



**Project proposal**  
**on**  
**Constructing a water reservoir at Dabayto, in Irob**  
**Wereda, Eastern Zone of Tigray**

**May 2012**

**1: Project Profile**

**Project title:** Constructing water reservoir at Dabayto

**Project location:** Dabayto, Tabiya Alitena in Irob Wereda

**Project beneficiaries:** 500 people and 2000 domestic animals in Dabayto

**Project Applicant:** Dabayto People

**Project objective:** To accommodate the people and animals in Dabayto

**Project Duration:** Nine months, (From May 2012-Jan 2013)

**Project budget:** The total project budget is estimated to be **280,709 Eth.**

**Birr**, equivalent to **12,476 Euro**

(At exchange rate of 1 Euro=22.5 Eth. Birr)

## 1. Introduction

### 1.1 Background of the project area

Dabayto is found in Tabiya Alitena, Irob Wereda, North-eastern part of Ethiopia. Irob wereda is one the districts of Tigray which is located between 14<sup>07'</sup> to 14<sup>010'</sup> N latitude and 39<sup>0 30'</sup> to 40<sup>000'</sup> E longitude at about 165 kms North of Mekelle, the capital of Tigray Region. The total area of the Wereda is estimated to be 850 km<sup>2</sup>, with a landscape consisting of rugged mountains, hills, high plateaus and deep valleys. The altitude varies from 900 meters above sea level at Endeli valley to the peak mountain Assimba that is 3200 meters above sea level. Most of the people live in areas ranging from 1500 to 2700 meters above sea level. The climate of the area is characterized by inadequate and erratic rainfall. The district receives annual rainfall from 150-250 mm and means annual temperature is 20<sup>0</sup>c. The rainfall pattern is very variable in time and space and difficult to predict.

The undulating landforms and almost constant moisture stress, which characterize the district, make it unsuitable for agriculture; especially crop production. The people solely depend upon animal production using grasses and forests that was ample during that time. Arable land is scarce in this area and land holding is roughly 0.25ha/household and crop production and productivity is very low. Thus majority of the people (about 90%) depends on external sources like safety net programs and other cash for work activities.

Dabayto is the place where the people of the Daldal (soil and water conservation dam) innovators live in the Region. Most of the area is covered by Cactus (Beles) and serves the people and animals for food.

### 2. Problem statements of the project

As it is mentioned in the background above, Dabayto is one of the areas in Irob Wereda which is affected by recurrent drought. Therefore the population is in series food insecurity and water in accessibility for the people as well as for their livestock.

### 3. Justification and relevance of the project:

As there is little rain in the area, the people have little expectation to harvest. Cactus, which is a usual staple food during bad times and used as supplementary source of income, do not ripe as expected because of erratic rain fall, therefore the starvation

started during summer in Dabayto. Hence, the food insecurity situation is not expected to change within a short period of time. This area is indicated as hot spot area with any infrastructure to appeal the Wereda government for support. This people are looking for an NGO or other private supporters to play their role in response to the drought situation.

Therefore, these people demand immediate intervention to minimize the risks of the drought effects. Accordingly, the emergency response for water supply reservoir is very crucial to reduce the effects of drought in this area.

## 4 .Project description

### 4.1 Over all objectives:

- Avail water reservoir for the people and livestock of Dabayto who live in remote rural and recurrent drought affected area in Irob Wereda.

**4.1.1 Specific objective:** To solve the problem of water supply in Dabayto.

### 4.1.2 Expected results

- 500 people and 2000 livestock get access to water supply every year.
- Creating conducive environment for Dabayto people (innovators of Daldal) and their livestock.

### 4.2 Activities

This project will solve the problem of water supply by undertaking the following activities:

- Creating conducive environment for inhabitants.
- Availing water supply for inhabitants.
- Reducing food insecurity and drought.

## 5. Project Budget and project period

The project period is Nine months, (From May 2012-Jan 2013) and the total project budget is estimated to be **Birr 280,709**, equivalent to **12,476** Euro (at exchange rate of 1 Euro=22.5 Eth. Birr)

## 6. Annexes:

- **The budget details**

**Wereda: Irob**                      **cistern type: circular**  
**Tabia: Alitena**                   **Height: 3m**  
**Kushet: Dabayto**               **inner diameter: 8m**  
**Site name: Golo-Dage**

### Bill of quantities of cistern pond for drinking water

No	Description/ Activities	unit	Quantity	unit cost	Total cost	Remark
1	Excavation/Earth work					
1.1	Site clearing up to a depth of 15cm	m <sup>2</sup>	150	3	450	

1.2	Excavation of medium formation	m <sup>3</sup>	65	15	975	
1.3	Excavation of hard formation	m <sup>3</sup>	80	25	2000	
1.4	Disposing excavated soil to suitable site	m <sup>3</sup>	170	12	2040	
1.5	Back filling of the space between the reservoir and the ground surface	m <sup>3</sup>	35	12	420	
	<b>Sub total-1 (1.1 - 1.5)</b>				<b>5885</b>	
2	Hard core	m <sup>3</sup>	20	320	6400	
3	Masonry work in cement mortar of (1:4)	m <sup>3</sup>	60	1200	72000	
4	concrete work ( 1:2:3 )	m <sup>3</sup>	25	1200	30000	
5	Plastering work					
5.1	Plastering in cement mortar of (1:3 )	m <sup>2</sup>	200	40	8000	
5.2	Plastering in cement mortar of (1:2 )	m <sup>2</sup>	100	40	4000	
5.3	Plastering in cement mortar of (1:1 )	m <sup>2</sup>	60	40	2400	
	<b>Sub total-2 ( 2 - 5.3 )</b>				<b>122800</b>	
6	<i>Local construction materials</i>					
6.1	Hard and rough stone	m <sup>3</sup>	80	50	4000	
6.2	pure sand (collection)	m <sup>3</sup>	40	60	2400	
6.3	Crushed gravel	m <sup>3</sup>	12	180	2160	
	<b>Sub total-3 (6.1 - 6.3 )</b>				<b>8560</b>	
7	Industrial materials					
7.1	Cement	Qtl	120	230	27600	
7.2	Reinforcement bars					
	Ø12	Berga	20	250	5000	
	Ø10	Berga	70	175	12250	
	Ø6	Kg	80	30	2400	
7.3	Steel pipe 2"	Pcs	2	700	1400	
7.4	Steel pipe 1" with faucet	Pcs	1	600	600	
7.5	Soft wire	Kg	20	40	800	
7.6	Form work	Pcs	27	400	10800	
8	Drainage work of 1m height	m	150	140	21000	
	<b>Sub total-4 ( 7.1 - 8 )</b>				<b>81850</b>	
10	Transportation of local and industrial construction materials ( sand, water, cement, RC bars, form works etc. )	LS			25,000	
	<b>Sub total-5 ( 1.1 - 10 )</b>				<b>244,095</b>	
	<b>Vat 15%</b>				<b>36614</b>	
	<b>Grand total</b>				<b>280709</b>	

- **The project area**



Photo Dabayto with mount Assimba, 2012

**Offers please to : *Südtiroler Ärzte für die Dritte Welt = World Doctors, cause: DABAYTO***

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