

Reconnaissance Survey Report

May 2022

The UNESCO declared the Lake Bosomtwe catchment as a Man and Nature Biosphere Reserve as a means of conservation. It is made up of a unique blend forest (Bosomtwe Range Forest Reserve), wetland (Lake Bosomtwe) and mountain ecosystems. The three ecosystems are critical for the maintenance and sustenance of the available flora and fauna species. In most specific terms, the lake is a vital freshwater ecosystem habitat for the freshwater biodiversity and a major fish source for the 22 fringe communities. It is also a major source of livelihood for fishermen and women who depend on the fish stock in the lake. The forest also hosts a wide range tropical tree species, wildlife and other life forms that contribute to the provision of ecosystems services essential for societal and environmental wellbeing. The mountain ecosystem also provides a beautiful scenery as it maintains and supports montane vegetation.

However, human activities remain a threat to the Biosphere and have a detrimental effect on the biodiversity of the lake, forest and mountain ecosystems as well as livelihood of communities. A number of interventions and programmes have been carried in the past while some still ongoing from government, research institutions and civil society groups in order to safeguard the Biosphere through some organizations such as A Rocha Ghana, Friends of the Earth- Ghana and FIDEP Foundation. Some of their programmes have focused on tree planting, alternative livelihoods (animal farming, mushroom production), monitoring and reporting of illegal activities. Though these programmes have made some significant progress with regards to the conservation of the Biosphere, more targeted efforts are needed to safeguard the various ecosystems for continual provision of its multiple benefits directly and indirectly.

This Rufford Foundation Small grant funded project titled "Community Engagement in Biodiversity Conservation and Monitoring through a Spatial and Temporal Change Detection Analysis of Lake Bosomtwe Biosphere Reserve, Ghana" Is geared towards contributing to efforts meant to conserve the Lake Bosomtwe Man and Nature Biosphere. The specific actions involve a spatial and temporal change detection analysis, community awareness on their contribution to conservation and tree planting activities around the banks of the lake, riverine (riparian) areas and other open/bare sites within the communities. These activities are envisaged to provide an overview of the current status of the Biosphere, serves as basis for management and governance of the resource, influence behavioural changes in the community members to conservation, and restore lost vegetation. Overall, the implementation activities of the project are in line with the Sustainable Development Goals (SDGs) 15 (Life on Earth), 14 (Life Below Water) and 11 (Sustainable Cities and Communities) in that order. Specifically, the tree planting and awareness creation on conservation are in line with SDG 15 as it will contribute to restoration of vegetation along the banks of the lake and maintain vegetation to provide ecosystems services such as carbon sequestration and amelioration of local climate. This will lead to the reduction of siltation and restore the breeding sites of the lake leading to the improvement in the fish stocks (SDG 14-Life Below Water). In the long run, SDG 11 (Sustainable Cities and Communities) will be realised through an improvement in the livelihood on the fringe communities as they will have fish stock for food and revenue.

In order, to commence of the implementation activities, a permit of entry for data collection within the Bosomtwe Range Forest Reserve, the catchment areas as well as entry to communities for awareness creation and tree planting exercise have a been secured. The forest entry permit was granted by the Ashanti Regional Forest Services Division (FSD) through the Bekwai FSD while the permit to enter the communities was obtained through community entry protocols in the respective communities.

A reconnaissance survey was conducted between the second week in February and second week in March. This was done to have an overview of the forest reserve, the lake and its riparian areas and the communities. It was also meant to establish contacts with the forest managers and officials, community political and traditional leadership and community members.

Some observations that were made during the survey have been detailed below:

- Increasing agricultural (farming) activities and infrastructural development close to the banks of the Lake Bosomtwe and on the slopes of the surrounding mountains. There is no respect of the buffer zone policy as most of these activities are just few meters away from the lake. There is clear evidence of surface run off into the lake causing siltation in the possible breeding sites of the lake.
- Some sites around the Lake Bosomtwe are already planted with trees.
- Reports of decreased fish stocks in the lake, which is affecting the livelihoods of the direct dependents of the lake (fishermen and fish mongers).
- The communities are receptive and willing to contribute to the conservation of the Biosphere for the provision of ecosystem services and also improve their livelihoods.
- Destruction of some trees planted around the banks by private developers (pictures could not be obtained due to security reasons)
- The Bosomtwe Range Forest Reserve is mainly a montane forest with elevation up to 500 m above sea level. There is increasing illegal farming and chainsaw lumbering in the forest reserve. Plantation establishment activities have been carried out to restore the degraded portions with some still ongoing.

Local contacts have been established in the communities to facilitate the community awareness and tree planting activities. The Forest Services Division are in support of the project and are willing to contribute to its success.

The reconnaissance survey was useful in providing an overview of the issues surrounding the Biosphere. The information obtained will be used to guide the implementation of the project activities to ensure success and sustainability.

Find images of some of the observations in below.



Figure 1: Illegal farms spotted in the Bosomtwe Range Forest Reserve.



Figure 2: Freshly cleared area for illegal farming in the Bosomtwe Range F/R.



Figure 3: Plantation establishment in some degraded portions of the Bosomtwe Range F/R.



Figure 4: Farms and infrastructural activities in very close proximity to the Lake Bosomtwe.



Figure 5: Sites earmarked for infrastructural development and investment close to the lake.



Figure 6: A view of the Bosomtwe Range Forest Reserve.



Figure 7: Some areas around the Lake Bosomtwe already planted with trees.



Figure 8: Some areas close to the lake and already planted sites that need further planting.



Figure 9: Sites within community that needs planting of trees to reduce surface run off.



Figure 10: Sites with erosion on the bank of the Lake Bosomtwe that require planting of trees to stabilize it against surface run off.