Final Evaluation Report

We ask all grant recipients to complete a project evaluation that helps us to gauge the success of your project. This must be sent in **MS Word and not PDF format**. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please DO NOT fill in and submit this form until the project has been completed.

Complete the form in English. Note that the information may be edited before posting on our website.

Please email this report to jane@rufford.org.

Your Details	
Full Name	Moses Odhiambo Abonga
Project Title	Synergizing Local based Monitoring and Geographical Information Systems (GIS) of Threatened and High Value Trees in Ramogi Hill Forest, Kenya
Application ID	39058-2
Date of this Report	Final report_ 13/1/2026

1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Remote sensing through GIS Cloud Mobile data Collection				We were able to create our base line maps of Ramogi using GIS and SEPAL. Through the data collected we developed maps for 2008, 2018 and 2024 showing the land use and land cover change. The results showed that there was a 23% decrease in forested area of the forest between 2013 and 2018. Additionally, between 2018 and 2023 there was an 8.46% change in forest area. We attributed the large drop in deforestation to our continuous outreach and community monitoring exercises. Our first projected started in 2018 which involved training of stakeholders and monitoring teams. We currently have a well-equipped local team that continuously carries out basic monitoring.
Community Biophysical monitoring				We were able to carry out extensive monitoring which provided us with raw data for the development of the maps and also a checklist of the biodiversity. Some notable birds that were identified for the first time included: Papyrus gonolek, Olive-bellied sun bird, Papyrus canary. These birds are very rare and secretive hence the continuous community monitoring by the local team enabled identification and

				sighting. This is the first time that the project team had sighted the olive bellied sunbird, however the papyrus Gonolek is occasionally heard at the edge of the forest closer to the Yala river. We established 3 sampling plots representing the different sections of the forest i.e. grassland, thicket and wetland areas. The following trees were sighted in the 3 sampling plots namely: Ocotea kenyensis (Vulnerable), Milicia excelsa (Near Threatened) Brachylaena huillensis (Near Threatened), Juniperus procera (Threatened).
Assessment of traditional ethno-ecological knowledge				Social data collected included: historical profiling and ethno-botanical knowledge including the cultural importance of the forest and the medicinal plants and indigenous vegetables available in the forest. We interviewed 50 local elders and forest users (29 women and 21 men).
Workshop for local community and Ramogi Forest Working Group				The primary aim of the workshops was to integrate community-led monitoring into Kenya's national REDD+ and Measuring, Reporting, and Verification (MRV) systems by building local capacity in forest assessment and GIS technology. By establishing the Ramogi Forest Working Group, the project sought to create a platform for shared governance where local elders, county-government representatives, and technical experts could harmonize indigenous ethno-ecological knowledge with scientific data. As a result, the team exceeded

				their initial targets by conducting five workshops instead of the planned four, successfully training 34 community members surpassing the original goal of 20 in mobile-based GIS data collection and biodiversity recording. These sessions culminated in the production of the area's first community-generated land cover maps and the documentation of traditional medicinal and cultural tree uses from 50 local informants, effectively shifting forest management from a top-down approach to a locally owned, evidence-based intelligence system.

2. Describe the three most important outcomes of your project.

a) We were able to train 34 local community members on data collection and recording of forest biodiversity using GIS mobile data collection and reporting system. The community have set up a local repository for storing data both physically and online. Our target was to train 20 community members but we carried out additional training due to the high number of interested participants. This however was through the assistance of Kenya Forest Service hence did not affect out budget.

b) 4 reports on tree species distribution, faunal diversity, iii) Land Use and Land Change and ethnobotanical knowledge. These reports are currently being used to develop an article for publication in a peer reviewed journal.

c) We have been able to produce three important Land cover maps of Ramogi Forest of 2013, 2018 and 2023 depicting the forest cover change over time. This is the first land cover map of the area and will be made available through our open access journal publication and poster presentation.

d) We were able to do a poster presentation in 2 different foras, both at Jaramogi Oginga Odinga university and Masinde Muliro University

3. Explain any unforeseen difficulties that arose during the project and how these were tackled.

a) Flooding: The project area experienced unexpected and unusually intense flooding during February and March 2024, following prolonged and above-average rainfall. These floods rendered several access routes to the project sites impassable, limited movement within the forest, and temporarily submerged or destabilized established sampling plots. As a result, scheduled field activities such as biodiversity monitoring, ground-truthing, community-led surveys, and training sessions had to be postponed or rescheduled for safety reasons. The flooding also affected community participation, as many local households prioritized safeguarding livelihoods, homes, and farms during this period. Consequently, project timelines were disrupted, data collection was delayed, and implementation costs increased due to repeated field visits and extended activity periods.

b) One of the core project team members became unavailable for part of the project period after enrolling in further academic studies, which significantly reduced their availability for field-based activities, data processing and community engagement. This team member had been responsible for key technical and coordination roles, including supporting biodiversity assessments and community training, and their reduced participation created temporary capacity gaps within the project. As a result, some activities had to be redistributed among remaining team members and in certain cases rescheduled, leading to delays in field surveys, data analysis and reporting. While the team adapted by reallocating responsibilities and drawing on local expertise, the transition affected the pace of implementation during that period.

c) During the project period, there was a change in the local government administration, including key officers responsible for environment, forestry and community development. This transition required the project team to restart formal engagement with the new office through fresh briefings, submission of documentation, and re-orientation of incoming officials on the project objectives, methods and ongoing activities. Approvals, permissions and coordination mechanisms that had already been established with the previous administration had to be rebuilt, temporarily slowing down field operations, community meetings and collaboration with government agencies. While the new administration has since been brought fully on board, this institutional transition caused unavoidable delays in implementation and required additional time and effort to restore working relationships and operational continuity.

4. Describe the involvement of local communities and how they have benefitted from the project.

From the start, the project was built around **Ramogi Forest User Groups (RFUGs)**, drawn from the three forest-adjacent community groups (Umba, Tang'chon Ber and Lpere). These groups form the operational core of monitoring, mapping and decision-making for the forest. Community members were embedded in every technical and governance layer of our project through intensive training, hands-on monitoring, and structured participation in decision-making. Thirty-four (34) local people are trained in forest biodiversity assessment, GPS and mobile-based GIS data collection, and recording deforestation, degradation, and forest recovery, enabling them to generate the same quality of data normally produced by professional foresters. Fifteen of these trained monitors then worked alongside the project team to establish permanent sample plots, measure tree species, carbon stocks and deadwood, and track illegal logging, charcoal burning, grazing and farming using smartphone-based GIS Cloud applications that produced real-time, georeferenced evidence. This was reinforced through the Ramogi Forest Working Group, which brought together adjacent local communities, Kenya Forest Service, county government, NGOs and universities to carry out participatory mapping, identify conservation priorities and jointly decide how the forest should be managed, marking the first time Ramogi Forest will have community-generated maps and a formal platform for shared governance.

Indigenous knowledge was deliberately integrated into this technical framework so that conservation is both scientifically sound and socially rooted. Fifty local elders and forest users are interviewed to document traditional tree uses, medicinal and cultural values, and species that should be protected or replanted, and this information was analyzed using quantitative scientific indices rather than treated as anecdotal. By embedding this knowledge into forest planning and management, the project gave communities intellectual ownership of conservation plan and ensured that modern monitoring tools reinforced, rather than replace, long-standing local stewardship of the forest.

The benefits to communities are tangible, durable and political. By producing official forest data, communities gained evidence to support REDD+ carbon claims, recognition as legitimate forest managers, and a seat at the table with Kenya Forest Service and county government, while early detection of illegal logging and active restoration protects the firewood, medicinal plants and cultural resources households rely on. Participants also acquired market-relevant skills in GIS, biodiversity monitoring and environmental data collection, opening pathways into conservation employment, and the deliberate inclusion of women and elders in mobile GIS, monitoring and workshops ensures that technological conservation does not exclude any group. In short, the project does not merely enlist communities to protect the forest; it equips them with the tools, data and institutional power to own and govern it for the long term.

5. Are there any plans to continue this work?

Yes.

6. How do you plan to share the results of your work with others?

a) Publication in a peer reviewed journal (has already been drafted and submitted with minimal changes and corrections for final publication)
b) Poster presentation
c) Through the iConserve website

7. Looking ahead, what do you feel are the important next steps?

a) Looking ahead, the most important next step is to move from monitoring and mapping into active, science-guided restoration of the threatened and high-value tree species identified through the project. The detailed GIS maps and community-collected field data now provide a clear picture of where key species such as *Ocotea kenyensis*, *Milicia excelsa* and *Moringa rivae* are surviving, where regeneration is occurring, and where populations have collapsed. These data should be used to establish targeted restoration zones within Ramogi Hill Forest, focusing on protecting seed trees, supporting natural regeneration, and implementing enrichment planting in degraded patches using locally appropriate species. Community forest monitors and elders should lead seed collection, nursery development and planting, ensuring that restoration is ecologically sound and culturally acceptable. By building on the existing community monitoring system, regeneration efforts can be tracked over time, allowing survival rates, growth and recovery of threatened species to be measured and management strategies adapted accordingly, turning Ramogi from a declining forest fragment into a recovering, climate-resilient ecosystem.

b) Continued monitoring to enhance data: Sustained community-led monitoring is critical to transforming the current snapshot of Ramogi Forest into a robust, long-term evidence base for conservation and climate action. The next step is to institutionalize regular data collection by the trained community monitors so that changes in forest cover, tree populations, regeneration rates and human pressures are recorded consistently over time. Repeated measurements of permanent sample plots, combined with ongoing mobile GIS reporting of deforestation and disturbance, will allow trends to be detected early, enabling rapid management responses before damage becomes irreversible. As the dataset grows, its accuracy, credibility and policy value will increase, making it more useful for REDD+, county forest planning and national reporting systems. In effect, continued monitoring turns community participation into a permanent forest intelligence system, ensuring that decisions about Ramogi's future are

driven by real, locally generated evidence rather than outdated or speculative data

c) Sustainable utilization activities to promote community involvement in conservation of the forest: To secure long-term protection of Ramogi Hill Forest, conservation must be directly linked to tangible livelihood benefits for the surrounding communities. The next step is to develop and support sustainable forest-based enterprises that allow local people to meet their needs without degrading the ecosystem. These include regulated harvesting of non-timber forest products such as medicinal plants, honey, fruits and seeds, community-managed tree nurseries for high-value indigenous species, and controlled firewood and bamboo production from designated restoration zones rather than from natural forest. By tying household income and essential resources to the health of the forest, communities gain a direct economic stake in protecting threatened trees and preventing illegal logging. When people benefit from a living, standing forest, conservation shifts from being an external obligation to a locally driven investment in long-term environmental and economic security.

8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?

Yes

9. Provide a full list of all the members of your team and their role in the project.

1. Rayola Isaac: Forester and agroforestry: He helped intensively in identification, and monitoring of the forest species.
2. Winnie Owiti: She stepped in for Olga Odoyo who had to commence her studies, she is an expert in ecotourism and conservation and helped in biodiversity monitoring. She also has training on remote sensing
3. Ibrahim Onyango: Is a community certified warden and was the liason between the project activities and the community

10. Any other comments?

We believe that this project has created a lot of interest from the community and also relevant stakeholders. We are already in talks on upscaling into community conservation activities

ANNEX – Financial Report

[Intentionally removed]