

Final Evaluation Report

Your Details	
Full Name	Mohammed Mussa Abdulahi
Project Title	Carrying Capacity and Stocking Rate of Grazing Areas of Arsi Mountain National Park, Ethiopia
Application ID	34114-1
Date of this Report	11/01/2023

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
Carrying capacity of grazing lands				Sample biomass production from the grazing lands collected from grazing land inside park and adjacent district grazing areas and their carrying capacity estimated.
Stocking rates of livestock in the study areas				Livestock population and available grazing area data collected from secondary socioeconomic data, literature review and land use land cover classification study and Livestock stocking rate (grazing pressure) of the study area estimated.
Socio-economic factors that drive the communities to graze livestock in the park				Socio-economic factors that drive the communities to graze their livestock in the park assessed using literature review, household survey, key informant interview and group discussion.

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

The most important outcome of this project area the following:

- a).** Carrying capacity of grazing lands in the areas used by the communities in Tena, Degeluna-Tijo, Shirka, and Lemu-Bilbilo districts including Galama Mountains of Arsi Mountains National Park, Ethiopia estimated.
- b).** Stocking rates of livestock in the areas used by the communities in Tena, Degeluna-Tijo, Shirka, and Lemu-Bilbilo districts including Galama Mountains of Arsi Mountains National Park, Ethiopia estimated.
- c).** Socio-economic factors that drive the communities to graze their livestock in the Galama mountains of Arsi Mountains National Park, Ethiopia were identified.

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

The size of the study area was too large, difficult to manage and reach each sampling point in the study area. To solve this problem, the trained field assistants were working independently and helped me to complete the work.

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

The project involved local community at its different stages:

- One self-sponsored MSc student attached to the project.
- Four local community members (paid on daily basis) who helped us during data collection.
- One park staff member and three MSc students involved as data collectors.
- Local communities involved in household interview and group discussion.

5. Are there any plans to continue this work?

The project was successful in determining the carrying capacity and stocking rate as well as identifying the factor that drive communities to graze their livestock in the park. Findings of this research will help governmental, non-governmental organisations and other interested parties to mitigate the threat from livestock grazing pressure on Galama mountain ecosystem. The next research will be on the carrying capacity and stocking rate of AMNP and surrounding areas (including four blocks in the park-related areas not included in the current study) through ecological, socio-economic, and geospatial data collection. This study will allow me to make informed conservation management suggestions to local officials and groups. I will prepare grazing pressure reduction strategies for the AMNP. In addition to this, I will provide capacity building for the main stakeholders involved in the AMNP grazing pressure reduction strategies. This will help the capacity of stakeholders to successfully implementation of the AMNP grazing pressure reduction strategies.

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

The research findings will be disseminated by formal publication in leading, peer reviewed international journals and with local newspapers to reach the general public. I also intend to give presentations at regional, national and international academic conferences.

From this project, I will publish at least three journals:

- 1)** Carrying Capacity and Stocking Rate of Grazing Areas of Galama Mountain of Arsi Mountain National Park and Adjacent grazing Areas, Ethiopia (*to be submitted to Journal of Nature Conservation*).
- 2)** Assessment of Livestock Feed Supply and Demand for Park-Adjacent Districts around Arsi Mountain National Park, Ethiopia (*to be submitted to African Journal of Ecology*).

3) Perception and attitude of communities on livestock-wildlife interactions around Galama mountain of Arsi Mountain National Park, Ethiopia: implication for grazing pressure reduction (to be submitted to Ecological Process).

The research project report will be also presented at the annual Research and Community Service Conference (RCSC), Haramaya University, staff conference to be held from November 15-19, 2023. The research result will be given to Ethiopian Wildlife Conservation Authority (EWCA), the Oromia National Regional state, Oromia Forest and Wildlife Enterprise (OFWE), and District Wildlife Conservation Offices. In addition, the result will be given to NGOs working on the conservation of wildlife and mountain habitats.

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

Important next step is to develop grazing pressure reduction strategies, grazing land management plan, and conduct outreach programme and capacity building of government, non-governmental, park staffs and local communities on management and mitigation of livestock grazing pressure threats.

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, I have used and will use the RF logo for reports produced in relation to this project. The research project report will be presented at the annual Research and Community Service Conference (RCSC), Haramaya University, staff conference to be held in November 2023. The local communities, local governmental and non-governmental officials in the project area were well informed about RF. So, it is important to mention that all of them appreciated and were very thankful to RF for funding this relevant project.

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

Team	Role
Mohammed Mussa Abdulahi	Principal investigator
Dr. Sintayehu Workeneh	Ecologist
Dr. Ibsa Mussa	Socio-economist
Mr. Mohammed Tifo	Wildlife Expert
Mr. Ramadan Mohammed	MSc Student

10. Any other comments?

I want to thank The Rufford Foundation for financial support of my work. Without it, the implementation of this project would be impossible.