

Impacts

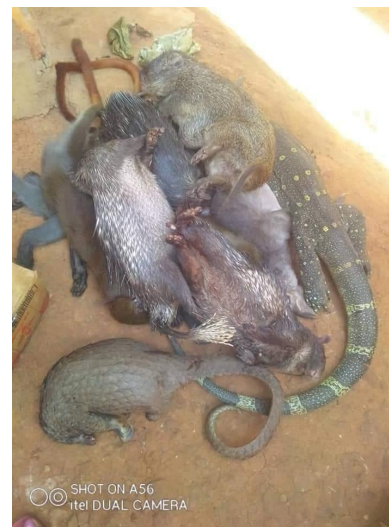
1. Pangolin rescue and reintroduction

The rescue of a white bellied Pangolin was one of the first direct conservation action that was undertaken by FReECo. The rescue occurred at the Bangem local market where we noticed that the market was also flooded with different species both dead and alive. Pangolins are one of the endangered species that FReECo gives a high priority for their welfare due to the species solitary and defenceless nature. Their role in the wildlife, especially as ecological regulators and habitat boosters for other species like the aardvark calls for the need of their protection. It was a recorded success for FReECo to purchase this specie from the dealer as a means to avoid conflict. Today, we have no doubt that this specie is thriving well in its habitat in the Deng-Deng National park, Eastern region of Cameroon.



2. IWL network clampdown and suppression of Bushmeat market

Through investigations and key informants, FReECo was able to get information about a group of local poachers in the Mount Cameroon National Park, South West Region of Cameroon that were specialised in the trade of elephant tusk (ivory) and other endangered species. We were able to provide intelligence to the Ministry of Forestry and Wildlife (MINFOF), and the Ecoguards agents succeeded to intercept a huge traffic of ivory. In the Deng-Deng National Park where we work closely with like-minded local guides, species that were killed and prepared for bushmeat marketing was also intercepted. These action have served as an eye opener to other poachers and dealers in the illegal wildlife trade and no doubt, a contributing factor to the welfare and stabilization of elephants and other species population in the Mount Cameroon and Deng-Deng National Parks.



3. Kick-off of Muanenguba Mountains Restoration

We have successfully restored over 28 hectares of the degraded landscape of the Muanenguba Mountain. This area has been experiencing high rate of forest fires caused by the Bororo settlers who graze their cattles in this area. This unsustainable practice scared away several species and considering the fact that the landscape is a wetland volcanic area with two crater lakes; different birds, reptiles and amphibians that found refuge in this area were scared away. He are proud to have set the pace for the regeneration of this natural ecosystem that is watershed to the entire Bangem sub Division. Our community awareness programs have also been very instrumental in contributing to these efforts.



4. Brought back birds to restored habitats

FReCo's restoration efforts in some patches of forest of the Muanenguba Mountain has brought back some birds. Recently, we engaged in a bird watch activity that gave us the opportunity to observe birds, most of which had left the area. This is a positive change, as we intend to expand this restoration initiative that will help bring back more species of birds, amphibians and reptiles.



5. Livelihood support for Ekaku Women CIG

Ekaku Women Common Initiative Group is a local women development CIG that is engaged in agricultural activities. This group of women have been carrying out farming in agrarian farming with the intentions of getting profits, but their methods have been unsustainable both to the environment and to their incomes. FReECo, was the first NGO to build the local women's capacity in sustainable rapid income generating activities by cultivating short seasoned crops. This has enabled us to support them in vegetable cultivations and other cereal crops like maize in a large scale with limited human labour. Currently, our objective for this group of women is being women's livelihood and income situation is gradually being improved while they safe their energies.

3. Training of locals on biomonitoring





PROJECTS

Community Rangers Project: Enhancing Community Field Assistants' Capacity for Long-term Collaborative Conservation Management of Pangolins in Deng-Deng National Park, Cameroon.

Pangolins are threatened and classified as Vulnerable on the IUCN Red List, listed on Appendix I of CITES and fully protected by Cameroon's Wildlife conservation law as 'class A'. Their habitats are under threat of degradation and fragmentation by human activity such as deforestation, farmland encroachment and bushfires. Literature has it that one Pangolin could consume more than 7 million of termites or ants annually (Challendar, 2009). The existing habitat disturbance as recorded during previous studies (Field observation of 2020/2021) threaten their welfare in their habitats, reduce food availability, and foraging capacity (Difouo et al., 2020) and reproduction leading to the local extinction. There is a limited number of government personnel charged biomonitoring of the park and to take off snares used to hunt pangolins. Thus, training of local guides as community rangers is vital for the biomonitoring and conservation of pangolin in Deng-Deng. The DDNP is in the Northern Congolian forest-savanna mosaic ecoregion situated against the forest of the Eastern Region and the desert of the Adamawa Region. Project outcome will help to understand the efficacy of using locally motivated individuals as citizen scientists to protect pangolins, thereby enabling forecast of potential period for species population and habitat restoration.

Though the project is still at its early stage, thanks to the Mohammed Bin Zayed (MBZ) Species Conservation Fund, 06 local field assistants have already been trained in biomonitoring of pangolins using SMART survey tools; camera trapping, GPS, cyber-tracking, and data collection and recording on field data forms. They have also been educated on environmental and research ethics which is necessary to provide reliable and consistent research information. The local assistants now function effectively as citizen scientists (Couvet et al., 2008; Eden, 1996); and will be supported in providing consistent information and biomonitoring data to support pangolin welfare in Deng-Deng. The transformed local field assistants are now monitored, and will be certified as Community Rangers coordinated under FReECo in order to collaborate with government owned Eco-guards who are limited in number. Their collaboration will sustain an efficient conservation and ecosystem free of human interference including removal of trapping devices, destruction of hunters' houses, recording of every human signs, document pangolin and other species signs their habitat use and evolution. In future more disengaged hunters will be recruited. This project targets to establish a standard community-based collaborative monitoring system based on feedback and rapid intervention response towards human activities, pangolin ecology, population status and other field reports.





Supporting Biomonitoring and Anthropogenic Threat Suppression for Longterm Protection of Pangolins in the Deng-Deng National Park

In 2018, we studied the status and threats to pangolins in DDNP. The project continued to 2020 with support from Idea Wild and Pittsburgh Zoo. The research provided information on pangolin ecology; and species using camera traps (Melle et al., 2019). A wildlife inventory conducted in the park by Simo et al. (2020), confirmed the importance of using local ecological knowledge to improve the effectiveness of monitoring pangolins. Difouo et al., (2020) also studied pangolin nutrient source in the park. During these field activities, we encountered planted snares, hunters' houses, carcass of pangolins (scales and internal organs), bullet shells, encroached farmlands, and logging activities. There is absence of effective biomonitoring and surveillance to suppress these threats and ensure pangolins welfare through threat suppression and discouraging pangolin sales in local bushmeat markets. With the influx of Central African refugees into Eastern Cameroon, poaching and illegal wildlife trade has increased intensively affecting the wildlife population in the park. The conservation needs across this protected area is on the rise especially in especially through biomonitoring/ surveillance and wildlife anti-poaching patrols. This project phase will facilitate efforts of government-supported rangers in the DDNP to engage in surveillance of pangolin, threat suppression and awareness building which is an urgent conservation need.

It is in response to this increasing conservation needs and field intervention that biomonitoring and threat clampdown is imperative; and with support from the Rufford Foundation and co-funding from MBZ, we worked with trained local field guides with good local ecological knowledge and proven commitment in conservation to work collaboratively with Ecoguards in obtaining information on current trapping/hunting zones in the park, removing snares, dismantling of encroached farms and huts used by hunters during drying of killed animals, transport routes from the forest to local markets, sensitize local community about wildlife and environmental laws and to a greater extent, control of wildlife trade.





Monitoring the Ecological Corridor of the Bakossi National Park and Banyang-Mbo Wildlife Sanctuary to Understand the Habitat Use and Migration Pattern of Drill Monkeys and Nigeria Cameroon Chimpanzees in South West Region, Cameroon.

The Bakossi National Park adjoins the Bayang Mbo Wildlife Sanctuary to form Kupe Muanenguba forest landscape, an important zone for the protection of primates and the African rainforest habitat of the Guinea-Congolian basin. The Bakossi National Park (BNP) is a protected area located at 5.049907°N and 9.567719°E, covering a surface area of 29,320 hectares (72,500 acres). It has the largest zone of cloud or sub-montane forest in West Central Africa (Royal Botanic Gardens, 2011). It has one of the best developed sub montane forest in West Africa and rich in montane endemics of Guinea-Congolian affinity (Kew Gardens, 2010). It is a unique hotspot for many primate species, including the Drill (Mandrillus leucophaeus), one of the most endangered primate species in the world, and the Chimpanzee (*Pan troglodytes*). Other primates include Preuss's red colobus, Red-eared guenon, Preuss's guenon, Putty-nosed monkey, Mona monkey and mammals like Blue duikers, Red river hog, Red-fronted duiker, Black-fronted duikers, Sitatunga, and Long tail pangolin, African forest elephant, (WWF Coastal Forest Programme, 2012).

This project sought to establish grounds for long-term collaborative conservation of Drills and Nigeria Cameroon Chimpanzees in the Bakossi National Park by filling the gap in field surveys created through Cameroon's Socio-political unrest (Anglophone Crises). This project was a pilot survey focusing to train and test the efficacy of engaging Bakossi locals with good Ecological Knowledge as social scientists, for the monitoring of the ecological corridor linking the Bakossi National Park and the Bayang Mbo Wildlife Sanctuary in order to provide information on population, distribution, habitat use and threats to these primates that are endemic in this area. Additionally, the unrest has hindered effective protection of the protected area from hunting and habitat degrading activities like logging, farmland encroachment and bushfires due to government agents of Forestry and Wildlife inability to access this zone. This has created a double facet conservation need; in data acquisition and wildlife surveillance, and anti-poaching.

It is in response to this halt of scientific research and challenges of government patrols that there is need for funding to support the training and to closely work with the locals of these communities. This Project trained 04 local community field researchers in the use of camera traps, GPS, Cyber Trackers, data gathering along transects and anthropogenic, assessments and deploy them in the field for monitoring along the corridor.

FReECo focuses to promote the long-term conservation of threatened Chimpanzees and Drills in the Bakossi National Park through local empowerment, collaboration, and participation.



Assessment of Anthropogenic Impact And Habitat Distribution Of *Smutsia Gigantea*, Illiger 1815; In The Forest Versus Savanna Of The Deng-Deng National Park

This study was conducted in Deng-Deng National Park (DDNP) located in the Eastern Region of Cameroon in the Lom et Djerem Division (5°–5° 25' N/13°–23° 34' E.). Deng-Deng National Park is characterized by an equatorial and humid climate with annual rainfall ranging between 1,500 and 1,600 mm (Diangha, 2015). It is located in the forest–savannah transition zone of the country. The park area experiences seasonal dry and wet periods (Diangha, 2015), and other than pangolins, it harbors vulnerable wildlife species including gorilla (*Gorilla gorilla*), chimpanzee (*Pan troglodytes*) and forest elephant (*Loxodonta africana*) (Maisels et al., 2011).

This project is the second support received from IDEA WILD for continues conservation of pangolins as well as to enhance the capacity of the project participants in the field of biodiversity protection and environmental sustainability.

Objectives

1. To confirm and document the presence of *Smutsia gigantea* in the Park using camera traps
2. To assess the habitat preference and relative population density of giant pangolins in the different habitat types,
3. Map out and describe anthropogenic activities occurring in and around the park and their impact on species welfare
4. To divert community's attention from forest resources to alternative livelihoods by building local awareness and developing environmental education programs for schools.

Field work

Fourteen camera traps (six Cuddeback X Change Colour Model 1279, and Long-range IR E2 Model, eight Bushnell Trophy Camera Brown 119836 and Trophy Cam HD 119875C) were deployed at sites with good potential for giant pangolin activity in different primary and secondary forest gallery such as Mixed Forest, Liana, marsh, forest with open or closed undergrowth.

Cameras were tied to trees at a height of 30–40 cm above the ground for potential ground burrows and feeding sites. Cameras targeting fallen logs were set higher according to the tree diameter and elevation above ground level and were placed ~30–40 cm above the upper side of the tree trunk. The cameras were positioned perpendicular to the targets at a distance of 3–4 m with the aim of obtaining full body lateral images of the specie.

- ❖ This project provided data on abundance and habitat distribution of the giant pangolin specie in East Cameroon, and have determined ideal habitats and conditions, where seized or orphaned life pangolins are release in the wild.
- ❖ The project will give another opportunity to document new and undiscovered species, their habitats and waypoints where they are identified. This will be important for other related conservation studies in the park.
- ❖ Through environmental education and local capacity building, inhabitants saw the need to divert attention from forest resources to alternative sustainable livelihoods, even though they decried challenges of alternative livelihood opportunities that is pushing them to exploit the forest resources. However, this will help preserve and restore forest landscape in long run as we shall be working to leverage funds to support locals towards income generating activities. Equally, by creating awareness of

pangolins being potential host of corona virus stream, it has discourage its consumption in local markets where we often saw pangolins eaten as a delicacy.

- ❖ Equally, by further working with the local hunters serving as field guides during the project, their training and integration into conservation efforts has help educate and encourage others to see the conservation benefits like employment.



