MARA PREDATOR CONSERVATION PROGRAMME

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KENYA WILDLIFE TRUST



ANNUAL REPORT | 2021

KWT
KENYA WILDLIFE TRUST

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EXECUTIVE SUMMARY

THIS ANNUAL REPORT covers the progress of the Mara Predator Conservation Programme (MPCP) in 2021. The overall goal of MPCP is to support stable, healthy predator populations in the Greater Mara Ecosystem by providing scientific evidence for conservation action. The programme is strongly guided by Kenya Wildlife Trust's value proposition of being driven by science and focused on people.

For the eighth consecutive year, the research team completed the three months intensive monitoring session. The Masai Mara has Kenya's most closely monitored lion and cheetah populations, in terms of robust and consistent density estimates. We recorded 299 lion and 61 cheetah sightings during the monitoring session. The updated lion & cheetah densities will be published in the 1st quarterly report of 2022.

The research team monitored five collared lions, successfully releasing and retrieving one collar from a male in November, giving us valuable insight into their space-use and how anthropogenic factors like livestock disturbance can affect it.

All cheetah demographic parameters were recorded and kept up to date, including 24 cheetahs individuals who survived their first year.

We discovered another active wild dog den in December, but it seems the Pardamat-Lemek pack has split up, and we stopped having sightings of the Enonkishu pack. One wild dog from the Pardamat-Lemek pack's 2019 litter died from unknown causes.

MPCP's Community department had a busy year implementing activities geared towards their three core objectives; Human-Wildlife Conflict (HWC) mitigation, community awareness, and conservation education. In efforts to mitigate HWC; the team conducted 14 herder trainings where 337 herders were engaged. The team also installed 300 lion deterrent lights in more than 30 bomas across the Mara and recruited an additional 5 lion ambassadors to increase the number to 15 who support MPCP in conflict mitigation and awareness at the village level. The community outreach objective was boosted through training of 78 community members in poison response and holding 4 barazas targeting wildlife core areas where 60 participants from the community attended. To further support communities through outreach, 2 rabies vaccination and deworming campaigns were held where 2,511 dogs and cats got inoculated against rabies.

The MPCP's conservation education programme administered through 9 wildlife clubs targeting primary schools around the Mara had a series of activities implemented. 347 members from the 9 schools were recruited and registered with Wildlife Clubs of Kenya. During the year, MPCP published and distributed a new series of books: "Ole Peenko's journey and "Ole Peenko learns from Naserian" which help the young learners to access learning materials relevant to understanding conservation in the Mara. The children engaged in an art competition and planted 1000 tree seedlings in their respective schools.

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RESEARCH UPDATE



ANNUAL LION AND CHEETAH INTENSIVE MONITORING SURVEY

In 2021, we completed our three months annual intensive monitoring survey (IMS). MPCP has been conducting these surveys since 2014, enabling us to obtain updates on lion and cheetah densities and distribution in the short term, while long-term data will give us insight into population trends.

During the three months of IMS, which continues to run from August 01- October 31, our effort totaled 8709 km of driving through the Mara conservancies and the National Reserve. The effort and our coverage of the study area are displayed in figure 1.

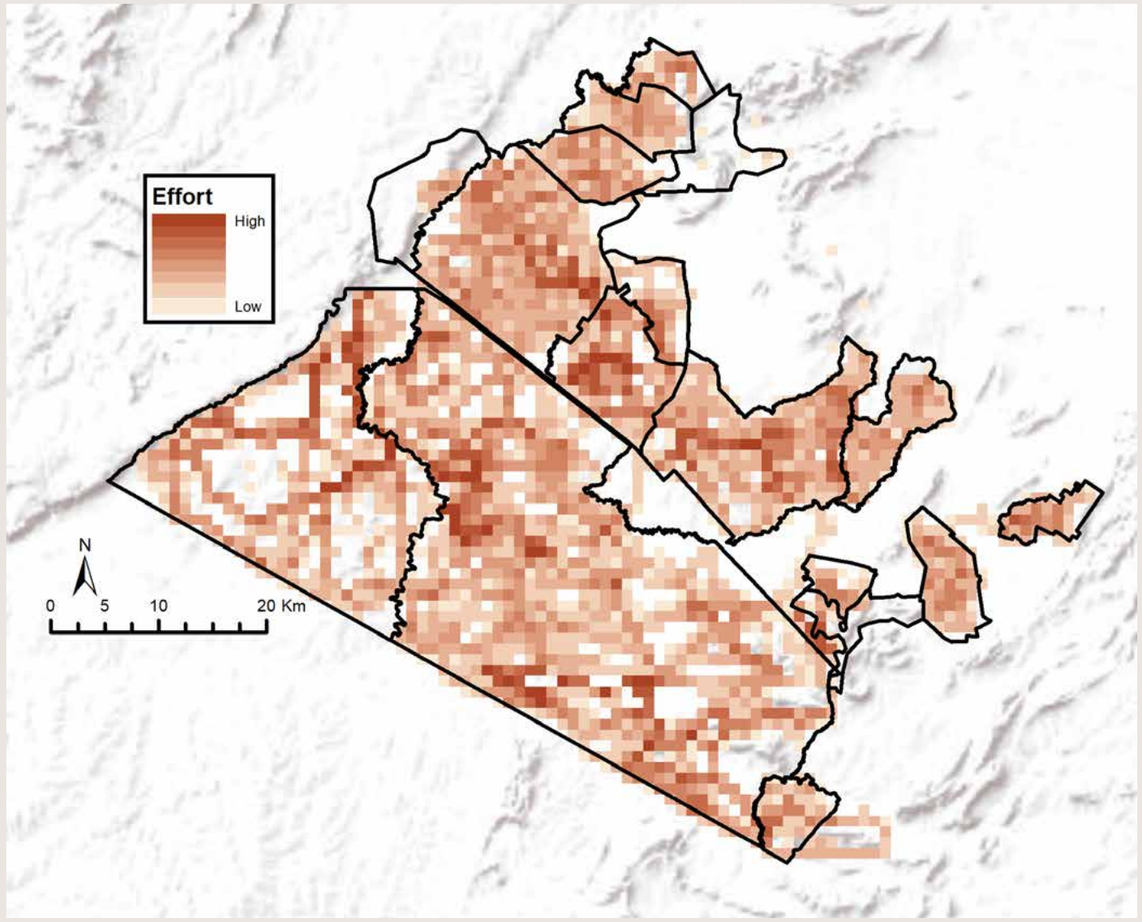


Figure 1. Effort map for 2021 IMS. The darker the area the more effort.

LION AND CHEETAH SIGHTINGS

We had a total of 299 lion sightings and 61 cheetah sightings, and their distribution overlaid on our tracks, can be seen in figure 2.

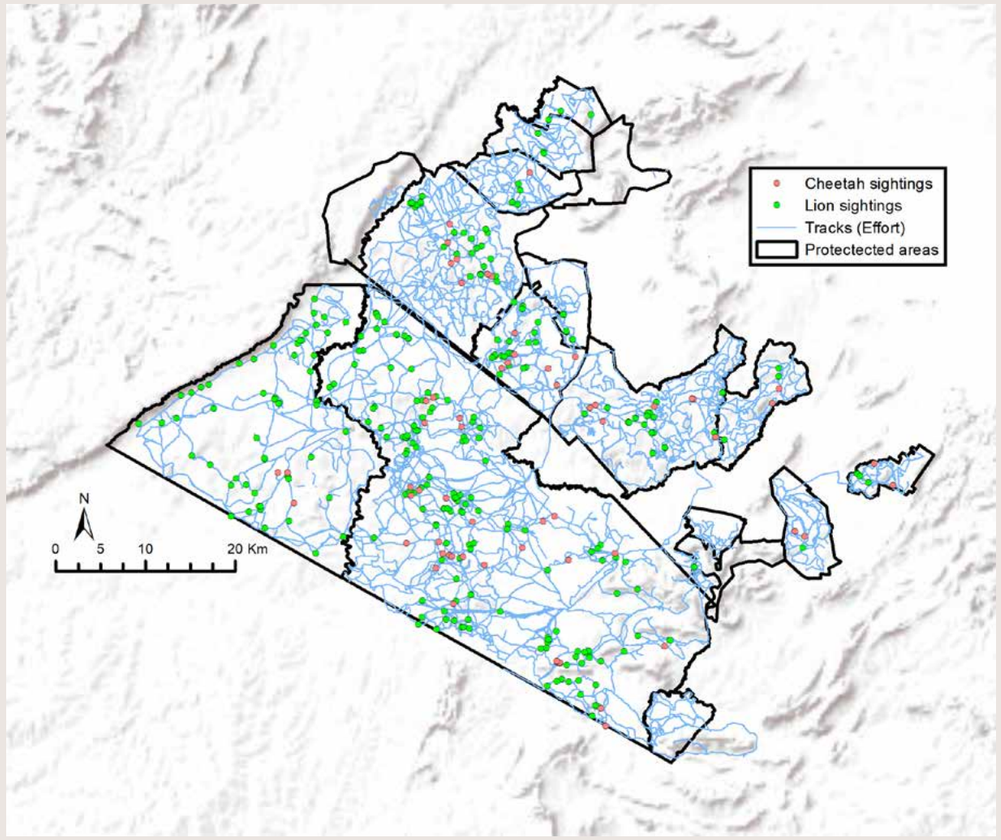


Figure 2. Lion & cheetah sightings overlaid the 8709 km of driven tracks.

Table 1 and 2 summarises the number of unique individuals of lions and cheetahs that were sighted during the IMS. We had a drop in the number of unique cheetahs (28) during this years' IMS compared to the IMS in 2020 (43). It is too early to tell how this will reflect in the density estimates.

We will be running the spatially explicit capture-recapture model soon from where we get updated lion and cheetah densities and heatmaps.

The results will be available in the first quarterly report of 2022.

Search effort (km driven)	Lion sightings	Lion detections*	**Unique individuals** >1 year old	
8,709 (9,287)	299 (258)	802 (694)	Male	131 (143)
Lions			Female	233 (224)
			Total	**364 (367)**

Table 1: Summary of lion sightings and numbers during the Aug01-Oct31 2021 survey.
**Lion detections are the total count (including all duplicates) of all lions seen. Numbers from 2020 are in brackets.*
.

Search effort (km driven)	Cheetah sightings	Cheetah detections*	**Unique adult individuals**	
8709 (9,287)	61 (78))	59 (145)	Male	10 (21)
Cheetahs			Female	18 (22)
			Total	**28 (43)**

Table 2: Summary of cheetah sightings and numbers during the Aug01-Oct31 2021 survey.
**Cheetah detections are the total count (including all duplicates) of all cheetahs seen. Numbers from 2020 are in brackets.*

LION UPDATES

LION COLLARING

Five lion collars were active in 2021 of which four were female and one was male. The male collar was released and collected in November. Figures 3-7 show each of the collared lions' movements (tracks) and their core territories overlaid with their 95% home ranges in 2021.

The core territories are based on the individual's 50% kernel densities, so basically where they spent half of their time. A 95% home range is the animal's home range, excluding the most peripheral outlier points. This is where the animal has spent 95% of its time during a specific period. Maasai homesteads are shown where relevant.

The figure texts include information on interesting observations and when the collar is due to drop off.

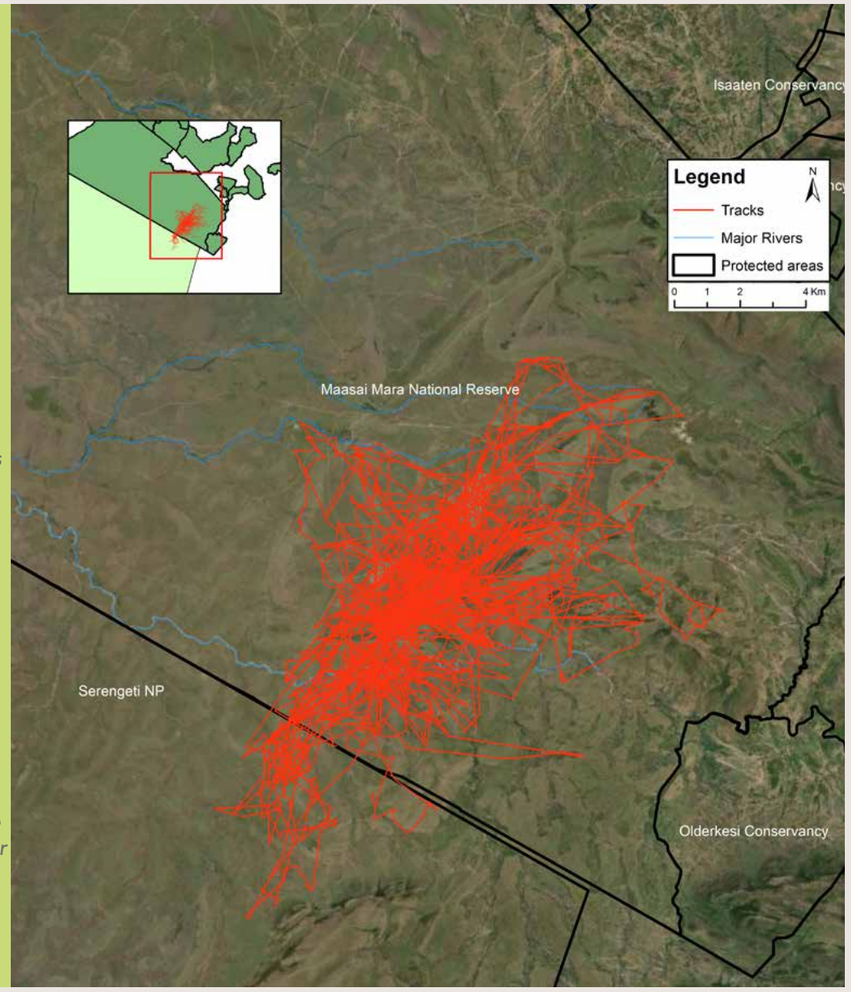


Figure 3a & b .
The collared adult female from the Olooloimatia (Sopa) pride provided us with some interesting information as she crossed into the Serengeti. This was during the wildebeest migration and so the lion and her pride most likely crossed the Kenyan border to hunt wildebeest.

She spent a total of 40 days in the Serengeti National Park over four different time periods, ranging from 5-22 days. The Serengeti is included in her 95% home range, while the core territory lies between two rivers, the Sand River and the Makari River in the Mara.

This is the first time a pride has been documented to have part of its home range across the border. The collar is scheduled to drop off in August 2022.

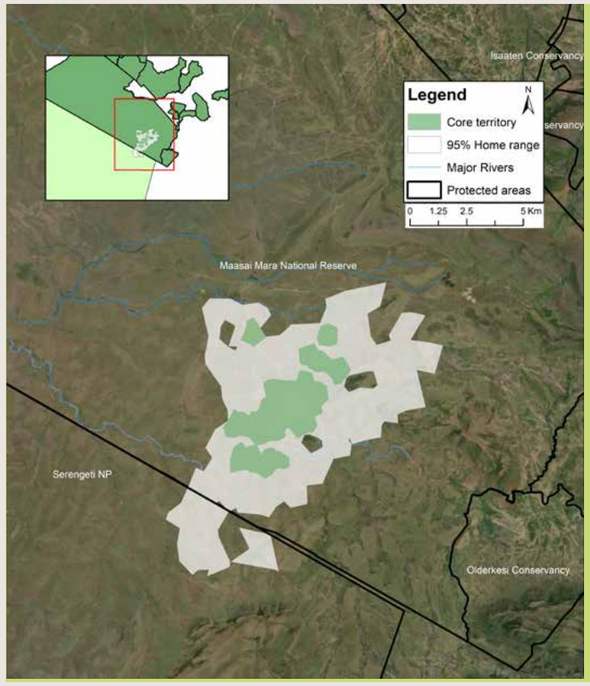


Figure 3b

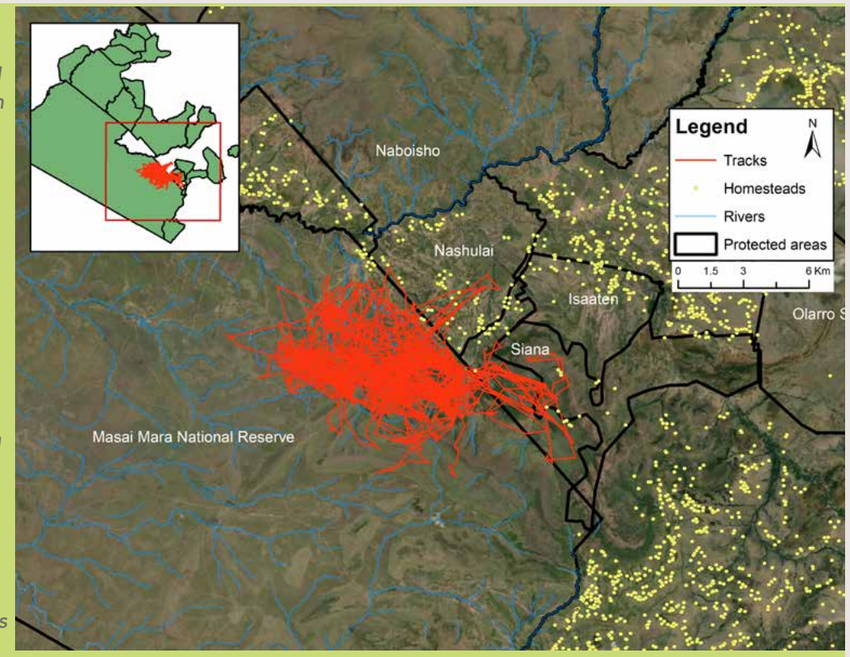


Figure 4a&b.
The KWS pride was collared as its movements are known to overlap with community areas.

This can be seen from the tracks, where they travel beyond the National Reserve and overlap with Maasai homesteads. The pride also utilises Siana Conservancy.

However, 95% of their home range is mostly within protected area boundaries, except a small piece of land that connects the National Reserve with Siana Conservancy, but this area is hilly without much human disturbance. The core area is patchy and is concentrated around streams and luggas, all within the protection of the National Reserve.

We have documented conflicts between this pride and the community in the past, and although lions did cause conflicts in 2021, is was not from the KWS pride. The collar will drop off in June 2022.

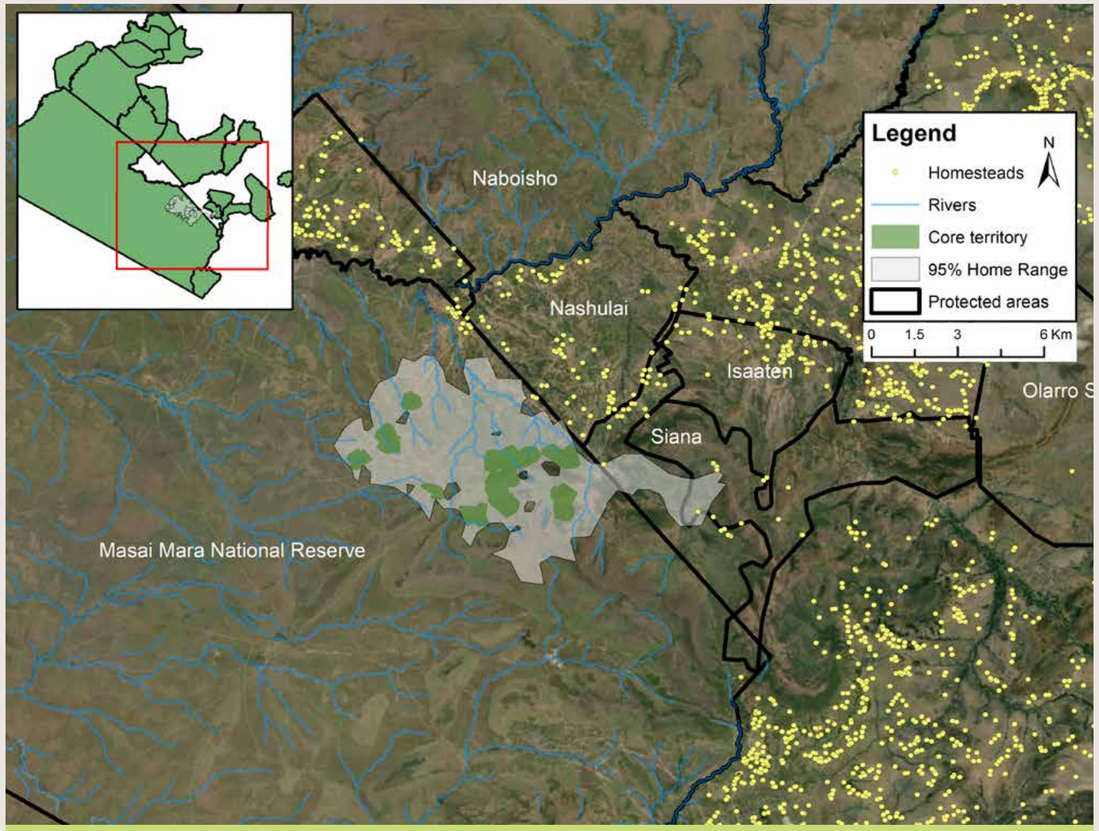


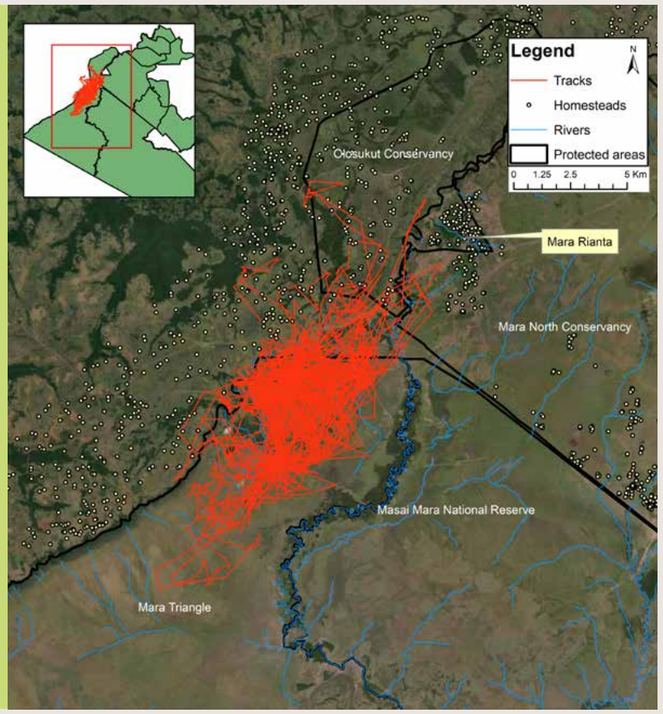
Figure 4b

Figure 5a & b.
The collared adult female and her Olololo/Angama pride were mostly staying inside the Mara Triangle, but they also travelled beyond its boundaries. The pride utilised the western part of Olosukut Conservancy, overlapping homesteads.

The grass there is kept low by livestock which attracts the lion's natural prey, and this is one of the drivers for the pride's movement, especially if the grass in the Mara Triangle is high with less prey.

However, settlements also mean high livestock abundance, which can increase the risks of conflicts. The pride also crossed the Mara River on several occasions and travelled all the way to the town of Mara Rianta, where there is a lot of human activity.

The collar will drop off in September 2022.



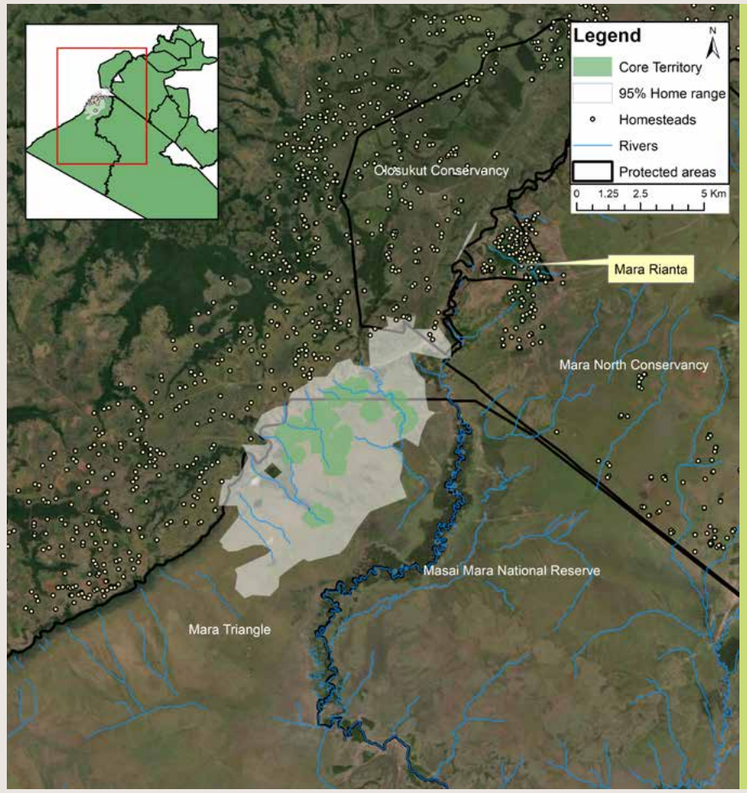
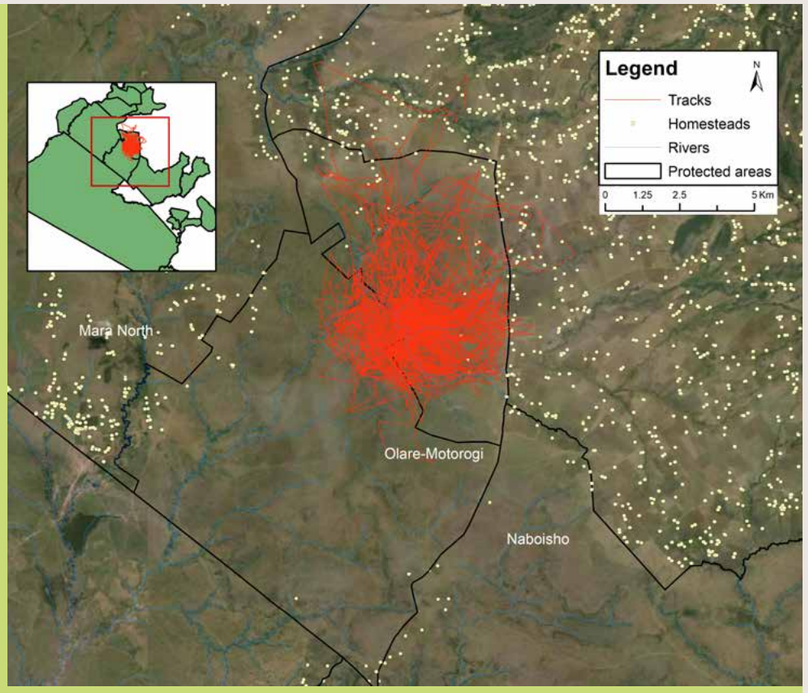


Figure 5b

Figure 6a & b.
An adult female from the Iseketa pride in Olare-Motorogi Conservancy was collared because the pride overlaps with homesteads that are still present in the Motorogi part of the conservancy.

The pride caused numerous conflicts during this year's drought when the conservancy was overcrowded with livestock, which also influenced the pride's movement (see figure 7).

Furthermore, the pride also ventured beyond the conservancy boundary where the homestead density is high, but as can be seen from figure 6b, none of the unprotected areas were included in the 95% home range.



Their core territory was small and this was likely related to livestock disturbance (figure 7). The collar is scheduled to drop off in November 2022.

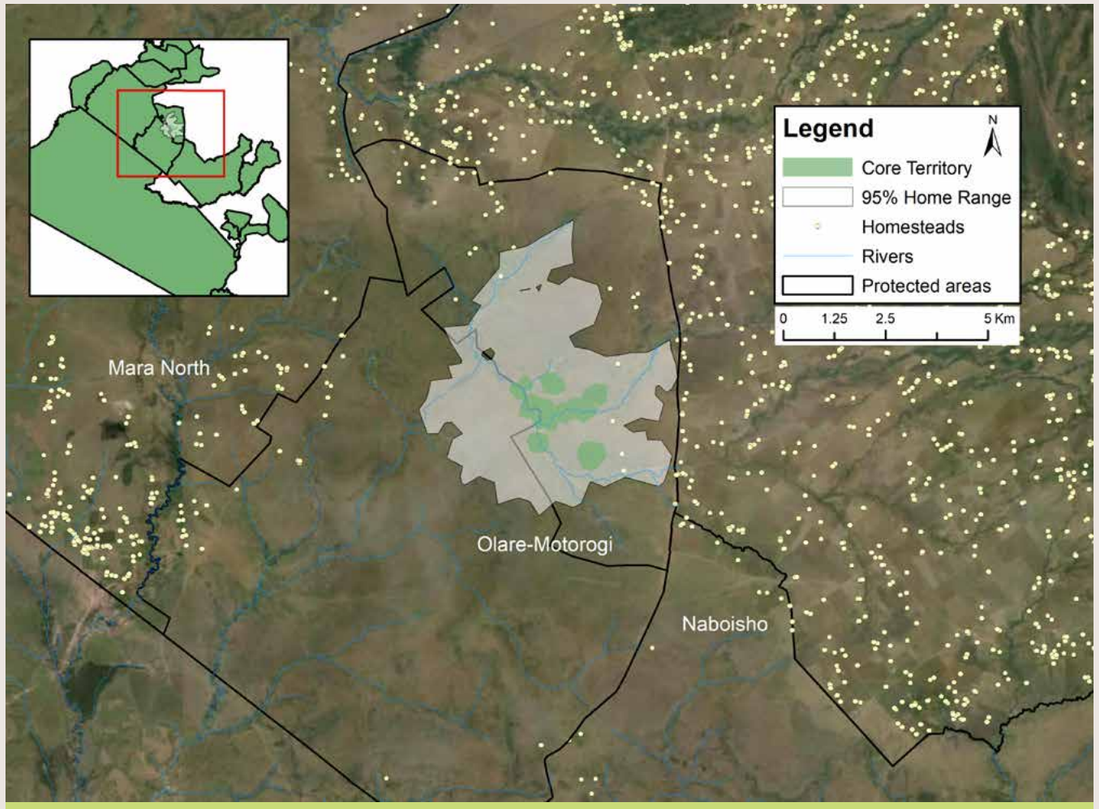


Figure 6b

Figure 7.
The Isekete pride's core territory overlaid with the livestock density in one of the Mara conservancies.

The core area was small and mostly concentrated around the rivers where they could hide in the thick riparian habitat.

A pride's core territory is normally influenced by access to resources such as prey and water, but anthropogenic disturbance, such as livestock, can also have a significant contribution.

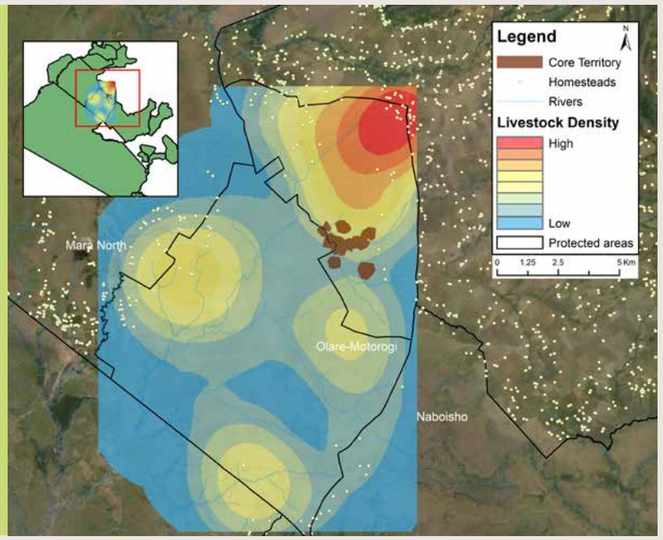
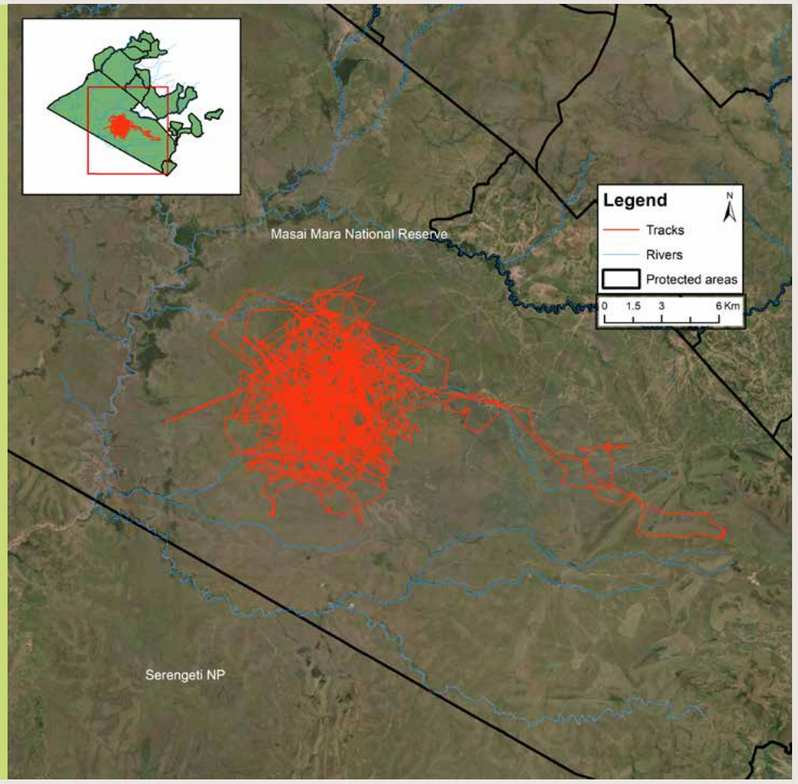


Figure 8a & b.
The only collared male this year was from the Black Rock pride in the National Reserve. Following this male and his four brothers has been interesting and insightful.

The male was collared while he was still with his natal pride. He and his brothers had a very late and an extraordinarily short dispersal period, as they settled with a pride very close to where they came from.

The tracks show where he has settled with a brief streak to the east when he was chased by other males.

Map b shows just how close his two 95% home ranges, before (2020) and after (2021) dispersal were.



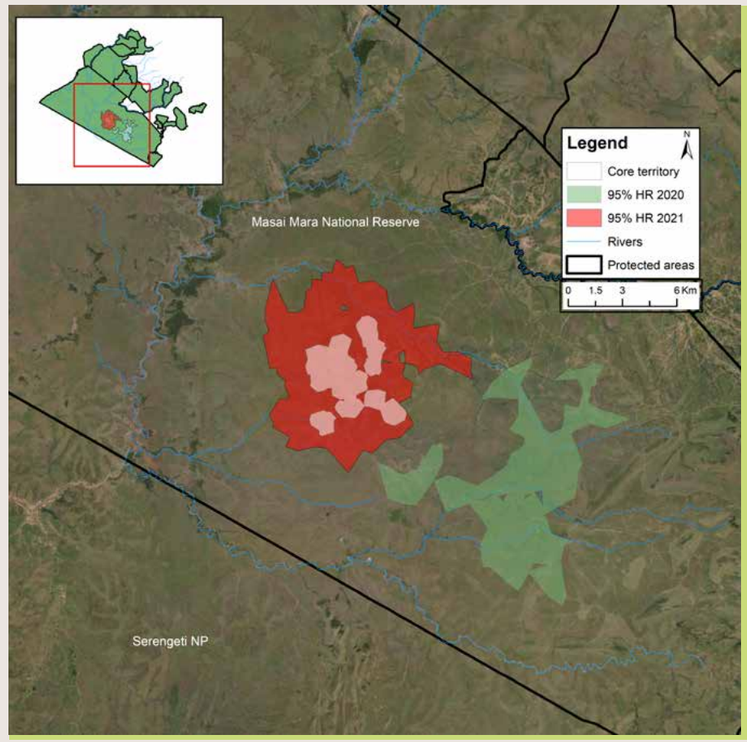


Figure 8b

CHEETAHS UPDATES

CHEETAH CUB MORTALITY AND DISPERSAL EVENTS

In 2021 we recorded 11 mothers giving birth to 52 cubs of which 28 have died, as can be seen in figure 9, with 2020 numbers are shown in comparison. This gives a cub mortality rate of 54% for 2021 (39% for 2020). We recorded four dispersal events which included five males and five females.

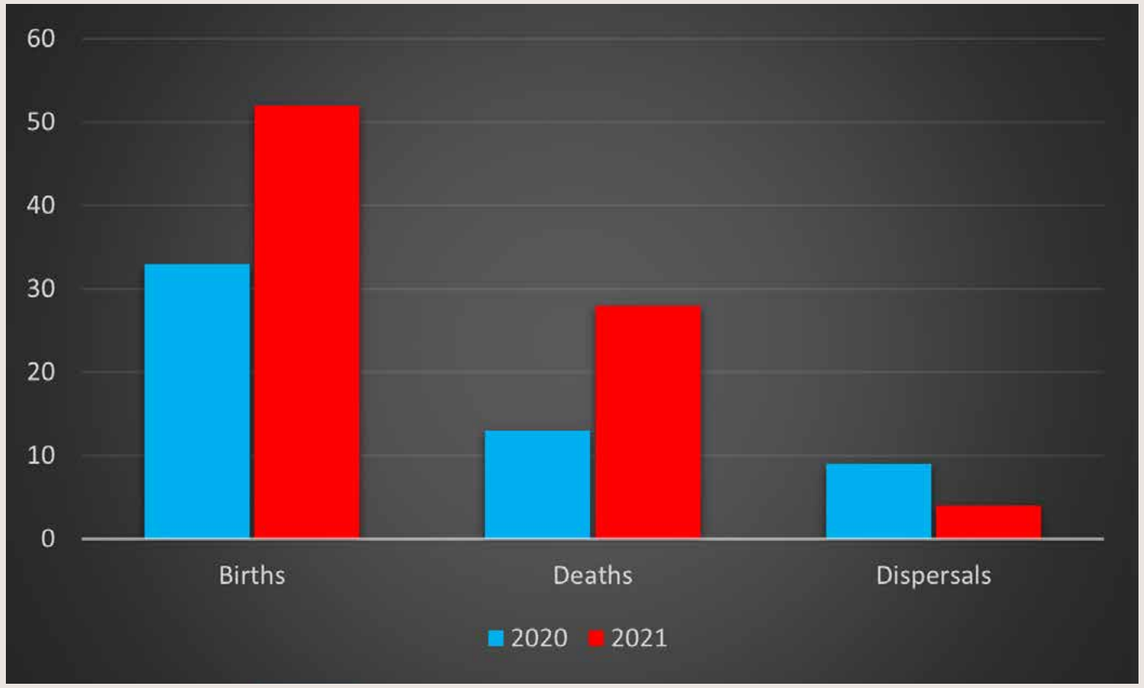


Figure 9. Births, deaths, and dispersals of cubs in 2020 and 2021.

WELL-KNOWN ADULT CHEETAH DEATHS

We also documented three adult cheetah deaths in 2021 which was very unfortunate as we can see that adult cheetahs are also prone to getting killed even in adulthood. The first incident happened to the Sopa Male coalition who were a common sighting in Oloolaimutia/ Sopa area.

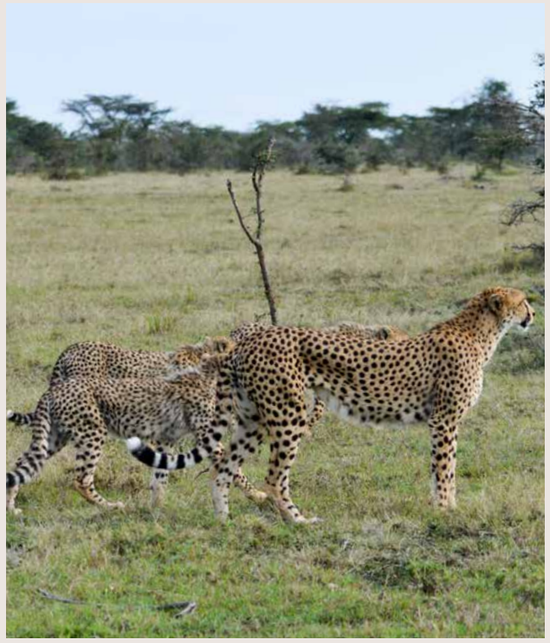
Guides witnessed the two males hunting a hartebeest and in the process of trying to take it down, one got seriously wounded and died. The other male survived the ordeal and he is still being seen in their territory.



Remaining Sopa male

Another well-known cheetah we lost in 2021 was a resident female in Olarro Conservancy who was named Kiraposhe. She was a successful mother and at the time of her death, she had two young cubs. Her legacy however will live on as she is the mother to Milele and Mbili as well as Kuahidi just to name a few. A third individual we lost was Namelok, who at her time of death was still together with her brother Ngao.

Namelok was Nashipae's daughter from her 2020 litter. She and her brother were doing well after dispersing from Nashipae but unfortunately, she was killed possibly by lions in December 2021, after they had crossed to the Mara Triangle.



Kiraposhe



Namelok



WILD DOGS UPDATES

SIGHTINGS

We had 24 direct wild dog sightings within the Mara ecosystem (figure 10) with the majorly being in human-dominated landscapes.

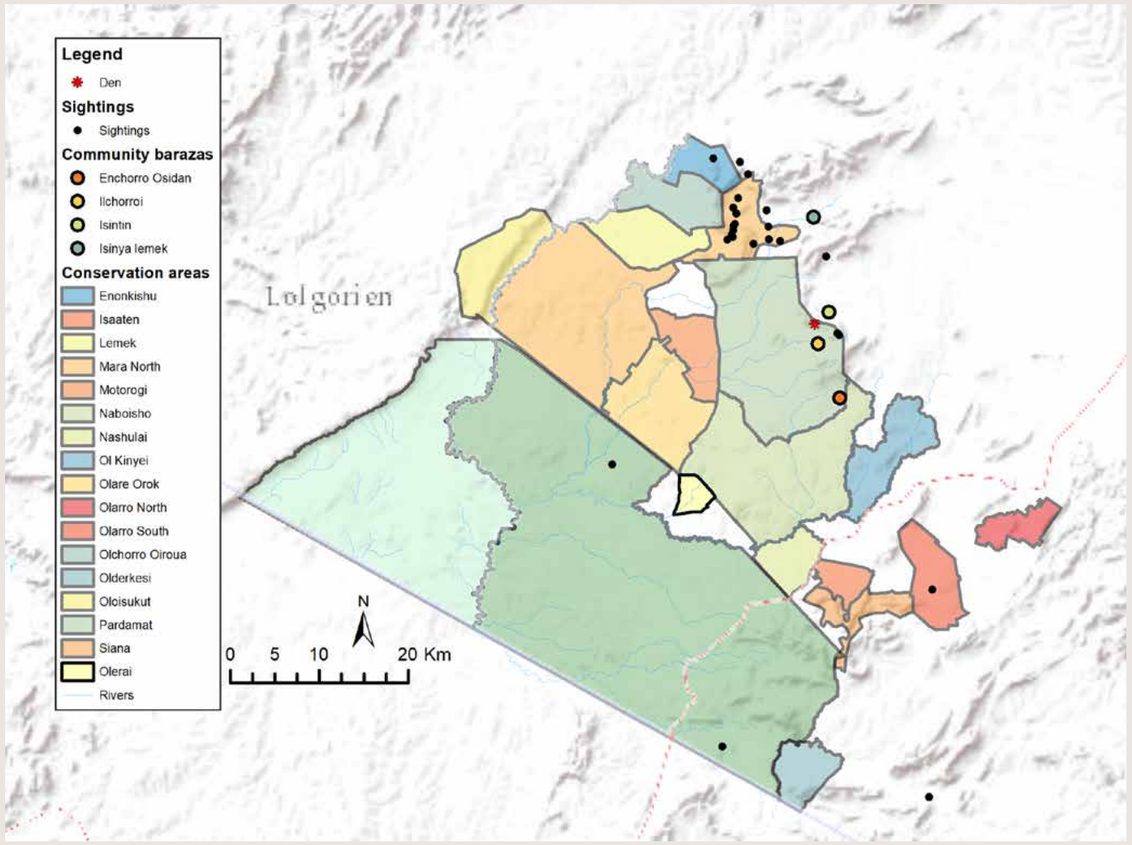


Figure 10. Wild dog sightings and community baraza locations

We were thrilled to discover an active denning site at Pardamat Conservation Area towards the end of December 2021 for the Lemek-Pardamt pack. The last time we documented an active den with this pack was in 2019 when we documented nine pups. This time we could only count two pups based on our camera traps photos, and later, only one pup was seen.

We have not been able to capture the alpha female at the denning site, but only one male was seen regularly feeding the pups. We discovered the den quite late and so we are unable to conclude what transpired at the den i.e. why there were only two pups seen, what happened to one of the two pups, and what happened to the alpha female.

The pack individuals seem to be living in a fission-fusion society, lacking a normal pack structure. The death of the alpha female could be an explanation for this.



A male feeding pups with regurgitated meat

In July, we sadly lost one female of Lemek-Pardamat pack at Enkikwei, south of Mara North Conservancy, only one week after seeing her at Ngosuani plains in the eastern tip of Mara North Conservancy, heading to the Pardamat Hills. She was a female who was born in the 2019 litter. The cause of death remains unknown.



Dead Lemek-Pardamat pack female

The Enonkishu alpha female was pregnant during our last sighting of her in June. We searched effortlessly but in vain to find her again and the den, she and the rest of the Enonkishu pack have disappeared.



The pregnant Enonkishu alpha female

DISPERSING WILD DOGS

Two sets of dispersing wild dogs have been sighted. Two females, one with a collar was first sighted at our Predator Hub heading to the National Reserve and sighted the following morning when they were at Lookout plains.

The two females are from a pack in the Serengeti as confirmed by the Serengeti Wild Dog Project.



Serengeti females

A lone female with mange, also fitted with a collar and from the Serengeti, continue to roam in the Olaro-Siana area but was also sighted in Naboisho conservancy this year.

COMMUNITY SOCIAL SURVEY

In 2018 a social survey questionnaire was conducted in 60 households and carried out across the study area. The households were selected randomly in four different villages and were chosen for their proximity to wild dog sightings.

A second survey was administered in December 2021 across the study area which included 100 households. The analysis is underway to quantify changes in attitudes and perceptions post mitigation and wild dog conservation awareness work.

COMMUNICATIONS, CONFLICT MITIGATION AND RESOLUTION.

We took an initiative to reach out to the community and conducted community barazas in four locations and herders training in three locations.

The barazas are a means to educate the community members and herders on how to improve herding practices and protect livestock from predators and identify mutual ways of collaboration in mitigating and resolving human-wildlife conflicts, especially for predators to avoid retaliation.

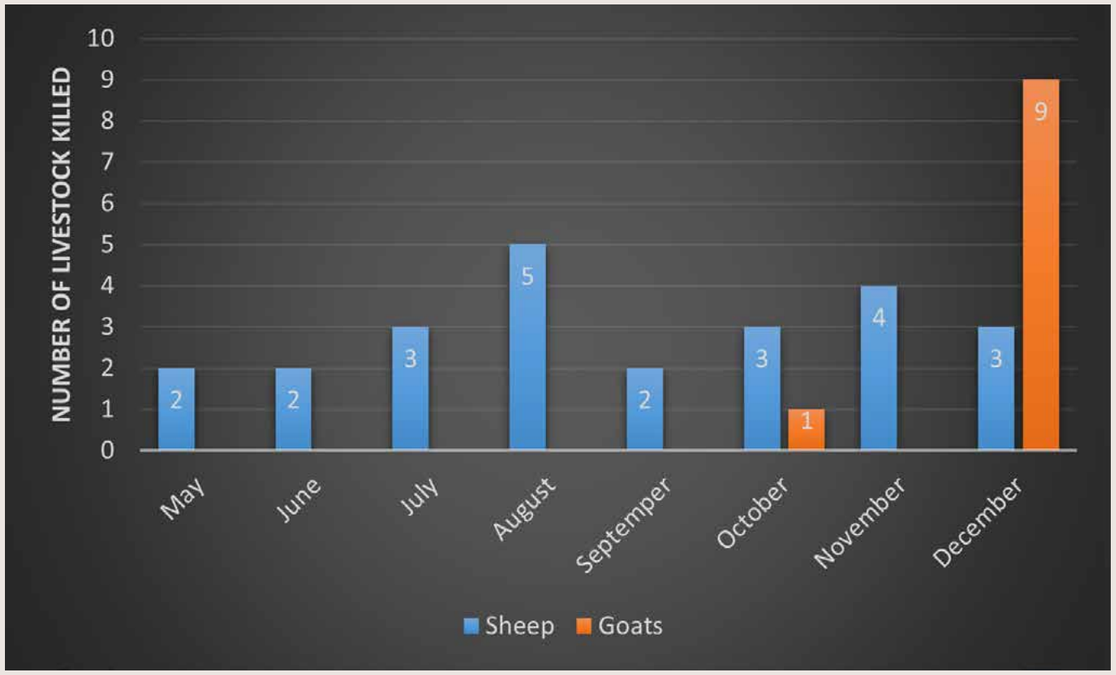


Figure 11. Wild dogs predation incidences



Community baraza at Enchorro Sidan

Following the positive progress, we established vital contacts for information sharing through our lion ambassadors. The community learned and understood the wildlife act of 2013 on endangered species and appreciated ongoing research and predator conservation efforts.

Livestock predation was on the rise in the Pardamat and Ol Kinyei hills towards the end of 2021 most likely as a result of over stocking sheep and and ongoing dry spell. The pack needed a regular food supply to feed the pups and sheep were easy prey when unguarded. Twelve predation conflicts occurred alone in December by wild dogs out of thirty two this year that has raised an alarm for worries of community retaliations.

The Pardamat Conservation Area management and MPCP worked collaboratively to mitigate and resolve conflicts to enhance co-existence and tolerance within the shared landscape.

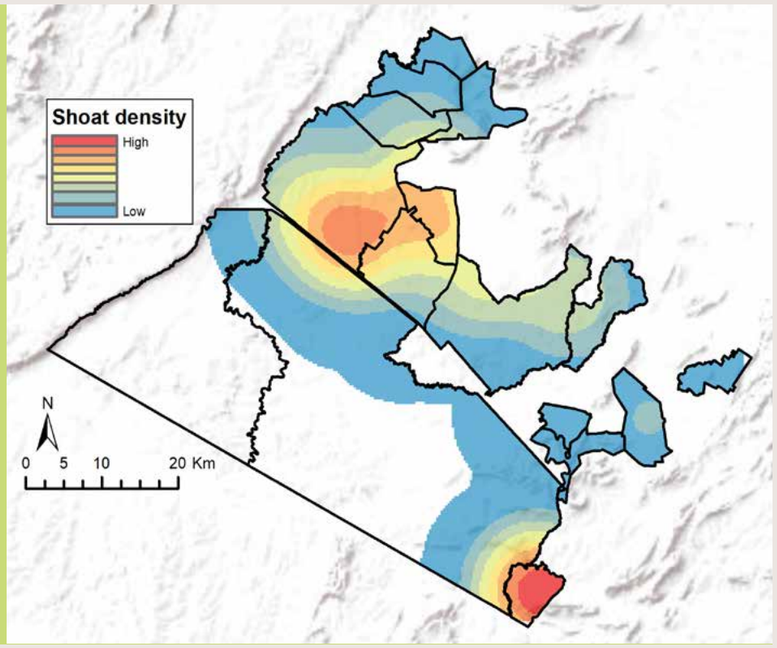


A sheep killed at Pardamat hills

LIVESTOCK ACTIVITY

Livestock numbers are continuously recorded during our intensive monitoring sessions. Figures12 and 13 show the densities of cattle and shoats (sheep + goats), respectively. The pressure from livestock varies considerably from the different management units and across seasons. These livestock density maps only reflect the period of August to October. We are currently working on a scientific article about how livestock influences the presence and abundance of lions.

Figure 12. Sheep and goats (shoats) kernel density map. The density is based on sheep and goat sightings, correcting for distance driven (effort).



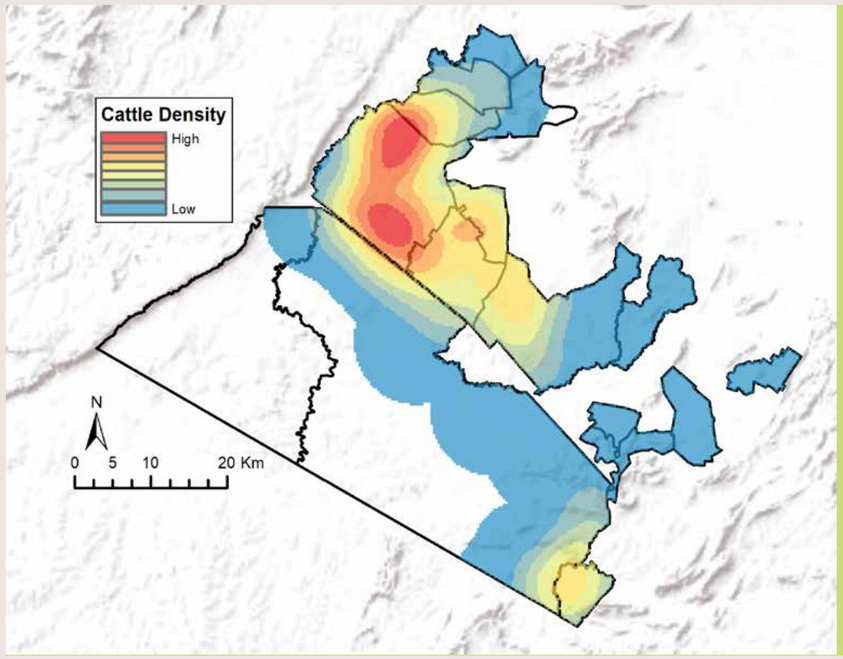


Figure 13. Cattle kernel density map. The density is based on cattle sightings, correcting for distance driven (effort).

LIVELIHOODS PROGRAM

KWT began the implementation of a new livelihoods program called *Ufugaji Hifadhi*. It is currently undertaken in Aitong and its market threshold. The local Maasai name is *Eramatare (Meaning the practice of livestock production)* which relates to Maasai pastoralists' culture. The program is based on a smartphone digital platform that connects farmers to each other, to promote better livestock production and husbandry and to value chains. It aims at giving farmers a fair wage and a sustainable income from the sale of healthy livestock and livestock products. Further, the program engages farmers in sound pasture management practices and restoring degraded landscapes in the Greater Mara Ecosystem.

This project kicked off with inception and a route mapping workshop held on 8th November 2021, at G&G in Talek. Talek was selected due to its centrality in the Maasai Mara landscape hence ease of access by all the participants.

A total of twenty participants drawn from the different conservancies in the Greater Mara Ecosystem were selected and participated in the workshop. The participants included youth, women, livestock traders, and livestock drovers. All the participants engage in the livestock trade or understand better livestock market routes and dynamics.



A group photo of community representatives.



COMMUNITY UPDATE

COMMUNITY OUTREACH AND EDUCATION

Mara Predator Conservation Programme's community outreach focuses on three key objectives; human wildlife conflict mitigation, community outreach and conservation education in primary schools.

During the year 2021, significant progress was achieved in each of the three objectives as discussed below.

HUMAN WILDLIFE CONFLICT MITIGATION

Human-Wildlife Conflicts (HWC) threaten coexistence efforts between people and wildlife in the Mara. The increase in HWC incidents prompted MPCP to initiate activities aimed at sensitising communities on conflict mitigation measures that will help curb them in order to improve people's perceptions of predators. Some of these initiatives implemented during this period are discussed in more detail below.

MARA LIVESTOCK HERDERS' TRAINING

Livestock depredation during the day has been increasing in the Mara over time due to the close interaction of livestock and predators especially in areas contiguous to conservancies or the game reserve. This, coupled with poor herding practices such as young children looking after livestock prompted MPCP to initiate a training programme for herders to help reduce the occurrence of such incidents. In this reporting period, MPCP organised 14 training sessions across the Mara where 337 herders attended.

The objectives of these trainings were:

- To equip herders with skills on good herding practices which will help reduce the occurrence of HWC incidents.
- Create a network of livestock herders who can report conflicts and sightings of predators to the Lion ambassadors and other relevant authorities.
- To sensitise herders on laws regarding compensation and penalties found in the Wildlife Conservation and Management Act (WMCA) of 2013



Figure 14: Herders from villages around Enoonkishu conservancy pose for a photo after one of the training sessions.

During the training, several topics were covered including; the ecological importance of predators, predator identification exercises, good herding practices, and laws regarding compensation and punishments in the WMCA 2013. The herders were also issued with Maasai shukas to motivate them (Figure 14).

Through these training exercises, MPCP seeks to continue to increasing awareness and equip communities with skills to reduce the occurrence of livestock predation which contributes to negative perceptions and retaliatory killings of predators in the Mara.

BOMA REINFORCEMENTS

Livestock depredation inside bomas at night is the major cause for retaliation as it results in large numbers of livestock killed mostly due to stampeding by livestock. Weaker traditional bomas are the easiest targets of such attacks due to their ease of access by predators through holes in bomas. According to a survey of bomas conducted by the lion ambassadors in 10 areas across the Mara, there were 1,109 weak bomas (1046 bomas made of branches and 63 made of whistling thorn brush).

These materials degrade easily over time and allow predators to easily penetrate the enclosures and kill livestock. MPCP partnered with the local community and supplied triple twist chain links (Fig 15) to 16 bomas in Enooronkon, Endoinyio-Erinka, Rekero, and Ngosuani to help reinforce them.



Figure 15: Triple twist chain-links procured to support boma reinforcement efforts in the identified conflict hotspots.

LION DETERRENT LIGHTS INSTALLATION AND MONITORING

During this period, MPCP installed 300 predator deterrent lights in two conflict hotspot areas around the Mara (Laila-Ng'osuani and Pardamat hills). The deterrent lights will help reduce livestock attacks inside bomas at night and contribute to positive perceptions towards predators. MPCP used this opportunity to identify bomas near those with lights (Controls) which will also be monitored to measure the effectiveness of lights as a conflict mitigation tool.



Figure 16: Lion deterrent lights installation in different boma types in the Mara by MPCP



ANTI-POISON CAMPAIGN

Following the outbreak of COVID-19, most community outreach activities were affected by the Government's directives that banned all large gatherings. MPCP's annual anti-poison campaign in markets around the Mara hasn't been conducted in the last two years. MPCP's community team found an alternative way to deliver the anti-poison songs in markets without gathering people. MPCP invited all 14 buffalo dancers and recorded the anti-poison songs and drama (Figure 17). The recorded songs were played in all major markets in the Mara to ensure community members still received the message to discourage wildlife poisoning. T-shirts with an Anti-poisoning message were also printed and distributed in these markets to help reinforce the message.



Figure 17: Buffalo dancers donning T-shirts with an anti-poisoning message during the recording of the campaign songs held in Talek.

RECYCLED PLASTIC POLES BOMAS & EVALUATION

MPCP through its Lion Ambassadors Programme identified 6 bomas that were largely affected by conflicts in three new zones i.e Kishermoruak-Olarro area (Z 12), Lemek area (Z13) and Olare Orok area (Z14) and will be working closely with the boma owners to construct predator-proof enclosures using recycled plastic poles, chain-link, and metal corners. MPCP has already procured materials for this and will put up the bomas during the next quarter.
Bomas which were constructed previously using the poles have proved to be effective in preventing night time attacks by predators (following a survey conducted by the Lion ambassadors Figure 18), a move that fosters positive attitudes towards predators by communities that live closer to conservation areas.

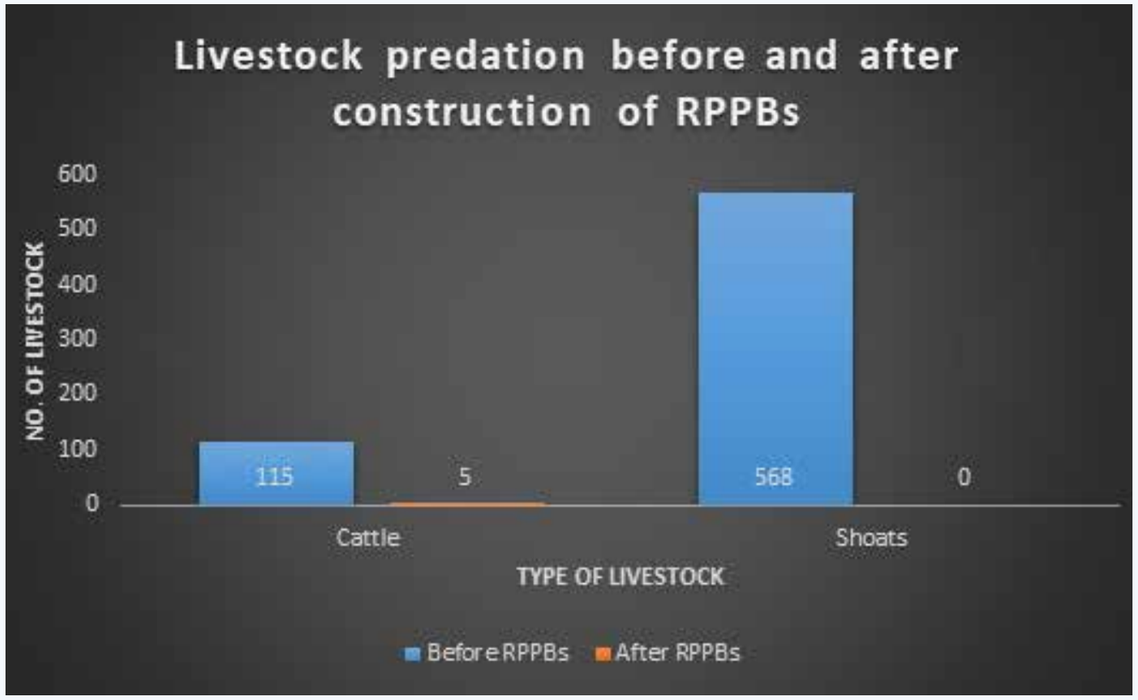


Figure 18: Livestock predation before and after the construction of Recycled plastic poles bomas

LION AMBASSADORS PROGRAMME

The Lion Ambassadors (LAs) programme was initiated in 2020 by MPCP to increase coverage of its Human-Wildlife Conflicts (HWC) mitigation efforts, community outreach, and collaboration with other partners in efforts to conserve predators, especially Lions, in the Mara. 10 LAs were employed in 2020 and were very instrumental in data collection (settlements, HWC, communication, livestock amongst others).

This year, with support from the Lion Recovery Fund (LRF), MPCP recruited, trained and equipped an additional 5 lion ambassadors to bring the total to 15 LAs who operate in 15 zones in the Mara as depicted in Figure 19.

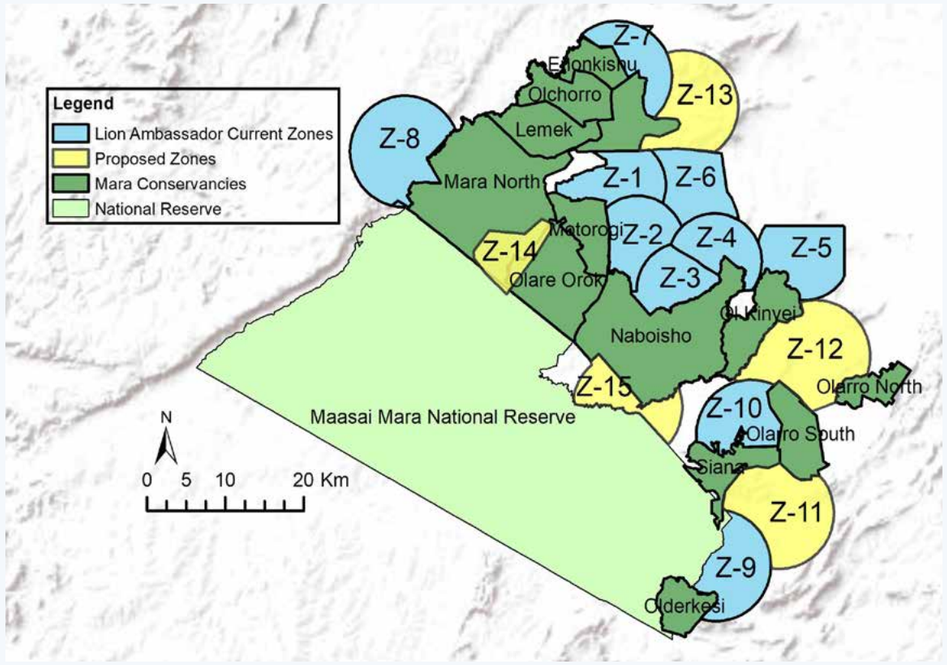


Figure 19: Location of Lion Ambassadors Zones in the Mara Ecosystem.

COMMUNITY OUTREACH

MPCP's community outreach is aimed at building the capacity of community members who live closer to conservation areas through community meetings, workshops and targeted campaigns to coexist with predators and resolving challenges associated with coexistence.
This year, a series of activities were carried out towards this objective as discussed below.

POISON RESPONSE TRAINING

Wildlife poisoning is a challenge to conservationists around the world. MPCP has been engaging different stakeholders in poison response training to build a network of people with the capacity to respond to wildlife poisoning around the Mara. This year, the MPCP team trained 78 community members in five villages (Olare orok, Lemek, Kishermoruak, Irbaan and Kijirijirr) on ways to respond to poisoning incidents in their respective areas.



Figure 20: Community members from the Olare orok area following a presentation from Dominic Sakat during the poison response training.

Of the 78 participants who attended the 5 trainings, 72 of them were aware that wildlife poisoning happens in the mara but only 26 of them have ever been to a poisoning scene. 13 participants had gotten some form of training on poison response but only 12 said they could attend to a poisoning scene before the training. After the training, 77 of the 78 participants were confident to effectively attend to a poisoning scene and decontaminate it to prevent deaths of more predators or birds of prey.

DOG VACCINATION



Figure 21: MPCP's community team members Michael Kaelo (holding a puppy) & Daniel Korio (at the background) taking part in the vaccination campaign at Enchorro o sidan village outside Naboisho Conservancy

Following the re-appearance of wild dogs and reported cases of rabies in domestic dogs in the Mara, MPCP, and other stakeholders (VSF Germany, Enoonkishu conservancy, and others), started vaccinating dogs and cats against the contagious rabies disease in areas bordering conservancies and the reserve. Early this year 1444 dogs and cats were vaccinated in Enoonkishu, Aitong, Lemek, Ng'osuani, and Rekero. Later in the year, an additional 1067 dogs and cats were vaccinated and dewormed in areas bordering Olare-Motorogi, Mara North, and Naboisho conservancies and the reserve i.e (Pardamat, Enoonkishu, Endoinyo erinka, Ngila, Olare orok, Olkurrot, Chemorut and Enelerai).
This exercise not only helps in preventing the spread of rabies from domestic animals to wildlife but also helps improve the health of dogs which in turn contributes to better livestock protection as dogs guard bomas at night.

CONSERVATION EDUCATION

WILDLIFE CLUBS ACTIVITIES

This year the nine wildlife club schools that MPCP works with resumed learning in January after a long break following the outbreak of COVID-19. This resumption enabled us to carry out the planned activities discussed below.

RENEWAL OF MEMBERSHIP

MPCP renewed membership with Wildlife club of Kenya for the nine Wildlife Clubs, with 347 members and 18 patrons. The schools were issued membership certificates while the members received membership cards valid throughout 2021. MPCP was excited to welcome Molibany primary school in Talek (Figure 22) into our wildlife club cluster this year. The club has two patrons who will be actively engaged in steering club activities as well as coordinating with the community outreach officer to ensure the smooth running of the clubs.

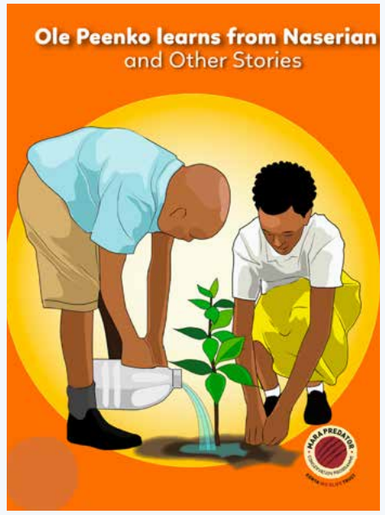




Figure 22: Left cover of the wildlife club book. Right Molibany primary school wildlife club members and patrons welcomed into the cluster of schools MPCP works with and issued with reading materials.

PRINTING AND DISTRIBUTION OF THE 1ST AND 2ND EDITIONS OF OLE PEENKO'S WILDLIFE CLUBS' BOOK SERIES



Figure 23: Wildlife club members of Mama Ngina participate during the read along of Ole Peenko's Learns from Naserian.

The first and second editions of Ole Peenko's wildlife clubs' books were printed and distributed to each of our 347 club members across the nine schools. The books featured stories that revolve around issues of coexistence with wildlife. It also covered wildlife social interactions sought to bring out empathy towards wildlife conservation from the readers. Interactive activities are included to break monotony and peak interest of the readers.
Lastly, in support of the national government's efforts to curb the Coronavirus spread, a child-friendly COVID-19 awareness section was added to increase the readers' access to correct information and help calm their young minds by assurance from the scientifically proven facts on how to properly conduct themselves.

TREE PLANTING

MPCP purchased 1000 indigenous tree seedlings and distributed them to the nine schools in efforts to increase forest cover and build capacities of members to tackle climate change through increasing tree cover in the school compounds.



Figure 24: Wildlife club members from Mara Girls Leadership in Talek taking part in a tree planting exercise.

ANNUAL ART COMPETITION



Figure 25: An artwork depicting a lion speared by a human being in what seems to be a HWC incident.

During this year, 231 wildlife club members from the nine schools participated in an annual art competition whose theme was "My favourite animal in its natural environment". The annual art competition is aimed at giving members an opportunity to nurture their talents and express their perceptions towards wildlife through art. MPCP's attention was caught by participants from one of our new schools in Ng'osuani where 2 children drew art depicting conflict situations where a lion and an elephant were being speared (Figure 25 and Figure 26 respectively).

This piece of art expresses the situation in that area (and is also supported by data from our lion ambassador Programme depicting the area as a conflict hotspot), MPCP will continue to carry out more outreach to community members, implement conflict mitigation efforts and engage children in the clubs to encourage coexistence.

To motivate the participants, the winners were awarded with prizes where the best one got a Tablet loaded with wildlife documentaries, the second one got a waterproof school bag and an encyclopaedia and third and fourth position got a waterproof school bag and artwork materials.

All the other best artwork participants were issued with a certificate.



Figure 26: An artwork depicting a speared elephant in a poaching incident drawn by a wildlife club member from Ng'osuani primary school.

WILDLIFE CLUB BULLETIN

MPCP designed, printed and distributed 100 copies of a wildlife club's newsletter called "Wildlife clubs bulletin" to all members in the nine schools. The bulletin highlighted great achievements and stories of the wildlife club patrons and members from the past.



Figure 27: Wildlife club patron and members from ADCAM Primary school in Aitong reading the first edition of the Wildlife club bulletin

APPENDIX

WEATHER

We recorded a total of 1125 mm of rain from the Predator Hub's weather station, Figure 28.

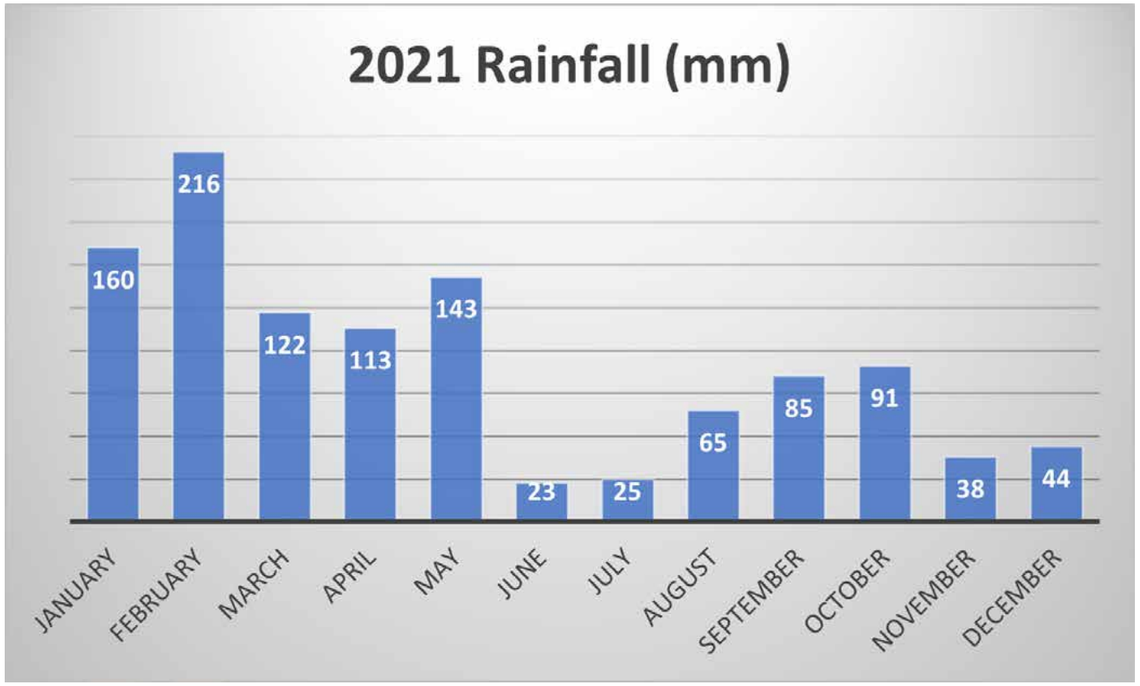


Figure 28: 2021 monthly rainfall.

ACKNOWLEDGMENTS

Our 2021 achievements were only possible through collaborations and support from our dedicated partners. We would like to extend our sincere gratitude to everyone who supported us.

In particular, we are extremely grateful to the following organizations for their support.



Mara Predator Conservation Programme
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