MARA PREDATOR CONSERVATION PROGRAMME



QUARTERLY REPORT JANUARY - MARCH 2018



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Printed in May 2018 by the Mara Predator Conservation Programme Maasai Mara, Kenya

www.marapredatorconservation.org

EXECUTIVE SUMMARY

In order to support stable, healthy predator populations within the Greater Mara Ecosystem, the Mara Predator Conservation Programme (MPCP) uses applied research-driven conservation approach to provide scientificallysound research recommendations. To achieve this, MPCP combines interdisciplinary long-term scientific research on population monitoring, ecological research, community-based conservation and stakeholder engagement to address three core objectives:

- Establish baseline predator densities and determine population trends
- Identify and quantify the threats to predators
- Identify and pilot sustainable solutions to mitigate against these threats

This is the first quarterly report by MPCP that encompasses all our conservation activities Maasai Mara landscape. During this quarter we started our first intensive predator survey of 2018 (February - April). We collected information on a multitude of species, including all predators, which will enable us to establish trends, their distribution and relative abundance over time. thereby providing an early warning system for species of concern. Our community programme continued with the six wildlife clubs and saw the anti-poisoning training. This document is structured as a progress report, highlighting our work as we strive to answer each of our research objectives.

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MEET THE TEAM



DR. CAROLINE NG'WENO

Programme Director

Caroline joined us in January 2018 from OI Pejeta Conservancy, where she was the Head of Research and Monitoring, having joined the organisation in 2008 as a Carnivore Programme Officer. Before joining OI Pejeta, Caroline worked with Kenya Wildlife Service in Nakuru as a Principal Researcher. Caroline holds a PhD in Zoology (and Hartebeest whispering, according to her supervisor!), an MPhil in Environmental Studies and a BSc in Education Science, bringing robust scientific credentials and a holistic view of how science can be applied for practical conservation success. In addition, Caroline supports capacity building and mentoring of university students through collaborations with local and international universities, as well as the Earthwatch Institute.



NIELS MOGENSEN

Senior Programme Scientist

Having conducted a BSc. in Biology at the University of Aarhus in his home country of Denmark, Niels then transferred to the Department of Behavioural Biology at the University of Copenhagen for his MSc. His fieldwork (2005-06) focused on how pastoralism and protection affected lion behaviour in the Mara, which led him to establish the Mara-Naboisho Lion Project, which merged with Kenya Wildlife Trust in 2013. Niels has been living in the Mara and focusing on lion conservation since 2011.



MICHAEL KAELO

Community & PR Manager

Michael hails from the Mara. In 2005, Michael joined Kenyatta University for a BSc in Environmental Studies and Community Development. In January 2012 Michael started an MA in Environmental Planning and Management at the University of Nairobi, after which he joined the Mara Predator Conservation Programme.



DOMINIC SANKATCommunity Liason Officer

Dominic is from the Koiyaki area of the Mara, very close to where we are based. Having been with us since the start, Dominic works closely with Michael to engage communities in predator conservation and to reduce human-wildlife conflict. He leads the delivery of our Wildlife Clubs in a number of schools across the Mara region. In 2007 he enrolled in the Koiyaki Guiding School, where he achieved his bronze KSPGA guiding certificate.



KOSIOM KEIWUA Research Assistant

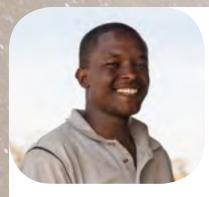
Kosiom focuses largely on cheetah conservation. He grew up in the Mara and over the years has developed a passion for animals. After completing his high school education, he joined Koiyaki Guiding School where he trained as a professional safari guide. He has previously worked at Karen Blixen Camp and joined the Mara Predator Conservation Programme in 2017.



KELVIN KOINET

Research Assistant

Kelvin focuses largely on lion conservation. He hails from Magadi and joined the project at the beginning of 2016. Prior to that, Kelvin worked with SORALO, where he managed a team of Resource Assessors. He is currently undertaking a Bachelor's degree in Environmental conservation and Natural Resource Management through correspondence at the University of Nairobi.



BILLY KAITET

Caretaker

Billy is our Chef and Caretaker – undoubtedly two of the most important jobs! He also supports our mechanic Julius with the day-to-day running of the Tony Lapham Predator Hub. Billy was born and brought up in Naroosura in Narok County, not far from the Maasai Mara. Before joining our team in 2016, Billy trained as a room steward, laundry service and maintenance person at Crocodile Camp just outside of the Maasai Mara National Reserve.



JULIUS MAKIBIOR

Mechanic

Julius is is responsible for all vehicles, as well as the maintenance of the Tony Lapham Predator Hub. His role is crucial, as he ensures that all vehicles are in tiptop condition for the rough terrain around the Mara, so that we can conduct our community and field work throughout the year. Julius was born in Kakimirai, Bomet County. He is a trained automotive technician with over 20 years of experience in vehicle maintenance. He has previously worked at Transworld Safaris and Sun Africa Hotels as a workshop supervisor and head mechanic.



Intensive Monitoring February - April 2018

We conduct fieldwork year-round to keep our databases and ID catalogues up to date and currently our database consists of over 1200 lion individuals, including the lions that have either died or disappeared. Additionally, every year we have two intensive monitoring sessions (outside and during the Serengeti wildebeest migration) to enable us to understand population trends. During this quarter, we drove a total distance of 8429 km during our 168 patrols, (Fig. 1.), collecting data on all predators (Fig. 2.) and on the factors affecting their distribution and abundance.

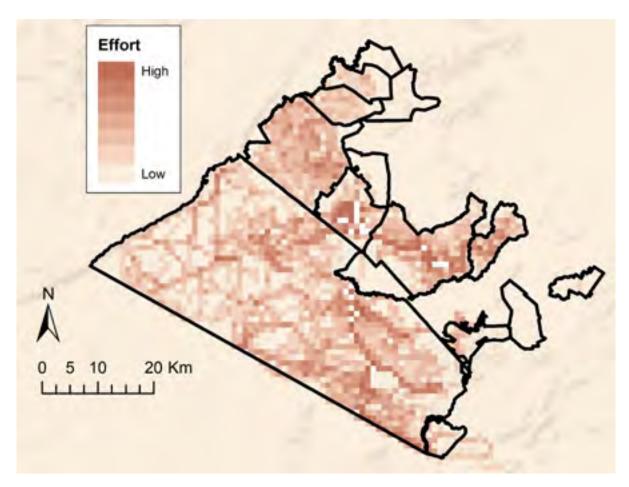


Fig.1. Field effort (01 January — 31 March 2018), colored according to distance driven per cell

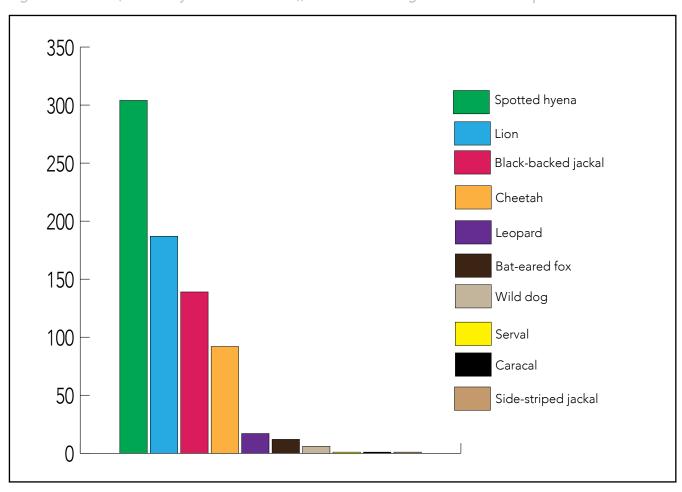
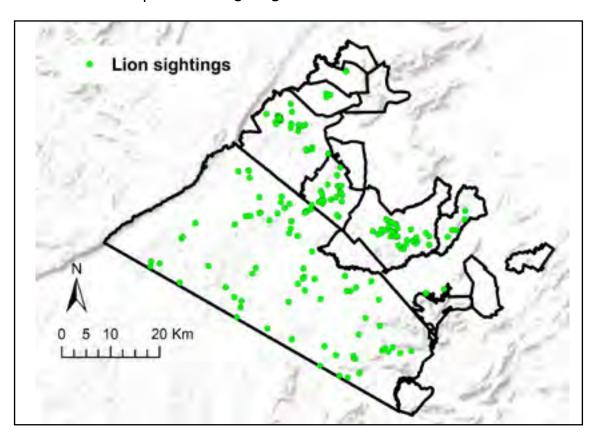
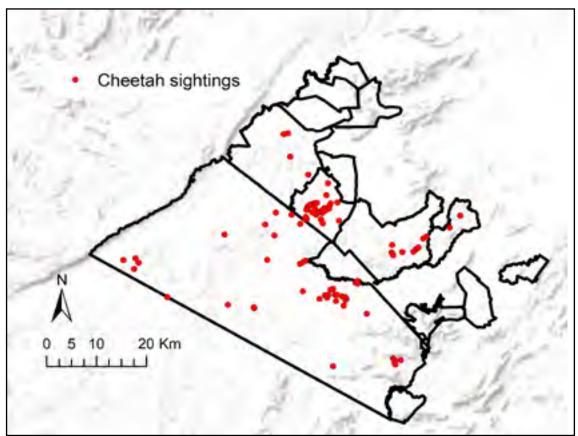
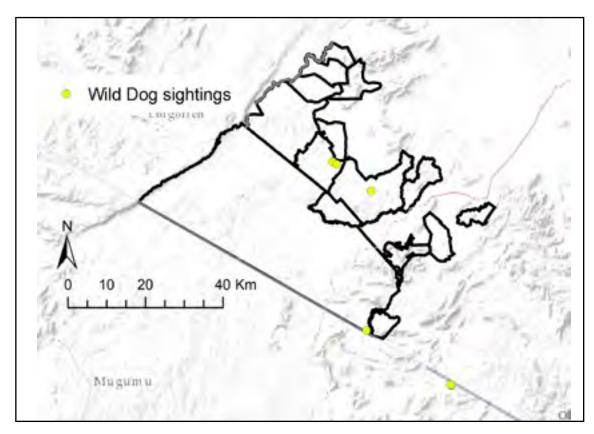


Fig.2. Number of predator sightings 01 January — 31 March 2018

The maps below show the locations of selected predator sighting (Fig. 3.) and should be viewed with the effort map in mind. Refer to Appendix 1 and 2 for details on cheetah births, deaths, dispersal and sightings within conservancies.







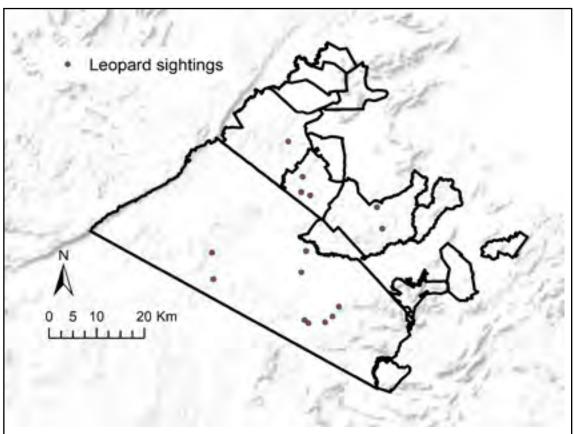


Fig. 3. Panels of; (a) lion, (b) cheetah. (c) Wild dog and, (d) leopard sightings 01 January — 31 March 2018



Collars for conservation

Wildlife collars are used to collect lion and cheetah location data (GPS) at set time intervals. This data is then received by the MPCP team through satellite communication, which allows us to continuously and intensively monitor the collared animals, helping us to learn more about their behavior and threats they face, in order for us to devise solutions and recommendations to help protect them. MPCP currently have one dispersing sub-adult male lion (Mandevu) collared, originally from the Topi pride Maasai Mara National Reserve (MMNR). Mandevu dispersed from his natal pride along with two brothers and one sister early this year. The pride stayed for quite some time in the Double Crossing area in MMNR before finally moving; first, they ventured into

Olare-Motorogi Conservancy and then crossed into Naboisho Conservancy, making their way from West to East. Later, the group crossed over to the Nkoilale side but returned to the South-Eastern part of Naboisho (see map Fig.4 below). Unfortunately, the collar stopped transmitting GPS locations towards the end of February. Only the VHF signal is still functioning, and we are trying to locate the dispersing group via the use of a VHF antenna. The collar is set to automatically drop off in June where we hope to be able to retrieve it. In collaboration with Kenya Wildlife Service, we are planning on re-deploy the collars on sub-adult males, in our efforts to document dispersal routes, connectivity, human-lion conflicts and survival of dispersing males.

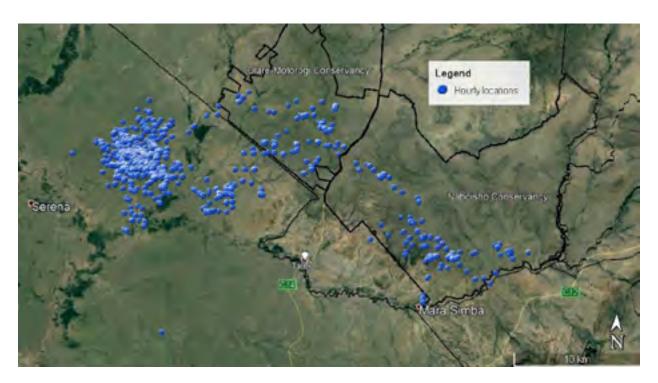


Fig.4. Movement on dispersing sub-adult males (Mandevu) via satellite collar.



Lion coalition in the making?

Two young males about seven years old from the Rocky Valley Pride have taken over the Salas pride and thereby kicking out the older Salas males close to Salas Camp along the Sand River. The Salas Males have taken refuge at Rhino Ridge area teaming up with two dispersing younger males from Engoyanai pride called Chumvi and Pilipili. The Salas male coalitions are still hanging around Rhino ridge and time will tell if they will form a strong enough bond to form a coalition



Plate 1: Peace reigns as Salas males kill a buffalo and were later joined by the two Engoyanai dispersing males.

Iconic Female Cheetah Death?

The famous Malaika was last sighted on 3rd March with her two sons (Plate 2). The following morning her sons were seen alone, calling along Olare-orok river. We are not sure as to what transpired. She could have decided to leave them as she encountered the five Musketeers a week earlier or worse; she could have drowned in the flooded river. She hasn't been

sighted since then, and we can only wait as time will tell what actually happened. Her sons Kigumba and Mdogo, who are 21 months old, are doing very well. They have been seen bringing down big male impalas, implying they have been trained well. They have been hanging around in the northern part of the game reserve.



Plate 2: Last sighting of Malaika by MPCP team, she was sighted at the reserve with her two sons.

Upcoming Predator Research

In early 2018, we brought together our two flagship predator conservation projects (focusing on lion and cheetah), into one long-term conservation commitment – our Mara Predator Conservation Programme. With the launch of MPCP, we are now able to include more predators in our research scope, expanding our monitoring efforts and ensuring viable populations of predators within the Mara ecosystem. As such, wish to expand into a wide-ranging, multi-disciplinary, conservation-based programme.

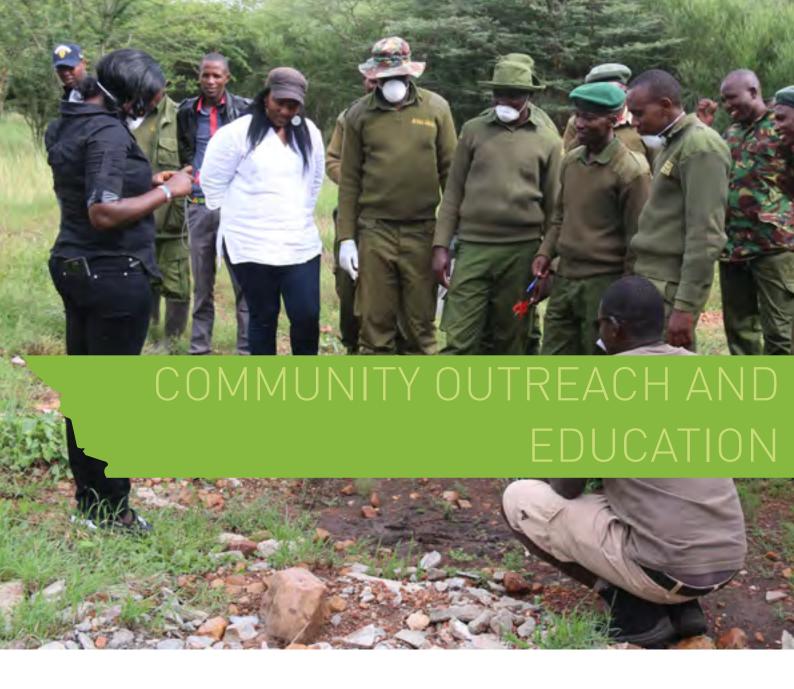
Early this year, dispersing groups of African wild dogs from the Serengeti were seen roaming the Mara Conservancies. There has also been a report of at least three resident wild dog dens in the Mara at Siana, Aitong hills, and Olpusimoru. MPCP has recently placed camera traps by a wild dog den at Olpusimoru, after being informed by Cotters Camp, who was tipped off by the local community. The den is located within the community area, approximately 43 km from Olderkesi Conservancy and 1 km in the Tanzanian-Kenyan border. However, the den is only accessible in the Kenyan side as it is close to Esoit Manyatta. Our camera trap resulted in 10 puppies captured (Plate 3), while at least a pack of 9 adults (unsexed) have been confirmed by a MPCP research assistant.

A camera trap is still positioned closer to the den to help build estimates from high-quality images of the elusive animal, determine wild dog activity and other movements within the den site.



Plate 3: A glimpse of Wild Dog puppies suckling that were captured by a camera at den site.

With this increased wild dog activity, it is our goal to conduct a baseline study to establish the demographics, distribution, and movement pattern across the landscape of wild dogs within the Greater Mara Ecosystem (GME). This initiative will provide valuable baseline date on wild dogs in GME. With the generous startup funding, we are able to contract a local Masters student for one year to provide us with this much needed baseline data. We will be working closely with the Serengeti Wild Dog project.



Alongside our research efforts these past three months, we have also continued our community engagement programme. Through our dedicated community outreach team we work closely with our surrounding community. Our community activities are aimed at ensuring sustainability of conservation efforts through engaging community so as to promote human-wildlife-coexistence. We consult with the community to identify areas of concern,

specifically related to; human wildlife conflict; mitigation using sustainable community-driven solutions; and resource management and community awareness programmes. We have continued to implement our planned community activities for this quarter such as Wildlife poisoning response training, Wildlife Clubs activities and meetings and workshops. A summary of each of these is discussed below in detail:

COMMUNITY UPDATE

Wildlife Poisoning Response Training

Many wildlife poisoning incidences were recorded within the GME in early 2018. Poisoning poses a serious threat to wildlife and lions are frequently a threat to local livelihoods as they kill livestock and in return, people kill lions.

The use of poison is particularly worrisome, since entire lion prides can be killed in a single incident. Thus, MPCP considered it was vital to have personnel on the ground who fully appreciate the impacts of wildlife poisoning. Therefore, MPCP, in an effort to ensure that the personnel on the ground from the Mara are well equipped to deal with any future poisoning incidents, initiated a series of anti-poisoning trainings.

This training is of paramount importance in efforts to halt lion declines across the GME as it focuses on how best to deal with the rising problem of wildlife poisoning throughout the GME. The goal of the training is to enhance the ability of rangers to respond

to wildlife poisoning incidents and provide quick response to save affected species. Timely response to poisoning incidents can significantly reduce resultant wildlife deaths and environmental contamination. Thus, crime scene management and decontamination were also part of the skills taught. Upon completion of the training, each conservancy was supplied with a 'Poisoning Kit' containing the equipment needed to safely respond to future incidents.

The training was led by Martin Odino, a Kenyan based leading expert on wildlife poisoning. So far, 45 rangers from 15 Wildlife Conservancies in the Mara have participated in these training sessions carried out between 14 and 16 March 2018. We appreciate the generous funding support from World Wildlife Fund (WWF) in collaboration with Nature Kenya who made the Wildlife Poisoning Response Training within the GME a great success.



Plate 4: Training participants pose for a photo at Nashulai

Recycled Plastic Bomas: Potential Solution to Big Problem

Large carnivores roam in the matrix outside protected areas, consequently bringing them into contact with communities that rely on livestock for their livelihoods. Hence, successful lion conservation requires the preservation of lion populations outside of protected areas to provide connectivity and maintenance of meta-population. Therefore, creativity is needed in employing effective tools and management practices that mitigate the negative effects of predators. MPCP has

received funding from WWF toward building a pilot predator proof livestock enclosure called "bomas" using recycled plastic poles. This smarter solution has been so far effective in ensuring the harmonious coexistence of lions and other large carnivores within community areas. Following the significant success of our work, we intend to continue to extend the initiative over the year and as this presents a real alternative to curbing depredation while at the same time minimizing deforestation.

Wildlife Clubs

The primary objective of the wildlife clubs is to inspire the next generation of wildlife conservationists. With six schools signed up and over 251 members, we have a busy curriculum and year ahead. The curriculum is

intended to motivate children to engage their minds in conservation issues understand them better and make informed choices. In February we held a meeting with all the patrons (Plate 6) to discuss the 2018 curriculum.



Plate 6: Community outreach officer Dominic with patrons -Talek schools

This quarter our wildlife club members between the ages of 12-15 years from five schools participated in the Twende Porini competition. Children were asked to describe how they view conservancies around the Maasai Mara and how they impact their lives through artwork, essays and poetry (Plate 7). A panel of judges (from MPCP, Maa trust, and

Naboisho camp), met at the Tony Lapham Predator Hub and selected three winners from each school. The winners were then selected to stay at Naboisho Camp and were given the privilege to go out on game drives and they were also given conservation talks from various organizations.



Plate 7: Kids showcasing their amazing artwork at the Twende Porini 2018 competition.

ADDITIONAL ACTIVITIES

World Wildlife Day

This year has been an incredible one regarding the global interest in lion conservation and 'Big cats under threat', the theme of this year's World Wildlife Day, shined a spotlight on the pressing need for people all over the world to take action to make sure big cats survive in the wild. MPCP team joined the rest of the world in celebrating the day by joining the Friends of Maasai Mara initiative in bringing together other stakeholders in Maasai Mara to take Talek local community

members, school kids, chiefs, and teachers for a guided game drive in the Maasai Mara Game Reserve. This exercise was aimed at creating awareness and ensuring active involvement of the surrounding communities in wildlife conservation. Lastly, MPCP was nominated by UNEP to be part of a big cat competition, whereby UNEP's new goodwill ambassador, English popstar Ellie Goulding, championed for lions.

Mara Education Stakeholders Forum

Maasai Mara Conservancies Associations funded a stakeholder's forum with an aim of bringing together all stakeholders (Plate 8) involved in education outreach activities in schools in the Mara to discuss matters on conservation education and social impact to the local communities. Among

the organizations that were present were The Maa Trust, Kicheche Community Trust, Gorvernors camps, Hammack Foundation, Mara North Conservancy (MNC), Naboisho Conservancy, Orderkesi Conservancy, Basecamp Foundation and Saruni Camp.



Plate 8: Dominic Koya of Naboisho Conservancy addressing the participants during the forum

Maasai Mara Science and Development Initiative Workshop

On 19th February, researchers and representatives from landowners committee, conservancy management, NGOs of the Maasai Mara and from Aarhus University met at a research workshop at Karen Blixen Camp in Mara North Conservancy. The main goal of the research meeting was to share knowledge and discuss future cooperation by bringing together the Maasai Mara stakeholders such

as landowners, conservancy managers, NGOs conducting research, monitoring and data collections in Masai Mara, and the research team of ecologists from Aarhus University, Denmark. MPCP team presented its findings and recommendations based on extensive data collected within the Mara over the years. Additionally, the team highlighted outreach activities carried out so far by the team.

Climate Change Adaptation Forum

On 25th January, our community team attended a community workshop "Community Climate Change Adaptation Assessment (C3A2)" organized by USAID and MMWCA. The aim of the workshop was to sensitize stakeholders on climate change and vulnerabilities in the Talek area. The community took the lead at identifying hazards, ranking them and

drawing calendars to understand changes of these hazards over the years. Some of the hazards identified include; floods, droughts, human wildlife conflict and changes in weather patterns. Such forums are very useful as communities get to formulate response mechanism to the hazards.

Conservancy Management Plan Endorsement Meetings

Conservancy management plans are critical tools that steers the conservancies to achieving their long-term goals and ensure sustainability. During this quarter we continued with our commitment of supporting conservancies in management plan formulation processes and meetings. We attended two management plan endorsement meetings at Lemek and, Olare-Motorogi. Land owners, local and

central governments representatives among other participants were also invited. The management plans were read out to the attendees and comments from participants were also taken in as input to improve the Plans. We look forward to the final product and hope the rest of the conservancies complete this process as required by law.

ACKNOWLEDGEMENTS

Achieving our goals requires a large, diverse and highly dedicated team. We would like to thank everyone involved for all their interest, energy and dedication towards helping us achieve our conservation goals.

In particular we are extremely grateful to WWF, AWF, Naboisho Conservancy's, MANCO and Band Foundation and individuals for their long-term and continuous support of the Programme. In addition to our local team, we have an amazing network of international partners and supporters, and we could not achieve anything without that help.

We look forward to continuing our partnership as together we can really make a difference and produce long-term benefits for both people and predators across the Greater Mara. We are also grateful for the collaborations and support of our partners and stakeholders in Maasai Mara:

- Narok County Government
- Kenya Wildlife Services
- MMWCA
- Mara Triangle (Mara Conservancy)
- Mara North Conservancy
- Olare-Motorogi Conservancy
- Olarro Conservancy

- Siana Conservancy
- Naboisho Conservancy
- Ol Kinyei Conservancy
- Lemek Conservancy
- Ol Chorro Conservancy
- Enonkishu Conservancy



APPENDICES

Appendix 1: Cheetah Population Parameters

Parameter	Number	NOTES
BIRTHS	4	This quarter Imani (one of Amani's daughters) gave birth to four cubs but lost one. Selenkei a daughter of Imani has also given birth in Naboisho. Kisiri gave birth to two cubs but disappeared when it was time to bring them out, we suspect something happened to her. Whilst only 3 births were confirmed we suspect that there was another one litter (Nolari) born but we are waiting to confirm.
CUB	3	We recorded 3 cub deaths - both cubs were approximately seven weeks old. For all cubs the cause of death is unknown.
ADULT DEATHS	1	Kisiri disappeared leaving alone 2 months old cubs a sign suggesting she could dead.
DISPERSAL	2	Miyale's son left his mother in mid-February after Miyale encountered and mated with the 5 musketeers, interestingly at this time an unknown lone dispersing male appeared and paired with Miyale's son therefore giving him an easy life starting off without Miyale. Malaika sons were also found on 4th March alone, nobody is sure as to what happened to Malaika, whether she just left the 20 months old cubs or may have drowned, we are still figuring out.

Appendix 2: Cheetah Sightings Breakdown

In the past three months we recorded 39 different adult cheetahs in the study area. Of these 18 were female and 21 were male. Of the females, five were seen with cubs. The following table includes summaries of the number of cheetahs that were recorded in each of the wildlife areas in the Maasai Mara during the last quarter.

Maasai Mara National Reserve: 22 different adult cheetahs (8 females and 14 males) and 5 cubs were recorded in the Maasai Mara National Reserve (Table 1).

Table 1: Cheetah sightings at the Reserve

Gender	Name	Number of Adults	Number of Cubs	NOTES
	Maridadi	1	1	Initially sighted to have two cubs but lost one
	Kisiri	1	0	Suspected to have given birth but then disappeared before she was sighted with cubs; two cubs suspected to be hers were found alone.
FEMALE	Malaika	1	2	She was last seen on 3rd March crossing a flooded river and is suspected that she might have been eaten by crocodiles while crossing the river. This is not confirmed though, we are still searching
H	Miyale	1	0	She encountered the 5 males and then separated with her son after the interaction.
	Roza	1	0	
	Roza's daughter	1	0	
	lmani1	1	4	Had 4 cubs but lost one
	Sub Total	20	7	

	5 Musketeers	5	0	
	Hodari	1	0	
	Sopa Males	2	0	
MALE	Olchore & Miyale's son	2	0	
	New Male 1	1	0	
	New Male 2	1	0	
	Sub Total	12		
	Total	20	7	

Mara Triangle: 4 different adult cheetahs (2 females and 2 males) were recorded in the Mara Triangle.

Table 2: Cheetah sightings Mara Triangle

Gender	Name	Number of Adults	Number of Cubs	Notes
EMALE	Kakenya's female cub	1	2	
δ	Kakenya	1	0	
æ	Sub Total	2	2	
MALE	Triangle Males	2	0	
M	Sub Total	2	0	
	Total	4	2	

Mara North Conservancy: 3 different adult cheetahs (2 females and 1 male) were recorded in the Mara North Conservancy.

Table 3: Cheetah sightings Mara North

Gender	Name	Number of Adults	Number of Cubs	Notes
	Amani	1	0	
EMALE	Amani's daughter	1	0	
H A	Sub Total	2	0	
111	Oloololo male	1	0	
MALE	Sub Total	1	0	
	Total	3	0	

Naboisho Conservancy: 7 different adult cheetahs (4 female sand 3 males) and 6 cubs were recorded in the Naboisho Conservancy.

Table 4: Cheetah sightings in Naboisho

Gender	Name	Number of Adults	Number of Cubs	Notes
	Neebati	1	2	Had 4 cubs but lost 2
щ	Naborr's female cub	1	0	
A	Selenkei	1	4	
	Kiraposhe's female cub		0	Separated with her brothers early March
	Sub Total	4	6	
щ	Olkinyei males	2	0	
MALE	Naborr's son	1	0	
Σ	Sub Total	2	0	
	Total	7	6	

Olkinyei Conservancy: 3 different adult cheetahs (1 female and 2 males) and 2 cubs were recorded in the Ol Kinyei Conservancy..

Table 5: Cheetah sighting at Olkinyei

Gender	Name	Number of Adults	Number of Cubs	Notes
EMALE	Neebati	1	2	
H M	Sub Total	1	2	
MALE	Olkinyei males	2	0	
Ψ	Sub Total	2	0	
	Total	3	2	

Olare-Motorogi Conservancy: 16 different adult cheetahs (7 females and 9 males) and 2 big cubs were recorded in the Olare-Motorogi Conservancy

Table 6: Cheetah sightings at Olare-Motorogi

Gender	Name	Number of Adults	Number of cubs	Notes
	Kiraposhe's female cub	1	0	
	Amani's daughter	1	0	
FEMALE	Neema	1	0	
Σ	Amani	1	0	
22	Malaika	1	2	
	Amani's daughter 2	1	0	
	Nashipai	1	0	
	Sub Total	7	2	
	Kiraposhe's sons	2	0	
	Siriwua	1	0	
MALE	Hodari	1	0	
~	5 Musketeers	5	0	
	Sub Total	9	0	
	Total	16	2	





Mara Predator Conservation Programme

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