



YANKARI GAME RESERVE

WCS QUARTERLY REPORT: JANUARY-MARCH 2021



WCS Nigeria

A Wildlife Conservation Society Program

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SUMMARY

This report describes law enforcement efforts and SMART-based ranger patrols managed by the Wildlife Conservation Society (WCS) in Yankari Game Reserve for the period January to March 2021. A total of 2,306 patrol man days (46 patrols) were completed by rangers covering a total distance of 5,216km and as a result twenty three people (17 hunters and 6 firewood collectors) were arrested during the period. Those arrested included a gang of seven poachers armed with an AK47 rifle and a 4x4 Toyota Hilux. Firearms confiscated during the period included 8 Dane guns, 1 shotgun and an AK47 automatic rifle. Zero elephant carcasses were recorded. Elephant crop raiding cases were reported from Mainamaji, Kuka, Gale, Gum, Dagudi, and Debigi communities. We continue to track the elephants with the aid of the satellite collars put on them to provide better protection and mitigate human elephant conflict issues. Only limited livestock grazing incidences in the reserve were recorded during the period. The WCS Nigeria Country Director and Financial Director visited Yankari and paid courtesy calls on all the three district heads surrounding Yankari as a way to strengthen our already existing good relationship (see picture below) and discuss other ways that the communities and the reserve can coexist in harmony. A baseline socio-economic needs assessment survey has been completed by a team from the University of Jos and the reports is currently in preparation. Three joint patrols were completed with the army to strengthen security for local communities and wildlife. WCS helped facilitate a security meeting for all security agencies and relevant authorities in Alkaleri L.G.A.



WCS Nigeria Country Director, Finance Director and Yankari Landscape Director at the palace of the District Head of Gwana

RESULTS AND DISCUSSION

A total of 46 SMART-based patrols were organized during this period covering a total distance of 5,216 km and 2,306 patrol man-days (see Appendix 1 for more details). Levels of protection *within the areas patrolled* are adequate but some areas of the reserve were left unprotected (see Map 1 below) during this reporting period due to shortage of funds and firearms to organize more patrols. Ranger morale is high and hunting and livestock grazing activities in the reserve have been reduced to a minimum level. Hunting is now opportunistic as hunters only go in for a few hours as their chances of being noticed and arrested is higher. However, the current efforts need to be sustained and possibly improved upon. Three joint patrols with the army were completed to boost ranger morale and to assure the surrounding communities of our commitment and partnership with other security agencies to work together and keep Yankari and the surrounding communities safe. A security meeting for all the security agencies operating in Alkaleri L.G.A. and relevant stakeholders was facilitated (see picture below). The importance of the meeting was to support the L.G.A. council to be able to work in synergy with all the various security agencies and the communities to ensure that the communities surrounding Yankari get the necessary security support. This is part of our ongoing programs to support the communities surrounding the reserve.



Alkaleri L.G.A. Chairman and some of the participants after the security meeting, March 2021

PATROL STRATEGY AND CAMPING PATROL SCHEDULE

The number of firearms and vehicles available limits the current patrol strategy. Currently, we can only organize four camping patrols each week. Four teams consisting of 6-7 rangers per team were sent out on camping patrol. We improved from seven days patrol that were previously done to eight days so that rangers can spend more time out on patrols and to enable us switch the patrol end and start days weekly. With only limited resources available, the current patrol strategy targets vulnerable areas rather than trying to cover the entire reserve. However, SMART enables us to see which areas of the reserve haven't been patrolled and we ensure that patrols are sent to those areas as well. This strategy has also enabled us to focus more attention on the remaining

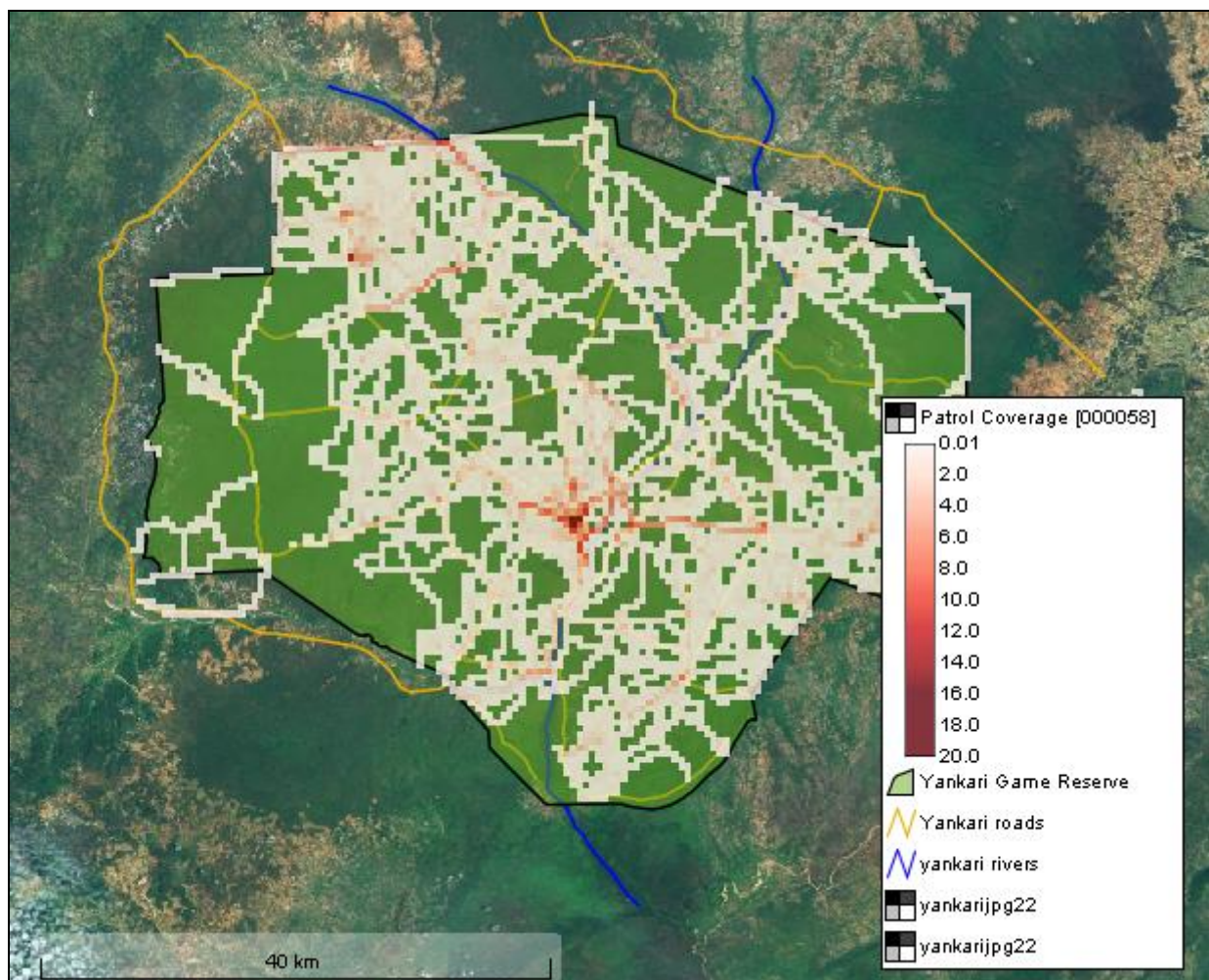
elephants. There were no fixed camping locations, instead rangers continuously change their location overnight both to increase the area coverage but also to minimize the risk of the camp being discovered by poachers and attacked. Data is collected using handheld computers running CyberTracker software which automatically records GPS coordinates for every observation. Data were analyzed using SMART software. Table 1 below summarizes the patrol data for the period.

PATROL EFFORT

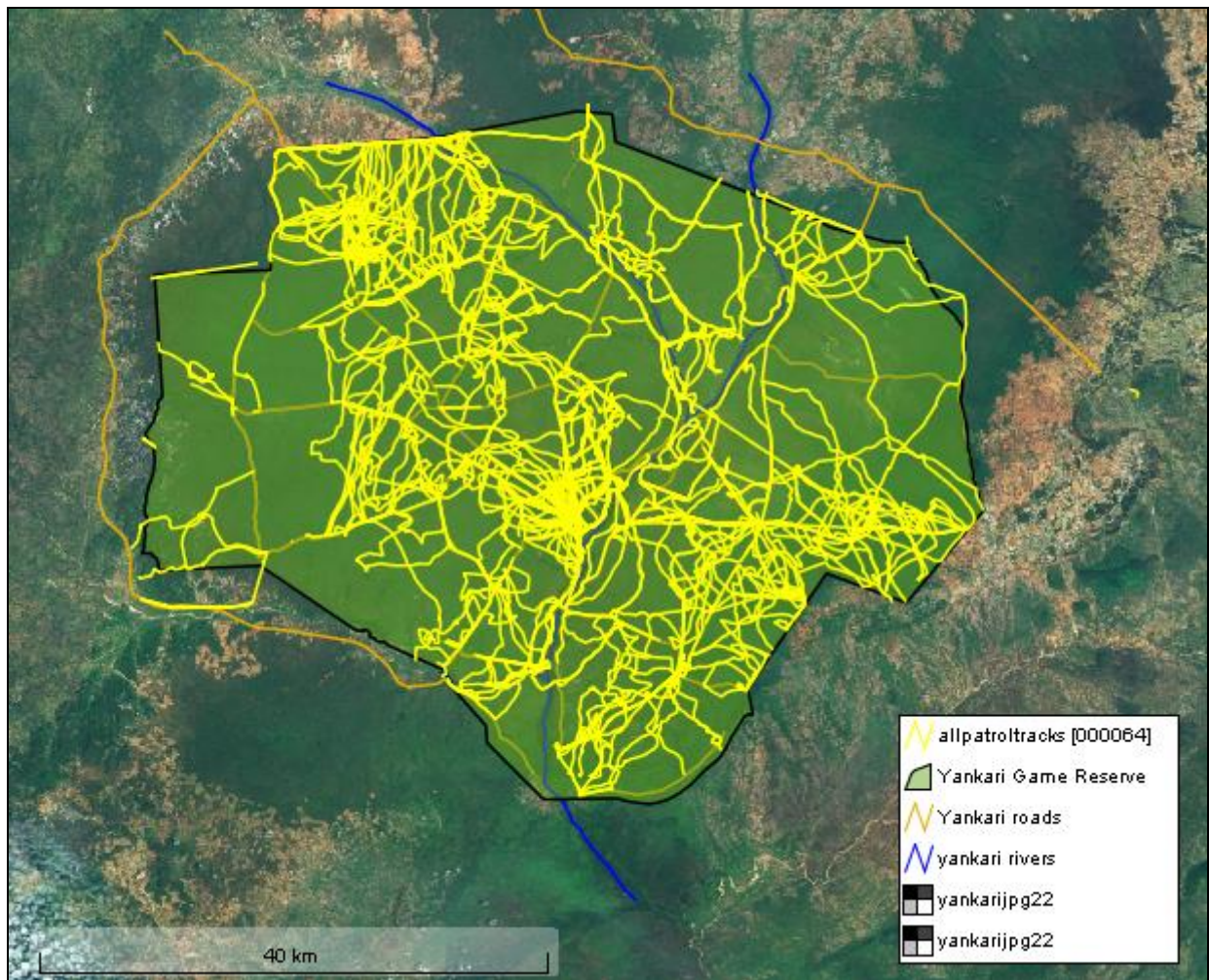
In *Map 1*, the darker red part of the grid map indicates areas that have been more frequently patrolled, the grey portions represent areas that were less patrolled while the un-shaded parts of the grid represents areas that were not patrolled during the reporting period.

Table 1. Summary of patrol effort for the period January to March 2021

<i>No of Patrols</i>	<i>Distance (km)</i>	<i>Hours</i>	<i>No of Days</i>	<i>Patrol Man Days</i>
46	5,216	2,770	349	2,306



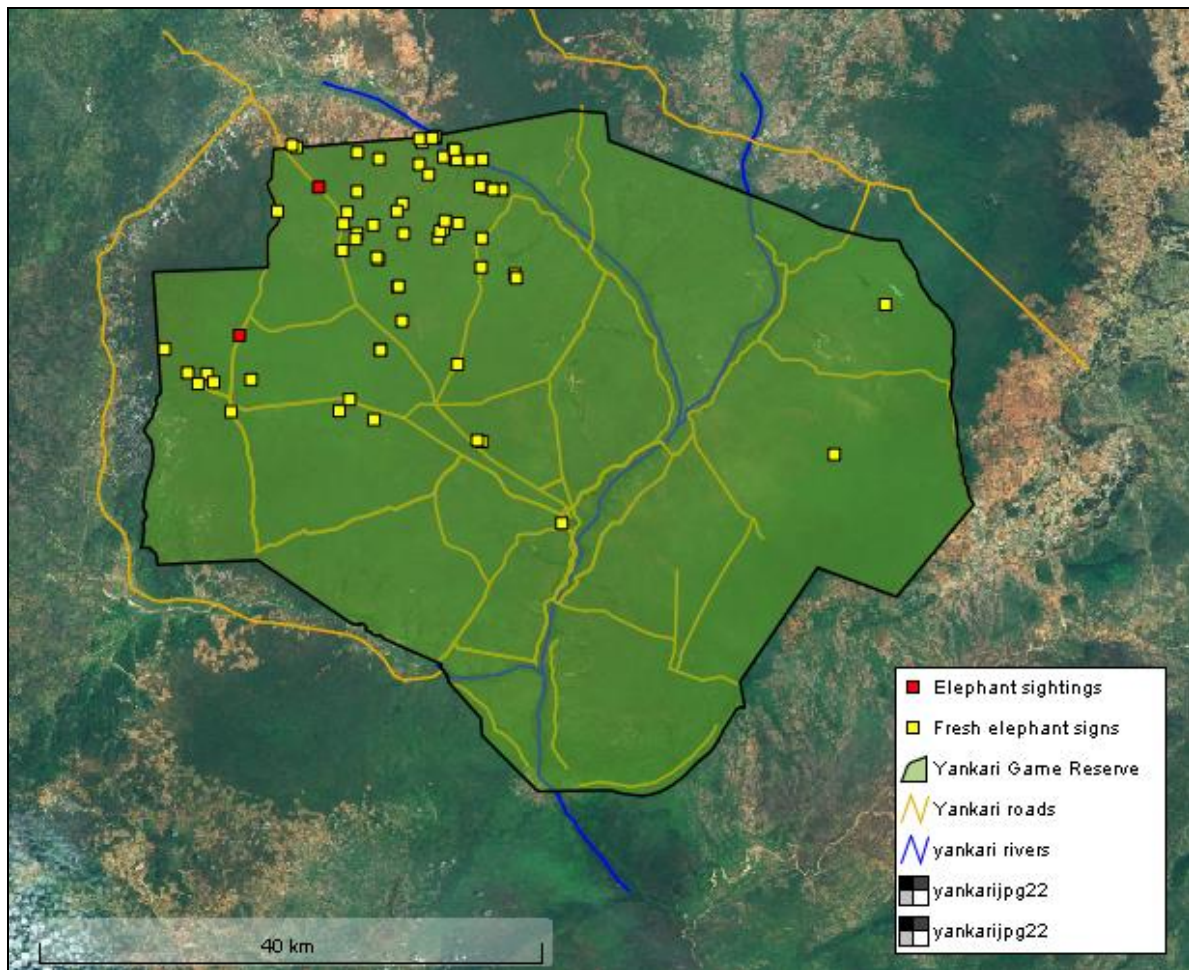
Map 1: Patrol effort in km walked per grid cell for January-March 2021. Darker red colour indicates areas of more intense patrol coverage.



Map 2: Patrol track logs for January-March 2021

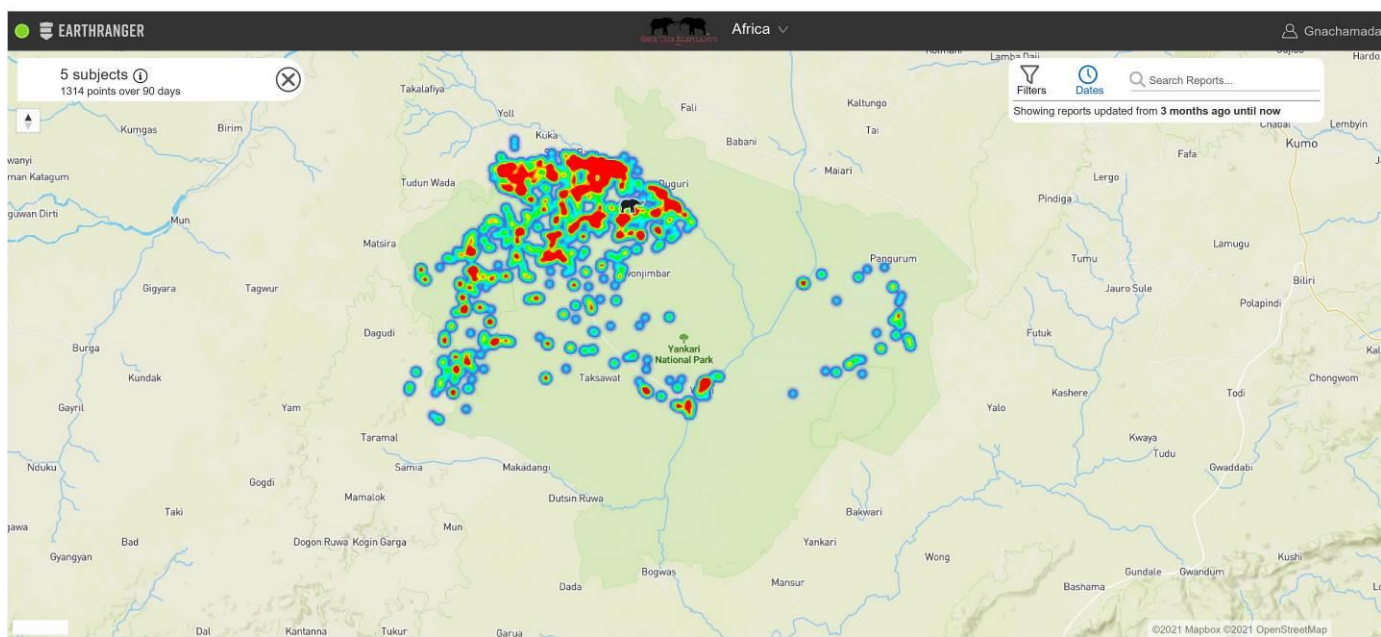
ELEPHANT CONSERVATION

Fresh (1-3 days old) elephant sign and elephant sighting was recorded in the reserve during ranger patrols, see Map 3 below. Crop raiding by elephants was reported from Mainamaji Kuka, Gale, Gum, Dagudi, and Debigi communities. Rangers were sent to the areas concerned, although typically elephants raid crops overnight and by the time the rangers arrive the following morning the elephants have already left and returned to the reserve. We continue to track the elephants with the aid of the satellite collars put on them to provide close protection and mitigate human wildlife conflict issues. We now use the software from “Save the Elephants” to monitor the elephants in real-time (see map 4 below). From the data from the collars on the heat map 4 below, the elephants have spent more time in the northern part of the reserve and little bit of time around the Wikki camp as well. Last year around this time, they spent more time around the NW part of the reserve. Although this year they visited the NW part of the reserve as well, they did not spend as much time. The heat map is very informative since it is able to show us where the elephants have spent more or less time over the period. The vegetation in the northern part of the reserve looks good, likely due to reduced activities of livestock grazing in the reserve. The elephants did not go to the southern part of the reserve during the period.



Map 3: Elephant Activities Recorded by All Ranger Patrols January-March 2021

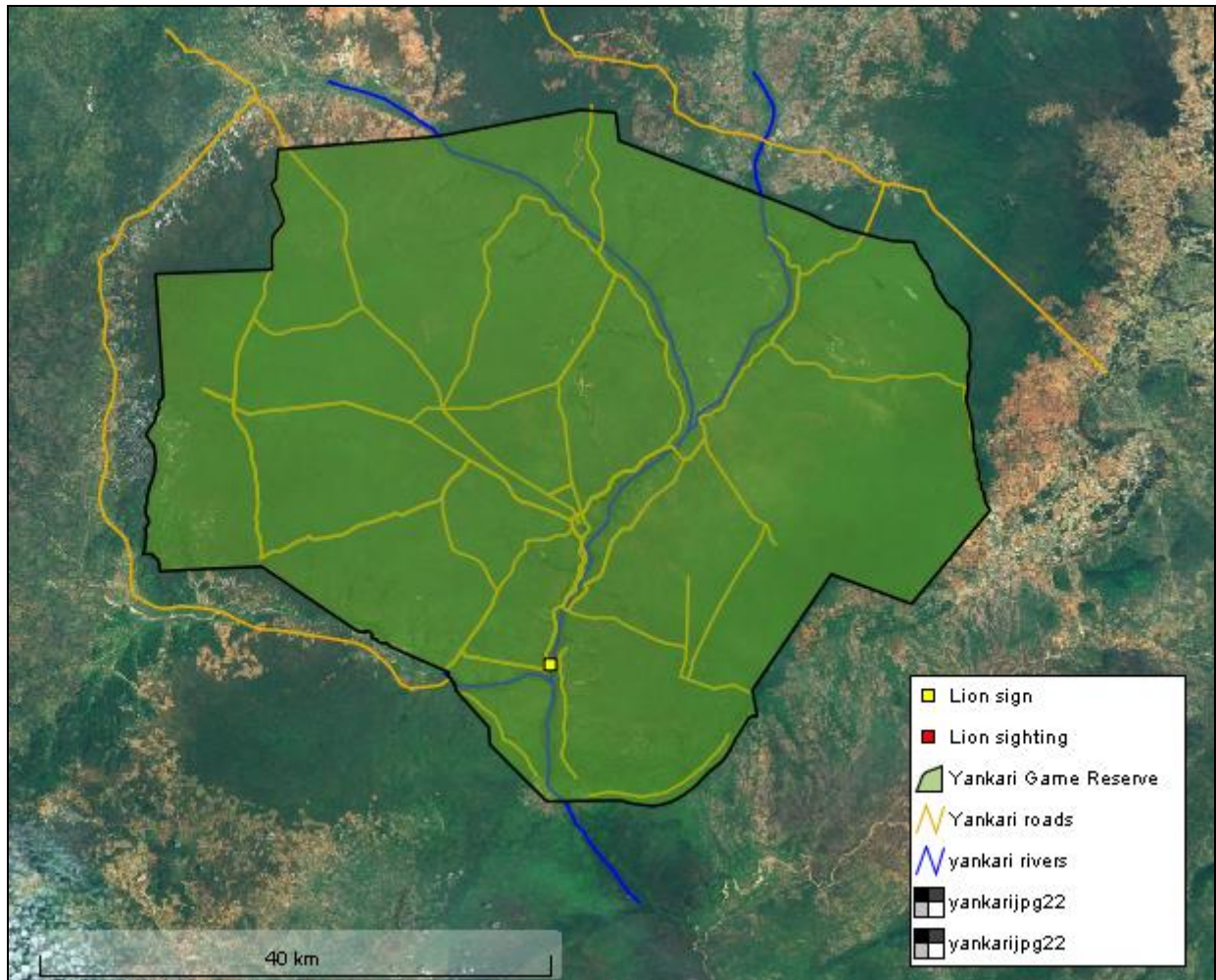
STE Heat Map for Yankari



Map 4: Heat Map for Elephant Movement from Satellite Collar Recorded January-March 2021

LION CONSERVATION

One fresh lion sign was reported by ranger patrols during the period (see map 5 below). Fresh lion sign meant sign that is 1-3 days old. Lion roaring was reported twice at night from the Wikki camp. Spoor of a lioness with two cubs was also reported around the airstrip. We have put out camera traps in those locations as well as other parts of the reserve.



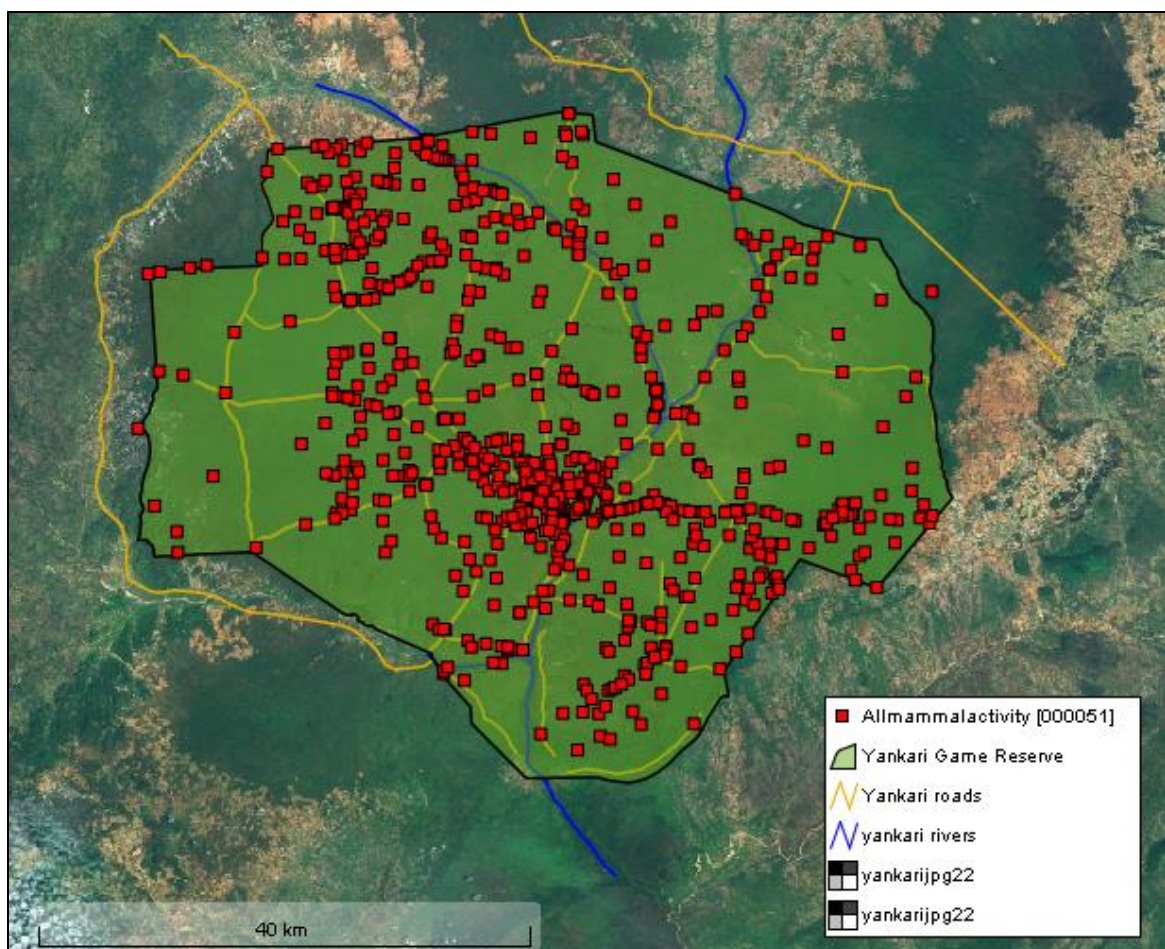
Map 5: Lion Activities Recorded by All Ranger Patrols January-March 2021

ALL OTHER MAMMAL SIGHTINGS

Various other large mammals were sighted within the reserve (see Map 6 below) including hippos, baboons, waterbuck, roan antelope, buffalo, hartebeest, patas monkey, tantalus monkey, bushbuck and warthog.



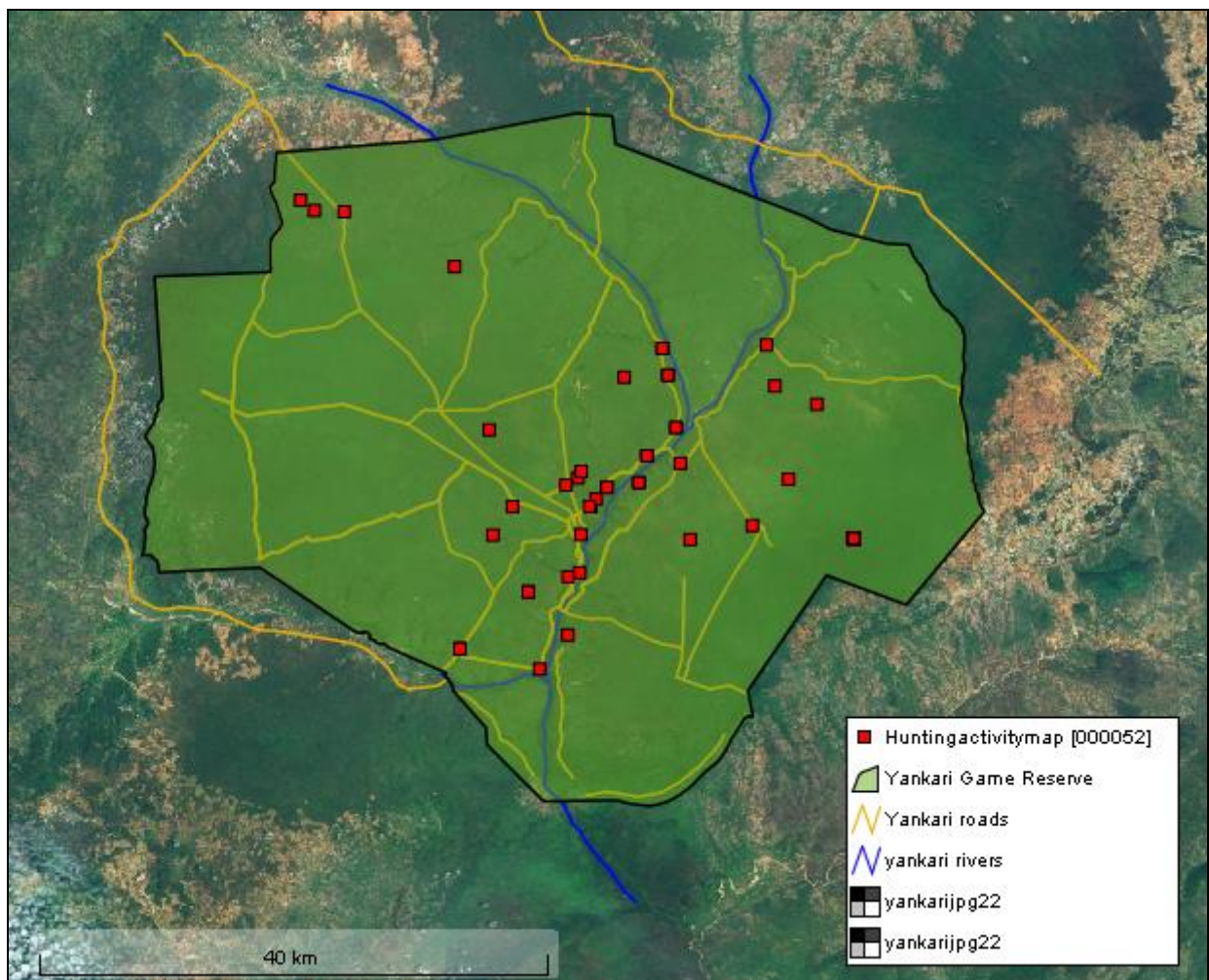
Camera trap photo of roan antelope & hartebeest, March 2021



Map 6: Location of All Other Mammal Sightings January-March 2021

HUNTING EVIDENCE

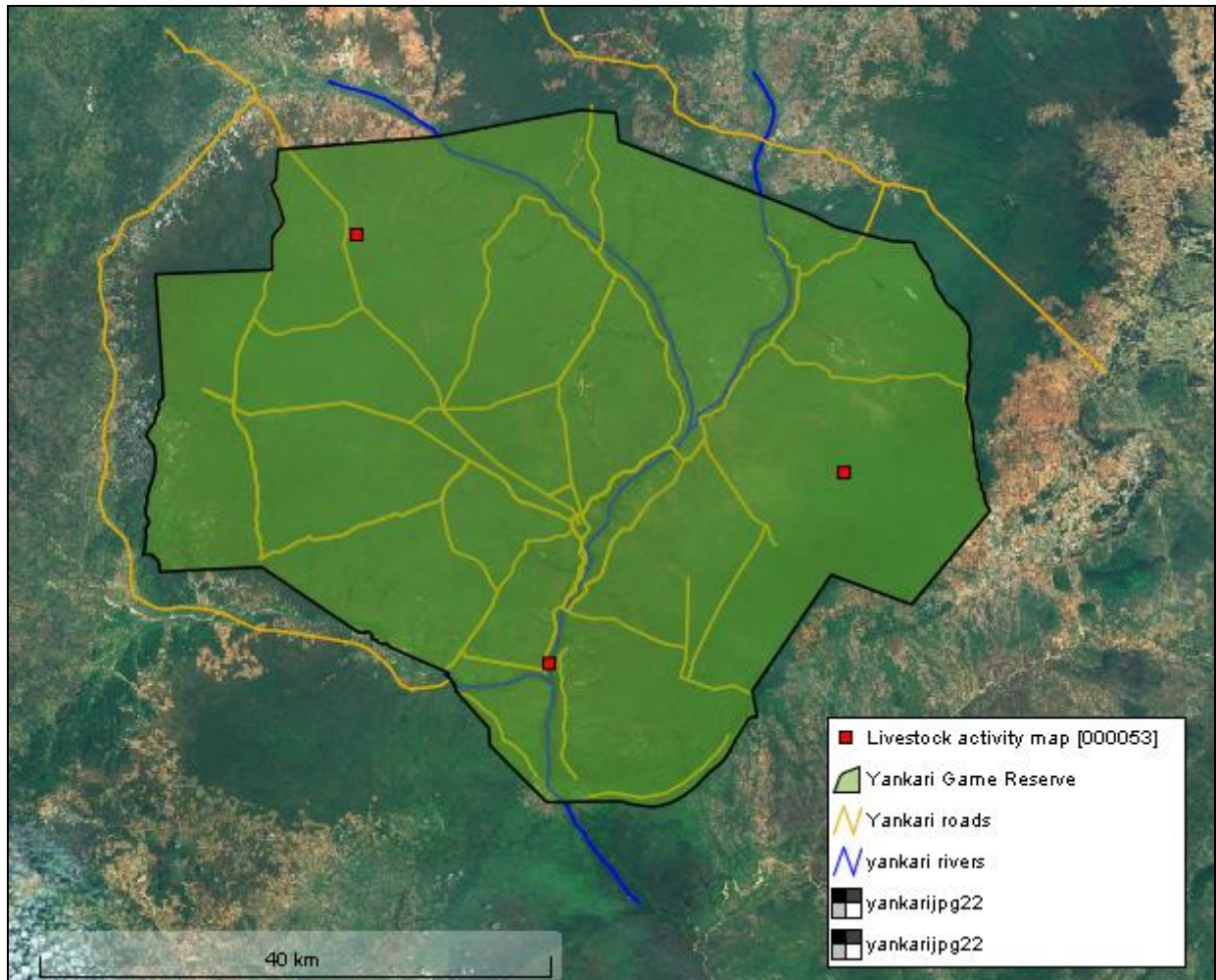
Although seventeen (17) hunters were arrested during the period, hunting pressure has significantly been reduced in the reserve. The hunters now only hunt opportunistic and are afraid of staying for long periods hunting in the reserve. Continuous ranger training and the provision of allowances, bonuses, food rations, kits and equipment has built the morale of the rangers. It was incredible that the rangers were able to mount a coordinated ambush and arrested seven poachers armed with an automatic rifle (AK47) and a 4x4 Toyota Hilux with no casualty. Unfortunately, the outdated wildlife law does not provide sufficient deterrent to poachers. We are working closely with the government to revise the wildlife law to provide tougher punishment that will serve as deterrent. Hunting signs recorded this period are shown in Map 7 below.



Map 7: Hunting Activity Recorded by All Ranger Patrols January-March 2021

LIVESTOCK GRAZING

Only limited livestock grazing activities in the reserve was encountered during the period, no arrest was made for livestock grazing in the reserve. The rate of livestock grazing in the reserve has also reduced overtime because rangers have dominated the reserve with continuous patrols. Livestock grazing sign recorded this period is shown in Map 8 below.



Map 8: Livestock Grazing Activity Recorded by All Ranger Patrols January-March 2021

CHALLENGES FACED

- **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 pressure would be mitigated.
- **Problems with Patrol Vehicles.** The four vehicles we have which help to support ranger teams while on patrol are old now due to overuse, bad road network and frequent breakdown.
- **Lack of Payment of Counterpart funding by the Bauchi State Government (BASG).** WCS is still waiting to receive counterpart funding from the BASG for over thirty six (36) months now. The lack of payment of the funds by the state government has put pressure on the limited funds WCS has and made it tough to sustain current patrols and impossible to increase the patrols.
- **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 a year 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. There are ongoing discussions with Airtel to allow us mount the antenna on their existing masts.

RECOMMENDATIONS

1. Purchase new patrol vehicles.
2. Revise the Bauchi State wildlife law.
3. Bauchi State should provide financial support to augment WCS's efforts so that Yankari can be better protected.
4. Acquire new firearms for rangers, preferably rifles.

ACKNOWLEDGEMENTS

We are grateful to the Elephant Crisis Fund, the United States Fish and Wildlife Service, Lion Recovery Fund, UNEP African Elephant Fund, Tusk Trust, North Carolina Zoo, Omaha Zoo, Indianapolis Zoo, the Illegal Wildlife Trade Challenge Fund (DEFRA), and the A.P. Leventis Conservation Foundation for their support.

Appendix 1: Twenty-Three Arrests Made and Court Outcome January-March 2021

Date	Name	Location	Offence and exhibit	Village	Outcome
20/01/21	1. Umar Musa 2. Abdullahi Yusuf 3. Kabiru Sani 4. Ibrahim Buba	Tungan Kifi	Arrested for hunting in the reserve with with 5 Dane guns, ammunition, 3 cutlass.	Maciyar Maje	Sent to jail awaiting trial but the courts are on strike now.
14/02/21	5. Abdullahi Adamu Wanzam	Yelwan-Duguri	Arrested for hunting in the reserve with a Dane gun, ammunition, cellphone, & gunpowder.	Sharam	Sent three months in jail
21/02/21	6. Ibrahim Salisu 7. Haruna Adamu 8. Rabi'u Shatima 9. Maharazu Abdullahi 10. Abdullahi Ibrahim	Kwaffan-Rimi	Arrested for collecting firewood in the reserve with five motorcycles and five axes	Mansur	Sent three months in jail
06/03/21	11. Dauda Musa 12. Mohammed Bihiya 13. Mahmud Moh'd 14. Masu'd Yusuf 15. Sale Adamu 16. Mohammed Aliyu 17. Adam Mahmud	Dogon-Kurmi	Arrested for hunting in the reserve with a 4x4 Toyola hilux, AK47 rifle, a shotgun, 2 Dane guns, & three smoked baboons	Azare	Case sent to Police in Mainamaji and transferred to CID in Bauchi ongoing.
08/03/21	18. Safiyanu Nuhu	Hawan Baba-Ayuba	Arrested for collecting firewood with a motorcycle in the reserve	Bulum	Sent two days in remand and N5,000 court fine.
19/03/21	19. Mohammed Bello Abdullahi	Dukkee	Arrested for hunting in the reserve with a Dane gun and knife	Sangar	Sent three months in jail.
27/03/21	20. Usman Chiroma 21. Yahuza M. Sabitu	Maidawa	Arrested for hunting in the reserve with a Dane gun, cutlass, a knife	Dogon-Ruwa	Sent two weeks in remand awaiting trial.
27/03/21	22. Abdulkarim Ibrahim 23. Habibu Sallah	Maidawa	Arrested for hunting in the reserve with 2 Dane guns, 2 torchlights, 1 cellphone	Goburawa	Sent two weeks in remand awaiting trial.

Appendix 2: 46 Camping Patrols Completed January-March 2021

No	Area patrol	Patrol Start	Patrol End	Patrol Man Days
1.	Saltlick A & B, Adamu Jumba, Tungulum, Guruntum, Rendel, Faliyaram	05/01/21	11/01/21	49
2.	Debigi, Buri, Batta, Zambuk, Buri	05/01/21	11/01/21	42
3.	Garangaran, Shaman, Borkono, Gwambaza	05/01/21	11/01/21	49
4.	Libji, Tungulum, Tungan Baki, Kariyo, Filin Tsintsiya, Pali	05/01/21	11/01/21	42
5.	Buri, Mansur, Kuka, Bata	12/01/21	18/01/21	56
6.	Libji, Bultu, Dorina, Jarkasa, Shaman, Borkono	12/01/21	18/01/21	49
7.	Faliyaram, Guturu, Kariyo, Dimil, Shehu Maska, Kwala, Guruntum, Jada, Dimil, Dalamiri	12/01/21	18/01/21	56
8.	Buri, Batta, Dogon-Kurmi, Mainamaji	19/01/21	25/01/21	35
9.	Pali, Giwa, Bultu, Dimil, Rendel, Gurnntum, Bogga, Saltlick A & B	19/01/21	25/01/21	42
10.	Libji, Maidawa, Kuka, Tatabara, Giwa, Fararkasa	19/01/21	25/01/21	35
11.	Adamu Jumba, Pali, Gale, Zambuk, Kali Imam	19/01/21	25/01/21	42
12.	Borkono, Jibrin Nayaya, Shaman, Garangaran	19/01/21	25/01/21	42
13.	Garangaran, Borkono, Shafale, Saltlick A & B	26/01/21	01/02/21	49
14.	Garangaran, Buri, Dauda Usman, Buri, Batta	26/01/21	01/02/21	49
15.	Libji, Kwala, Shehu Maska, Kali Imam, Pali	26/01/21	01/02/21	49
16.	Borkono, Kariyo, Tungulum, Tungan Baki, Dogon-Kurmi, Yalo, Malla, Jarkasa, Gajin-Gwaza, Boga	02/02/21	08/02/21	42
17.	Daban-Maje, Shaushau, Kariyo, Giwa, Dimil	02/02/21	08/02/21	56
18.	Saltlick A & B, Dorina, Libji, Faliyaram, Duguri, Guruntum, Shaman	02/02/21	08/02/21	56
19.	Garangaran, Buri, Bata, Kani, Tungan-Kifi, Gwambaza	02/02/21	08/02/21	42
20.	Tungan-Dutse, Giwa, Shehu Maska, Tatabara,	09/02/21	16/02/21	48

	Bogga, Malla, Kariyo, Shaushau			
21.	Bultu, Ruwan-Rakumi, Kwala, Gwambza, Tungulum, Malla	09/02/21	16/02/21	64
22.	Shama, Dorina, Buri, Tukuruwa, Dogon-Ruwa	09/02/21	16/02/21	56
23.	Duguri, Buri, Batta, Maikonkoni	09/02/21	16/02/21	48
24.	Faliyaram, Shaman, Mainamaji, Kalban, Jibrin-Nayaya, Batta	17/02/21	24/02/21	56
25.	Faliyaram, Malla, Yalo, Jarkasa, Giwa, Shaman, Rimi	17/02/21	24/02/21	56
26.	Bultu, Kwala, Giwa, Shaman, Shehu-Maska, Adamu-Jumba, Tungan-Dutse	17/02/21	24/02/21	48
27.	Duguri, Batta, Kalban, Faliyaram, Buri, Shaman	17/02/21	24/02/21	48
28.	Shaman, Kalban, Jibrin-Nayaya, Faliyaram, Buri	25/02/21	04/03/21	56
29.	Hobbaje, Bata, Buri, Dukey, Kuka	25/02/21	04/03/21	48
30.	Filin-Tsintsiya, Shehu MAskA, MAlLa, Shaushau, Tungan Kifi, Borkono, Guturu, Malla	25/02/21	04/03/21	48
31.	Borkono, Yalo, Bultu, Kwala, Guruntum, Giwa	25/02/21	04/03/21	48
32.	Libji, Buri, Faliyaram, Kalban, Gwambaza, Borkono	05/03/21	12/03/21	56
33.	Malla, Bogga, Kariyo, Yalo, Tungulum, Tungan-Baki, Gale, Shaushau	05/03/21	12/03/21	56
34.	Giwa, Rendel, Ruwan-Rakumi, Ruwan-Gogo, Pali	05/03/21	12/03/21	48
35.	Tukuruwa, Buri, Debigi, Fararkasa, Jibrin-Nayaya, Saltlick A & B	05/03/21	12/03/21	48
36.	Maidawa, Jada, Shaushau, Kariyo, Jada, Guruntum, Malla	13/03/21	20/03/21	56
37.	Malla, Kali-Imam, Borkono, Jada, Kali-Imam	13/03/21	20/03/21	56
38.	Faliyaram, Kalban, Batta, Nata'ala, Libline, Kuka	13/03/21	20/03/21	40
39.	Dogon-Kurmi, Hobbaje, Maikwankwani	13/03/21	20/03/21	56
40.	Borkono, Giwa, Guturu, Tungan-Kifi, Tungan-Kiyashi, MAlLa, Shaushau, Dogon-Kurmi, Kwala	21/03/21	28/03/21	56
41.	Shaushau, Malla, Tungulum, Rimi	21/03/21	28/03/21	56

42.	Faliyaram, Duguri, Libji, Maidawa, Gajigamu, Shaman	21/03/21	28/03/21	48
43.	Dagudi, Yelwan-Duguri, Mainamaji, Dogon-Ruwa, Libji, Maikonkoni	21/03/21	28/03/21	48
44.	Tungan-Baki, Kwanan-Kirya, Shehu-Maska, Bogga, Giwa	29/03/21	05/04/21	56
45.	Dorina, Shaman, Maidawa, Dorina	29/03/21	05/04/21	56
46.	Gwambaza, Filin-Tsintisya, Jibrin-Nayaya, Buri, Libji	29/03/21	05/04/21	64



Camera trap photo of hartebeest and roan antelope, February 2021