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

MEP June 2020 Report

The Loita team arrested two suspects with power saws cutting down a podo tree.

GENERAL

In June, we recorded the highest number of illegal bushmeat poaching and logging incidents since the inception of MEP. The pressures put on the economy have increased due to the effect of COVID-19 on the tourism industry. The halt of tourist generated revenue in the Mara has meant more people are out of work, which results in food insecurity and an increase in illegal activities. We are anxiously anticipating the Kenya Ministry of Tourism and Wildlife's update to the National Tourism Policy on July 6 and hope that foreign tourists will be welcomed back to the Mara soon.

The three forest areas we work in are taking a real hit, but we are certainly making a dent in the illegal activities destroying forest habitats. I congratulate the ranger's dedication and effectiveness and we will continue to be steadfast in our commitment to support protection of wildlife, habitat and communities. We have already seen some pushback from the people who earn large amounts of income from selling timber and posts. With the increase in illegal activities, we need to increase our effort to meet this upsurge, keep our rangers safe and work more closely than ever with our government law enforcement partners.

Timber recovered in the Loita area by MEP rangers while on patrol.

An exciting development was made this month when the new drone regulations were passed into law. MEP has been on the forefront of using drones for conservation in Kenya since 2012. We supported several training packages in Tanzania in 2014 and 2015 and obtained permits from Kenya Civil Aviation Authority in 2017 under the previous legislation. During this time, we presented to Kenya Wildlife Service (KWS), Kenya Civil Aviation Authority and the International Aviation Organization on using drones for conservation. This month we have been progressing with the recertification and registration of our drones and obtaining personal licenses. We will also be developing our standard operating procedures for drone support to HEC, security and research. We are eager to get up in the sky again safely and effectively.

The MEP Board Finance committee met via Zoom and we plan that the Governance committee will meet in July. On the 25th we ran a selection for new rangers from the Loita region. Since June 2019, we have some rangers leave MEP to run their own businesses at home or who have been dismissed and the selection in Loita will make up for this; however, we still have several vacancies to fill. Kenya continues to see an upward trend in new cases of COVID-19 and the presidential address about continuing the Nairobi lockdown is scheduled for the 6th of July and in all likelihood the lookdown will continue.

SECURITY, ANTI-POACHING & CONFLICT

On the 16th a young man was killed by an elephant in the Naroosora area during a conflict incident. The incident became politically charged and the government was swift to act by deploying a large police presence both on the ground and using our helicopter to quell the unrest. One of our rangers was injured on the head by a stone and received medical attention. MEP engaged directly with the family who sustained this tragic loss to support their burial costs. We send our deepest condolences to them during this difficult time. We pulled our HEC team out of this area for their own safety but more recently, we have had numerous calls from farmers to return to help them protect their farms at night. This area continues to be severely degraded and is extremely sensitive politically as the area is set to be subdivided.

Crop damage photographed by MEP rangers responding to conflict in Naroosora on June 19

MEP intelligence led KWS to an ivory recovery of 3 kg and the arrest of one suspect in Karen Shopping Center on the 22nd. One notable incident which illustrates a specific use of elephant collars took place on the 15th when MEP and KWS collared a bull who had been severely injured during a crop raiding incident. He was attacked with arrows and spears the very night before. The spear wound in his left front armpit was quite deep and needed immediate veterinary intervention. KWS Vet Dr. Limo and the Sheldrick Wildlife Trust (SWT) Mara Mobile Vet unit were quick to arrive on the scene. He was treated and his spear wound sewed up. KWS and MEP decided to collar him to monitor his recovery and potential future crop raiding. He then moved that night near MEP HQ for about a week and then on to Mara North Conservancy. On June 25, we started receiving immobility reports and at first light our HQ ground team found the young bull dead and already heavily scavenged. The brief collar data gave us interesting insight into sick elephant movement and allowed us to attribute the cause of death to conflict with humans.

The spears and arrows removed from Shamba.

The second collaring MEP did was requested by KWS in the Londiani area north of the Mau. "Ritan" is a cropaholic and goes into farms around Deloraine on a nightly basis. The KWS ground team based in the area has been vigilant to push him back into the forest when he breaks through the geo-fence we programmed around the forest. He may well need to be translocated if this trend continues.

In June, rangers were involved with various joint patrols within the Maasai Mara ecosystem with Mara North Conservancy and Kenya Wildlife Service rangers responding to human wildlife conflict. They also arrested a lorry transporting 180 sacks of charcoal in Mara North and a lorry being transported from Lolgorian to Narok. On the other side of the Maasai Mau Forest area, rangers together with Kenya Forest Service and KWS were able to confiscate seven power saws which were used to cut down indigenous trees and arrested various

charcoal burners within the area. They also removed 33 wire snares and arrested one suspect with 20 kg of bushmeat. On the other side Transmara-Nyakweri rangers together with Kenya Wildlife Service responded to various human wildlife conflict incidents.

On June 22, rangers ambushed a vehicle and arrested one suspect transporting charcoal.

Cedar timbers recovered in June by MEP rangers.

One suspect was arrested on June 20 in the Mau Forest by the SWT Mau De-Snaring Unit with 20 kg of bushmeat. The team removed 21 snares that day in the Mau.

In total in June, MEP rangers along with partners responded to nine conflict incidents, confiscated 2,980 illegal timbers and posts, seven power saws, 20 kg of bushmeat and arrested 24 people for illegal activities related to deforestation and one bushmeat poacher. They also destroyed 28 kilns, 248 sacks of charcoal and removed 43 snares. In June, MEP rangers covered a distance of 1,002.19 km on foot, 568.38 km by car and 1,686 km on motorbike.

HELICOPTER

The collaring operation in the Londiani Forest with KWS was an interesting exercise as hovering at high altitudes during the darting pushes the helicopter to the edge of the power envelope. This kind of operation is only possible with the support of a nearby ground station with fuel and equipment. The helicopter has to be stripped down of any extra weight and fueled with minimum amounts to do the task. Each hour of flying in these conditions feels like 5 hours. The mission was a great success and completed without incident.

Shorty photographed on June 26 during an aerial monitoring flight.

COMMUNICATIONS & FUNDRAISING

On June 5, Mara Elephant Project celebrated World Environment Day and took #TimeForNature. We featured MEP's Chief Financial Officer Stanley Misoka and his contribution to keeping MEP operations during COVID. The MEP Research Department wrote a blog about their research into human-elephant conflict. Save The Elephants promoted MEP's conflict blog on their vastly followed social media channels, which provided great exposure for our organization. Robinson Helicopter Company featured MEP twice in June on their various social media feeds. It's a new audience for MEP, which is always great. The Greatest Maasai Mara Photographer of the Year has launched an online auction platform selling beautiful images to raise much-needed funds for boots-on-the-ground conservation organizations in the Mara, like MEP. The Angama Foundation is ensuring 50% of all proceeds goes to the competition's conservation partners so buyers can be assured that their funds are working to protect the Mara for generations to come. Elephanatics hosted a fundraiser for MEP selling elephant-themed wine. MEP received a 25-kilogram donation of seed balls from Seedballs Kenya courtesy of Filip.

Marc Goss went live on Facebook with The Nobelity Project for an hour-long conservation talk about MEP. Terra Conservation released a two-part podcast featuring Marc and Dr. Jake Wall. In the series, Terra highlights the stories of wildlife rangers on the frontlines of the fight against poaching, how technology is being used to support their efforts and what life is like for those who are creating sustainable economies for the vulnerable and at-risk populations who are protecting Earth's most precious resources. An article from The Guardian featuring Mara Elephant Project's rapid response to human-elephant conflict in Ol Kinyei Conservancy alongside head ranger Simon Nkoitoi. Marc is featured discussing the use of the KBCT helicopter to move elephants out of settlements and the challenges that come along with that. Additionally, we were featured in Corporate Knights magazine discussing COVID-19 and how it's impacting conservation. MEP's Communications Director Claire Bolles and Trustee Trey Fehsenfeld presented at the Indianapolis Zoo for their Conservation Educator Academy. Afterwards, the elephant Conservation Station kiosk was unveiled at the Indy Zoo as part of their new elephant Tembo Camp. It features a video on MEP and the Indy Zoo's supported elephant Vasco. We continue to value the relationship between MEP and the Indianapolis Zoo.

The Conservation Station at the Indy Zoo.

Paradise International Foundation, Jack Ma's conservation organization, gave a generous donation of 20,000 surgical masks, 400 N95 medical masks and 100 infrared thermometers to support healthcare worker's efforts at six partner medical facilities across the Maasai Mara, and the wider Narok West sub county: Aitong Health Center, Mararianda, Nkoilale, Olesere, Endoinyio Erinka and Talek. The Maa Trust supplemented these supplies with boots, protective overalls and on June 10, Mara Elephant Project joined them to hand over this essential COVID-19 PPE equipment to the Ministry of Health and Community Health Partners at Talek Clinic. Photographed are MEP CEO Marc Goss, MEP Data and Reporting Manager Wilson Sairowua and The Maa Trust CEO Crystal Mogensen along with Talek Clinic representatives.

PPE distribution in June.

We received a total of $65,719 in donations in June from over 100 supporters. We are very grateful to Sue Anschutz-Rogers for her continued support that provided $50,000 towards the cost of the helicopter, which we are having to use more during the COVID restrictions. Six individuals supported us through Facebook with a total of $162.35 raised. Seventy individuals supported us through PayPal donating total of $11,177. Thank you to David Lloyd, Kate Tiedeman, the Ganatra Family, Valerie Preston, Robert Kaufman, the Mikarn Charitable Gift Fund and the Animal Rights Reserved Foundation and everyone else who has supported us financially in June. Also, thank you to everyone who supported MEP with an entry in the Greatest Maasai Mara photo competition in June. Thank you to Thorsten Hanewald, Rosa Maria Pastor Nicolas, Sushil Chauchan, Kevin Mita, Annamaria Gremmo, Pranav Chadha, Ritik Şube, Jacques-Andre Dupont, Pepe Arespacochaga, Riz Jiwa, Kelly Moran, Anand R J, Adnan Savani and Roisin Allen.

A June entry by photographer Kelly Moran.

RESEARCH & CONSERVATION

Director's Update:

Using Esri ArcGIS Pro software I was able to develop an animation of crop-raiding behaviour that we posted to social media channels (https://vimeo.com/430669229). The 3D animation technique is one of the most effective ways of visualizing tracking data and we see the three elephants hiding during daylight in forested 'staging' sites while raiding crops each night for a week in early 2017. Esri has generously renewed our organizational license for another year and we intend to develop a series of animations highlighting different aspects of elephant behaviour using this method. Our two research assistants (Amos & David) have continued with their land-mapping exercise using MEP's *Njia* mapping application. David is focussed on collecting ground control points to help with a landcover classification while Amos is mapping the proliferation of fences spreading across the Loita plains. In June he mapped 1,046 kilometers of fence lines bringing the total to 8,126 kilometers of fence line mapped since November 2019. Many of these data are visible in the Landscape Dynamics web mapping application (https://arcg.is/1W8W44). I've been working on a scientific paper to analyse the movements of the Mara elephants. One of the analyses requires annotating the recorded locations of elephants with satellite and spatial indices such as the vegetation cover or distance to roads. To achieve this, I have developed code as part of a 'Movement Ecology Tools for Python' package that I will make open source when the analysis is completed. The 19 covariate values for each of the 7.1 million elephant data points were extracted from Google's EarthEngine platform and took nearly a week to complete in late June. We are now on to the analysis and manuscript writing.

Tracking Manager's Update:

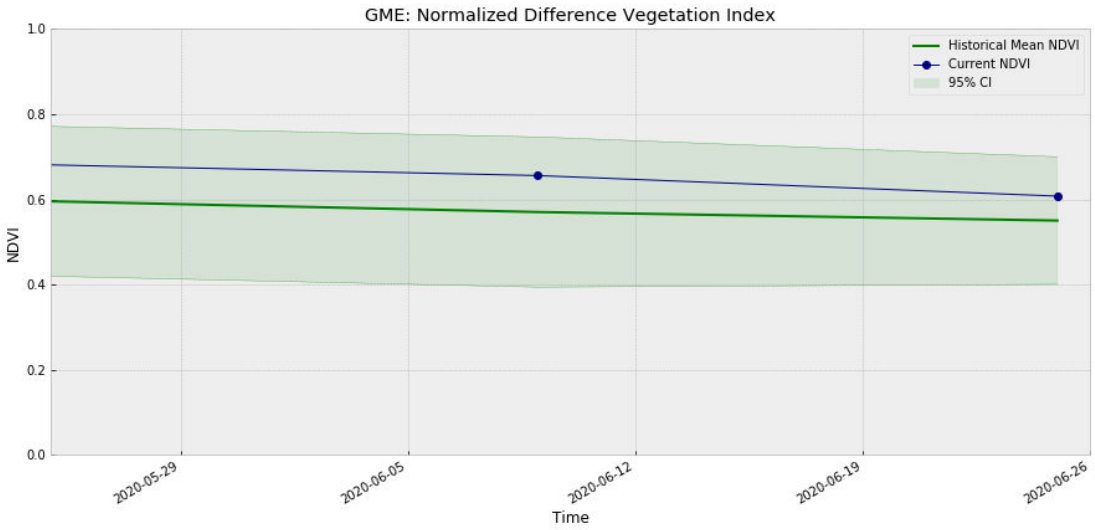
As mentioned previously, we checked in on Shorty who started June on the southern side of the Serengeti National Reserve then moved into Kenya near the border. He was spotted with a mixed group of 15 elephants. Unfortunately, Chelsea's collar battery lost power in June and will need to be replaced soon. Ivy continued her crop raiding behavior breaking geo-fences in the Enoonkishu area where MEP rangers needed to respond. Hannibal and Napoleon continue to spend time together moving around the Mosiro area and raiding farms at night. Fitz was also very busy crop raiding in the Nyakweri Forest. The MEP team stationed nearby was responding nightly to move the herd back into the forest. As mentioned previously, KWS and MEP collared two new elephants: Ritan and Shamba, who passed away 10 days after the collaring operation.

Fitz and his herd photographed in June.

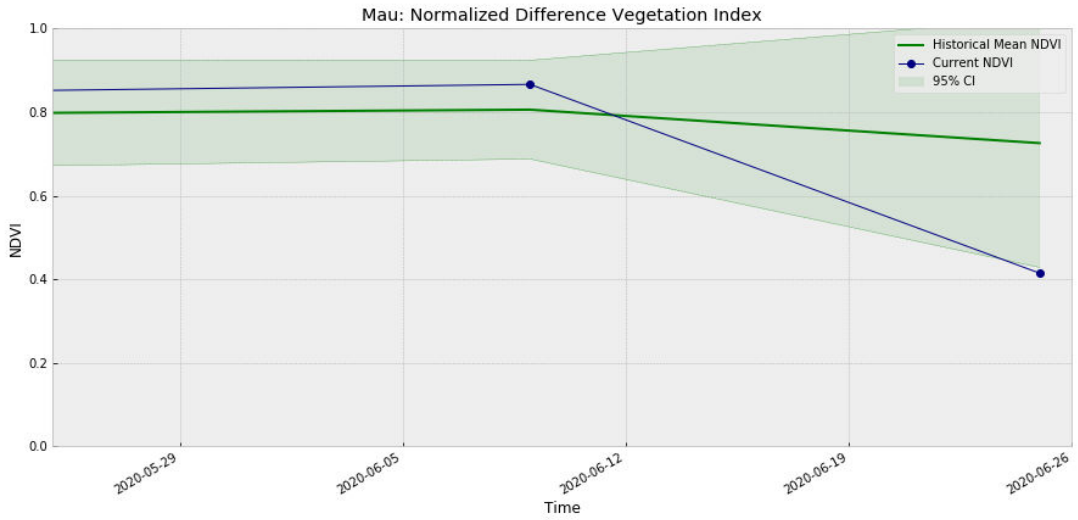
ENVIRONMENT: NDVI

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.

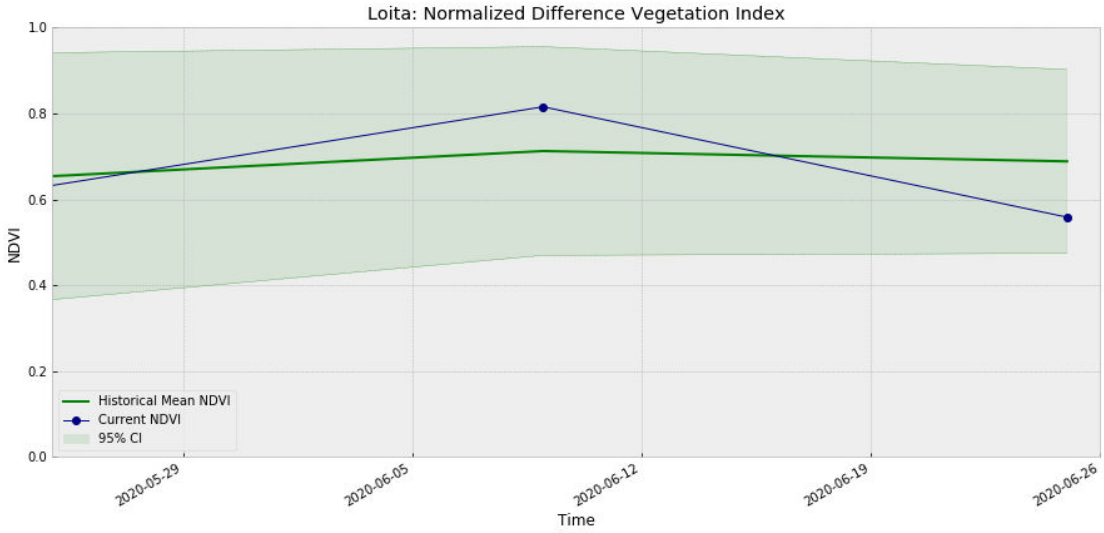
Greater Mara Ecosystem (GME)



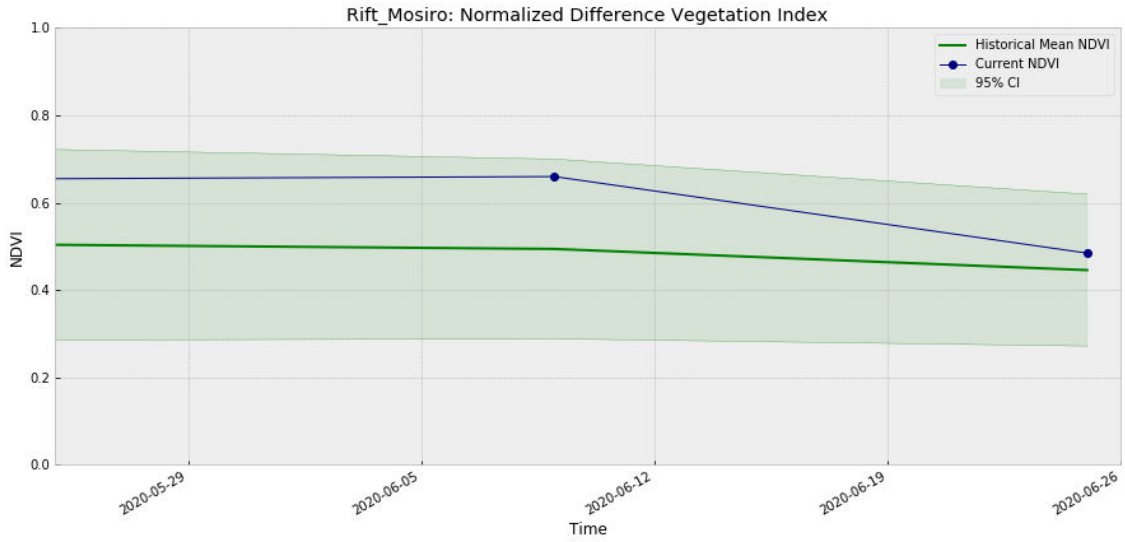
Mau Forest



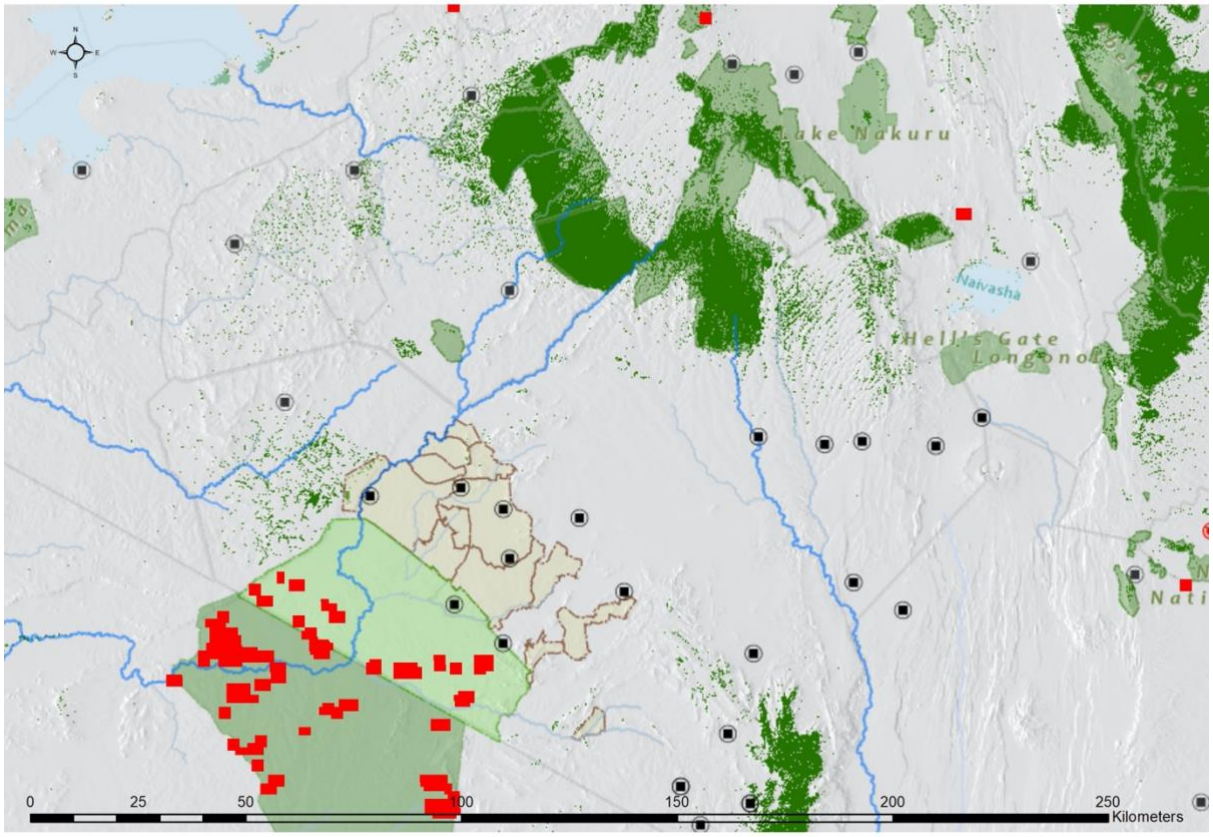
Loita



Rift Valley



ENVIRONMENT: Burn/Fire Areas



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