



# ACTION ETHIOPIA

## WATER DEVELOPMENT PROJECT 2010

*ACTION ETHIOPIA is the fundraising arm of Sunarma in the UK.*

**BACKGROUND:** Sunarma works to improve the lives of rural communities in Ethiopia. It does this by assisting communities to improve the management of their natural resources which play such a central role in their livelihoods.

83% of Ethiopia's population is rural and depends on its natural resources to provide a living. Agriculture provides 60 per cent of exports and 80 per cent of total employment but Ethiopia suffers from frequent drought and poor land management practices.

Ethiopia experiences two rainy seasons – the first, and more reliable, is the Meher (summer) rain which starts in May/June and extends into September/October. The second and less reliable is the Belg (spring) rain which starts in January and continues through to the end of April.

In 2009 the Belg rains failed in many parts of Ethiopia, resulting in catastrophic drought, non-existent harvests and the death of both people and livestock. Seed stocks were eaten into in order to survive which left nothing to plant and grow for the following season.

People already at the margins of survival, balancing their livelihoods on a daily basis, have little in the way of a buffer when nature tips the balance against them - and when crisis strikes it is absolute and devastating.



SUNARMA responded to the failure of the 2009 Belg rains by providing emergency seed to its project area in the 'Woreda' (district) of Wuchale and Jidda. This quick response saved many lives and brought many families back into a balance.

What SUNARMA now needs to do is to work with these communities to make their water more effective to maximise the impact of the Emergency Seed Bank.

## THE WUCHALE-JIDDA COMMUNITY BASED WATER DEVELOPMENT PROJECT 2010

The project focuses mainly on five 'kebeles' (neighbourhoods), two in Wuchale and three in Jidda.

The annual rainfall is relatively high but the problem (particularly in recent years) is that the amount of rain is reducing and is becoming erratic and unreliable at critical stages in the cropping cycle. The rain tends to stop early, plants dry out and don't produce flowers or fruit, and so there is not much to harvest.

Cattle die when *belg*(spring) rains fail to provide adequate water. There is however surface water (rivers/streams and ponds) and groundwater (springs, hand dug and deep wells) that can be developed to help in overcoming the impacts of the unreliable rainfall.

The majority of the population uses unprotected and poorly handled spring, HDW (hand dug well) and river water sources.

Actual average consumption is reported to be less than 10 litres per person per day.

Livestock watering is from the same rivers and springs taht the people use; there are no purpose built ponds in both 'woredas'. Livestock suffer and perish when there is shortage of rains, due to lack of both water and feed.



Women and young girls are responsible for fetching water from both the improved and unprotected sources. The biological/bacteriological quality of the water collected from unprotected sources is very poor.

The level of awareness on the link between hygiene, sanitation, water and health in both 'woredas' is low. Personal hygiene and sanitation is generally poor.

The data obtained from the two woreda health offices indicate that water and sanitation related diseases that are prevalent in the two woredas are diarrhoea, intestinal parasites, eye and skin diseases. These diseases constitute 50% in Wuchale and 41 % in Jidda of the top ten reasons for death in the local population.

The main back garden irrigated crops are garden vegetables such as onion, garlic and potato. Barley and wheat are irrigated in wider farmlands along rivers/streams as well. Women are particularly involved in the irrigation of back garden crops and for health and hygiene in the family; this is one of the reasons why women are the primary targets of the project.

### Project Home Irrigation Development Aims:

- The construction of 35 hand dug wells (with hand pumps installed) within or in the vicinity of villages, for irrigation and domestic water supply purposes;
- The development of six springs for irrigation and domestic water supply purposes;
- The installation of four portable irrigation pumps on rivers/streams for irrigation purposes
- The supply of irrigated crop seeds and seedlings



## Project Water Supply, Hygiene and Sanitation Aims:

- The construction of 5 hand dug wells (with hand pumps installed) within or the villages. This is in addition to the 35 hand dug wells to be built for irrigation, but meant to provide domestic water only;
- The installation of one rope pump on an existing hand dug well providing domestic water;
- The construction of one new pond of capacity 182 m<sup>3</sup> for livestock watering;
- The upgrading of seven existing ponds/quarries dug in the ground, to properly functioning ponds for livestock watering;
- The construction of 10 cattle troughs on new and upgraded ponds;
- Hygiene and sanitation education to all 46 domestic water supply beneficiary communities;
- The construction of 92 traditional pit latrines, 2 in each of the 46 communities.



The total number of people who will benefit from improved water supply, hygiene and sanitation will be approx 10,752.

The project is tentatively scheduled to be implemented over a period of three years, January 2010 – December 2012.

The total budget of the project over the three years is **Birr 5,532,185**. The cost per capita to provide the area with clean water and sanitation will be approx Birr 514.53 (£25).

**Table-3 Population of the Five Main Target Kebeles of the Project**

Woreda	Kebele	Total	Male	Female
Wuchale	Engoye Gordoma	5,874	2,078	3,796
	Adere Gordoma	5,498	3,000	2,498
	<b>Subtotal</b>	<b>11,372</b>	<b>5,078</b>	<b>6,294</b>
Jidda	Debeli Genjo	3,637	1,767	1,870
	Wanya Kore	3,365	1,872	1,493
	Siba Sirti	3,756	1,987	1,769
	<b>Subtotal</b>	<b>10,758</b>	<b>5,626</b>	<b>5,132</b>
<b>Totals in the 5 kebeles</b>		<b>22,130</b>	<b>10,704</b>	<b>11,426</b>

Source: Kebele WARDO DAs

**Table-6 Livestock Population of the Five Main Target Kebeles of the Project**

Type of livestock	Engoye Gordoma	Adere Gordoma	Debeli Genjo	Wanya Kore	Siba Sirti	Total	Total per HH
Cattle (oxen included)	3,939	8,475	5,191	5,058	2,948	25,611	6
Sheep and goat	2,140	25,087	26,800	3,994	1,669	59,690	13
Equine animals	1,003	NA	1,236	1,570	620	4,429	1
Poultry	179	33,771	1,229	1,411	718	37,308	8

Source: Kebele WARDO DAs

**Table-10 Beneficiaries of Domestic Water Supply from Irrigation Water Sources**

Type of scheme	No. of schemes	Beneficiary HH/scheme	Total no. of HH beneficiaries	Total no. people benefiting
HDW	35	38.4	1,344.0	6,720
Spring	6	38.4	230.4	1,152
<b>Totals</b>	<b>41</b>	<b>76.8</b>	<b>1,574.4</b>	<b>7,872</b>

**Table-11 Top Ten Causes of Non-Hospital Death in Wuchale and Jidda Woredas**

Wuchale Woreda				Jidda Woreda		
No	Morbidity case	No of cases	%	Morbidity case	No of cases	%
1	Diarrhoea	759	20	Diarrhoea	1,129	19
2	Upper respiratory tract infection	724	19	Pneumonia	937	16
3	Intestinal parasites	648	17	Intestinal parasites	852	14
4	Eye diseases	360	10	Gastritis	697	12
5	Rheumatism	328	9	Personal fights	564	9
6	Tonsillitis	289	8	Tonsillitis	495	8
7	Anaemia	271	7	Eye diseases	487	8
8	Tooth and gum diseases	139	4	Rheumatic pain	426	7
9	Skin infection	125	3	Anaemia	299	5
10	Others	118	3	Tooth and gum diseases	137	2
<b>Totals</b>		<b>3,761</b>	<b>100</b>	<b>Totals</b>	<b>6,023</b>	<b>100</b>

Source: WHO's

**Table-15 Budget Summary for Wuchale-Jida Community Based Water Development Project**

No.	Component/Activity	Unit	Qty	Unit Cost (Birr)	Three years budget (Birr)	Three years budget (£)
<b>1</b>	<b>Micro/Home Yard Irrigation Development (as well serve as domestic water supply sources)</b>					
1.1	Hand dug well construction (with hand pumps)	No.	35	45,000	1,575,000	78,750
1.2	Spring development	No.	6	25,000	150,000	7,500
1.3	The construction of pumped schemes on rivers	No.	4	40,000	160,000	8,000
1.4	Irrigation extension services	LS			54,000	2,700
1.5	Irrigated crop seed & seedlings supply	LS			180,000	9,000
	<b>Subtotal</b>				<b>2,119,000</b>	<b>105,950</b>
<b>2</b>	<b>Domestic Water Supply, Hygiene and Sanitation</b>					
2.1	Hand dug well construction (with hand pumps)	No	5	45,000	225,000	11,250
2.2	Hand dug well maintenance with rope pump	No	1	5,000	5,000	250
2.3	New pond Construction	No	1	10,000	10,000	500
2.4	Upgrading existing pond water sources	No	7	10,000	70,000	3,500
2.5	Cattle trough construction	No	10	10,000	100,000	5,000
2.6	Hygiene & sanitation education	LS			120,000	6,000
2.7	Model traditional pit latrine construction (TPL)	LS	92	1,000	92,000	4,600
	<b>Subtotal</b>				<b>622,000</b>	<b>31,100</b>
<b>3</b>	<b>Capacity Building</b>					
3.1	Community sensitization and organization	Sites	59	1,000	59,000	2,950
3.2	Staff Training of trainers (ToT)					
	▪ Irrigated Agriculture	No	2	40,000	80,000	4,000
	▪ Gender and Development	No	2	40,000	80,000	4,000
3.3	Beneficiaries training					
	▪ O&M of water facilities	No	5	20,000	100,000	5,000
3.4	Experience Exchange visit to irrigation & water supply sites	No	2	20,000	40,000	2,000

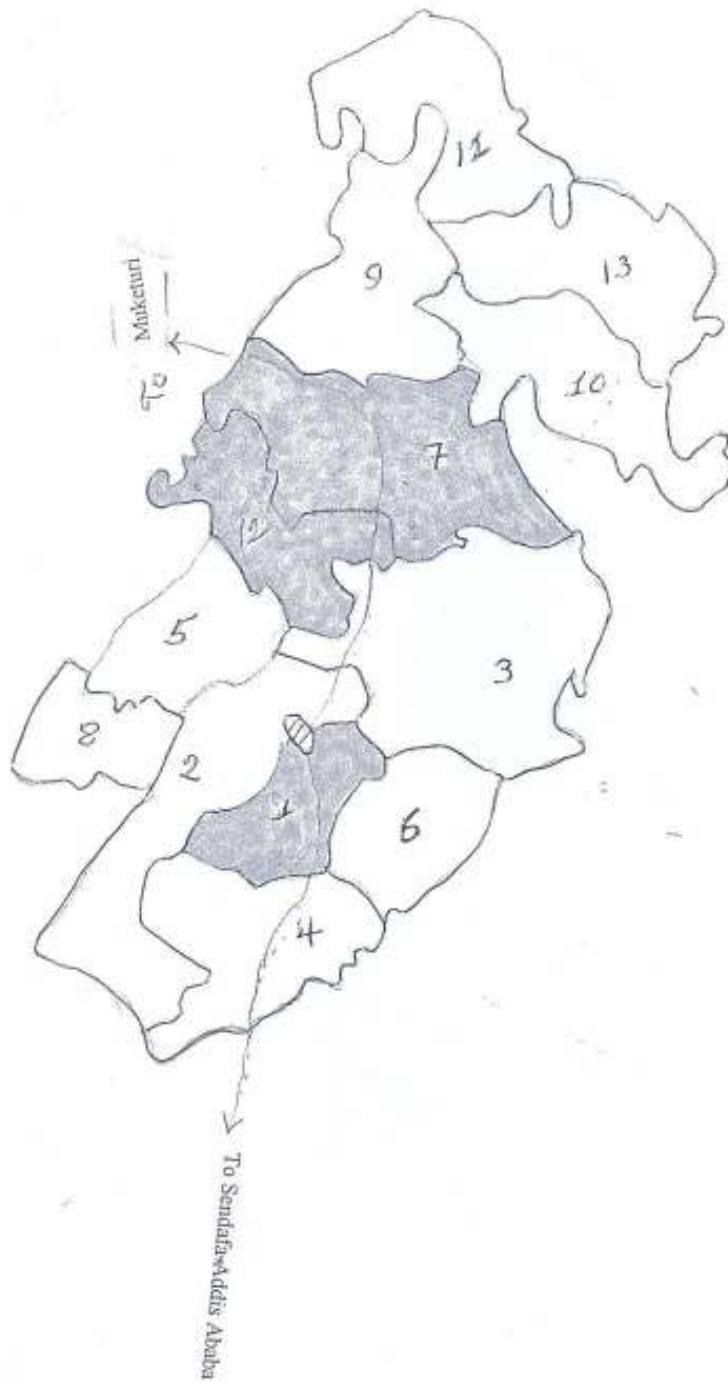
3.5	Stakeholders review meetings and workshops	No	6	15,000	90,000	4,500
3.6	Tools and equipment for construction	LS				
3.7	Provision of initial tools for water facilities	Sites	59	1,000	59,000	2,950
3.8	Dewatering pump		2	8,000	16,000	800
3.9	Water quality testing tool kits	No	2	10,000	20,000	1,000
3.10	4WD double cabin pick up	No	1	400,000	400,000	20,000
	<b>Subtotal</b>				<b>944,000</b>	<b>47,200</b>
<b>4</b>	<b>Project Development and Evaluations</b>					
	Project development, baseline survey, mid-term evaluation, and terminal evaluation	No	4	80,000	320,000	16,000
	<b>Subtotal</b>				<b>320,000</b>	<b>16,000</b>
<b>5</b>	<b>Project Management</b>					
5.1	PO staff salaries and benefits	LS			1,002,136	50,107
5.2	PO office rent and office supplies	LS			93,600	4,680
5.3	Vehicle running and transport	LS			90,000	4,500
5.4	Capital items	LS			120,000	6,000
5.5	Head office administrative costs	LS			221,449	11,072
	<b>Subtotal</b>				<b>1,527,185</b>	<b>76,359</b>
	<b>Grand Total</b>				<b>5,532,185</b>	<b>276,609</b>

Note: exchange rate used is £1 = Birr 20.


Programme  
Area



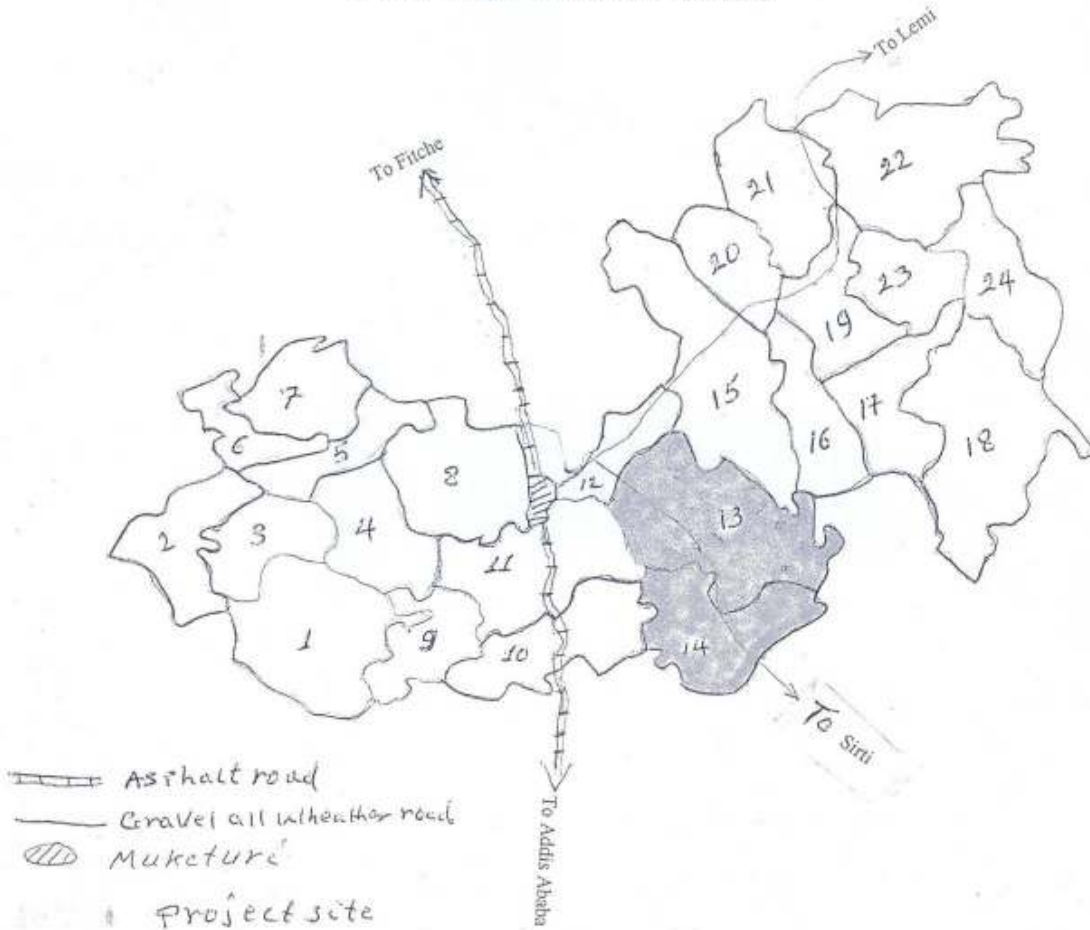
# Sketch map of Jidda Woreda



- Kebeles
1. Siba Sirti
  2. Wayna Dega Nesri
  3. Gogle nesri Godeti
  4. Siba dega
  5. Haro Abo
  6. Aria kelate
  7. Debeli Gänjö
  8. Gango
  9. Arebsa Chifara
  10. Ariya Gadula
  11. Ayida Dawa
  12. Wayna Kore
  13. Dega Golba

 Gravel all weather road  
Sirti

Sketch map of Wuchale Woreda



Kebeles

1. Nono
2. Bacho fe
3. Bole bacho
4. Kaso Abo
5. Akako dayu
6. Ano Bilu
7. Bodeya Gimbicho
8. Harkiso
9. Gebreal Guto
10. Boseke Jate
11. Gora Keteba
12. Mechela Wortu
13. Adere Gordoma
14. Ingoye Gordoma
15. Ely Egu Egoro
16. Galmo
17. Ichiko Kura
18. Walanso Aroji
19. Bidaru
20. Abu ifachi
21. Elu Eteya
22. Usumani
23. Sadani
24. Gomoro Sabo

- Asphalt road
- Gravel all weather road
- Muketure
- Project site