Protecting elephants to conserve the greater Mara ecosystem
www.maraelephantproject.org

MEP May 2020 Report

Illegal logging recorded at the end of May from the helicopter.

GENERAL

This month we have started to see the Mara drying up a bit after several months of heavy and destructive rains. The Mara River has come right down and the bare banks, stripped of vegetation during the floods, are a clear reminder of how high the river rose. Already areas like Naroosura are showing signs of overgrazing as the area dries up. On the COVID-19 front, Kenya continues to report increased cases and at the end of May the numbers stood at 1,962 confirmed cases, with 64 deaths and 478 recoveries. On May 17, three bull elephants traveled, we think, from Mosiro in the Rift Valley, to the outskirts of Nairobi. This event made the national news and people were posting numerous social media posts of varying excitement. Some were seeing elephants for the first time in their lives, others were teasing that the elephants do not respect the lockdown, and some were worried about the landowner and elephant's safety. The Kenya Wildlife Service (KWS) were quick to respond and translocate the three bulls to the Maasai Mara National Reserve. They also collared one of the bulls in partnership with Save the Elephants and the collared animal is now also on our system and is currently in the MMNR respecting COVID travel restrictions.

Elephants in Nairobi photographed by residents and posted on social media.

One of MEP's longest continually tracked elephants Caroline was found dead on May 8 of natural causes. Originally collared in December 2011, Caroline was re-collared twice, February 2015 and May 2018, which has established a long-term record of her movements. Kenya Wildlife Service conducted an autopsy and found that Caroline died of a liver abnormality and was unfortunately 14 months pregnant.

MEP collared elephant Caroline previously photographed with her family herd.

SECURITY, ANTI-POACHING & CONFLICT

On the 29th KWS and MEP personnel recovered 4 pieces of elephant ivory weighing 37 kg at Ngorengore.

The 37 kg of ivory seized on May 29.

As we had projected, we are starting to see concrete evidence that bushmeat poaching is on the rise. This month two suspects were arrested in the Mara North Conservancy (MNC) by a joint operation conducted by MNC, KWS and MEP rangers. Poaching in MNC was unheard of for over a decade. In May, MEP rangers confiscated a total of 250 kg of bushmeat and arrested 11 bushmeat poaching suspects.

Two suspects arrested for bushmeat poaching on May 19.

In the Mau Forest area, MEP rangers together with Kenya Forest Service (KFS) and Bongo Surveillance Project (BSP) removed a total of 30 snares during their joint patrols.

Snares recovered in the Mau Forest on May 18.

While MEP rangers focused on illegal activities, human-elephant conflict was also increasing with crops ripening in communities. In total, MEP rangers responded to 14 conflict incidents, the most occurring in the Naroosura area. Specifically, the area of Enkongu Enkare located in Naroosura has seen a high level of conflict in the last few weeks that MEP and KWS rangers are responding to day-and-night to keep both elephants and the community safe. MEP, KWS and local residents in this area luckily have a good relationship and the community knows we will respond when they need our help to protect their crops and in exchange, they will not harm the elephants.

Conflict damage recorded on May 7.

MEP rangers responding to conflict at night on May 27.

In May, there were a total of 3,053 illegally logged posts and two power saws confiscated along with 10 people arrested for activities related to illegal logging or charcoal production. MEP rangers also destroyed a total of 35 kilns and confiscated 20 bags of charcoal.

MEP rangers destroying a charcoal kiln on May 26.

Ranger Foot Patrols:
In May, MEP rangers covered a distance of 734.14 km on foot, 6,502.82 km by car and 1,986 km on motorbike. Throughout the month rangers were involve on various joint patrols within the Maasai Mara ecosystem with MNC and KWS rangers responding to human wildlife conflict on the eastern side of the conservancy as well as various ambushes to ensure that there is no poaching in and outside the protected areas.

HELICOPTER

On the 19th three engineers from our Approved Maintenance Organization KWS Airwing replaced the main rotor gearbox mounts which had failed. The helicopter is now serviceable, and we were able to catch up on work in the Mau and Loita. At the end of the month we were approached by KWS and Animal Rights Reserved who reported that 30 cape buffalo were stranded on a small island on Lake Naivasha and had run out of food. The two organizations supported the flying time to push the animals to safety and the operation was a great success. We suspect that the rapidly rising lake caught the buffalos off guard and suddenly they found themselves surrounded by water.

COMMUNICATIONS & FUNDRAISING

MEP celebrated Mother's Day in the U.S. on May 10 with an update on Ivy and her growing calf. On May 15, we highlighted the Bongo Surveillance Project (BSP) to celebrate

#EndangeredSpeciesDay. The work BSP is doing in the Mau Forest is critical to this species' survival. We ran two fundraising campaigns, one for ranger support highlighting the Nyakweri Forest where there is a high level of deforestation activity. We also demonstrated how important the Karen Blixen Camp Trust helicopter has been to ensuring crops are protected and MEP staff are safely isolated. The Maa Trust's food distribution started at the end of April and finished the first of May. Overall, they distributed 677 parcels of food in 8 days in the Maasai Mara to the families of women engaged in Maa Beadwork or Maa Honey social enterprises and children in The Maa Trust's scholarship program.

MEP was mentioned in Bloomberg's Daily Daydream about the Best African Safari Adventure and Mary Holland spent time in the Mara recently and wrote a great article for Condé Nast Traveler about the effect of COVID-19 on tourism and Kenya's tourism industry. It not only features a mention of MEP, but also many of our partners.

Thank you to everyone who supported MEP with an entry in the Greatest Maasai Mara photo competition: Graham Wood, David Roberts, Riz Jiwa, Philippe Henry de Frahan, Pragnesh Patel, Mindy Hayton, Adnan Savani, Roisin Allen, Margaret Bishop, Stephen Underwood, Charlotte Rhodes and Gurcharan Roopra.

An entry from May by David Roberts that benefitted MEP.

In terms of donations received, despite the on-going economic impact of COVID-19, we continue to see incredible support receiving a total of $64,245.26 in May. We received $10,000 from a long-time supporter that went to the increased use of the helicopter during the crisis. Lori Price donated $10,000 to support work we are doing with Forest Guardians in the Loita Forest to provide immediate relief to communities living in the forest and to support an innovative approach to improving food security into the future. We are also very

grateful for the renewed general support from the Leslie Alexander Family Foundation of $25,000 and new grants of $10,000 and $2,500 from Peter SerVaas and the Richard's family respectively. Eight individuals supported us through Facebook with a total of $304.35 raised in response to our helicopter appeal and Parris Larrain's birthday fundraiser. A further $2,215 was received from 37 individuals through PayPal. Thank you to Cynthia Lewis, Intel, Suzanne Svendsen Kosman, James & Heather Wall, Marianne Muir, Georgia STOKES, Sarah Sederstrom, Peter Lemon, David Chadick, Joseph Adams and everyone else who has supported us financially in May.

RESEARCH & CONSERVATION

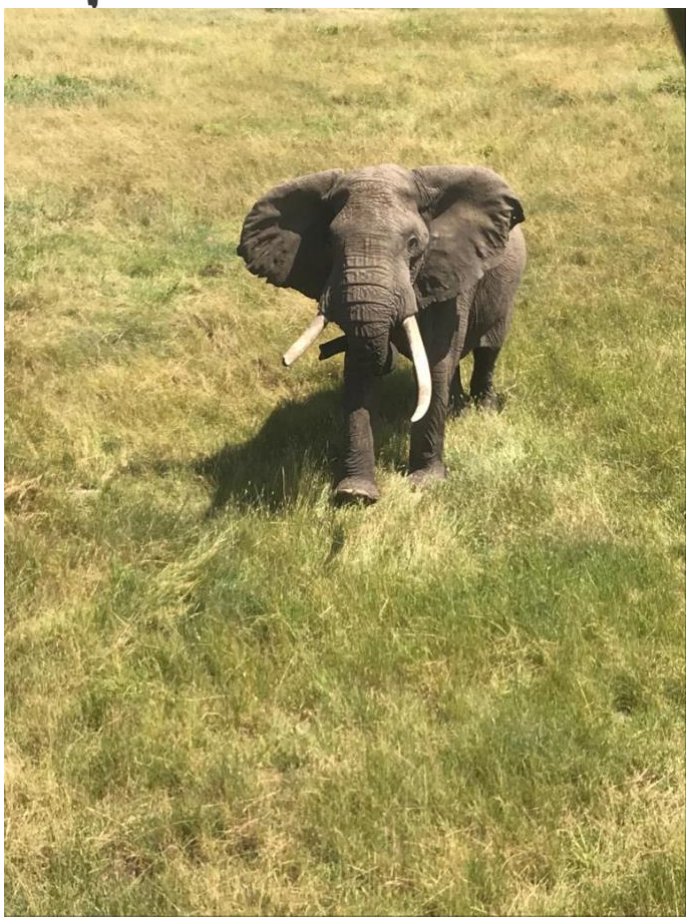
Director's Update:

The month of May saw a shift from the heavy precipitation we had in April and the Mara has begun to dry up. The research department continued with monitoring of collared individuals and our field assistants covered 1,917 km mapping fences and collecting ground truth points necessary to develop our landcover map. Using the software module, we are developing to interface with EarthRanger (earthranger_sarf) we've now been able to extract collar battery voltage information that compares voltage over the current month versus the historical statistics for that unit. Using this method, we've now seen that three of our collars are approaching the end of their lifetime and need to be replaced.

In May, we kicked off a project to develop a database and photo management system for elephant ID photos. A student from Caltech will be leading the project on MEP's behalf and working together with WildMe (based in Portland) and Vulcan (based in Seattle) to setup an elephant Wildbook (https://www.wildbook.org/). MEP is collaborating with both Elephant Voices and Elephants Alive on this project. The goal is to develop a streamlined workflow to acquire field photos of elephants and ID them based on historic photos stored in the database or log a new individual based on the sighting information. Eventually, machine learning might be able to perform the bulk of the identification work. We're making progress on an analysis of elephant range use in the Mara. The database consists of nearly one million recorded positions since 2011. We are using a resource selection approach to quantify how elephants select certain components in the landscape. These covariates include vegetation quality/quantity, terrain, security, proximity to water and people. We made further progress in May developing the android ROAM application in collaboration with Vulcan. All MEP vehicles are now using the app for tracking. We will continue working with Vulcan on this exciting new software that fills an operational void which does not require expensive satellites or vehicle tracking systems.

Tracking Manager's Update:

Kiambi reported a low speed alert at several locations in May but the MEP aerial team confirmed he was doing well after flying over to check on him. He was spotted with a big group of females in the Reserve. MEP rangers on the ground caught a glimpse of Fitz in the Nyakweri Forest. He and his herd have been moving into farms at night to crop raid and then returning back to the cover of the forest early in the morning.



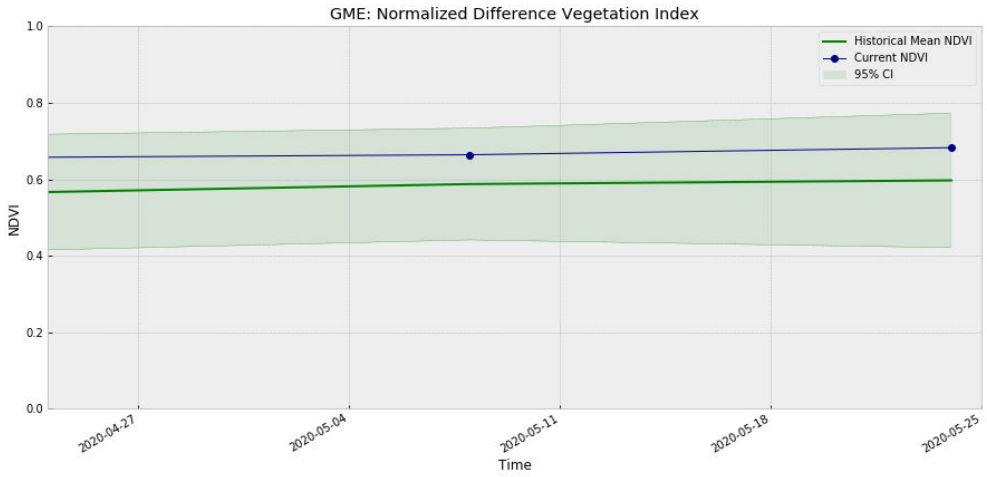
MEP collared elephant Kiambi photographed during an aerial monitoring flight on May 24.

A photo of Fitz in the forest.

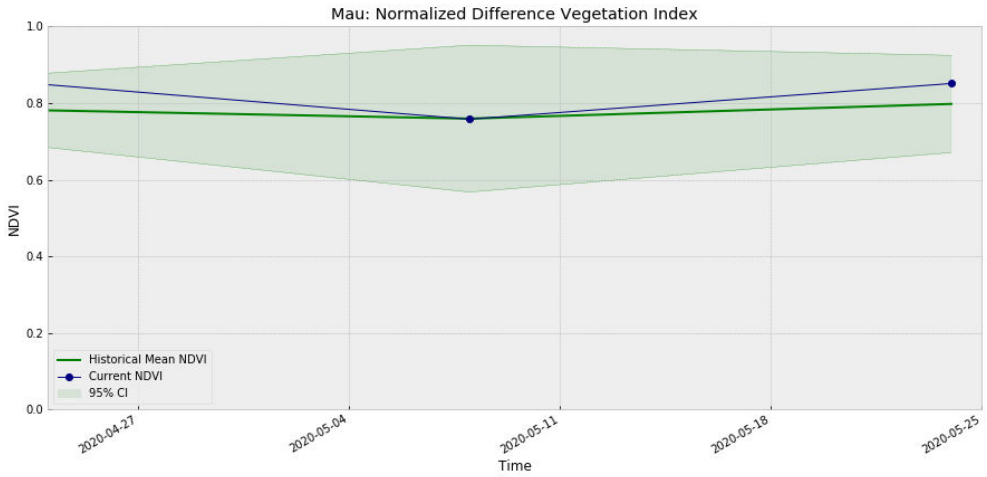
ENVIRONMENT: NDVI

Normalized Difference Vegetation Index (NDVI) is a measure of plant photosynthetic activity. Higher NDVI indicates the plant is greener. The orange 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.

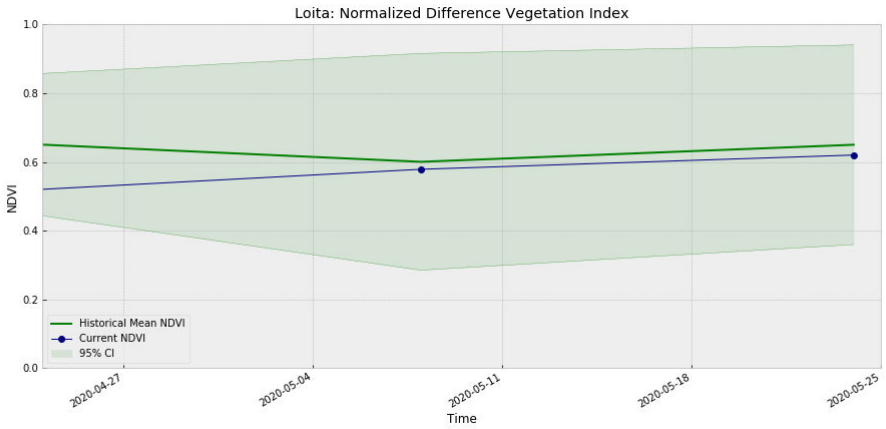
Greater Mara Ecosystem (GME)



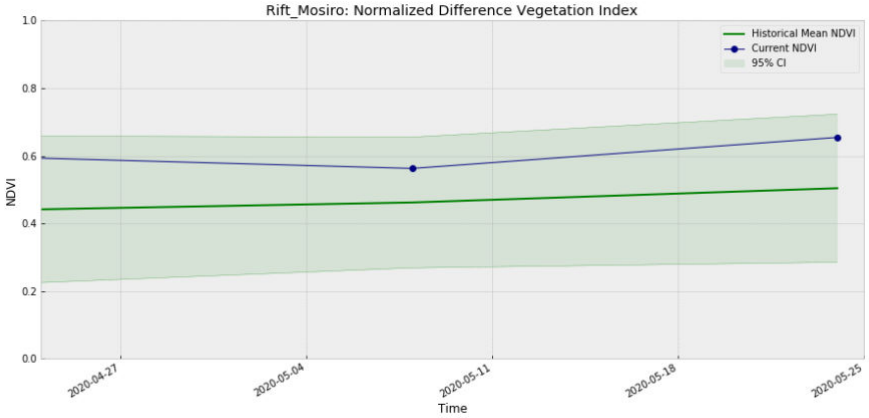
Mau Forest



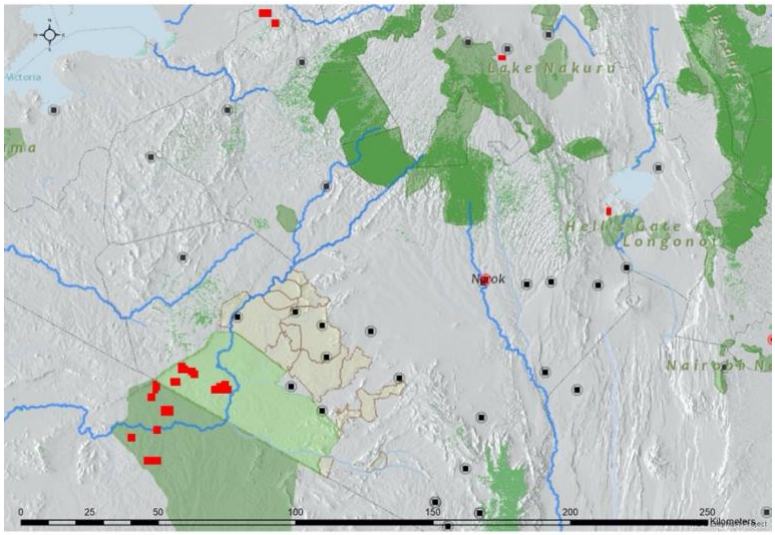
Loita



Rift Valley



ENVIRONMENT: Burn/Fire Areas



Red blocks indicate burn areas as measured by NASA's FIRMS dataset during the period May 1, 2020 – June 1, 2020. Accessed through Google Earth Engine. Planned burns have started in the Mara Triangle.