MEP January 2021 Report

Flooding was prevalent around the Mara in January.

GENERAL

As we enter into Mara Elephant Project's 10th year of operation, I feel as an organization we are more equipped to handle the increase in habitat destruction activities and bushmeat poaching we're seeing the Greater Mara Ecosystem. My hope for this year is that the tourist industry is revived, and we are busy greeting visitors on MEP's campus during high season. In the meantime, MEP continues to focus on raising the opportunity cost for poachers and deter illegal habitat destruction activities in the Mara and January was no exception.

MEP's intelligence unit started 2021 off with two ivory busts. Starting on January 5, MEP's intelligence unit alongside Kenya Wildlife Service (KWS) arrested two suspects in possession of 30 kg of ivory. The team suspects this ivory came from Tanzania and are glad they were able to successfully remove it from the market. Then, on January 14, the MEP intelligence unit along with KWS arrested one suspect in possession of two elephant tusk weighing 11 kilograms estimated to be worth a street value of Ksh.1.1 million according to Citizen TV in Kenya. The suspect was arrested on the Kehancha-Ntimaru road near the border of Tanzania and Kenya.

The two ivory busts led by the MEP intelligence unit in January resulting in a total of 41 kg of ivory seized and three suspects arrested.

SECURITY, ANTI-POACHING & CONFLICT

In terms of bushmeat poaching, MEP rangers alongside government partners arrested two bushmeat poaching suspects, confiscated 15 kg of bushmeat and removed 19 snares.

The SWT Mau De-Snaring Unit rangers on January 14 during their normal patrol arrested two suspects with 15 kg of bushmeat and 4 snares. They also burnt down a poachers' hut.

In total, in January, MEP rangers alongside government partners also arrested 22 habitat destruction suspects, recovered two power saws, destroyed 31 kilns and 30 sacks of charcoal and confiscated 370 posts and 105 pieces of timber.

A kiln destroyed in the Mau Forest in January and a charcoal arrest on January 4 with 18 bags of charcoal.

As crops ripen across the Mara River near MEP's HQ, we have deployed a team to near the Naronyo Hill on Olchoro conservancy so that they are in close proximity of the crop raiding elephants who cross into crops at night. The rangers patrol in their vehicle along the river and are tasked with stopping the herds at the crossing points with their mitigation toolkit. In total, MEP rangers responded to five conflict incidents in January.

A group of five elephants raided a crop farm at night in Kilaye area on January 4.

Ranger Foot Patrols

In January, MEP rangers covered a distance of 1,522 km on foot, 6,028 km by car and 3,145 km on motorbike.

HELICOPTER

Collared elephant Chelsea was spotted the first week of January by the Olkinyei Conservancy rangers with a wound on her side, a very dangerous place that needed immediate veterinary intervention. Chelsea was originally collared by KWS and MEP in May 2015 and in June 2020, her collar ran out of its battery life and MEP rangers were tasked with keeping track of her while on patrol until she could be fitted with a new collar. Replacing this collar became more urgent when they discovered her wound. So, on January 8, MEP the MEP leased helicopter was deployed to complete this mission. Chelsea was successfully darted and treated by KWS Vet Dr. Rono from the KWS HQ in Nairobi for a wound on her side that was obtained from a spear. While being treated, she was also fitted with a new collar that will be monitored 24/7 by KWS and MEP. Chelsea will be closely monitored while she is recovering from her wound, but the prognosis is good.

Collared elephant Chelsea receiving treatment and a new collar on January 8.

MEP hired an R44 helicopter to use the last week of January to monitor Fred, Ivy, Fitz, David, Kegol, Kiambi, Lempiris, Chelsea, Matali, Hannibal, Napoleon and two herds in Olarro Conservancy and the Southern Loita area. Kiambi was spotted with a bachelor herd and Chelsea was with her usual family herd; both doing well. The Southern Loita area is a spot where KWS and MEP are looking for good elephant candidates to collar in 2021 to establish movement patterns around the Sand River. Aerial monitoring of Kenya Wildlife Service and Mara Elephant Project's collared elephants is a key component to keeping them safe. A view from the air allows us to monitor the elephant's well-being and the collar's overall wear-and-tear. Beyond just the collared elephant, while up in the air, we check the whole herd for injuries and we take notes on the elephant's herd size, noting new babies as well as any changes in the land cover like new settlements, fences or roads. We also monitor our forested areas for habitat destruction and relay these coordinates to our ground teams. All of this is combined in MEP's own instance of EarthRanger to create a broader picture of how elephants are using the landscape based on factors like fences and settlements. We also used the helicopter to move Fitz and his herd back

into Dupoto Forest from the western edge of the forest which is experiencing a huge amount of destruction.

Collared elephant Kiambi and his herd photographed from the air.

COMMUNICATIONS & FUNDRAISING

January is always a great month to reflect on the accomplishments of the previous year and prepare for the year ahead. We are very excited to be celebrating Mara Elephant Project's 10-year anniversary on September 12 and we have many great announcements coming soon about that. The national news in Kenya featured ivory seizures and arrests that involved MEP intelligence. On January 7 and again on January 20, both on Citizens TV.

In January, there were amazing first entries in the Greatest Maasai Mara photo competition. Thank you to Guillaume Niger, Oliver Zeid, Vikram Ghanekar, Yarin Klein, Roisin Allen, Andrew Liu, Thorsten Hanewald, Julie Lovens, Ivan Glaser, William Fortescue, Eric Janus, Edouard Wenseleers, Sushil Chauhan, Adam Zdebel, Sean McDermott, Charlotte Rhodes, Karin Bishop, Rizwan Jiwa, Clair Nicol and Manoj Shah for designating MEP as your beneficiary.

A January entry in the GMM competition by Roisin Allen.

The new year has gotten off to a good start in terms of donations. We received $117,928.81 in January from 195 individuals and organizations. Our direct mail campaign continues to be successful and the monthly payments have gone up to $37,000. We received a $25,000 donation from Mary Love, $10,000 from Maxine Beige and $10,000 in support from Elephanatics, a long-time MEP supporter out of Canada. Thank you also to Richard Urell, Mallory Hathaway and Stephanie Sheehan for their donations of $5,000 each which they made in late December but were only received in early January. We would also like to thank photographer James Lewin for supporting MEP with the sales of his photographs in January. We had four Facebook birthday fundraisers which have raised $237.76 so far. Thank you to Pavla Pacalov, Dana Adkins, Sarah Cass and Derek Vemer. Thank you to Mara Tatu who supported MEP in 2020 with a percentage of their sales, an almost $300 donation received in January. Finally, we are excited about 2021 and the possibilities for travel. MEP is starting to hear from our tourist partners about people booking safaris and we cannot wait to host people on MEP's campus again.

RESEARCH & CONSERVATION

Director's Update

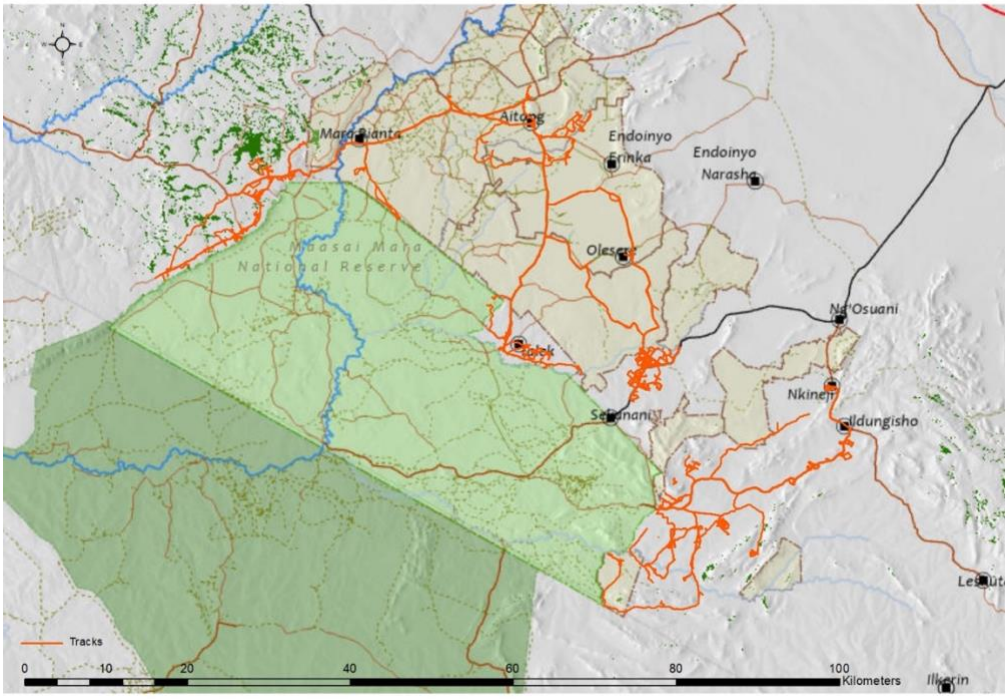
This month we welcomed David Kimanzi to the MEP Research team. David was a colleague of mine at Save the Elephants and is a GIS specialist. David will be working with Wilson Sairowua and I closely to collect new spatial layers, manage our EarthRanger platform, monitor all collared elephants, and produce cartographic and analytical outputs from our growing conservation datasets. Karibu David!

I've been working closely with the Data Science Society at Berkeley to help build open-source tools for analytical outputs from EarthRanger. The DSS team is back in full swing after the break and we are looking forward to developing new tools for data analysis this year. The first will be a python library to export speed maps from EarthRanger.

We had a good time at the recent Mara-Serengeti Stakeholder meeting held at Serena Lodge in the Mara Triangle where we were able to see colleagues from both Tanzania and Kenya. Grant Hopcraft from the University of Glasgow gave a fantastic overview of all the research currently underway in the Mara (including presenting some slides from MEP). Coordination with Tanzania and regular meetings like these are critical to conservation of this ecosystem.

Collared elephant Ivy enjoying lush green grass in Lemek Conservancy.

Year	Month	Electric	Other	Wire	De-fenced	Total (kms)
2019	November	48.27	-	18.35		66.62
2019	December	81	-	59		140
2020	January	111.16	4.64	124.71		240.51
2020	February	101.62	1.17	33.99		136.78
2020	March	48.59	0.14	59.76		108.49
2020	April	19.78	0	10.38		30.16
2020	May	24.75	1.88	41.18		67.81
2020	June	15.19	1.48	107.88		124.55
2020	July	37	-	52.76		89.76
2020	August	60.12	7.52	40.08		107.72
2020	September	126.95	7.15	221.44	15.18	370.72
2020	October	109.05	10.57	218.99	1.78	340.39
2020	November	101.2	24.52	153.12	13.88	292.72
2020	December	62.99	9	190		261.99
2021	January	87.9	19.4	121.09	5.2	233.59
	Total (kms)	**1035.57**	**87.47**	**1452.73**	**36.04**	**2611.81**



Movements (orange tracks) of MEP's three field assistants during January. All of our field assistants are working on mapping fences, roads and landcover ground-truthing points using motorbikes and our Njia app. They recorded 233 km of fences and 245 LCC points in January.

Tracking Manager's Update

Fitz was in the Nyakweri Forest for the most of January. He made several attempts to move east towards the farms thereby breaking geo-fences but MEP's Alpha team on ground were able to push him back into the forest. He was seen in the company of five other elephants around Kilaye before being pushed back into the forest. Ritan was displaying similar behavior as Fitz and spent

most of January in the Chemesusu Forest (Mau area) and its immediate neighborhood. During the day he foraged deep into the forest and at twilight approached the southern edges of the forest. Sporadically, he staged fast crop-raids into the neighboring farms at night and went back into the forest before sunrise. His farm-raids were picked by our geo-fence analyzer reports in Earth Ranger. Hannibal and Napoleon were in the southern slopes of Mt. Suswa at the start of January. They both left the Suswa area and moved about 50 km farther south into Mosiro, where they spent time in unprotected areas. In the second week of January, both bulls left Mosiro at dusk and moved south-west into the riverine thicket of Ewuaso Ngiro to crop raid under the cover of darkness. They broke a geo-fence and whizzed through dense farms in Ewuaso Ngiro South. The crop-raid seemed well strategized starting at around sunset entering the farms at midnight and heading back at the crack of dawn.

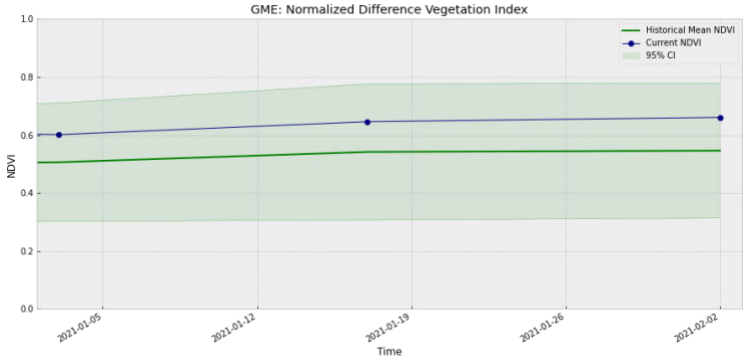
Collared elephant Kegol photographed during an aerial monitoring flight in January.

Collared elephant Fitz photographed by MEP rangers in the Nyakweri Forest in January.

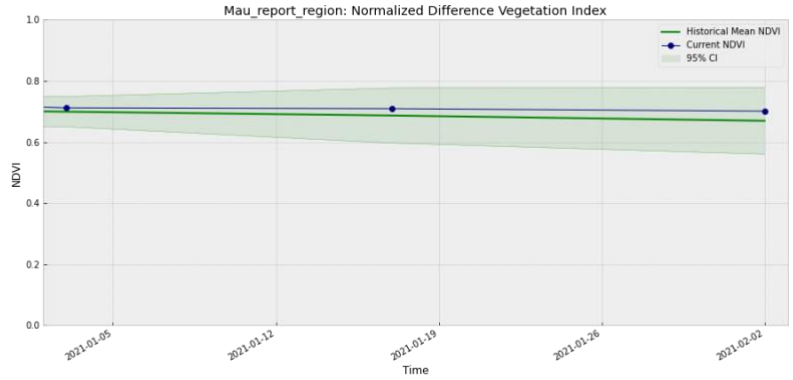
ENVIRONMENT: NDVI

Normalized Difference Vegetation Index (NDVI) is a measure of plant photosynthetic activity. Higher NDVI indicates the plant is greener. The blue trendline shows the current value while the green area shows the 95% distribution of values centered around the green trendline from values measured back to February 2000.

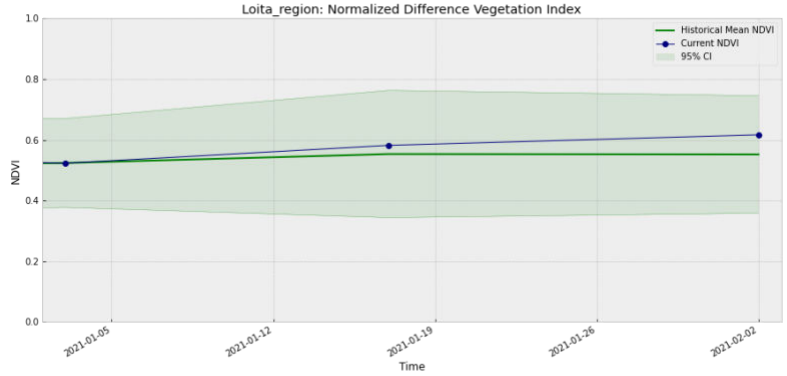
Greater Mara Ecosystem (GME)



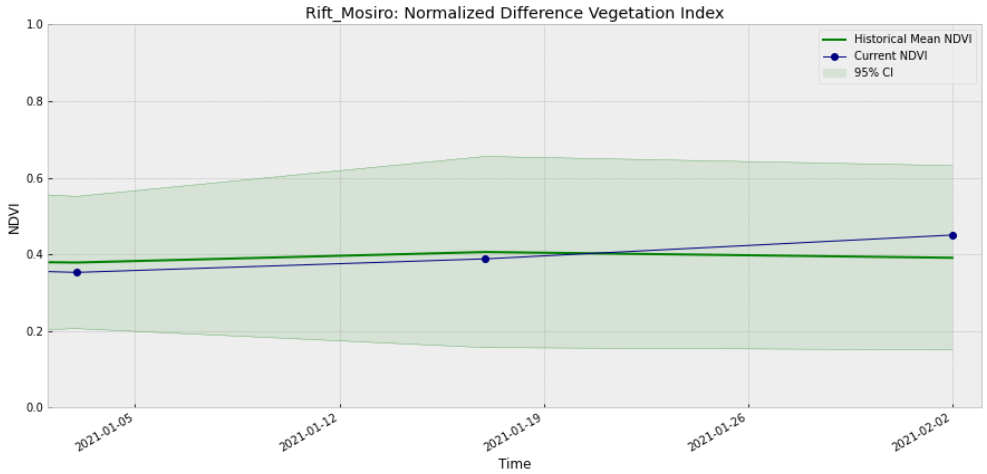
Mau Forest



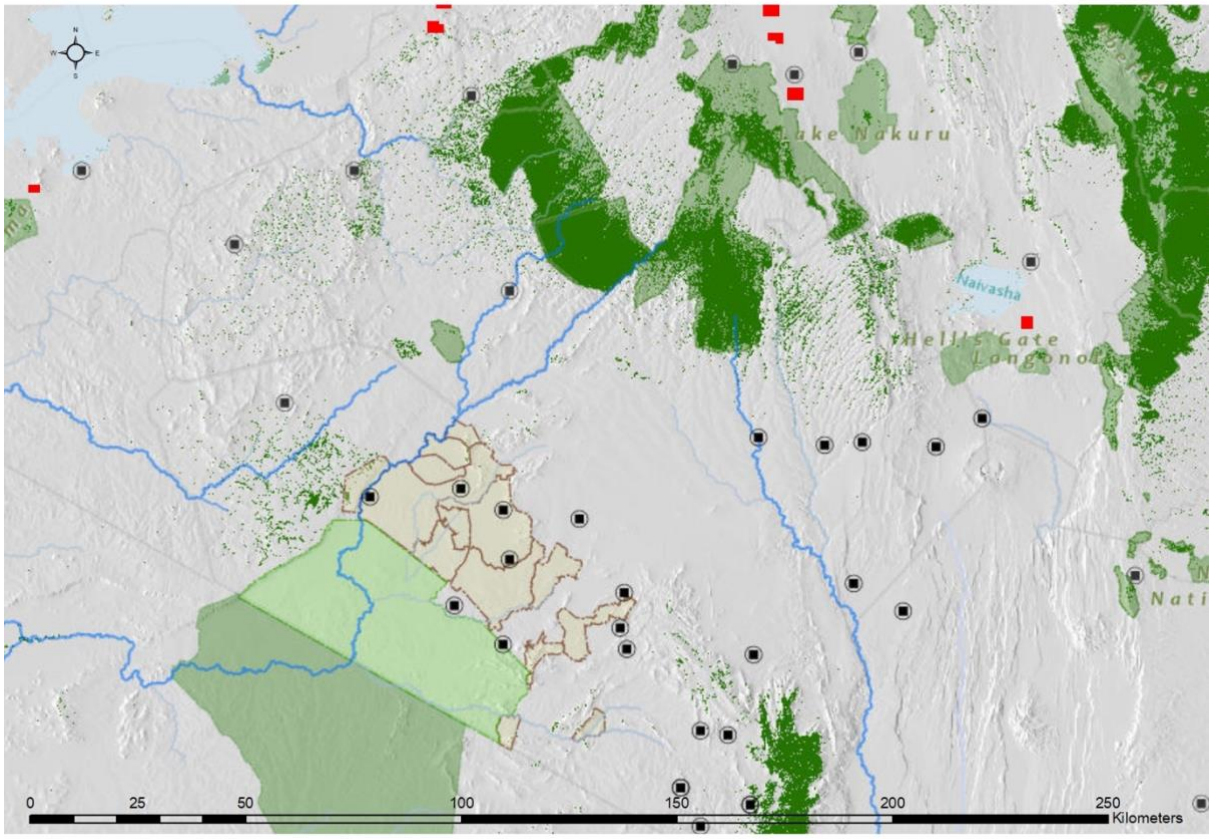
Loita



Rift Valley



ENVIRONMENT: Burn/Fire Areas



Red blocks indicate burn areas as measured by NASA's FIRMS dataset during the period January 1, 2021 – February 1, 2021. Accessed through Google Earth Engine.