Project Update: August 2022

Summary
Reconnaissance survey and pre-survey activities were conducted to identify and familiarise with the selected study areas. Data collection tools, materials and equipment's were prepared. MSc student recruited and attached to project for capacity building. Field data collectors and supervisors were selected using the minimum qualifications set for field data collectors. Training on ecological and socio-economic survey had given to data collectors (Park staff, Haramaya University staffs and MSc Student). After training, socio-economic data and secondary data were collected. Using secondary data and socio-economic data dry season ecological data were collected and transported to Haramaya University (HrU) nutrition lab for dry matter analysis. In addition, geospatial data were collected for analysis of land use land cover changes in the study areas.

We followed the following steps for our activities:

1. **Permission acquisition and preliminary survey**

We have discussed and approved our project with Haramaya University. Then, we the project team moved to Arsi Mountain National Park (AMNP) with the official letter written from Haramaya University Research affair. We reached AMNP and discussed with member of the project and AMNP head Mohammed Tifo. After some discussion at AMNP head office found in Asalla city, the research team lead by Mohammed Mussa with the guidance from park staff Zeyad Jemal travelled to AMNP and different areas of the park (Figure 1).

2. **MSc student recruited and attached to project**

To build capacity of graduate student at Haramaya University, we have recruited four students as data collectors and attached one MSc student. All of them are MSc my graduate student from range ecology and dryland biodiversity MSc programme (Figure 2). From them Mr. Remadan Mohammed attached to the project and working on his MSc thesis entitled, "Livestock Feed Balance and Grazing Land Condition in District Surrounding Galama Chilalo Block Arsi Mountain National Park, In Oromia Regional State Ethiopia" under my supervision and Dr. Sintayehu Workine. I am his major advisor for his MSc Thesis.

3. **Data collectors training**

Data collector training was conducted at Haramaya University, Haramaya, Ethiopia. The general objective of the projects and training for the data collectors were given by Mr. Mohammed Mussa. The main aim was to briefly present overall objectives and contents of the study, tools and approaches of data collection for the project. The underlying premise behind this training is that the quality and reliability of data from the field is dependent on the complete and uniform understanding of the objective, rationale, methodology and instruments of the survey by the field data collectors. Therefore, the uniform and comprehensive guides to the field data collectors were given.

Figure 1: Partial view of field visit at Arsi Mountain National Park and surrounding areas, Oromia region, Ethiopia (Photo taken on November 21, 2021)

Figure 2: Mr. Ramadan Mohammed at Arsi Mountain National Park, Oromia region, Ethiopia (Photo taken on November 21, 2021)

4. Socio-economic data and secondary data collection

For determination of stocking rate and socio-economic analysis, primary data were collected from the districts surrounding Arsi Mountain National Park. In addition, secondary data were collected from Arsi Zone offices and districts (Figure 3). We are analysing the collected data.

Figure 3: Partial view of socio-economic data collection at districts surrounding Arsi Mountain National Park, Oromia region, Ethiopia (Photo taken on February 7, 2022).

5. Ecological data and geospatial data collection and analysis

For determination of carrying capacity, the herbaceous biomasses data were collected from different areas of the park and transported to Haramaya University Nutrition Laboratory for dry matter analysis (Figure 4). In addition, geospatial data were also collected for analysis of land use land cover changes. The lab technicians are conducting the vegetation dry matter analysis.

Figure 4: Partial view of ecological data collection for carrying capacity determination at Arsi Mountain National Park, Oromia region, Ethiopia (Photo taken on February 7, 2022).