

## Project Update: February 2022

**Note:** Despite the Costa Rican situation related to the Covid pandemic, restrictions have been relaxed in the past few months. Therefore, we have been able to initiate more activities related to our field work including visiting farms at Tenorio-Miravalles Biological Corridor (TMBC) to interviewing farmers to characterise human-tapir interactions. Due to local restrictions, we initiated a camera trap community-based network in farms throughout TMBC, and tapir captures were initiated by July 2021 having as a result five tapirs captured and fitted with GPS radiocollars at TMBC. We have been tracking and monitoring their movement patterns, habitat preferences, and health status. Additionally, we have implemented electric fencing on two farms at TMBC, and we just initiated a natural repellent (i. e. mainly pepper-based) field experiment as part of the *Best Practices Manual* in these two farms at TMBC. Below a summary of the updates per goal.

### **Goal 1. Characterise human-tapir interactions on farms across the Tenorio-Miravalles Biological Corridor (TMBC) through the use of semi-structured surveys**

We have found major challenges related to our visits in farms at TMBC to conduct semi-structured interviews. However, we conducted visits to four farmers to document their agricultural practices including crops planted and produced (e. g. beans, tubers, corn, pepper and cucumber) by the farmers according to the season. In the meantime, farmers implemented mixed and diversified crop system management and some implemented livestock fencing.



**Photo 1.** Left: Dr. Jorge visiting Mr. Alexis to document the agricultural practices that he was implementing. Right: mixed and diversified crop system management implemented by Mr. Alexis including planting beans, tubers, corn, pepper and cucumber.

### **Goal 2. Gain a thorough understanding of tapir movements in the corridor, by utilizing a camera trap network and supplementing it with tracking five individuals with GPS collars**

So far, we have deployed 15 camera traps in 15 properties from farmers at TMBC. We detected in total 20 species of mammals including: tapir (*Tapirus bairdii*), puma (*Puma concolor*), ocelot (*Leopardus pardalis*), coyote (*Canis latrans*), eira (*Eira barbara*), raccoon (*Procyon lotor*), coati (*Nasua narica*), red-brocket deer (*Mazama temama*), white-lipped peccary (*Tayassu pecari*), anteater (*Tamandua mexicana*), white-faced

capuchin (*Cebus imitator*), rabbit (*Sylvilagus* spp.), agouti (*Dasyprocta punctata*), common opossum (*Didelphis marsupialis*), common gray four-eyed opossum (*Philander opossum*) squirrel (*Sciurus variegatoides*), lowland paca (*Cuniculi paca*), skunk (*Conepatus semistriatus*), nine-banded armadillo (*Dasybus novemcinctus*), and rodents. In addition, we have captured and fitted GPS radiocollars to five tapirs at TMBC. We have worked closely with local farmers and landowners to coordinate the capture procedures on their farms throughout the TMBC. However, due to COVID-19, access to some of these farms have been denied. Opportunistically, we have also waited for farmers notification for when and where a tapir is wandering to proceed with the capture. These five captures were successful in terms of animal welfare and tracking of the individuals.

We have been tracking and monitoring their movement patterns, habitat preferences, and health status, accordingly. Through VHF tracking and observation of the individuals for the health status assessment, and by using the Animal Tracker app. During captures and tracking sessions, we have included local collaborators such as farmers, local tour operators, and park rangers from the National System of Conservation Areas (SINAC).

**Goal 3. Implement mitigation actions to decrease human-tapir conflict and improve agriculture practices at the TMBC**

We have implemented electric fencing in two farms at TMBC, and we just initiated a natural repellent (i. e. mainly pepper-based) field experiment as part of the Best Practices Manual in these two farms at TMBC.



Photo 2. Top left: A puma (*Puma concolor*) detected through camera trapping at TMBC. Top right: Dr. Jorge and its field team capturing and outfitting with GPS radio collar a tapir male individual.





Photo 2. Bottom left: Dr. Rojas and Dr. Sonia Hernandez capturing a tapir. Bottom right: "Milagro", an old male tapir fitted with a GPS radio collar at TMBC.



Photo 3. Top left: Dr. Jorge and biologist Sofia Pastor (CRWF staff member) visiting Don Alexis, while providing an electric fence pulsator to be implemented in his farm. Top right:

Dr. Jorge and Sofia Pastor visiting Ms. Gladys to document her agricultural practices in order to implement mitigation actions where tapirs are raiding crops. Bottom left: Dr. Jorge, Sofia Pastor and MSc. Esteban Brenes (CRWF Executive Director) discussing with Don Alexis to implement mitigation actions in his property. Bottom right: Dr. Jorge and biologist Sofia Pastor visiting Don Dimas in his property to document his agricultural practices in order to implement mitigation actions where tapirs are raiding crops.