



## **AFI MOUNTAIN WILDLIFE SANCTUARY QUARTERLY REPORT: OCTOBER TO DECEMBER, 2021**



Prepared by:  
**AYANG Vincent**  
**WCS Nigeria Program**

## Summary

This report presents the results of ranger patrols of Afi Mountain Wildlife Sanctuary (AMWS) conducted from October to December 2021 by the Wildlife Conservation Society (WCS). The report also covers activities implemented during the same period to raise levels of conservation awareness in the surrounding communities, as well as support provided to improve local livelihoods. A total of 17 patrols were completed this quarter covering 449.5 kilometers over 108 patrol days (610 man-days). The patrols covered the Esekwe camp, Base camp, Nkayang-Kakubok, Katche-Asuben, Olum axis, Njua Lowland, Buanchor-Drill Ranch, and Ebakken-Boje-Asuben sectors of the sanctuary. Eight offenders were apprehended including 5 hunters and 3 people farming inside the sanctuary. One shotgun and 12 unset snare wires were confiscated. While awaiting action by the Cross River State Forestry Commission (CRSFC), the offenders were also reported to their respective communities for sanctions. A total of 292 wire snares were removed from the forest and three hunting camps were dismantled. In addition to signs of hunting, 3 illegal farms were observed in the Buanchor, Olum, and Esekwe axes of the sanctuary. Great apes were not sighted during this period. However, vocalizations were heard, and nine nest sites were observed: 4 gorilla, 3 chimpanzee, and two unidentified. Monkeys sighted include putty-nosed monkey *Cercopithecus nictitans* (25 sightings) Mona monkey *Cercopithecus mona* (24 sightings), and drill *Mandrillus leucophaeus* (21 sightings). Other large mammals recorded include yellow-backed duiker *Cephalophus silvicultor*, bay duiker *Cephalophus dorsalis*, red river hog *Potamochoerus porcus*, and African civet *Civettictis civetta*. In addition to regular patrols of the sanctuary, “Gorilla Guardians” trained and supported by WCS surveyed adjoining community forests in the Olum-Bubong, Esekwe-Ndemechang, Katche-Asuben-Ebakken and Bitiah-Kakwagom-Kakubok areas to monitor gorilla presence. To raise levels of conservation awareness in the local communities, WCS facilitated 6 field trips, 5 exchange visits, 9 school visits, distributed 224 WCS customized notebooks in schools. A total of 668 students and 1,395 men and women in 16 villages participated in these activities. Great ape film shows were presented in 11 villages and viewed by a total of 1,222 people. WCS also facilitated 9 community meetings to discuss ways to reduce illegal human activities in protected area. Livelihood support activities implemented this quarter include establishment of 3 cocoa nurseries (improved variety) in Okubuchi, Ndemechang and Nkanya to raise seedlings for distribution to farmers previously trained in improved cocoa farming practices to improve productivity of existing farms and reduce deforestation due to farm expansion. A total of 91 farms proposed for support were visited and mapped for future monitoring.

## Methods

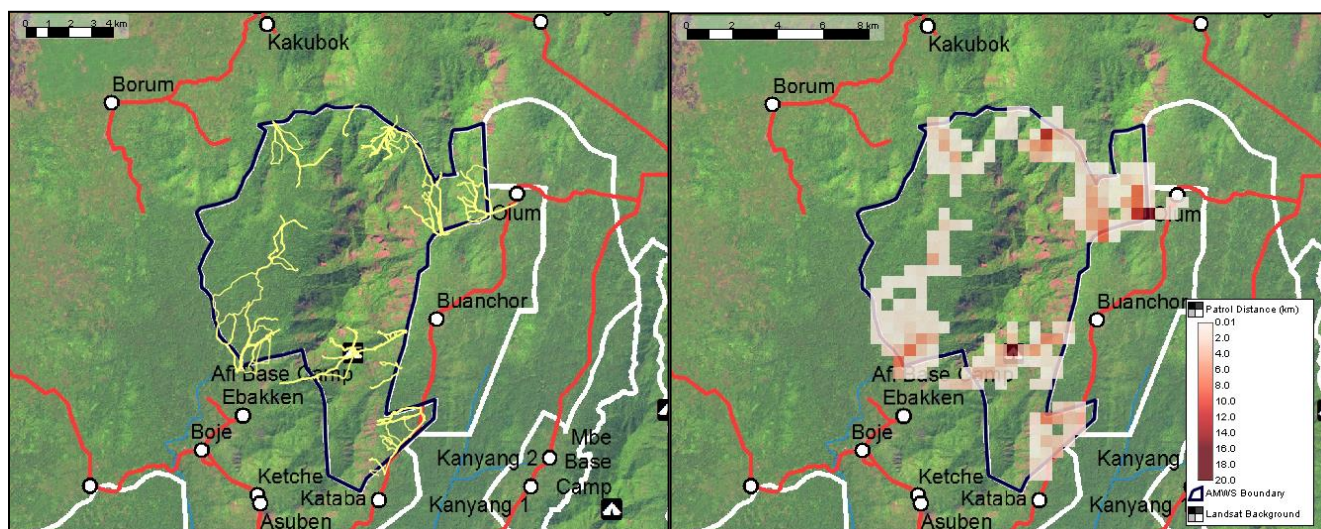
Four to six patrols were completed per month each lasting 6-10 days. The patrols targeted hotspots of illegal human activities determined based on data from previous patrols and intelligence gathered from surrounding communities. Offenders encountered were arrested and all wire snares and hunting camps found were destroyed. Data were collected and analyzed using SMART software. The patrols covered the Esekwe Camp, Base Camp, Nkayang-Kakubok, Katche-Asuben, Olum axis, Njua Lowland, Buanchor-Drill Ranch, and Ebakken-Boje-Asuben sectors of the sanctuary (Figure 1).

## Results

### 1. Law Enforcement

#### *Patrol effort*

Seventeen patrols were completed this quarter covering a total distance of 449.5 kilometers over 108 patrol days (610 man-days) (Figure 1; Table 1).

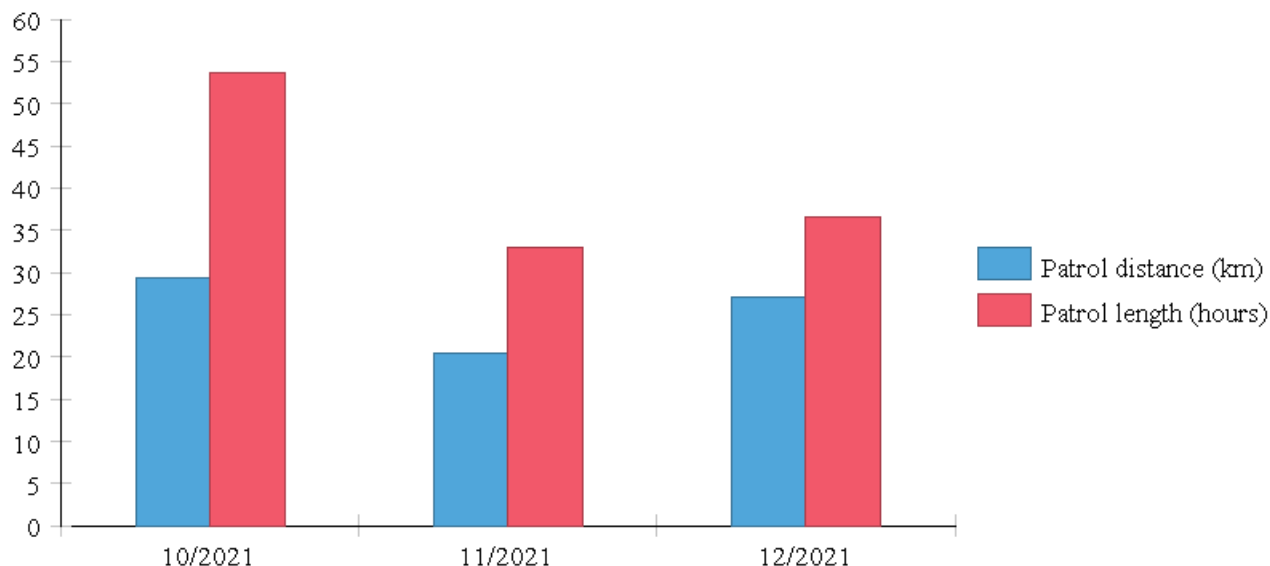


**Figure 1. Patrol tracklogs and patrol effort in km walked per grid cell from October to December, 2021. Darker red color indicates areas of more intense patrol coverage.**

**Table 1. Summary of patrol effort by patrol area for the period October to December, 2021.**

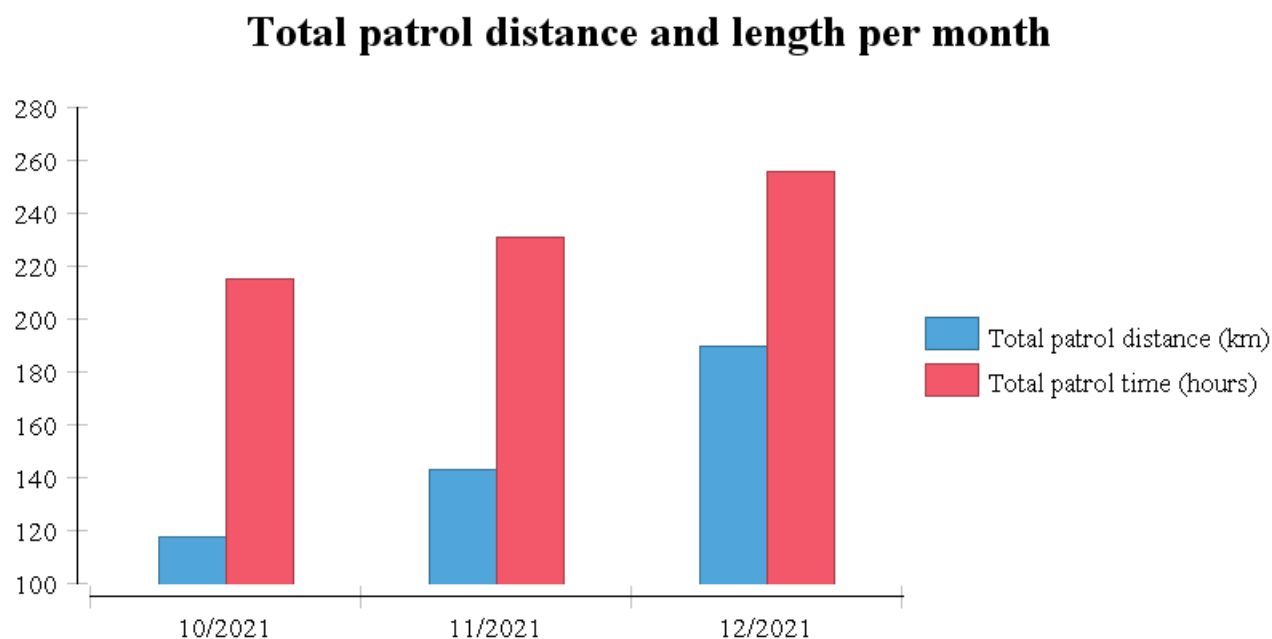
Area	Number of Patrols	Patrol Days	Patrol Hours	Distance (km)	Person - Days
Base Camp	3	23	147.5	90.8	120
Buanchor-Drill Ranch	3	24	133.7	105.0	145
Ebakken-Boje-Asu	1	5	22.1	24.8	24
Esekwe Camp	5	32	242.0	123.7	215
Njua Lowland	2	7	47.0	38.4	18
Olum Axis	3	17	108.6	66.8	88
<b>Total</b>	<b>17</b>	<b>108</b>	<b>700.9</b>	<b>449.5</b>	<b>610</b>

### Average distance and length of patrols per month





**Figure 2. Average distance covered and time taken per patrol per month for the period October to December, 2021.**



**Figure 3. Total patrol distance and time per month for the period October to December, 2021.**

### ***Law Enforcement***

Patrols this quarter removed 292 wire snares and dismantled three hunting camps (Table 6). Eight offenders were apprehended including 5 hunters and 3 people farming inside the sanctuary. One shotgun and 12 unset snares wires confiscated. Other signs of hunting observed include 18 gunshots heard and 111 empty cartridges (Table 6). Evidence of illegal logging and four farms were seen inside the sanctuary (Tables 4 & 5).

**Table 2. Summary of arrests and other law enforcement for the period October to December, 2021.**

Station	Leader	Date	Action Taken - People	Home Village	Name	Threat
Buanchor-Drill Ranch	Henry Achua	Dec 1, 2021	Apprehended and reported			Trapping
Olum Axis	George Mgbang	Oct 11, 2021	Apprehended and reported	Buanchor		Hunting
Olum Axis	George Mgbang	Oct 11, 2021	Apprehended and reported	Buanchor	Christopher Owan	Hunting
Olum Axis	George Mgbang	Oct 11, 2021	Apprehended and reported	Buanchor	Rachael	Farming
Esekwe Camp	George Mgbang	Nov 18, 2021	Apprehended and reported	Olum	Asu	Farming
Esekwe Camp	George Mgbang	Nov 11, 2021	Apprehended and reported	Esekwe	Mike	Farming
Esekwe Camp	George Mgbang	Nov 12, 2021	Apprehended and reported	Bunyia	Ekwo	Hunting
Esekwe Camp	George Mgbang	Nov 9, 2021	Apprehended and reported	Esekwe	Ebasy	Hunting

**Table 3. Number of people seen as threat from October to December, 2021.**

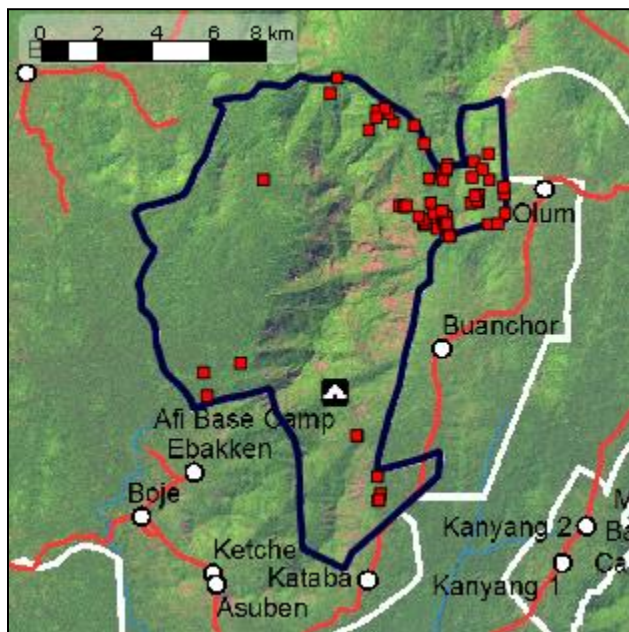
Threat	Number of People	Encounter Rate per km
Farming	3	0.007
Hunting	5	0.011

**Table 4. Total encounter rates of signs of human activity from October to December, 2021**

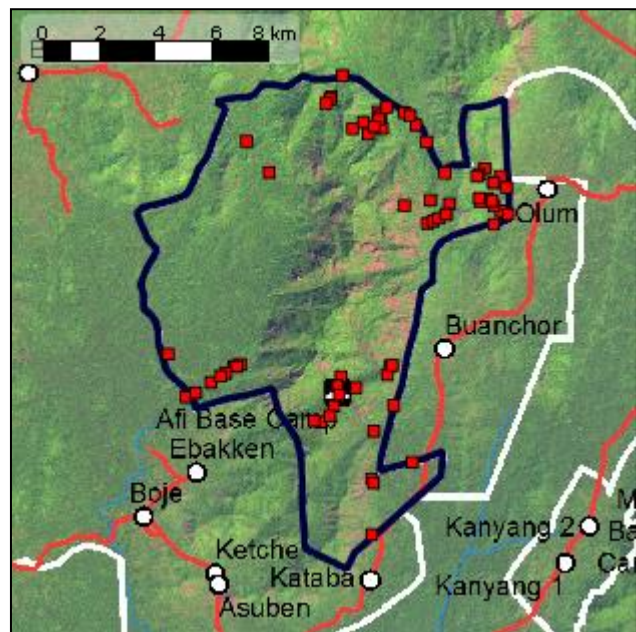
Activity	Number of Incidents	Encounter Rate per km
Farming and Land Clearing	4	0.009
Gunshot heard	18	0.040
Human Sign	48	0.107
Logging and Tree Cutting	1	0.002
People seen	8	0.018
Shed or Camp	4	0.009
Traps, Weapons & Equipment	147	0.327

**Table 5. Specific evidence of logging for the period October to December, 2021.**

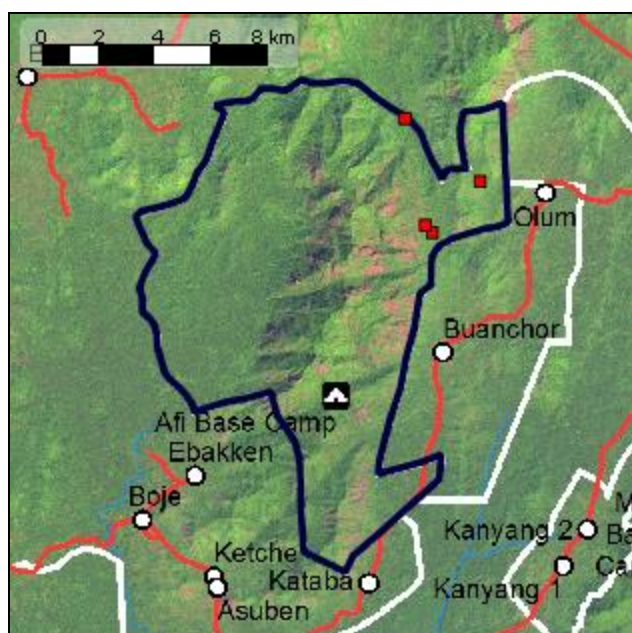
Type of logging evidence	Action Taken - Items	Age of Sign	Number of cut pieces	Number of Logs	Number of Planks	Number of Stumps	Tree Species
Stump	Seen Only	Fresh				5	Other



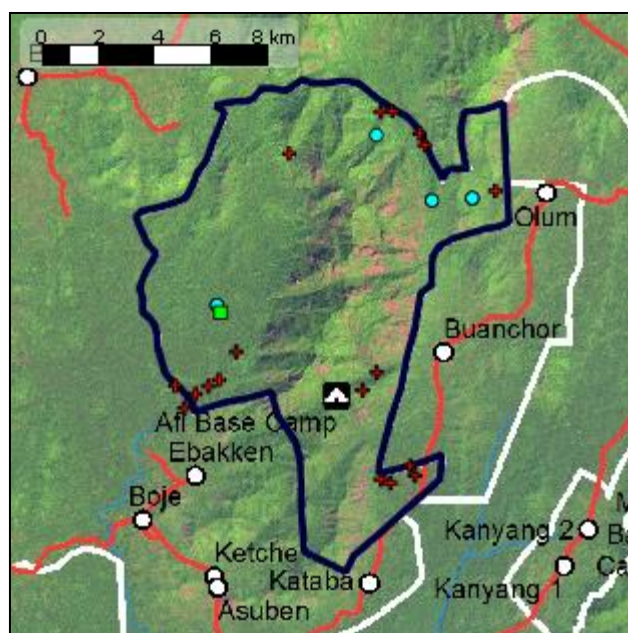
a) Wire snares



b) Empty cartridges



c) Sheds and camps



d) Farms (circles), gunshots heard (crosses), logging (squares), and NTFP collection (triangles)

**Figure 4. Distribution of all signs of human activity recorded in October to December, 2021.**

**Table 6. Hunting signs recorded for the period October to December, 2021.**

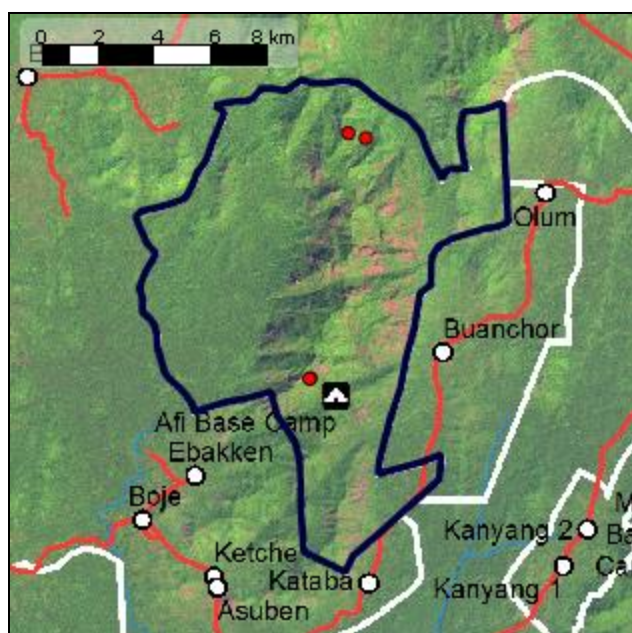
Sign	Number of Observations	Encounter Rate per km
Gunshots heard	18	0.040
Set wire snares	292	0.650
Unset wire snares	2	0.004
Empty cartridges	111	0.247
Hunting camps	3	0.007

## Wildlife Observations

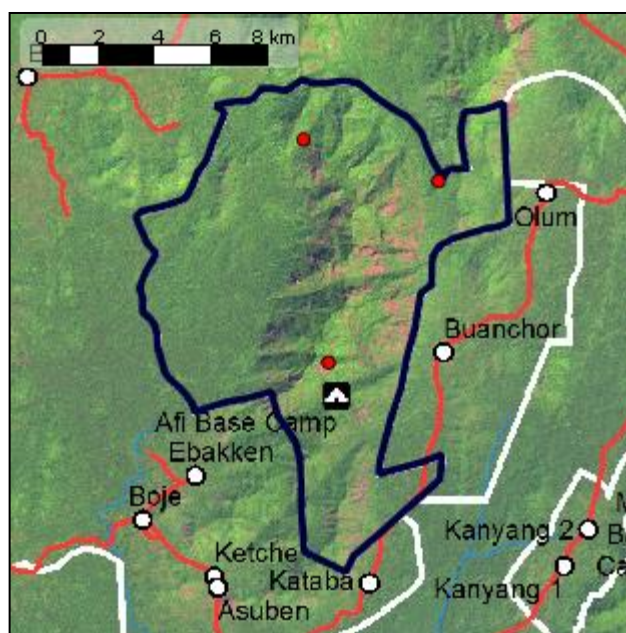
### Great apes

Great apes were not directly sighted this quarter. However, chimpanzees and a baby gorilla were heard vocalizing. Nine great ape nest sites were observed including four gorilla, three chimpanzee, and two that could not be confirmed as gorilla or chimpanzee and were recorded as unidentified.

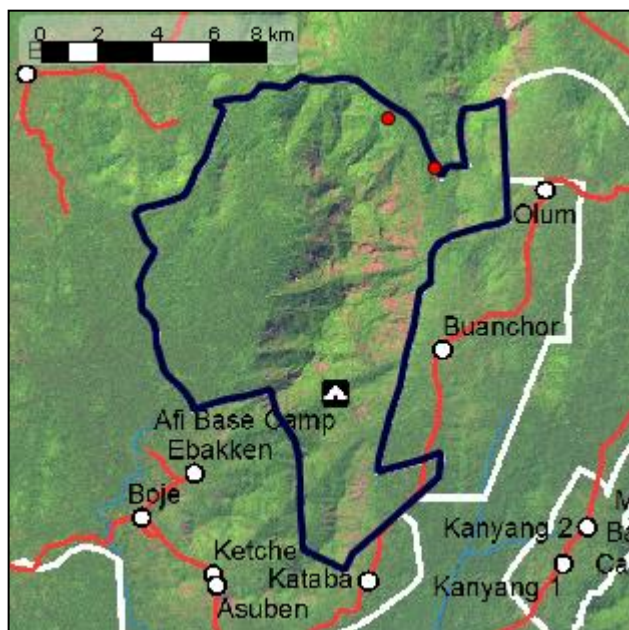




a) Gorillas



b) Chimpanzees



c) Unidentified apes

**Figure 5. Ape sightings and nest sites recorded from October to December 2021. Nest sites shown as circles, sightings shown as crosses.**

**Table 7. Number and encounter rate of nest sites recorded for the period October to December, 2021.**

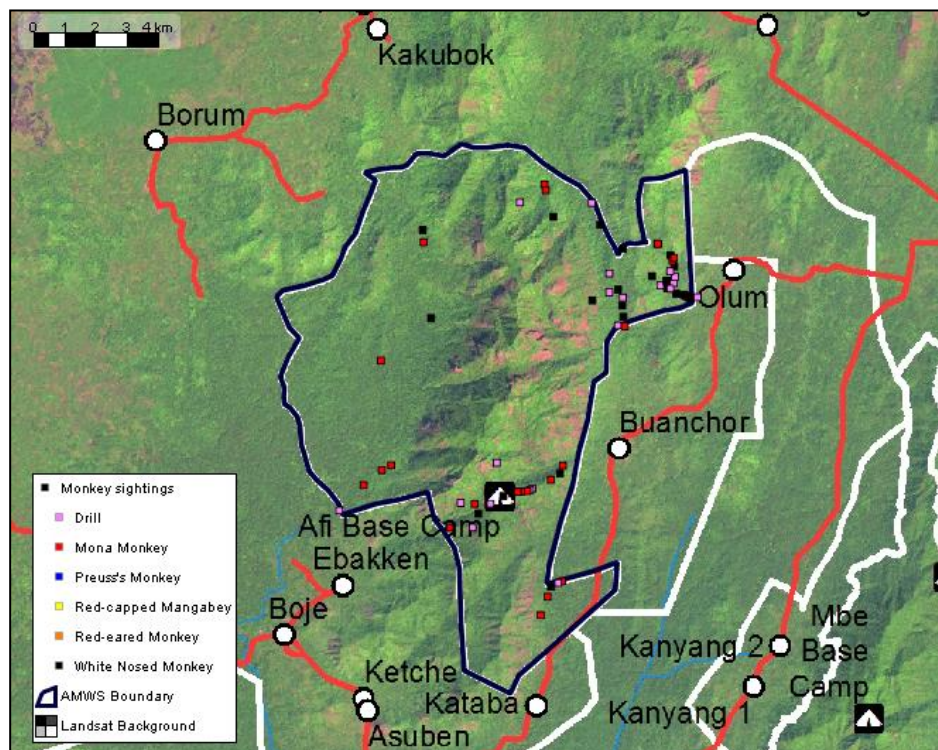
Species	Number of nest sites	Encounter rate of nest sites per km
Chimpanzee	3	0.007
Gorilla	4	0.009
Unidentified great ape	2	0.004

**Table 8. Nest sites recorded for the period October to December 2021.**

Species	Nest site type	Age of Sign	Dung present	Number of ground nests	Total number of nests
Chimpanzee	Night nest(s)	Recent	true	3	11
Chimpanzee	Day nest(s)	Fresh	true	0	10
Chimpanzee	Unknown	Fresh	false	0	7
Gorilla	Night nest(s)	Fresh	true	3	9
Gorilla	Day nest(s)	Fresh	true	1	
Gorilla	Day nest(s)	Recent	false	9	9
Gorilla	Unknown	Recent	true	1	3
Unidentified great ape	Unknown	Old	false	0	4
Unidentified great ape	Unknown	Old	false	1	2

### Monkey sightings

Monkeys sighted this quarter include drill, Mona monkey and putty-nosed monkey (see Figure 6 and Table 9). Vocalizations, particularly from drills were also heard frequently during the patrols.

**Figure 6. Monkey species observed for the period October to December, 2021.****Table 9. Monkey species sighted from October to December, 2021.**

Species	Number of observations	Encounter rate per km
Drill	21	0.047
Mona monkey	24	0.053
White-nosed monkey	25	0.056



## Other Wildlife

Encounter rates of all the animal signs (including sightings) are presented in Appendix II below. Blue duiker (*Philantomba monticola*), brush-tailed porcupine (*Atherurus africanus*) and red river hog (*Potamochoerus porcus*) were the most frequently observed.

## Ranger training

To strengthen the protection of the sanctuary, WCS organized a refresher ranger training course was organized for all Afi rangers during this period. The training was conducted by “Conservation Outcomes”, a South Africa-based specialist ranger training company, and lasted for a total of 42 days divided into two courses, each lasting 21 days. The training took place at the Erokut Gate Camp on the edge of the Oban Division of CRNP, and covered physical fitness, first aid, patrol techniques, drill, discipline, human rights, and self-defense. In addition to increasing their knowledge and skills, the refresher training helped raise morale among the rangers who are now better motivated to perform their duties and better protect the forest and wildlife of in the park. WCS invited a magistrate to the training to educate the rangers on the provisions of the Administration Criminal Justice Law of Cross River State and on collecting and documenting evidence to present in court to support and ensure successful prosecutions.



**Photo 1. Rangers taking instructions during the ranger training at Erokut Gate, Oban Division of Cross River National Park**

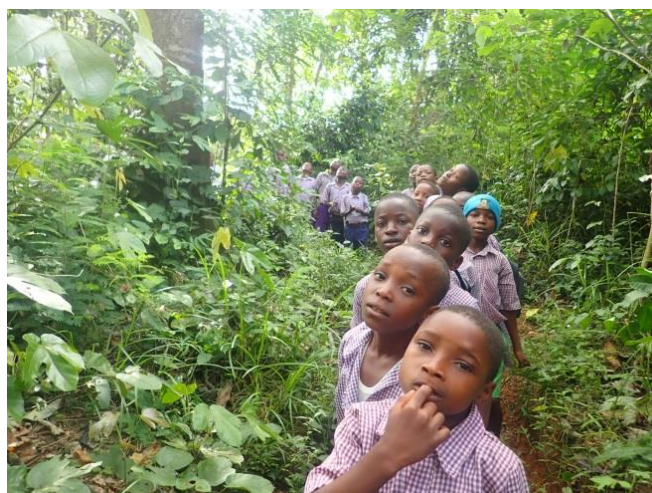
## 2. Conservation Education and awareness

### Field Trips

Six guided field trips to the sanctuary involving 167 students and 12 teachers were organized for schoolchildren.

**Table 10: Field trips to Afi Mountain Wildlife Sanctuary October-December 2021**

Date	School(s)	site	No of pupils/students
October 15th	JAFOR International Nursery/Primary School Buanchor	Afi	25
October 18th	Noble Breed International Secondary School Enyi Boje	Afi	29
November 24th	Government Primary School Katabang	Afi	35
November 27th	Migrant Technical School Enyi Boje	Afi	26
December 9th	Oath Comprehensive Secondary School Katabang	Afi	28
December 10th	Government Primary School Enyi Boje	Afi	24



**Photo 2. Field Trip with Migrants Technical Secondary School Enyi Boje**

### Exchange Visit

During this period, WCS facilitated 5 exchange visits involving 10 schools around Afi Mountain Wildlife Sanctuary. A total of 491 students participated in school exchange visits (Table 11). The aim is to engage students to exchange experiences and discover new viewpoints and approaches for specific conservation activity.

**Table 11: School Exchange visits and number of participants October-December 2021**

Date	School(s)	Site	No of students
October 17	Pope John Paul Secondary School Boje and Noble Breed secondary school Enyi Boje	Afi	91
October 17	Day to Day Primary School Kache Boje and Unified Christ Springfield International School Kache Boje	Afi	102
November 17	Christ Ascension International School Olum and Penuel International School Olum	Afi	95
November 17	Community Secondary School Olum and Community Secondary School Buanchor	Afi	99
December 13	Government Primary School Ebok and Migrants Primary School Ebranta	Afi	104

**Photo 3. Exchange visit between Community Secondary School Boje and Government Migrant School Enyi Boje****School Visit**

The purpose of school visits is to organize conservation education lessons and introduce new concepts that would help student to participate in conservation activities within their schools and communities. 9 Schools were visited (Table 12) where 224 WCS customized notebooks and posters were given to schools to enhance understanding of WCS activities.

**Table 12: Schools visited in Afi between October to December 2021**

Date	School(s)	Site	Number of pens distributed
October 15	JAFOR International Nursery/Primary School Buanchor	Afi	50
October 18	Noble Breed International Secondary School Enyi Boje	Afi	50
November 27	Migrant Technical School Enyi Boje	Afi	15
November 27	Government Primary School Enyi	Afi	15
November 27	Pope John Paul Primary School Enyi Boje	Afi	10
December 5	Winners International Nursery/Primary School Katabang	Afi	20
December 5	Oath Comprehensive Secondary School Katabang	Afi	20
December 5	Government Primary School Katabang	Afi	20
December 6	JAFOR International Nursery/Primary School Buanchor	Afi	20





**Photo 4. Visit to Day-to-Day Primary School Kache Boje (left), and Noble Breed Academy Enyi Boje**

### **Film Show**

Great ape films were showed in 11 villages in Afi with of total of 1,222 viewers (Table 13). Film shows are used to improved understanding among the target audience about local wildlife issues and challenges.

**Table 13: Villages and school visited in Afi during film show and estimated number of viewers**

<b>Date</b>	<b>Name of community</b>	<b>Site</b>	<b>Attendance</b>
16/10/2021	Ebranta Boje	Afi	64
17/10/2021	Enyi	Afi	81
24/11/2021	Katabang	Afi	148
27/11/2021	Itali Boje	Afi	49
28/11/2021	Enyi Boje	Afi	176
29/11/2021	Buanchor	Afi	206
2/12/2021	Itali Boje	Afi	41
3/12/2021	Ebranta	Afi	89
4/12/2021	Ebok	Afi	91
5/12/2021	Katabang	Afi	107
20 /12/2021	Njua	Afi	170
Total			1,222



**Photo 5. Film show in Ebranta-Boje**

### **Community Meetings**

WCS facilitated 9 community meetings (Table 14) to address current conservation challenges in Afi. Meetings were held during film show with community leaders only due to covid-19 restrictions. The meetings focused on illegal logging, bush burning and the hunting of endangered species from poaching.

**Table 14; Names of villages visited and number of persons in attendance**

<b>Date</b>	<b>Name of Community</b>	<b>Site</b>	<b>Attendance</b>
16/10/2021	Ebranta Boje	Afi	12
17/10/2021	Enyi	Afi	14
24/11/2021	Katabang	Afi	23
27/11/2021	Itali Boje	Afi	16
28/11/2021	Enyi Boje	Afi	11
2/12/2021	Itali Boje	Afi	19
3/12/2021	Ebranta	Afi	31
4/12/2021	Ebok	Afi	19
5/12/2021	Katabang	Afi	28

### 3. Support for sustainable diversified livelihoods

Livelihood support activities implemented this quarter include establishment of 3 improved variety cocoa nurseries in Okubuchi, Ndemechang and Nkanya (Table 15) to raise seedlings for distribution to farmers trained in improved cocoa farming practices nursery. A total of 91 farms proposed for support were visited and mapped for future monitoring

**Table 15. Farms mapped October to December 2021**

Community	No. farms verified/mapped
Okubuchi	22
Ndemechang	24
Nkanya	21
Kakubok	24

#### Recommendations

- Lack of prosecutions of arrested defaulters is encouraging communities to perpetrate illegal activities in the sanctuary. The CRSFC should take action to prosecute arrested offenders.
- Many communities around the Sanctuary still do not understand the legal status of the sanctuary, that is why some communities like Esekwe keep stopping ranger patrols in their axis when their illegalities are exposed. As such community should receive briefing on the forest laws and implications of breaking the laws.
- Decisive action is needed to deal with the problem of farm encroachment in Afi. Some new farms were seen in the sanctuary during patrols this quarter.
- There is need to have a camp (permanent or temporary) in the Kakubok axis of the sanctuary to deal with the increasing illegal activities in the areas around Njua and kakubok.
- Regular meetings between stakeholders increasing the CRSFC, Ministry of Climate Change, Boki LGA, communities around AMWS are encouraged to generate interest and support.
- The sanctuary boundary should be cleared regularly to facilitate law enforcement, as most people seen in the sanctuary claimed ignorance of the sanctuary boundary, which is overgrown in many places.
- In addition to clearing, signposts should be placed at strategic locations along the boundary with information on prohibited activities to reduce illegal activities.
- Prosecution is key to reducing illegal logging in and around the sanctuary. The CRSFC should arrest and prosecute defaulters to discourage illegal logging.
- Forestry checkpoints on the roads should be established within logging hotspots around the sanctuary to complement the work of rangers.

#### Acknowledgements

We are grateful to the Great Ape Conservation Fund of the United States Fish and Wildlife Service who have constantly provided financial support to the WCS Nigeria program. We also appreciate the funding from Arcus Foundation, JRS Biodiversity Foundation, Kolmården Zoo, AZA, Zoo New England, and Dutch Gorilla Foundation. WCS is formally registered in Nigeria through an agreement with the Ministry of Budget and National Planning of the Federal Republic of Nigeria. The Government of Cross River State is also appreciated for giving WCS the enabling environment to operate. WCS works at Afi Mountain Wildlife Sanctuary in collaboration with the Ministry of Climate Change and Forestry and the Cross River State Forestry Commission.



**Appendix I. Patrol effort statistics October to December, 2021.**

Date	Number of Patrols	Distance (km)	Number of Hours	Number of Rangers
2021-10-09	2	10.1	12.5	13
2021-10-10	2	14.2	14.3	13
2021-10-11	2	9.5	14.5	13
2021-10-12	2	8.3	18.2	13
2021-10-13	2	9.1	16.0	13
2021-10-14	2	9.0	14.0	13
2021-10-15	2	9.9	14.3	13
2021-10-16	2	6.6	8.8	13
2021-10-20	1	6.0	6.7	5
2021-10-21	2	9.3	14.4	13
2021-10-22	2	4.7	14.7	13
2021-10-23	2	4.7	12.2	13
2021-10-24	2	4.5	14.6	13
2021-10-25	2	6.0	14.1	13
2021-10-26	2	2.9	13.3	13
2021-10-27	2	2.4	12.0	13
2021-11-06	1	4.5	4.0	6
2021-11-07	2	9.5	12.3	10
2021-11-08	2	14.9	12.8	10
2021-11-09	2	8.4	11.7	10
2021-11-10	2	5.3	19.1	10
2021-11-11	2	6.6	20.1	10
2021-11-12	2	9.9	11.5	10
2021-11-13	2	11.0	10.3	10
2021-11-16	1	6.8	5.9	7
2021-11-18	2	10.7	9.7	11
2021-11-19	2	7.1	11.4	11
2021-11-20	2	10.9	20.9	11
2021-11-21	2	5.9	20.1	10
2021-11-22	2	12.2	22.2	11
2021-11-23	3	8.2	18.4	11
2021-11-30	3	10.9	20.3	16
2021-12-01	2	11.2	13.8	10
2021-12-02	2	11.9	17.8	10

Date	Number of Patrols	Distance (km)	Number of Hours	Number of Rangers
2021-12-03	2	10.2	16.1	10
2021-12-04	2	11.5	17.6	10
2021-12-05	2	11.8	13.9	10
2021-12-10	2	10.5	13.9	10
2021-12-11	2	8.8	13.2	11
2021-12-12	2	9.0	11.6	10
2021-12-13	2	7.4	15.5	11
2021-12-14	2	10.8	14.3	11
2021-12-20	2	12.5	20.6	13
2021-12-21	2	12.5	19.0	14
2021-12-22	2	8.3	11.0	14
2021-12-23	2	10.1	8.5	14
2021-12-27	2	8.2	9.2	14
2021-12-28	2	11.5	13.8	14
2021-12-29	2	13.6	13.7	14
2021-12-30	2	9.9	12.1	14

**Appendix II. Encounter rate of wildlife species observed during patrols from October to December, 2021. Species not encountered during patrols are not shown.**

Species	Number of observations	Encounter rate per km
Blue duiker	<i>Philantomba monticola</i>	1.172
Brush-tailed porcupine	<i>Atherurus africanus</i>	0.854
Red river hog	<i>Potamochoerus porcus</i>	0.650
Drill	<i>Mandrillus leucophaeus</i>	0.521
Mona monkey	<i>Cercopithecus mona</i>	0.412
Turaco	-	0.369
White-nosed monkey	<i>Cercopithecus nictitans</i>	0.305
Mongoose	<i>Crossarchus</i> spp.	0.296
Hornbill	-	0.289
Unidentified monkey	-	0.196
Cane rat	<i>Thryonomys swinderianus</i>	0.185
Yellow-backed duiker	<i>Cephalophus silvicultor</i>	0.176
Bay duiker	<i>Cephalophus dorsalis</i>	0.151
African civet	<i>Civettictis civetta</i>	0.142
Pangolin	<i>Phataginus tricuspis</i>	0.105
Nigeria-Cameroon chimpanzee	<i>Pan troglodytes ellioti</i>	0.082
Unidentified great ape	-	0.049
Rock fowl	<i>Picathartes oreas</i>	0.047
Palm civet	<i>Nandinia binotata</i>	0.042
Cross river gorilla	<i>Gorilla gorilla diehli</i>	0.038
Grey parrot	-	0.024
Unidentified large duiker	-	0.024
Unidentified medium duiker	-	0.024
Genet	-	0.009

**Appendix III. Ranger work time for the period October to December, 2021.**

<b>Name</b>	<b>Number of Patrols</b>	<b>Number of Patrol Days</b>	<b>Number Patrol Hours</b>	<b>Total Patrol Distance (km)</b>
Alphonsus Oweh	7	34	231.8	159.7
Anthony Osang	7	34	207.7	165.5
Bernard Akpa	7	34	265.4	152.8
David Otu	6	37	226.4	169.7
Donald Ojie	6	37	226.4	169.7
Duke Ofre	5	25	195.2	116.3
Esekwe Gorilla Guardian	5	21	133.2	104.4
Etta Joseph	7	34	207.7	165.5
George Mgbang	7	39	313.6	166.0
Henry Achua	6	33	221.8	129.0
Joseph Dibang	6	35	275.6	152.2
Katabang Gorilla Guardian	7	33	257.5	151.4
Okiro Gorilla Guardian	4	16	133.5	69.7
Olum Gorilla Guardian	7	35	271.6	156.2
Patrick Bankong	7	39	313.6	166.0
Patrick Kejie	5	34	206.1	156.1
Peter Nsan	6	38	290.5	163.2
Philip Ashijua	5	23	185.3	110.0
Vincent Ayang	6	29	224.1	121.1