

# Bahir Dar University



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## **1. Introduction**

Ethiopia is endowed with abundant natural resources in its varied agro-climatic zones. The natural resources such as land, water, forests and other resources are fundamental to the survival and livelihood of the majority of people living in rural part of Ethiopia. The status of natural resources determines biodiversity and ecosystem services like carbon sequestration potential, watershed protection, soil fertility, control of erosion, reproduction of fish, etc...The non-consumptive use of natural resources like the scenic beauty can also provide opportunities for income generation from tourism. However, the abundant natural resources are deteriorating from time to time since securing food and livelihood is inextricably linked to the exploitation of these natural resources. Thus, land and environmental degradation, loss of productivity and food insecurity became the main challenges in many parts of Ethiopia especially the central highlands of the country.

The government of Ethiopia is campaigning for massive public mobilization to participate in soil and water conservation activities at all local communities to bring sustainable utilization of the natural resources. Community based integrated natural resources management is the agenda of the regional states in the major community watersheds. In line with this, many governmental and non-governmental organizations are actively participating towards achieving these ends. Bahir Dar University, as an academic institution, is serving the local communities by directly participating on the major issues of the local communities at watershed level. Thus, this document briefly explains the contribution of BDU for local communities of Birr watershed, Birr-Adama, Quarit Woreda of West Gojjam Adm. Zone, Ethiopia.

### **The whereabouts of Birr-Adama**

Birr-Adama is found 60 km South-West of Bahir Dar at the non-asphalted road connecting Bahir Dar to Feres Bet town, Degadamot Woreda. Mount Adama is one of the peaks of central Gojjam highlands, a continuum of Choke Mountain ranges. At 11°06.885' N and 37°23.614'E it reached to 3526 m a.s.l in altitude (Garmin 60 GPS reading during the Oct 2014 site visit). It has unique and beautiful landscape, dividing four Woredas (Quarit, Sekela, Mecha and Adet) of West Gojjam Administrative Zone. It is a bucket of many rivers and streams such as Jemma, Birr,

Shina, Shigez, Kotet, Gerima, etc. Being a water tower of the Upper Blue Nile River, there are a number of watersheds in all directions of the mountain (Fig. 1). It could be the main attractions of the tourists because of the existence of an impressive landscape, unique and source of biological diversity and the cool agro-ecological zone.

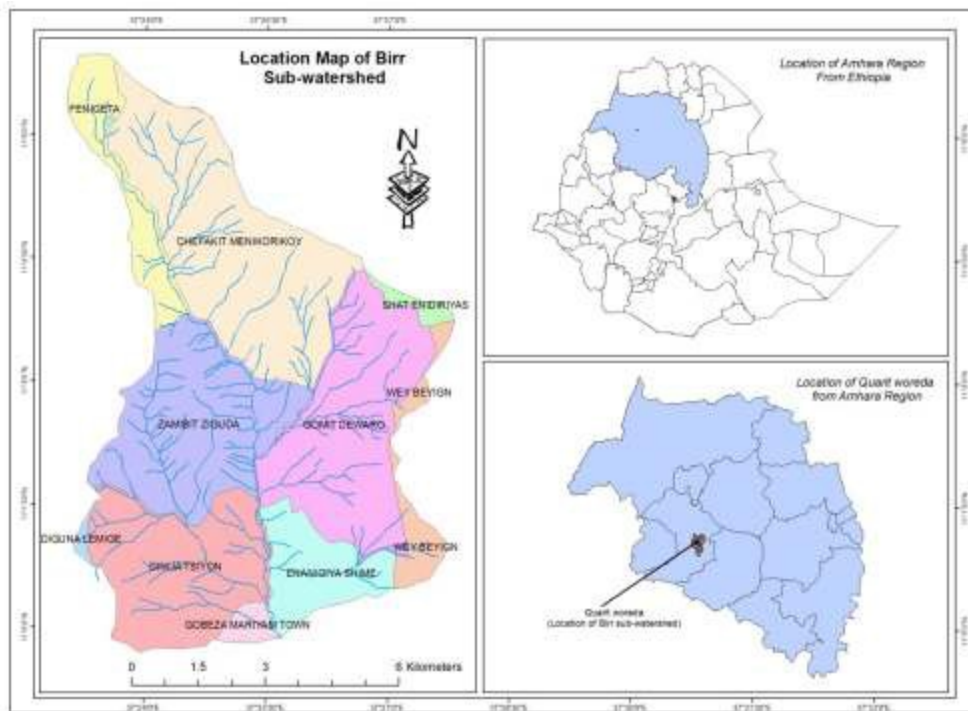


Figure 1 Location map of Birr Sub-watershed (BDU report, 2011)

## Project Initiation

With the strong support of the Former President of Bahir Dar University, Dr. Yeshimebrat Kassa and other committed individuals in the University, the University took the initiative to intervene in one of the degraded watersheds of Adama Mountain, i.e., the Birr-Adama watershed. The project intervention was officially inaugurated by the former Vice Prime Minister of Federal Democratic Republic of Ethiopia, his Excellency Ato Addisu Legesse and the current Vice Prime Minister of Ethiopia, his Excellency Ato Demeke Mekonnen and the Current President of Amhara National Regional State, his Excellency Ato Gedu Andargachew on 11 July 2002 E.C. together with the inauguration of Adet-Feres Bet road. At the beginning the Vice President of Research and Community services offices allocated fund for comprehensive feasibility study in

the area. The study was entitled as “Comprehensive Study on Research, Development and Management Interventions in Birr- Adama Watershed.”

The objectives of the study were:

1. To identify major development constraints in the watershed, suggest recommendation options, develop intervention projects
2. To intervene to solve the problems at a pilot level in the way that it could be scaled up.

A multi-disciplinary team was established from the different Departments of Bahir Dar University to effectively conduct this comprehensive study. The project work was finalized in January 2011 and presented for major stakeholders. The project work could serve as a baseline to design further research and development intervention in each discipline. However, development of intervention projects was not made.

## **Project Area Description**

Birr-Adama Watershed is one of the watersheds originating at the southern part of Adama Mountain. It is named after its major river, Birr & the mountain, Adama. The watershed covers a huge area of 306,000 ha extending from Adama Mountain to the junction point of Temcha River which ultimately goes to the Blue Nile River. A number of tributary rivers join Birr River, like Talia River. The area includes 91% of Jabi Tehnan, 76% of Dembecha, 51% of Sekela, 45% of Quarit, 44% of Burrie and 39% of Dega Damot Woredas (MoWR, 1995). From the total catchment area about 133,000 ha is under rain-fed agriculture and about 5000 ha is cropped under small scale irrigation (MoWR, 1995). The River crosses bench mark sites established at Gebezemariam, Genet, Jiga and Birr State Farm. In the watershed, a total of 284 000 people's livelihood is based on rain-fed agriculture with unimodal rainfall pattern. The major crops grown in the area are barley, potatoes, wheat, faba beans, field pea, Teff, Maize, nouge, chickpea, etc... A total of 457 000 cattle and 174 000 shoats and 77 000 equines are grazing grasses, shrubs and trees growing in area (MoWR, 1995). In the watershed, like everywhere else, there is a rapid population growth and increasing demands for natural resources. According to the BDU report (2011), land degradation, failure of crops due to pests, diseases and lack of resistant and high yielding varieties, scarcity of land, less productivity of animals, feed shortage

are major problems observed in the area. In the watershed, marginal lands were once under land uses of shrub, grazing, forest, wood lands, and steep slopes are being used for annual crop production which lead to land degradation. Prevalence of deep gullies in the watershed is an indicator for extreme stage of land degradation. Thus, it would be advisable to implement integrate natural resources management to sustainably utilize the existing natural resources and improve livelihood in the area.

### **Major Activities done in the area**

Since the inception of the project Bahir Dar University has achieved the following results in Birr watershed

1. A comprehensive baseline study was carried out
2. Consultative workshops were conducted with major stakeholders
3. About 50 ha of land is protected from human intervention and is planted with more than 40 000 indigenous trees. It is recovering very well.
4. Frequent supervisions and discussions were made
5. In 2006, field visits at Birr Adama were made with participation of major regional stakeholders and discussions were made with the local communities
6. Coordinator was assigned for the project area
7. Regional Technical Committee was established
8. Priority was given by the University and budget was allocated from Vice President for Research and Community Services Office for different activities of the 2006 budget year. Activities are sorted and action plan is prepared by different teams.
9. Language teachers were trained for two days
10. More than 30 farmers were trained in soil and water conservation for two days
11. Money was sent to Birr Adama School for buying books and nursery materials

### **Planned activities for the year 2006**

1. Natural Resources Management: It mainly focuses on practical hand on soil and water conservation practices, area closures and afforestation programs and supporting nursery sites at Birr Adama primary school. Material provision for SWC activities like barbed wires for

making gabion, spade/shovel, pickaxe, sickle, local seedlings (Koso, Yehabshea Tid, Bamboo), nursery management instruments like sprinkler, plastics, etc...

2. Animal Production: Focus is given on training of farmers about pasture management, apiculture, fattening and animal health. Improved forage seeds and plants will provided in the project area.
3. Crop production: Training will be given on horticulture and other field crops. Focus will be given for provisions of improved seeds like potato and highland apple.
4. Energy supply: Focus is given to fuel saving technologies and hands on training
5. Capacity building of Birr-Adama School: Provision of library reference books and different chemicals for science demonstrations will be made
6. Training for teachers and students
7. Gender: Focuses on training of elders, religious leaders, women in the area.
8. Heath and Sanitation: It focuses on training of local communities on health issues.
9. Food Preparation: Practical training will be given for selected residents on potato cooking methods
10. Experience sharing: Selected farmers and experts will have experience tour to Kolela and Debre-Mewi watersheds

The detail of the activities, budget and list of staff involved are showed as follows

**Birr-Adama Model Watershed: Minwelet Mengist (Dr) Principal coordinator**

No	Activities	Budget/ Eth. Birr	Coordinators	Status
1	Soil and Water Conservation	27380	Asheber Alemie	Started
2	Gender/women empowerment	5100	Mulunesh Abebe (Dr)	not started
3	Maths, English &	14000	Abdu Mohammed Berie Getie,	English (completed) Maths (not started)
4	School capacity building (Books)	33200	Dr Minwelet Mengist	Started
5	Energy	20700	Kindu Wondim,	not started
6	Health	5068	Worku Awoke	not started
7	Horticulture	16780	Kiflemariam Yehuala	not started
8	Food demonstration	6726	CASCAP staff	not started

9	Seedling & nursery establishment (school)	6500	Dr Minwelet Mengist	not started
10	Experience sharing	5100	Ashebir Alemie	not started
11	Beekeeping	17695	Tessema Aynalem,	not started
	Total	<b>158249</b>		

### **Birr-Adama Model Watershed Community Service Intervention Participants (List and No of Staff involved)**

<b>Birr-Adama Watershed Development</b>		
<b>1</b>	<b>Soil and Water Conservation</b>	
	Asheber Alemie	CA ESs
	Kindye Ebabu	CA ESs
	Getachew Fisseha (Dr)	CA ESs
<b>2</b>	<b>Gender/women empowerment</b>	
	Mulunesh Abebe (Dr)	Gender
	Haymanot Minwuye	Gender
<b>3</b>	<b>Maths &amp; English</b>	
	Abdu Mohammed	Humanity
	Berie Getie,	Science College
	Daniel Mekonnen	Science College
<b>4</b>	<b>School capacity building (Books)</b>	
	Minwelet Mengist (Dr)	CA ESs
<b>5</b>	<b>Energy</b>	
	Kindu Wondim	Engineering
	Kassa Wondim	Engineering
	Kefale Waga	Engineering
<b>6</b>	<b>Health</b>	
	Minwelet Mengist (Dr)	CA ESs
	Worku Awoke	Medical College
<b>7</b>	<b>Horticulture/Forestry</b>	
	Kiflemariam, Yehuala	CA ESs
	Dereje Ayalew (Dr)	CA ESs
	Agumas Beilie	CA ESs
	Melkamu Alemayehu (Dr) 4	CA ESs
<b>8</b>	<b>Food demonstration</b>	
	Minwelet Mengist (Dr) /CASCAP staff	CA ESs
<b>9</b>	<b>Seedling &amp; nursery establishment</b>	
	Minwelet Mengist (Dr)/Scool	CA ESs
<b>10</b>	<b>Experience sharing</b>	
	Asheber Alemie	CA ESs
<b>11</b>	<b>Beekeeping</b>	
	Tessema Aynalem,	CA ESs
	Yeshambel Mekuriaw (Dr)	CA ESs
	Hailu Mazengia (Dr) 21	CA ESs