*Construction of Borkono Bridge, May 2020*



*Completed Borkono Bridge, July 2020*

### **IMPROVED WOOD STOVES**

We provided 692 improved fuel-efficient wood stoves to women in 37 communities around Yankari where firewood is increasingly scarce. The stoves reduce firewood consumption and so have significant economic and environmental benefits. They also produce less smoke and so have important health benefits too.



*Women from Pali district with their fuel-efficient woodstoves, September 2020*

### **IMPROVING MOBILITY FOR ELEPHANT GUARDIANS**

Six of the elephant guardians were provided with new motorcycles in July 2020 to improve mobility so that they can also cover neighbouring villages and extend their reach.



*Six of the elephant guardians with their new motorcycles, July 2020*

## **SCHOOL VISITS**

The communities surrounding the reserve are key stakeholders for the long-term survival of Yankari. As part of our ongoing engagement with these communities, we organised field trips to Yankari for 19 schools during the period involving a total of 400 pupils and 80 teachers. The purpose of the visit was to expose the children and their teachers to the rich biodiversity of Yankari and to develop a long-term support for conservation. The children enjoyed free transportation, free shirts, books, lunch at the restaurant, visit to the museum, Wikki warm spring and game viewing. Though these kids live right on the edge of the reserve, 100% of them said they had never been to Yankari until this visit.



*School children with their teachers during their visit, November 2020*

## **STAKEHOLDER CONSULTATION WORKSHOPS**

The communities surrounding the reserve are key stakeholders for the long-term survival of Yankari. Two stakeholder consultation workshops were held with surrounding communities, the first one focused on mitigating cattle encroachment into the reserve and the second focused on reducing levels of human-elephant conflict within surrounding communities. During the first workshop, we invited all the Fulani leaders from the surrounding communities to Yankari. For the second workshop we invited the three District Heads around Yankari (Duguri, Gwana & Pali), school headmasters, principals, religious leaders, the Chairman for Alkaleri Local Government Area, and the Hon. Commissioner for Culture and Tourism to Yankari.

The main objective of the second workshop was to further strengthen the working relationship between Yankari and the surrounding communities to better protect Yankari, improve security for the surrounding communities and also to find ways that wildlife and local communities can coexist in harmony to work with them as key stakeholders for the long-term survival of the reserve.



*Workshop participants in Yankari, December 2019*

## PROBLEMS ENCOUNTERED

- **Problems with Patrol Vehicles.** The four vehicles used to support ranger teams while on patrol are old now due to overuse, bad road network and frequent breakdown.
- **Outdated wildlife law and the lack of deterrent.** The Yankari protection law is outdated and the penalties need strengthening to act as a deterrent. If there are tough enough jail sentences to offenders as deterrent, hunting and livestock pressure would be mitigated.
- **Firearms.** The firearms that the rangers use are old now and would need replacement and if possible, an upgrade from using shotguns to rifles.
- **Elephant crop raiding and human-elephant conflict.**
- **Lack of proper real time communication** between the ranger teams on patrol and the operations room. Since the mast on which our antenna for the VHF radio system was knocked down by heavy winds about two years ago, proper communication between ranger teams on patrol and the operations room has become difficult. Rangers have to depend on mobile network on their cell phones which is not available in most parts of the reserve. Thankfully, we have now received approval from Airtel to use their two existing masts for the radio system.

- **Lack of Payment of Counterpart funding by the Bauchi State Government (BASG).** WCS has not been paid counterpart funding from the BASG for more than 3 years.

## **RECOMMENDATIONS**

1. Repair the road network and bridges within Yankari Game Reserve.
2. Purchase at least three new patrol vehicles (preferably Land Cruiser pick-ups).
3. Government salaries for Yankari rangers are very low. Funds permitting we would like to supplement salaries of Yankari rangers with a small top-up allowance each month to supplement their existing meagre salaries.
4. Collaring of the remaining Yankari lions to monitor their movements and provide closer ranger protection.
5. Purchase of a small plane to help provide aerial support.
6. BASG should provide its counterpart funding so that protection activities can be improved.
7. Review the Bauchi State wildlife law and strengthen the existing penalties
8. Purchase additional firearms.
9. Organise essential refresher training for rangers including human rights training.
10. Complete Code of Conduct for Yankari rangers.
11. Implement Grievance Mechanism for surrounding communities.
12. Complete a socio-economic survey of local communities to help design a community outreach program.

## **ACKNOWLEDGEMENTS**

We are grateful to the Elephant Crisis Fund, United States Fish and Wildlife Service, Lion Recovery Fund, UNEP African Elephant Fund, the Government of the Federal Republic of Germany, French Embassy in Nigeria, Tusk Trust, North Carolina Zoo, Omaha Zoo, and the A.P. Leventis Conservation Foundation for their support.

### Appendix 1: 37 Arrests made and Court Outcome January-December 2020

Date	Name	Location	Offence and exhibit	Village	Outcome
31/01/20	Danliti Bello Timothy Maji	Malla	Arrested for hunting in the reserve with a cutlass, 2 hoes, 2 smoked patas monkey, and a knife	Rahama	Sent two weeks in remand and six months in jail.
12/02/20	Habibu Saidu	Gwambaza	Arrested for hunting in the reserve with a cutlass, knife, smoked waterbuck, and charms	Millin-Fulani	Sent one week in remand and eighteen (18) months in jail.
13/02/20	Saminu Liman Salisu	Kwafan Rimi	Arrested for collecting firewood in the reserve with a motorcycle	Mansur	Sent two weeks in jail.
16/02/20	Jibrin Jauro Abba Musa Ahmadu Balarabe Yusu	Belle-Yibi	Arrested for hunting in the reserve with 3 Dane guns, 3 cutlasses, 2 knives, ammunition, and gun powder	Wundo	Sent one week in remand and eighteen (18) months in jail
05/03/20	Ali Babuga Sale Alh. Halilu	Kani	Arrested for livestock grazing in the reserve with 2 cutlasses, 2 torchlights	Dogon-Ruwa	Two weeks in remand and three months in jail
09/03/20	Mutari Mohammed Ali Saidu Kafi Mohammed Aliyu Duguri	Kani	Arrested for hunting and shooting a ranger in the reserve with three Dane guns, 4 smoked guinea fowl, and a smoked bushbuck	Dururi, Kafi, Dogon-Ruwa	Case transferred to police in Mainamaji who later transferred it to the C.I.D. in Bauchi
09/03/20	Usman Abdu Waiti Abdu	Dutsen-Kura	Arrested for cattle grazing in the reserve with a cutlass, charms, and a blade	Bogga	Sent two weeks in remand and three months in jail
09/03/20	Ibrahim Abdu Gambo Umaru	Kani	Arrested for cattle grazing in the reserve with 2 cutlasses and a bag	Dogon-Ruwa	Sent one week in remand and three months in jail
24/03/20	Dare Shame Baba Wuro Bahashe	Dogon-Kurmi	Arrested for cattle grazing in the reserve	Kashara	Released on bail due to Covid-19 outbreak.

25/03/20	Yusuf Musa	Buri	Arrested for hunting in the reserve with a Dane gun, knife, and a cutlass	Gale	Released on bail due to Covid-19 outbreak.
12/04/20	Umar Adamu	Kariyo	Arrested for hunting in the reserve with a Dane gun, knife, empty sacks and torchlight	Kwala	Released on bail due to Covid-19 outbreak. Guns & other exhibits in our custody.
11/05/20	Ahmadu Musa Isa Ahmadu Hassan Abdullahi	Tungan Kiyashi	Arrested for hunting in the reserve with 3 Dane guns, knife, cellphone, empty sacks and torchlight	Wolakerol	Released on bail due to Covid-19 outbreak. Guns & other exhibits in our custody.
12/05/20	Yusuf Isah Isa Ayuba	Libji	Arrested for hunting in the reserve with 2 Dane guns, knife, smoked Hartebeest, empty sacks and torchlight	Katarko	Released on bail due to Covid-19 outbreak. Guns & other exhibits are in our custody.
22/05/20	Ahmadu Abba Muhammad Abdu Hassan Abdu	Yalo	Arrested for livestock grazing in the reserve with a cellphone, and 3 axes	Yalo	Released on bail due to Covid-19 outbreak.
13/06/20	Danjuma Sale	Tungan- Baki	Arrested for hunting in the reserve with a Dane gun, knife, cellphone, empty sacks and torchlight	Kukawa	Released on bail due to Covid-19 outbreak. Gun & other exhibits in our custody.
29/06/20	Isa Yahaya Mohammed Abdulhami	Shaman	Arrested for hunting in the reserve with 2 Dane guns, knife, gunpowder, 2 axes, knife	Gaji-Gamu	Released on bail due to Covid-19 outbreak. Guns & other exhibits in our custody.
06/07/20	Mohammed Sani	Bogwas	Arrested for fishing in the reserve with a net and some fish he caught	Bogwas	Released on bail due to Covid-19 outbreak. Exhibits are in our custody.
13/07/20	Baffawuro Usman Sallau Magaji	Wolakerol	Arrested for hunting in the reserve with 2 Dane guns, knife, gun powder, 2 axes, knife	Gaji-Gamu	Released on bail due to Covid-19 outbreak. Guns & other exhibits are in our custody.
26/07/20	Garba Abubakar	Faliyaram	Arrested for hunting in the reserve with a Dane gun, knife, gun powder	Sabon Layi	Released on bail due to Covid-19 outbreak. Exhibits are in our

					custody.
17/09/20	Baushe Adamu Danjuma	Gum, arrested at home	Arrested in connection to elephant carcass recorded in August with an unlicensed Dane gun, ammunition and other wildlife products at home.	Gum	Sent to jail and case is ongoing.
29/09/20	Isiyaka Mohammed	Hawan Zubairu	Arrested for hunting in the reserve with a Dane gun, 2 knives, axe, cutlass, and ammunition	Gaji-Gamu	Six months in jail

Appendix 2: Elephant Carcass Data January-December 2020

Date	GPS Long	GPS Lat	Carcass Age	Age	Sex	Death cause	Meat taken	Ivory status	Hec_situation	comment
28/08/20	N09.91315	E10.22145	Fresh	Adult	Female	Shot with a Dane gun	No	Missing	There was elephant crop raiding reported from the area during the time.	Elephant shot on the right hand side of the chest with a Dane gun. One person has been arrested.