Project Update June 2024

Introduction

The riverine ecosystem in dryland areas serves as a microhabitat and harbours various flora and fauna. This is mainly associated with the relatively moist climatic conditions of the ecosystem, which enable it to remain evergreen the entire season and serve as a habitat for various wildlife. However, this fragile ecosystem is under great stress because of various natural and man-made factors. To overcome these challenges, a thorough survey of riparian vegetation and existing wildlife accompanied by the rehabilitation of riparian vegetation was performed. In addition, a riverine habitat is conducive for beehive farming. This study was conducted in Hirmi Drylad, northern Ethiopia, to conserve both riparian plant species and wildlife as well as to conduct beehive farming.

Project activities carried out:

In this phase of the study, the following activities were conducted:

i. Floristic survey of the riparian plant species.
ii. Wildlife species found in the study area.
iii. Nurturing about 20 different plant species (a total of 2,000 stems) in Shire Mai-Tsebri Agricultural research centre.

i. Floristic survey of the riparian plant species

About 30 plots were laid following the riverine corridors to collect the vegetation data (species name (at least its vernacular name), species abundance, habit, DBH and environmental data such as elevation, geographical coordinates and disturbance factors). The study plots ranged from 1118 to 1991 m asl. A total of 42 plant species belonging to 23 families were recorded. Approximately 60% of the recorded species were woody plants, and the remaining 40% were liana and herb species. *Justicia schimperiana, Calotropis procera, Justicia schimperiana, Vangueria madagascariensis, Calpurnia aurea, Setaria megaphylla, Andropogon abyssinicus, Hyparrhenia rufa, Hyparrhenia rufa* and *Chloris pycnothrix* were among the abundant plant species found. logging, charcoal production and grazing were among the disturbance signs recorded in and around the sampled plots.

Figure 1. The riverine prefaces of the Hirmi Dryland

ii. Wildlife species found in the study area

Following the river corridors, some wildlife was recorded. *Phacochoerus africanus* (warthog), *Sylvicapra grimmia* (bush duiker), *Panthera pardus* (leopard), *Potamochoerus larvatus* (bush pig), *Tragelaphus scriptus meneliki* (Menelik's bushbuck) *Felis silvestris* (wild cat), *Lupulella adusta* (jackal), *Papio anubis* (baboon), apes, *Crocuta crocuta* (hyenas), *Pternistis erckelii* (Erckel's spurfowl) *Procavia capensis* (rock hyrax), *Cossypha semirufa* (Rüppell's robin-chat), *Scopus umbretta* (hamerkop), *Numida meleagris* (helmeted guineafowl), *Leptopelis gramineus* (frog), *Agapornis taranta* (black-winged lovebird), *Uraeginthus bengalus* (red-cheeked cordonbleu), *Euxerus erythropus* (striped squirrel), *Spilopelia senegalensis* (laughing dove), *Paraechinus aethiopicus* (hedgehog), *Alligator mississippiensis* (alligator), *Latastia longicaudata* (long-tailed lizard) and *Bitis arietan* (snake) are among the recorded wildlife in the study area.

Phacochoerus africanus

Tragelaphus scriptus Meneliki

Agapornis taranta

Sylvicapra grimmia

Figure 2. some wild animals in the study area

iii. Nurturing of the riverine plant species in the nursery

A total of 20 woody species commonly found around the rever basin were selected and nurtured in the Shire Mai-Tsebri Agricultural Research Center nursery. *Ficus* species, *Combretum* species, *Acacia* species, *Anogeissus leiocarpa, Calpurnia aurea, Diospyros mespiliformis, Ehretia cymosa, Grewia ferruginea, Mimusops kummel, Syzygium guineense, Tamarindus indica,* and *Vangueria madagascariensis* were among the species in the nursery site prepared for the next plantation.

Figure 3. Plants in the Shire Mai-Tsebri Agricultural Research Center nursery

Emerging Issues

Although this project will play a significant role in the rehabilitation of riparian vegetation, the current survey revealed that a massive part of the ecosystem of the study area has been destroyed because of the war in northern Ethiopia (in and around the study project). Thus, further rehabilitation and economic associations between

nearby communities and forest ecosystems are important. In addition, various researchers have studied various academic and applied research

Conclusions

To date, the local community, leaders and various researchers have been receiving increasing amounts of attention. However, nature conservation after the war was not as intense as it was before. Thus, an increase in awareness accompanied by some prioritised conservation action is the core message of this project to overcome the existing problem.