MEP January 2023 Report

We welcomed our Patron Princess Marie in January. 📸 *Jeffrey Wu*

GENERAL

In January, we were thrilled to host our patron, Princess Marie of Liechtenstein at Mara Elephant Project headquarters in the Mara. She was able to meet the staff, visit the rangers in the field, visit the co-existence farm and participate in a collaring operation for bull elephant Hannibal.

MEP Patron Marie was captured by MEP Image Ambassador Jeffrey Wu during her visit.

On January 31, Hannibal was re-collared alongside Kenya Wildlife Service (KWS) Vet Dr. Njoroge to continue collecting movement data on him. Originally collared in 2019 in a forest right on the outskirts of Nairobi, he immediately streaked into the Rift Valley eventually settling in the Mosiro area. Hannibal has given KWS, the Wildlife Research and Training Institute (WRTI) and MEP key insights into how elephants are navigating a landscape that is seeing an increase in urbanization and how that affects connectivity. He's also a known crop raider in the area and tracking his movements have allowed MEP to rapidly respond when conflict arises.

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SECURITY, ANTI-POACHING & CONFLICT

On January 18, KWS and Tanzania National Parks (TANAPA) seized two pieces of elephant tusks and arrested one suspect based on Mara Elephant Project intelligence. The suspect was arrested on the border of Tanzania and Kenya in possession of 35.84 kg (79 lbs.) of ivory and handed over to the proper authorities. Joint intelligence operations like these are crucial to ensuring ivory isn't crossing borders and seas. Intelligence rangers work together to raise the opportunity cost for poachers; if you are carrying elephant ivory, you will be caught, and everyone is working together to ensure justice is served.

In January, the two MEP / Sheldrick Wildlife Trust (SWT) Mau De-Snaring Units continued their efforts to remove snares and destroy kilns inside the Mau Forest. The "Charlie" and "Alpha" teams patrol the forest to remove snares, combat habitat destruction and promote co-existence.

On January 4, MEP rangers monitored a bull elephant in Mara North Conservancy with an injury. The KWS Vet Dr. Njoroge from the SWT Mara Mobile Vet Unit was called in and we assisted his team during the treatment. The bull had two spear injuries, one on his back and the other on his shoulder, that were most likely obtained while crop raiding in nearby farms.

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The MEP mobile ranger unit responded to a report of a bull elephant with an arrow wound in need of treatment. They joined KWS Vet Dr. Njoroge from the SWT Mobile Vet Unit to assist with the treatment in Naboisho Conservancy on January 4. The bull was successfully treated for one arrow wound and is expected to make a full recovery.

In total, in January, MEP rangers alongside our government partners arrested 15 habitat destruction suspects, destroyed 49 kilns and 68 bags of charcoal, recovered 200 pieces of timber, 28 posts and two trees. They arrested four bushmeat poaching suspects and seized 25 kg of bushmeat. The rangers also mitigated 16 conflict incidents in January. In January, MEP rangers covered a distance of 1,714km on foot and 16,693 km by car in the GME. MEP rangers also covered a distance of 137 km on foot in Marmanet.

HELICOPTER

The helicopter was a critical part of a collaring operations in January. On January 11, elephant "Gina" was re-collared near the Shimba Hills Airstrip in the Shimba Hills National Reserve with the assistance from KWS Vet Dr. Njoroge. Originally collared in 2019 in the Mwaluganje Elephant Sanctuary by KWS, the Wildlife Research and Training Institute and MEP, Gina's movement data provides an understanding of elephant movements in Shimba Hills and the Mwaluganje.

Tom Heyman generously supported Gina's monitoring and joined for the operation. As you can see, the helicopter was very popular with the children.

COMMUNICATIONS & FUNDRAISING

A special thanks to Holly Budge who founded World Female Ranger Week for featuring MEP in a special article featuring the amazing work of female rangers in Kenya Airways in-flight magazine.

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Mr. Evans classroom at GLOBE Charter School is raising money for Mara Elephant Project in 2023 and learning more about the world of conservation in the process. We are delighted to see young children so engaged in protecting wildlife.

In January, the Sidekick Foundation, Inc. d/b/a Mara Elephant Project USA received $198,757.67 in support, which includes a few December donations not previously mentioned. Mara Elephant Project Trust in Kenya received $11,121 in donations in January. Thank you to long-time supporter Lincoln Howell and Maxine Beige for their support. The GLOBE Foundation supported the launch of an internship program for Kenyan students pursuing a degree at EARTH University in Costa Rica. Thank you to Ada Frasca, Mike & Margy McCormick, Al & Kathy Hubbard, George Worley, Dudley Diebold, Ferdinand Prinz Von Hohenzollern, Sharon Lee Butcher, the Gilbert W Siron Charitable Foundation, Sheryl Adams, Dr James & Barbara Syverud, David Ade, R.E. Professional Services, LLC., Lois & Quentin Regestein, Anne Constein, Hart Family Fund, Shawn Burke, Richard Leirer Giving Account, Casciato Charitable Gift Fund, Avadhesh Agarwal, Eve Anderson, Burt Family Foundation, Rafe Cohen, Angelina Dalessio, Michael der Manouel, Donald Epstein, Peter Farrell, Jerre Gresly, Ravenna Helson, Radford Klotz and Grace Pacheco. Thank you to Explorers Against Extinction and all of their supporters for raising money to support the Co-Existence Farm.

Thank you to the 18 photographers who supported Mara Elephant Project in January in the Greatest Maasai Mara photo competition.

A January entry from photographer Silke Hullmann.

RESEARCH & CONSERVATION

Director's Update

In early January I travelled to attend a meeting convened and financed by the Greater Serengeti Conservation Society held at the Serena Lodge in Ngorongoro Crater TZ. This was the third meeting I've attended, and it serves as an incredibly useful annual update on science and research for managers and policymakers across the trans-national Serengeti-Mara system. The new Narok Governor Hon. Patrick Ole Ntutu and his team attended the meeting this year. The meeting was led and organized by Simon Mduma, Grant Hopcraft and Han Olff. MEP contributes various information about elephant range, crop-raiding and other environmental metrics to the slide presentation.

Ngorongoro Crater in Tanzania.

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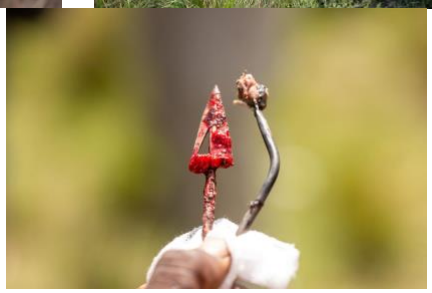
The Monitoring Framework led by Holly Dublin, Cindy Obath and myself progressed in January and we scheduled many bilateral meetings with researchers/managers involved in development of the framework. We are creating 'Indicator Cards' that demonstrate examples of the questions, datasets, analyses and visualization outputs related to each of dozens of framework indicators that we collected during our first workshop in November.

In early January we were joined by Raymond Owino who completing his master's at the University of Nairobi. Raymond will be starting a PhD at Arizona University in September and he's helping with various analyses, running our monthly reporting outputs and GIS data consolidation for the time he is here. He's also helping to teach our team GIS and in turn is also learning about our Ecoscope tools. Welcome Raymond!

MEP helped to coordinate a veterinary treatment of a wounded bull elephant first reported by our friends at Serian Camp. The elephant is known in our database as individual 58. The MEP long-term monitoring (LTM) team quickly joined KWS Vet Dr. Njoroge from the SWT Mobile Vet Unit and Mara North Conservancy rangers to assist with his treatment. There were four arrow wounds in total. The arrows were removed, the wounds treated, and thankfully the elephant is expected to make a full recovery.



Thank you to Roisin Allen from Alex Walker Serian for the amazing photos.

The MEP LTM team was conducting monitoring work in Mara North Conservancy and captured a herd of over 50 elephants. The large herd is actually made up of smaller family groups, and most of the adults were originally identified in the field by the MEP LTM team. They've noted that these family groups will meet up to socialize for a few days and then go their separate ways.

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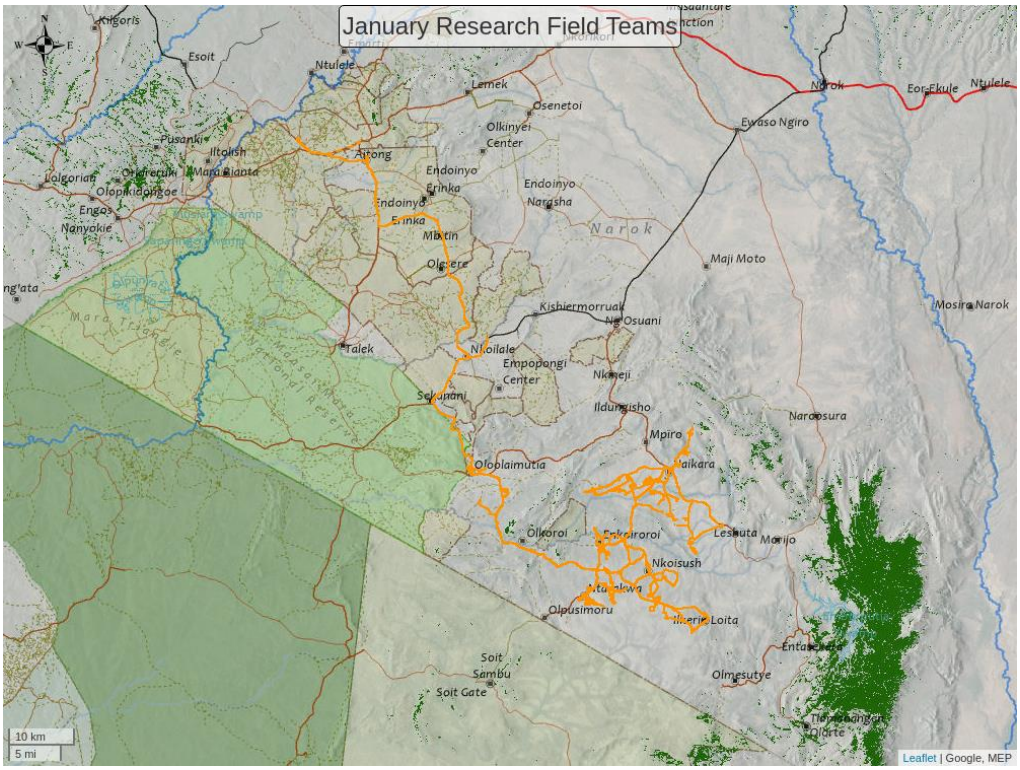

Movements (orange tracks) of MEP's two field assistants during January. All of our field assistants are working on mapping fences, roads and landcover ground-truthing points using motorbikes and our TerraChart app. They recorded 27 km of fences and 0 LCC points in January.

MEP Co-Existence Farm

General Update

MEP Co-Existence Project had a successful 2022 and as we begin 2023, we are grateful for all of our supporters and partners. The month of January begun with few days of rainfall then towards the end of the month we experienced very hot weather. We had elephant and hippo visitors in January. On the human visitor side, we were very pleased to host MEP Patron Princess Marie and she was accompanied by MEP Image Ambassador Jeffrey Wu and a long-time supporter Rita Cabases and her partner. While visiting they took a farm tour and were very engaging with insightful questions and suggestions. Our kitchen garden and medicinal garden are doing great, we planted seeds in the nursery and are patiently waiting for them to grow we can transplant them next month.

Experimental Farm SITREP: *January 2023*

Date Time	Plot Id	Type of Crop	Details
2023_01_15	4-5.1	Ginger	Elephant passed through this plot and stepped on the crops
2023_01_15	5-7.1	Cucumber	Elephants stepped on and eat cucumber plants that were flowering and fruiting in this plot
2023_01_15	6-2.1	Canola	Hippos entered the plot and eat all the matured canola
2023_01_15	6-6.1	Sweet Potatoes	The few plants that had remain were all eaten by elephants

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2023_01_15	6-7.1	Butternut	Elephants stepped on this plot and eat plants which were in flowering stage
2023_01_15	9-11.1	Spinach	A few pieces eaten by hippos
2023_01_15	8-5.2	Canola	Hippos eat a few rows of the canola plot
2023_01_15	5-8.1 11-14.1	Cabbage	Cabbages replanted for the forth time after they were eaten by hippos and others harvested
2023_01_15	7-3.1	Chili	Since the farm begun its operation the chili was planted and harvested with high yield, this is first replant on this plot
2023_01_15	5-9.1	Carrot	A total of 5kgs of carrots were harvested and send to HQ
2023_01_15	6-14.1 7-9.1 8-4.1 10-2.1 2-10.1	Corriander	A total of 21kgs of Corriander was harvested over time from all the plots after all were planted and grew at the same time.
2023_01_22	2-8.1	Potatoes	A few pieces of potato crops were eaten by hippos
2023_01_22	1-7.1	Canola	Hippos eat a few rows of the canola plot
2023_01_22	1-9.1 4-6.1 5-2.1 9-10.1	Peas	2.1 Kgs of peas were harvested from all the plots , they are yet to be harvested as the grow in different stages, the yields were taken to HQ.
2023_01_29	2-2.1 8-16.1 4-4.1 7-8.1 9-11.1	Spinach	All the spinach crops were replanted after they were eaten by hippos
2023_01_29	9-3.1 8-9.1 11-6.1 1-10.1	Tomatoes	All the tomatoes plots were replanted after it was continuously predated on by hippos, this is their forth trial
2023_01_29	11-9.1 9-4.1 7-1.1 3-11.1	Sukuma	Sukuma plots were replanted most for the forth trial
2023_01_29	1-6.1 5-14.1 6-1.1 7-4.1 8-10.1	Capsicum	Capsicum were replanted for the fourth time after they had a stunted growth and continuous predation by hippos
2023_01_29	3-1.2 7-5.2 10-5.2 4-9.1	Eggplant	Eggplant crop have had a poor growth since they were planted, this is their third replant after only a few germinated fully to fruiting in each plot
2023_01_29	8-13.1	Carrot	A total of 5kgs of carrots were harvested and send to HQ

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Elephants ate and stepped on cucumber and ginger plots respectively.

Expanded kitchen garden with heirloom seeds grown.

Climate Report

Table 2: 1 MEP's Experimental Farm Rainfall Recording January 2023

Date Time	Precipitation (ml) Rain gauge 1	Precipitation (ml) Rain gauge 2 (200m^2)
2023_01_06	4	3.4
2023_01_08	5.5	5
2023_01_09	14	10
2023_01_14	40	28

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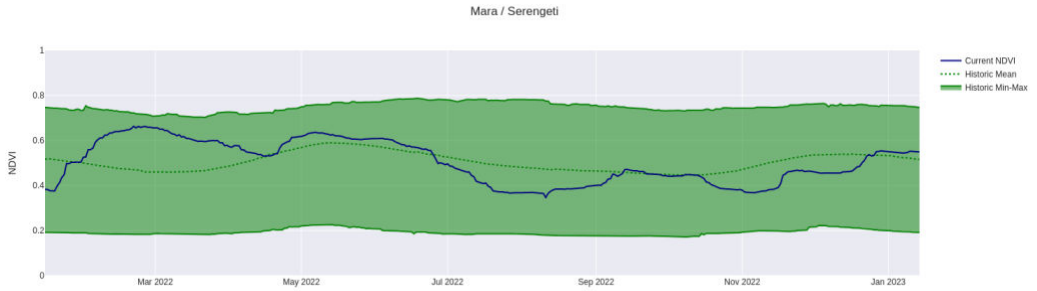
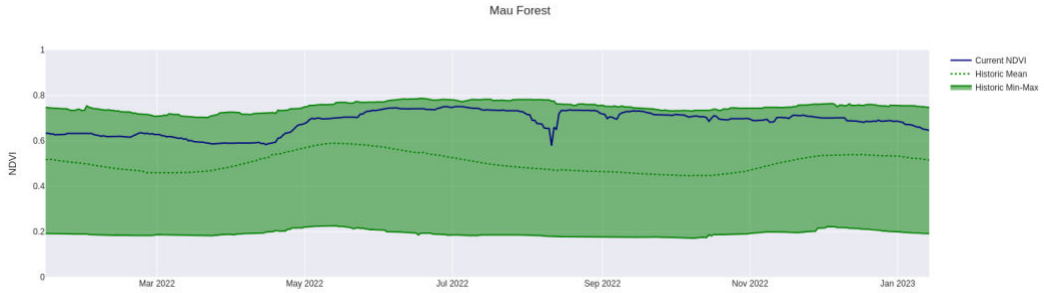
ENVIRONMENT: NDVI

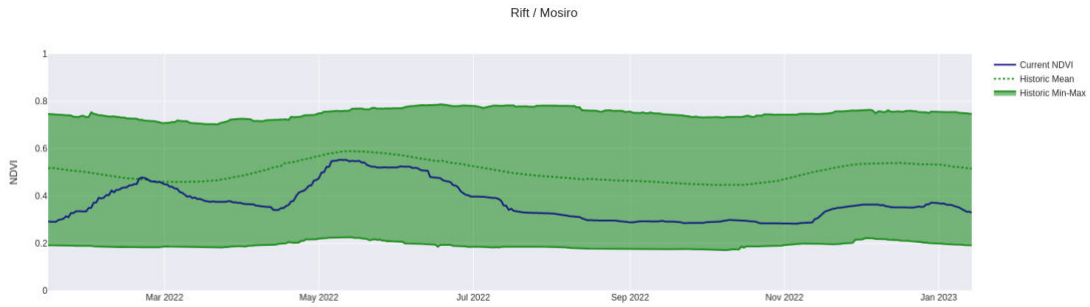
Normalized Difference Vegetation Index (NDVI) is a measure of plant photosynthetic activity. Higher NDVI indicates the plant is greener. The blue trend line shows the current value while the green shaded area shows the min-max range of values centered around the green trend line from values measured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



Greater Mara Ecosystem (GME)



Mau Forest



Rift Valley / Mosiro

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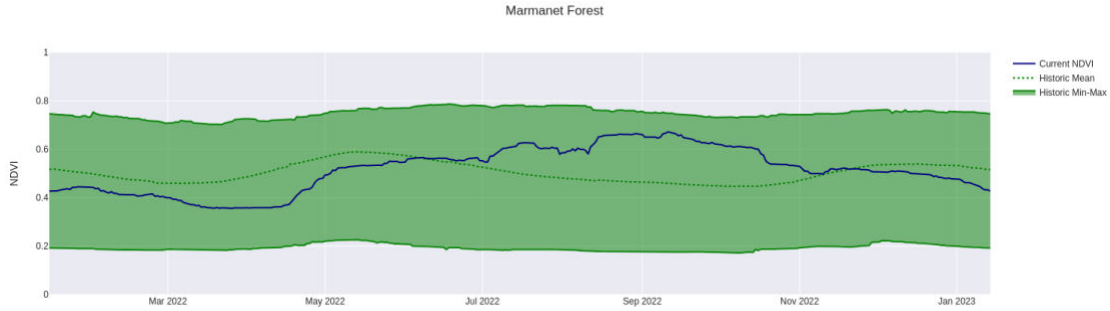
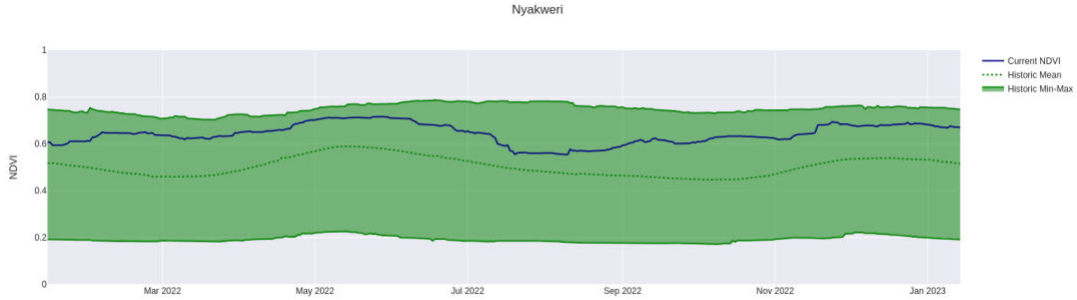


Marmanet Forest



Nyakweri Forest

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