

Progress Report to Rufford Small Grant

Grant Types: A First RSG

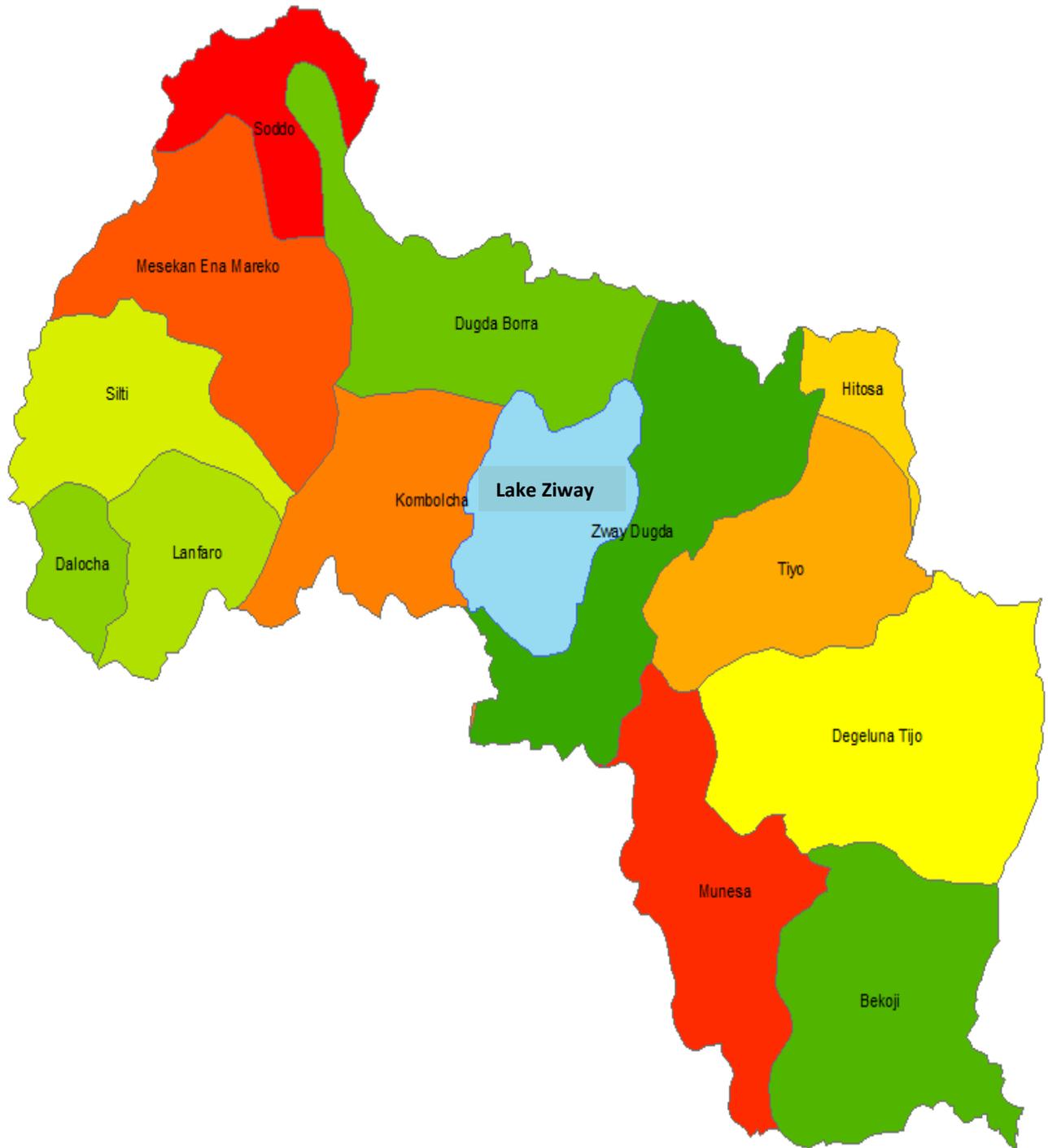
Title: Integrated land and water use management of Lake Ziway and its catchments: Study from conservation planning perspectives

Name of principal project country: Southern Ethiopia

Name of Researcher: FIRST name: Hayal Desta Yimer

1. Map of the Study Area

- The respective Woredas(Districts) in the watershed where data are being collected



2. What was done before data collection?

- Preliminary field survey of the study area was conducted in June 2012
- Data collectors were trained , and questionnaires pre-test was conducted in Dalocha Woreda

3. Household Survey

- Household survey questionnaires have been designed.
- Household data have been collected using questionnaires. So far, the following woredas are fully covered; the remaining woredas of Arsi Zone (Tiyo, Hitosa, degeluna, Tiyo, Munessa, and Bekoji) will be covered as of August 2013. So far a total of more than 450 household data were collected from heads of the households.

Table 1. List of Woredas where household surveys were conducted

Region	Zone	Woreda
SNNPR	Gurage	○ Meskan
		○ Sodo
		○ Mareko
	Silti	○ Lanfro
		○ Dalocha
○ Silti		
Oromia	Arsi	○ Ziway Dugda
	East Showa	○ Kombolch ○ Dugda Bora

- Direct and indirect resource user households have been contacted for socio-economic data
- Hence, conditions of households, conditions of Lake Ziway and its catchment, land and water resource use patterns, land and water management and conservation issues, land and water use change, their drivers and impact, and potential collaborators in Lake Ziway management, etc. were included in household survey
- The collected data are being entered in SPSS version 20 for analysis

4. Stockholder/key informant Interview

- Key informant interview questionnaires have been designed
- Public and private stockholders such as members of fishermen, large scale irrigators, etc. which have direct and indirect use value of the lake, as well as government and non-government institutions which have concerns over the Lake Ziway and those within the watershed of Lake Ziway have been interviewed; and data were collect on Lake Ziway water

quality and water level, amount of water abstraction, land and water management practices surrounding Lake Ziway, and laws and policy issues about natural resources management of the country. Hence, a total of 63 stockholder interviews were conducted from different sectors including the federal ministries (Table 1).

- Yet, Key informant interviews will also be continued as of August 2013 in the remaining woredas of Arisi Zone of Oromia Regional State (Tiyo, Hitosa, degeluna, Tiyo, Munessa, and Bekoji).
- The data collected are now in the process of data entry for analysis.

Table 2. List of Key informant interviews conducted by organizations and regions

No	Name of interviewee	Position & Tel.	Organization	Zone/Region
1.	Masho Desta	Vice Head	Ziway Dugda Woreda Rural Land Admin. and Env'tal Protection Office	Arsi/Oromia
2.	Aman Tuffa	Chair Person	Sheled-GOTU Irrigation Project	Arsi/Oromia
3.	Mekonnen Kibret	Extension & Crop Dev't Expert	Adami Tulu Jido Kombolcha Woreda Agri. Office	E. Showa /Oromia
4.	Tadesse Berhanu	Fisherman	Private	E. Showa /Oromia
5.	Abayneh Tesfaye	Env'tal Protection team Leader	Adami Tulu Jido Kombolcha Woreda Rural Land Admin. and Env'tal Protection Office	E. Showa /Oromia
6.	Gemeda Kebero	Irrigation Expert 0913-484880	Adami Tulu Jido Kombolcha Woreda Agri. Office	E. Showa /Oromia
7.	Abreham Walelign	Soil & Water Conservation Expert 0911-305672	Adami Tulu Jido Kombolcha Woreda Agri. Office	E. Showa /Oromia
8.	Daniel Ali	Irrigation Expert 0913-944390	Adami Tulu Jido Kombolcha Woreda Water, Mine & Energy Office	E. Showa /Oromia
9.	Kemal Mohammed	Irrigation Expert 0913-136328	Ziway Dugda Woreda Agri. Office	Arsi/Oromia
10.	Tariku Bayou	Soil & Water Conservation Expert 0911-887194	Ziway Dugda Woreda Agri. Office	Arsi/Oromia
11.	Ibrahim Gudeta	Irrigation Expert 0912-044890	Ziway Dugda Woreda Water, Mine & Energy Office	Arsi/Oromia
12.	Tadele Kufa	Farmer 0912-127391		E. Showa /Oromia
13.	Tufa	Pump Operator	Meki Irrigation Project	E. Showa

	Hussen	0913-481270		/Oromia
14.	Daba Tuge	Researcher 0913-120787	Oromia Fishery Research Center Ziway Branch	E. Showa /Oromia
15.	Meseret Taye	Planner 0911-747818	Oromia Fishery Research Center Ziway Branch	E. Showa /Oromia
16.	Tamirat Tefera	Land Admin. Team Leader 0935-594773	Dugda Woreda Rural Land Admin. and Env'tal Protection Office	E. Showa /Oromia
17.	Anteneh Abreham	Soil & Water Conservation Expert 0920-178088	Dugda Woreda Agri. Office	E. Showa /Oromia
18.	Ali Lalega	Forest Dev't & Protection Expert 0919-597706 0920-706308	Dugda Woreda Agri. Office	E. Showa /Oromia
19.	Begna Roba	Irrigation Expert 0910-058173	Dugda Woreda Water, Mine & Energy Office	Arsi/Oromia
20.	Wolde Ebissa	Irrigation Expert 0915-831494	Dugda Woreda Agri. Office	E. Showa /Oromia
21.	Deraro Hora	Chair person 0910-249933	Batu-Ziway Fishermen Cooperatives	E. Showa /Oromia
22.	Firafis Nebiy	Manager 0927-340309	Hora Denbel Boat owners association	E. Showa /Oromia
23.	Amintu Esmael	Branch Manager 0913-270018	Rift Valley Children and Women Development Organization – Ziway Branch	E. Showa /Oromia
24.	Melese Abule	Field technician 0913-171950	Meki-Batu Vegetables and Fruits Growers Cooprtative Union	E. Showa /Oromia
25.	Wubshet Asrat	Irrigation Expert 0921-105543	Arata Irrigation Project	Arsi /Oromia
26.	Mussa Mohammed	Env'tal protection Unit Head 0911-792266	Batu town Admin. Environmental Protection Desk	E. Showa /Oromia
27.	Adefris kassaye	manager 0913-386703	Fish Production & Marketing Industry-Ziway	E. Showa /Oromia
28.	Daniel Alemu	Development & rehabilitation Team Leader 0464-414339	Ziway Federal Prison	E. Showa /Oromia
29.	Amare Hailu	Coordinator 0911-192003	Horn of Africa Ziway Branch Office	E. Showa /Oromia
30.	Mesfin Abera	Head, Water Supply Unit 0916-820693	Batu Water and Sewerage Authority	E. Showa /Oromia
31.	Tafesse Andarge	Economist 0911-718671	Oromia Water, Mineral & Energy Bureau, Irrigation	Oromia

			water supply & Land drainage Process section	
32.	Anbessu Jima	Irrigation Agronomist 0911-774690	Oromia Regional State Agri. Bureau	Oromia
33.	Nuralem Kenissie	EIA Expert 0910-218591	Oromia Regional State Env'tal Protection Bureau	Oromia
34.	Ahmed Hussien	Env'tal Protection Expert 0911-842155	Oromia Regional State Rural Land and Env'tal Protection Bureau	Oromia
35.	Musework Alemayehu	Irrigation Engineer 0911-982706	Ministry of Agriculture	Federal
36.	Hasen Kedir	Soil & water Conservation Expert 0911-770015	Ministry of Agriculture	Federal
37.	Tesfay Kebede	Ziway & Gidebo Irrigation Project Coordinator 0911-657341	Ministry of Water and Energy	Federal
38.	Mohammed Hussien	Hydrology Engineer 0911-301008	Ministry of Water and Energy	Federal
39.	Assefa kebede	40. Hydrologist	41. Ministry of Water and Energy	42. Federal
43.	Dereje Agonafir	Env'tal Units program Director	Federal Env'tal Protection Authority	Federal
44.	Brook	Hydrology Engineer	Ministry of Water and Energy	Federal
45.	Asmamaw	Head, Rift valley Watershed Project	Ministry of Water and Energy	Federal
46.	Jemal Nujeba	Env'tal Protection expert 0913-494078	Lanfro Woreda Agri. Office	Silte/SNNPR
47.	Shimelis T/Tsadik	Land Admin. Expert 0913-256664	Dalocha Woreda Agri. Office	Silte/SNNPR
48.	Beredin Dikaso	Forest & Wildlife Expert 0913-448630	Dalocha Woreda Agri. Office	Silte/SNNPR
49.	Dereje Mogess	Land Admin. & Land use Expert 0911-398730	Silte Zone Agri. Department	
50.	Ergete	Natural Resources Management process coordinator 0913-194497	Silte Zone Agri. Department	Silte/SNNPR
51.	Sintayehu Getahun	Soil & Water Conservation Expert 0912-181645	Dalocha woreda Agri. Department	Silte/SNNPR
52.	Engida Hareri	Forestry Expert 0910-009721	Mareko Woreda Agri. Office	Gurage /SNNPR
53.	Umer Gemechu	Irrigation Coordinator 0926-948189	Mareko Woreda Agri. Office	Gurage /SNNPR
54.	Jemal Awol	Irrigation Engineer 0913-159352	Sodo Woreda Agri. Office	Gurage /SNNPR

55.	Melesse	Irrigation Expert 0912-246931	Sodo Woreda Agri. Office	Gurage/SNNPR
56.	Kidist Zewdu	Soil & Water Conservation expert 0913-413530	Sodo Woreda Agri. Office	Gurage /SNNPR
57.	Mohammed Kedir	Soil & Water Conservation expert 0916-839753	Meskan Woreda Agri. Office	Gurage /SNNPR
58.	Agonafir Aklilu	Irrigation expert 0913-086291	Meskan Woreda Agri. Office	Gurage /SNNPR
59.	Ayele Dessie	Forestry Expert 0916-839816	Meskan Woreda Agri. Office 0916-839816	Gurage /SNNPR
60.	Zekarias Banda	Soil & Water Conservation expert 0913-697304	Mareko Woreda Agri. Office	Gurage /SNNPR
61.	Tilahun Teklu	Soil & Water Conservation expert 0913-672655	Mareko Woreda Agri. Office	Gurage /SNNPR
62.	Degife Mulugeta	Natural Resource Expert 0928-765623	Silte Woreda Agri. Office	Silte /SNNPR
63.	Amedin Feleke	Soil & Water Conservation Expert 0910-438082	Silte Woreda Agri. Office	Silte /SNNPR
64.	Amare	Agri'l Input Expert 0916-478522	Silte Woreda Agri. Office	Silte /SNNPR
65.	Almaz Balcha	Environmentalist 0911-181635	Silte Woreda Agri. Office	Silte /SNNPR
66.	Gihon Amara	Rural Land Use Data Expert	Silte Woreda Agri. Office	Silte /SNNPR

5. Focus Group Discussions

- Focus group discussions have been undertaken in six woredas (Table 3)
- So far, a total of seven focus group discussions have been conducted using nine to eleven members per group, and data were collected about the group's perception on the impacts of human pressures on the Lake Ziway watershed and the Lake Ziway itself.

Table 3. List of Woredas where focus group discussions were conducted

Region	Zone	Woreda
SNNPR	Gurage	○ Meskan
		○ Sodo
		○ Mareko
	Silti	○ Lanfro
		○ Dalocha
		○ Silti
Oromia	Arsi	○ Ziway Dugda

6. Students' survey

Students from four high schools were assessed using purposive sampling for their perception about the current condition of Lake Ziway and the benefits local communities get out of the lake. Hence, both male and female top 5 students from grade 9, 10, 11, and 12 were selected, and a total of 166 students were participated in the research using self-administered questionnaires.

Figure 2. Name of School selected for study

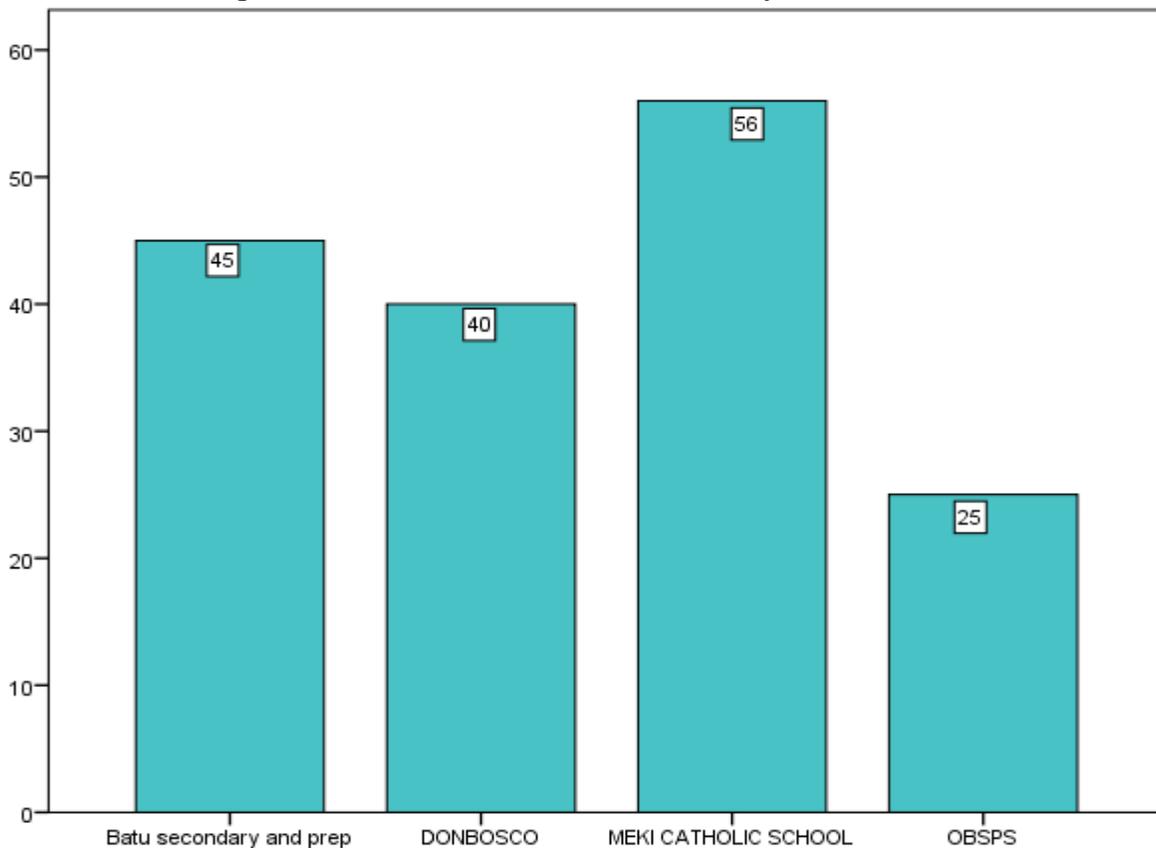
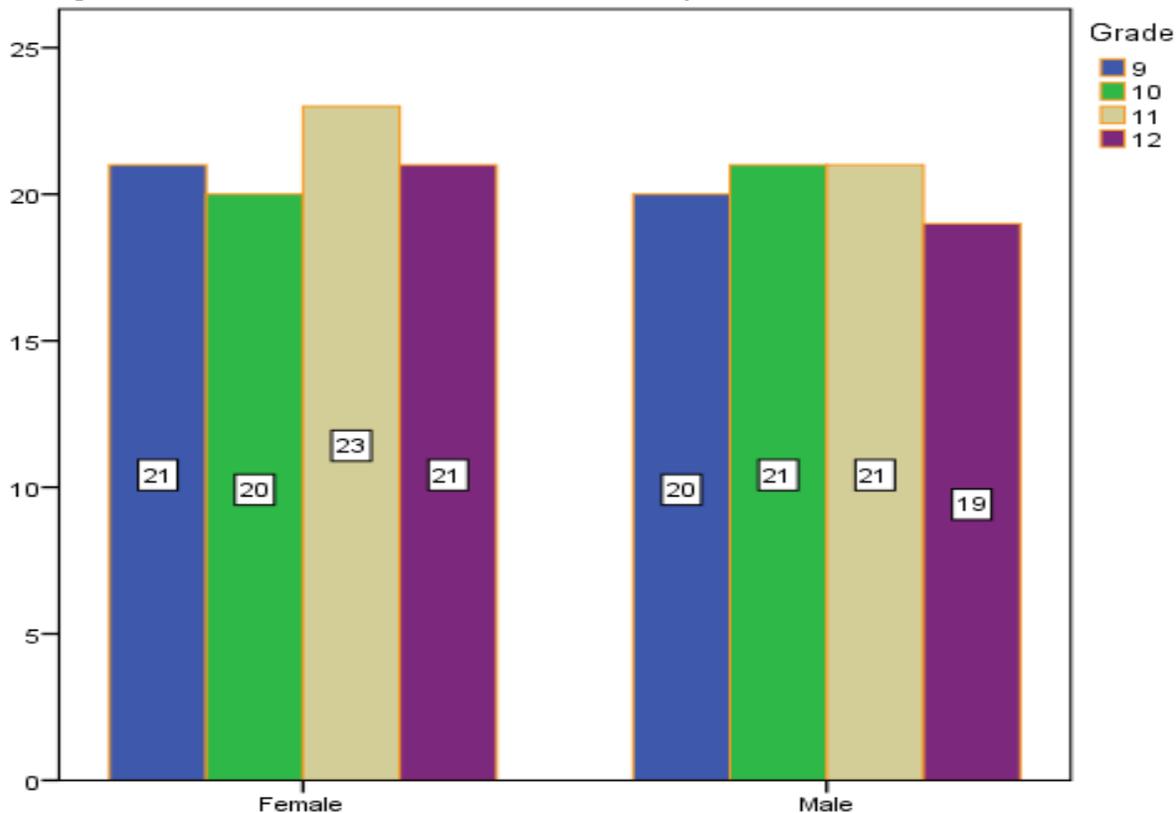


Figure 2. Number of students involved in the study



7. Physical observations

Physical observations have been being conducted with the aim to examine what is really happening as a support to eliminate if there is some subjective bias in the questionnaires. Accordingly, the following were opobserved:

- **Water Abstractions**

Amount and types of water abstractions from the Lake Ziway have been examined and calculated in three woredas that share lake – Dugda, Adami-Tulu Jido Kombolcha, and Ziway Dugda Woreda.

- **Agro-Chemicals**

Amount and types of agrochemicals being used per year in all woredas of the watershed except Tiyo, Munessa, Degelino Tijo, Bekoji, and Hitosa have been identified.

- **Irrigation**

Private, communal and government owned Irrigated farm lands in areas surrounding Lake Ziway have been identified,

- **Resources Collection from lakeshore**

The physical observation data are being processed for analyzing the different interacting and driving forces such as

- Agricultural practices, the types of land and water uses, the practices of flower farms, etc.,
- Pressures such as water abstraction, sources of lake pollution, deforestation, grazing, etc.,
- State such as lake water quality, ecological status of the lake, etc.,
- Impacts such as human livelihoods, , etc.,
- Response such as land use regulation, water use management, etc.

8. Land use changes

The inputs for analyzing land use and land cover change detections using GIS and remote sensing (RS) tools have been collected in nine woredas, and yet for **Tiyo, Munessa, Degelino Tijo, Bekoji, and Hitosa** woredas, the collection will be continued and finalized September and October 2013.

9. Soil Erosion modeling

An assessment for the rate of soil erosion in the watershed has been carried out using the model. Accordingly, field data for validation has been collected in nine woredas, and for Arisi woredas' watershed- **Tiyo, Munessa, Degelino Tijo, Bekoji, and Hitosa woredas**, the task will be completed in September.

10. What to do next

Household surveys, Key informant Interviews and focus group discussions will be conducted as of August 2013 in Arsi woredas - **Tiyo, Munessa, Degelino Tijo, Bekoji, and Hitosa**. In the mean time, data collection for Soil Erosion modeling, Land use changes; conducting focus group discussions; identifying the types and amount of agrochemicals being used, etc. will also be conducted in the stated woredas along with analyzing the collected data.