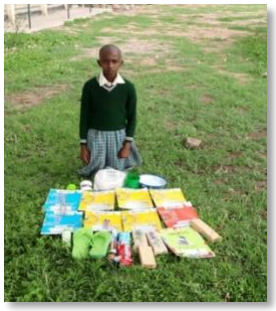
MEP January 2024 Report



Mara Elephant Project has been sponsoring Sheema with school supplies since 2017 to keep her education going and ensure a successful transition to the next level. This is after she was critically injured by a rogue elephant and MEP came to her rescue. In January, she sent us an update as she begins a new school year at Kishermoruak Primary School.

GENERAL

The Fran Duthie African Elephant Conservation Scholarship overseen by Mara Elephant Project launched in 2022 with the inaugural recipient Janeth Jepkemboi starting her MSc in Environmental Studies in September 2022 at Karatina University. Now in her second, and final year, of the program, she's focusing on her thesis. Janeth began her research internship at MEP HQ in January and is working on gathering the evidence needed to defend her thesis. Beyond completing her thesis work, Janeth has been learning about the work of MEP's long-term monitoring team, and the suite of tools used for data collection and analysis, and we even had her join a visitor group. Thank you to every donor who has supported the scholarship fund, especially Fran and Lorne Duthie, for making it all possible.

SECURITY, ANTI-POACHING & CONFLICT

In January, the MEP "Golf" ranger team together with Kenya Wildlife Service (KWS) and Oloisukut Conservancy rangers led joint patrols in the Nyakweri Forest and surrounding areas. They responded to a conflict incident, moving a herd of 15 elephants out of maize farms, and had several successful logging busts amounting to the arrest of 17 total suspects illegally logging in the area.

Also in January, the MEP / Sheldrick Wildlife Trust (SWT) Mau De-Snaring Unit alongside KWS, Kenya Forest Service (KFS) and the Bongo Surveillance Project (BSP) removed 15 snares inside the Mau Forest. Snares are used to

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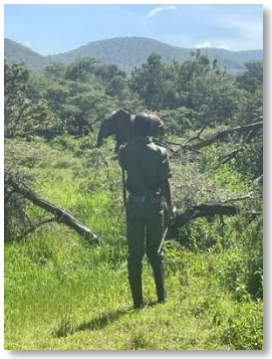
poach bushmeat, for either personal or commercial use, and often wildlife like antelopes are the target however larger wildlife like elephants can be harmed if a snare wraps around their legs or trunk. The two teams operating in the Mau were responsible for 75% of the total snares removed in 2023.



On January 30, the MEP "Foxtrot" ranger team monitored a young adult bull elephant treated by the KWS / SWT Mobile Vet Unit in late 2023. MEP assisted our partners with his original treatment in December for an arrow wound likely sustained during an encounter with the nearby community. They noted that the wound on his front leg was healing, and though he's still slightly limping, he didn't appear to have any trouble moving around. Rangers will continue to monitor his progress.

The Marmanet Forest is located a little over 100 km north of the Mau Forest is home to an estimated 60 elephants, which MEP learned in 2019 after collared elephant Vasco moved from the Mau to Marmanet. Since his original movement, the Wildlife Research and Training Institute (WRTI), KWS and MEP have collared three additional elephants in this area to better understand their movements and inform the rangers tasked with protecting the habitat and wildlife that call it home. On January 26, rangers monitored collared elephant Bea alongside a herd of over 20, which included several very new additions.


The Shimba/Mwaluganje Ecosystem contains a lowland coastal forest home to a diverse selection of flora and fauna including several rare and endemic species and is an important dispersal area for elephants. Alongside the three collared elephants in this ecosystem, MEP deploys one wildlife ranger who works alongside Mwaluganje Elephant Sanctuary community scouts and KWS rangers to monitor elephants and respond to conflict and deter habitat destruction activities in the forest. In January, the team destroyed charcoal kilns, arrested four habitat destruction suspects and seized 57 illegal timber posts. The team will continue to work together to protect elephants and the ecosystem they call home.

Overall, in January, MEP rangers alongside government partners arrested three bushmeat poaching suspects and six habitat destruction suspects. They confiscated 37 kg of bushmeat and removed 19 snares. They also confiscated 140 pieces of timber, 15 posts, destroyed four charcoal kilns and mitigated 13 conflict incidents. In January, MEP rangers covered a distance 1,623.76 km on foot and 7,993.52 km by car in the GME.

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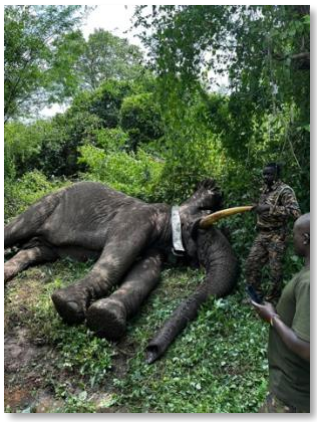
HELICOPTER



Since 2011, KWS, WRTI and MEP have deployed satellite tracking collars on over 80 elephants across Kenya to rapidly respond to conflict, deter poaching and monitor their movements to inform our habitat protection efforts. On January 9, alongside KWS Vet Dr. Bernard Rono, a bull elephant was fitted with a collar in Tana River County, a new area of monitoring for KWS, WRTI and MEP. The wildlife and communities living in this area are experiencing similar challenges to the Mara, infrastructure and agricultural expansion and high levels of conflict. The bull, named "Tino", will be a pioneer elephant and his movements will inform conflict mitigation response and allow for rapid response by KWS rangers on the ground. MEP CEO Marc Goss assisted the KWS team in the air and was joined by pilot Rob Walker in an R66 Robinson helicopter, who generously supported the flying time for this collaring operation.

Shortly after his collaring, MEP responded to a request from KWS to deploy the helicopter to move collared elephant "Tino" out of farms. MEP CEO Marc Goss used the helicopter to move Tino back to safety and we continue to assist our partners in this area.

Also in January, MEP CEO Marc Goss provided aerial support to the ground teams during an elephant treatment in Mara North Conservancy. The young sub adult bull, which was suffering from a hip wound, was successfully treated by our partner KWS Vet Dr. Njoroge from the SWT Mara Mobile Unit.

DRONES FOR CONSERVATION
Special Projects Manager's Update

In January, due to heavy rainfall and many areas becoming inaccessible to vehicles and motorbikes, all MEP ranger teams deployed drones to monitor larger herds and, move elephants to safety or move them out of forested areas for treatment.

In January, we received a request from KWS Naisuya station regarding elephants raiding crops in the Naisuya area from the Mau Forest. We deployed the mobile team with 2

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Mavic 3T drones, which were donated by Elephant Cooperation and Rob's Magic, to monitor the herd at night. The first day involved a night patrol with the Mavic 3T in Naisuya, but there were no elephants in the area. On the second day, we patrolled along the forest with drones in Olokorikirai and managed to move a herd of more than 35 elephants back to the forest, away from maize farms.

Drones continue to be a vital tool for Mara Elephant Project rangers to respond to conflict and monitor elephants. On January 4, I deployed a drone to move three bulls found inside farms after the community called to ask for help. MEP acts as the first responders in the Mara, and drones are the latest technology we can use to bolster our efforts.

Also in January, the MEP 'Foxtrot' ranger team had a first-time drone experience, when a herd of elephants they were monitoring had just minutes beforehand welcomed a new member to their family. The rangers after deploying the drone to monitor this herd for injuries, discovered a just born calf under his mother's belly. Little did the little guy know that the "bird" in the sky was a tool used by MEP rangers to keep him safe.

COMMUNICATIONS & FUNDRAISING

A special thanks to Romageco Kenya Limited popularly known as 'Robs Magic' for generously supporting MEP with a Mavic Enterprise 3 drone. This drone is easy to operate, has a thermal sensor, and a flying time of up to 45 minutes making it a key tool for MEP rangers to respond to conflict especially at night.

Mara Elephant Project Trust in Kenya received $1,982 in donations in January. Thank you to Kampur Travel Diaries for your continued commitment to advancing the Co-Existence Farm's education initiative in 2024. Mara Elephant Project USA received $178,414.31 in support of MEP's efforts. Thank you to Maxine Beige, Barbara Berman, Carolyn Shine, Robert Stephen, Theresa Cederholm, James C. Syverud, the Glynis Burgdorff Family Charitable Fund, Jane Brockwell Donahue, Edward Forstein, Mike and Margy McCormick, Wayne Dunn, Theresa Cederholm, Margaret Granberry, John Walsh, Roby Odom, Michael Crawford, the HCD Foundation, Carolyn Lavely, Caryl Rine and Richard Schechter for your support.

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Thank you to all the 15 photographers who supported Mara Elephant Project in January in the Greatest Maasai Mara photo competition. *Left: An entry from Photographer Amish Chhagan.*

RESEARCH & CONSERVATION

Director's Update

Mara Elephant Project is currently participating in the USAID Global Development Alliance (GDA) workplan meeting convened by the Maasai Mara Wildlife Conservancies Association (MMWCA) in their Mara headquarters in Aitong. All the four sub partners including MEP, tourism partners, key personnel from USAID, County Government of Narok, and human rights consultants will be discussing the indicators and the various funding streams involved in this grant. I made a presentation on the first day which included an introduction about MEP, the Greater Mara Monitoring Framework (GMMF), EarthRanger, Ecoscope and MEP's role and the activities we will be supporting on outcome one which is about secured and sustained biodiversity through locally-led organizations and strategic partnerships. All participants agreed that conservation cannot be done is silos and therefore the need to bring all actors in the Mara landscape to work together.

We had a paper on elephant movement published in the journal Movement Ecology - *Land use drives differential resource selection by African elephants in the Greater Mara Ecosystem, Kenya*. (Available at https://movementecologyjournal.biomedcentral.com/articles/10.1186/s40462-023-00436-8). We used a resource selection function (RSF) approach to analyze ~1.3 million collected GPS datapoints to understand the selection preferences of elephants across three land-use zones (formerly protected, conservancies, and unprotected). We noted significant changes in elephant habitat preference, particularly with regards to vegetation. Notably, elephants most strongly selected high-canopy cover forest thickets and avoided open-areas. This selection preference was accentuated when in the unprotected areas presumably because of the visibility and human encounters. We received support from Google to run our analysis in the Google Cloud platform and use extremely high-RAM virtual machines.

Eric and I met with different partner organizations that we are helping to support under our grant from Basecamp Explorer Foundation to help with data analysis, training and the use of Ecoscope.

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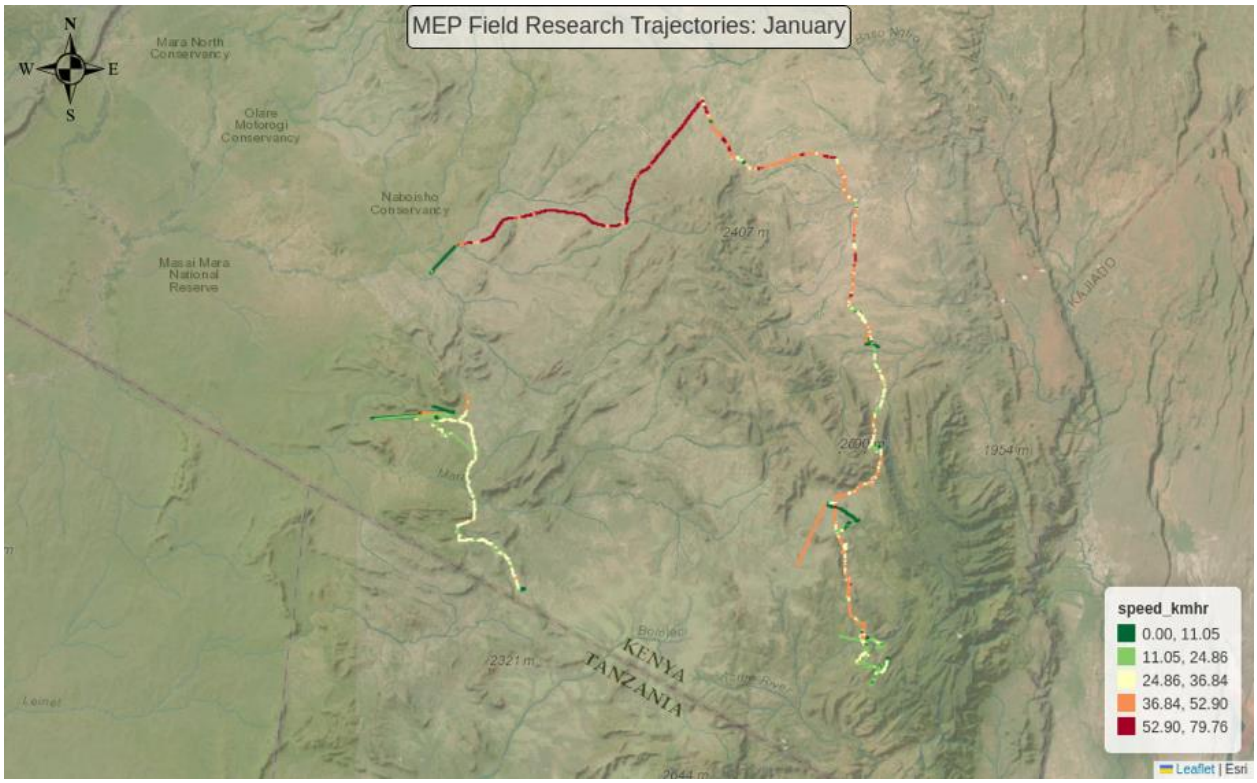
In late January, MEP received a report from Mara North Conservancy rangers about a young bull elephant that was limping. The MEP long-term monitoring (LTM) team responded to monitor the elephant and decided that he needed treatment. They called the KWS Vet Dr. Njoroge from the SWT Mobile Vet Unit to treat his hip wound in hopes that it won't affect his movements long term.



Movements of MEP's two field assistants during January. All of our field assistants are working on mapping fences, roads and landcover ground-truthing points using motorbikes and our TerraChart app. They recorded 360.48 km of fences and 0 LCC points in January.

MEP Co-Existence Farm

General Update

The year began with a high rainfall level, with rains falling almost every single day of the month, which affected daily working at the farm but reduced wildlife and predation on the crops. The rains also caused the river level to go up which was mostly caused by rains in the uplands. This month, Yun Wu who had been working with MEP visited the farm to learn more about our activities. As we begin our 2024, we continue working with different partners in our conservation school clubs, and our utmost gratitude to Kampur Travel Diaries for funding the project last year and continuing their commitment this year. In January, we met with community CBO Women in the Wild to plan upcoming school club events.

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Turmeric doing well after the rains

Moringa doing well after the rains

Eggplant harvested.

Co-Existence Farm SITREP: *January 2024*

Date Time	Plot Id	Type of Crop	Details
2024_01_16	6-9.1	Goose Berry	Birds are predating on ready gooseberries
2024_01_16	7-1.1	Sukuma	Cows entered the farm and predated slightly on the Sukuma plot
2024_01_16	3-1.2	Eggplant	24kgs of eggplant have been harvested from the five plots
2024_01_16	4-9.1	Eggplant	
2024_01_16	7-5.2	Eggplant	
2024_01_16	10-5.2	Eggplant	
2024_01_16	11-11.2	Eggplant	
2024_01_16	3-11.1	Sukuma	2kgs of Sukuma wiki has been harvested and consumed at the MEP experimental farm
2024_01_16	9-4.1	Sukuma	
2024_01_16	4-11.1	Chili	6.6 kilogram of red chili were harvested.
2024_01_16	7-3.1	Chili	
2024_01_16	10-11.1	Chili	
2024_01_25	9-17.1	Onion	A total of 4 kilograms of onions were harvested
2024_01_25	9-4.1	Sukuma	One kilogram was harvested in this plot Sukuma
2024_01_25	S2-1-4.1	Maize/Ditch	30kgs of maize was harvested.
2024_01_26	1-6.1	Capsicum	A total of 9 kgs was harvested, the yield was taken to MEP headquarters
2024_01_26	5-14.1	Capsicum	
2024_01_26	6-1.1	Capsicum	
2024_01_26	7-4.1	Capsicum	
2024_01_26	8-10.1	Capsicum	

Climate Report

Table 2: 1 MEP's Experimental Farm Rainfall Recording January 2024

Date Time	Precipitation	
	Rain gauge 1 (ml)	Rain gauge 2 (200m2)
2023_01_03	23	17
2023_01_04	5	2
2023_01_06	16	10
2023_01_09	4	2
2023_01_10	34	26.5
2023_01_11	45	31
2023_01_14	10	7
2023_01_15	20	15

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2023_01_16	25	18
2023_01_17	10	7
2023_01_18	9	6
2023_01_20	7.8	6
2023_01_23	28	12
2023_01_24	22	10
2023_01_25	4	3
2023_01_26	20	17
2023_01_27	19	12.3
2023_01_30	7	5.8

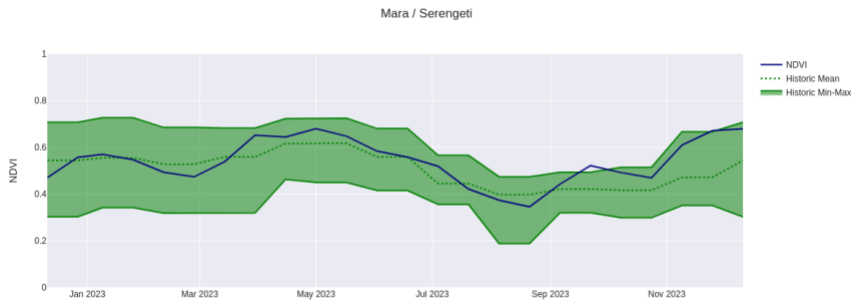
Tracking Manager Report

Collared elephants Hannibal and Polaris monitored by MEP rangers in the month of January.

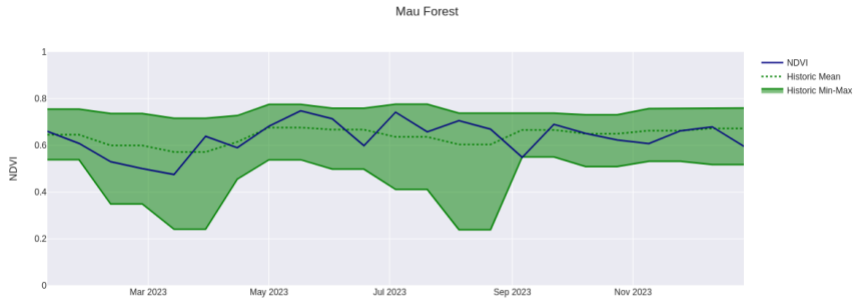
ENVIRONMENT: NDVI

Normalized Difference Vegetation Index (NDVI) is a measure of plant photosynthetic activity. Higher NDVI indicates the plant is greener. The blue trend line shows the current value while the green shaded area shows the min-max range of values centered around the green trend line from values measured back to February 2000.

Greater Mara Ecosystem (GME)



Mau Forest



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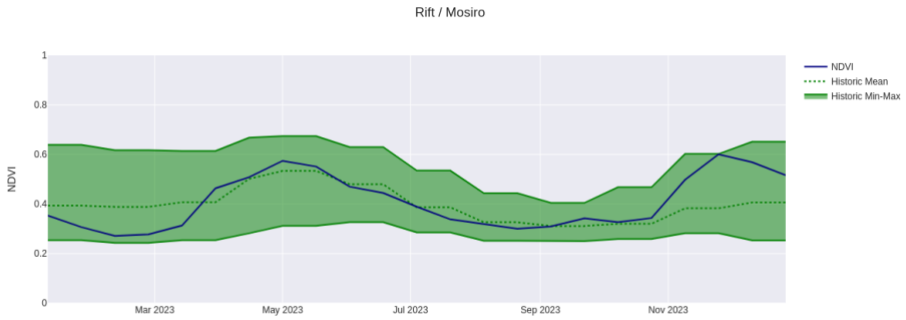
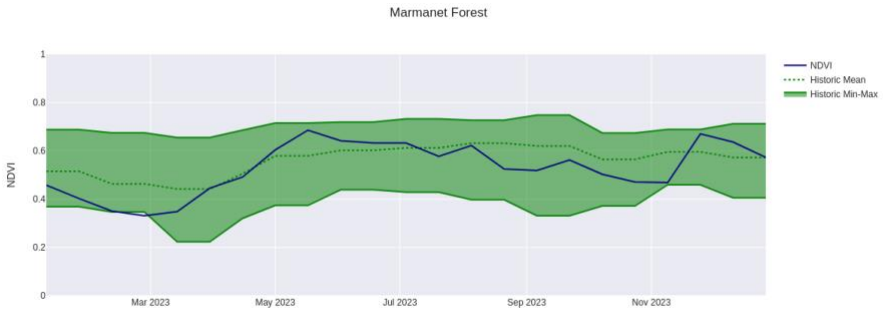
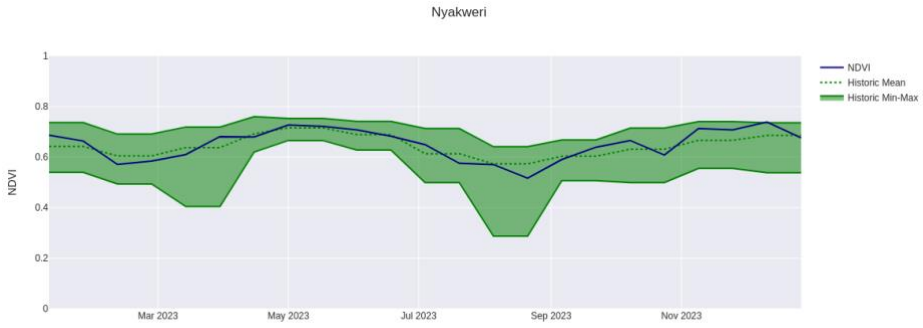
Rift Valley / Mosiro



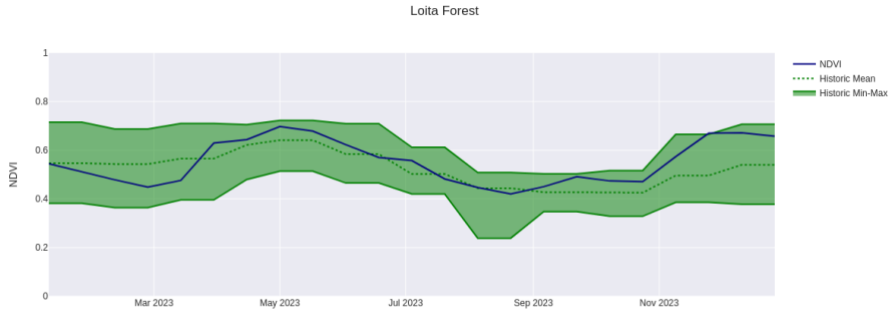
Marmanet Forest



Nyakweri Forest



Loita Forest



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