



Project Proposal

Organization	FAO (Food & Agriculture Organization of the United Nations)		
Project Title	Improving water supply availability to drought affected communities in Dollow, Baardheere and Garbahaarey districts, in Gedo Region, through identification of sustainable groundwater resources		
CHF Code	CHF-DDA-3485-746		
Primary Cluster	Water, Sanitation and Hygiene	Secondary Cluster	
CHF Allocation	Standard Allocation 1 (Feb 2015)	Project Duration	12 months
Project Budget	200,000.00		
HRP Details	HRP Code	SOM-15/WS/71454	HRP Budget
	HRP Project Ranking	A - HIGH	HRP Gender Marker
			1,000,000.00

Project Beneficiaries	Men	Women	Total
Beneficiary Summary	18,750	18,750	37,500
	Boys	Girls	Total
	18,750	18,750	37,500
	Total		75,000
Total beneficiaries include the following:			
Aid Agencies	200	0	200
Staff (own or partner staff, authorities)	20	0	20

Implementing Partners

Organization focal point contact details
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BACKGROUND INFORMATION

1. Project rationale. Humanitarian context: Give a specific description of the humanitarian situation in the target region based on newest data available (indicate source) (Maximum of 1500 characters)	The water supply situation in Somalia is poor, particularly in rural areas where women and children cover long distances in the dry season to collect water for domestic and livestock use. According to a recent study by SWALIM, FSNAU and UNICEF, 71% of the Somali population have no access to an improved source of water. As a result, the population, particularly women and children live under harsh conditions which expose them to diseases associated to unsafe water and even experience sexual gender based violence as they search for water. Gedo Region in south Somalia is one of the worst affected areas by re-current droughts in the country. Rainfall performance has been below average for many parts of the region in the recent past, resulting high costs for water provision through long distance trucking.
2. Needs assessment. Describe the capacities in place, then identify the gaps (previous and new). Explain the specific needs of your target group(s) in detail. State how the needs assessment was conducted (who consulted whom, how and when?). List any baseline data	Gedo Region relies more on groundwater resources, apart from the communities living along the Juba River. However there is limited geological and hydrogeological information to guide extraction of groundwater through borehole drilling. Investigations needs to be done to locate areas where good quality water can be tapped. A recent study by Gedo Technical Working Group of the WASH cluster identified through remote sensing analysis that many of the aquifers in the region have medium potential. The study however relied on limited available data, and gave a recommendation for further hydrogeological surveys. A rapid assessment carried out by WASH cluster in parts of the region in February 2014 identified that 54.8% of residents in some districts of Gedo did not have any access to water sources. Majority of the villages depend on un-reliable water sources such as berkads and shallow wells which dry out soon after the rains forcing people to travel long distances (between 1 and 50 Km) to search for water. Many water sources do not also provide safe drinking water, thus exposing the communities to health problems. To improve access to safe drinking water for the communities in Dollow and Garbahaarey districts there is great need for geological and hydrogeological investigations. These investigations help to locate aquifers with sustainable amounts of good quality water for drillers and intervening agencies to establish boreholes for the communities.
3. Activities. List and describe the activities that your organization is currently implementing to address these needs	This project will be implemented by FAO under its Somalia Water and Land Information Management - SWALIM Project. SWALIM continues to deliver timely and relevant water and land information to inform emergency response, early warning and preparedness. SWALIM supports the humanitarian community on preparedness through provision of analysis and trends on flood and drought prone areas, which are used to develop contingency and response plans, and in-depth analysis and projections of underlying climatic and ecological factors that trigger emergencies in Somalia. Major activities include assessment of rural and urban water supply, several inventories of strategic water sources, and the hydrogeological survey and assessment of selected areas in Somaliland and Puntland. SWALIM is also active member of the WASH technical working group looking at sustainable solutions to water stress in Gedo Region. Currently, SWALIM is undertaking a geophysics and hydrogeology investigation for Ceel Waaq District of Gedo Region which is similar to what is proposed for this project. Risk and mitigation measures for this project will follow the overall FAO Somalia risk management framework which will be adjusted during implementation.

LOGICAL FRAMEWORK

Objective 1	Water availability increased through guided borehole drilling using up to date hydrogeological information		
Outcome 1	Potential groundwater zones identified with good accuracy to support drilling of sustainable boreholes in Dollow, Baardheere and Garbahaarey districts of Gedo region		
Activity 1.1	Review of existing secondary data and resources for Dollow, Garbahaarey and Baardhere districts: This includes topographical maps, existing studies, existing borehole logs, geological reports and maps, water quality records, etc. The available information will be analyzed to provide basic understanding of groundwater resource situation in the three districts. Findings of this review will be presented in an interim report and used to plan and guide the actual field surveys.		
Activity 1.2	Geophysical and Hydro-geological field data collection in Dollow, Garbahaarey and Baardhere districts: The geophysical investigations will be done at 20 sites (5 in Dollow, 10 in Garbahaarey and 5 in Baardhere districts) using Vertical Electrical/IP Soundings technology. GPS Coordinates, Photos etc of the investigation sites will also be collected. For the Hydrogeological data collection visits will be done to existing water sources in the three districts and information collected on GPS co-ordinates, static water level, yield, basic water quality (EC, pH, TDS), water usage, ownership, and other parameters specified in the SWIMS field standard data collection forms. At least one photo and a water sample will be taken for each source visited for detailed laboratory analysis. Details on the study area are available in the attached document "Area to be Investigated"		
Activity 1.3	Data analysis and interpretation: Preliminary and final hydrogeology and geophysics data analysis and interpretation will be done, and presentation on the findings done to the WASH Cluster. The geophysics data interpretation and analysis will include generation of resistivity curves and estimation of groundwater availability, depths and recommendations for drilling. A detailed ground water resources database and technical report will be compiled with accompanying information products including raw and processed data on hydrogeology and geophysics investigations, proposed drilling depths, etc.		
Indicators for outcome 1	Cluster	Indicator description	Target
		Number of people with sustained access to safe water	75000

	Indicator 1.1	Water, Sanitation and Hygiene		
	Indicator 1.2	Water, Sanitation and Hygiene	Number of sites investigated for groundwater potential	20
	Indicator 1.3	Water, Sanitation and Hygiene	Hydrogeology and geophysics investigations technical report with drilling recommendations	1
Outcome 2				
Activity 2.1				
Activity 2.2				
Activity 2.3				
Indicators for outcome 2				
		Cluster	Indicator description	Target
	Indicator 2.1			
	Indicator 2.2			
	Indicator 2.3			
Outcome 3				
Activity 3.1				
Activity 3.2				
Activity 3.3				
Indicators for outcome 3				
		Cluster	Indicator description	Target
	Indicator 3.1			
	Indicator 3.2			
	Indicator 3.3			

WORK PLAN

Implementation: Describe for each activity how you plan to implement it and who is carrying out what

The hydrogeology and geophysics investigations for Dollow, Baardheere and Garbahaarey districts will be carried out by the Somalia Water and Land Information Management Project (SWALIM) of the Food and Agriculture Organization through three major activities: Collection and collation of existing hydro-geology information and data for the three districts, and undertake a preliminary analysis (including limited satellite image analysis) to provide basic understanding of groundwater resource situation; Identification of the 20 investigation sites across Dollow, Baardheere and Garbahaarey districts in consultation with the WASH cluster and partners, and undertake geophysical and hydro-geological investigations of the selected sites; Compilation of a detailed ground water resources database and technical report and accompanying information products including geophysical investigation logs, layers resistivity, groundwater potential maps and recommended drilling information. FAO SWALIM will collaborate closely with the WASH cluster and provide updates on the progress made in the implementation of the activities. The final results will be presented to the WASH cluster.

Project workplan for activities defined in the Logical framework	Activity Description	Month 1-2	Month 3-4	Month 5-6	Month 7-8	Month 9-10	Month 11-12	
	Activity 1.1 Review of existing secondary data and resources for Dollow, Garbahaarey and Baardhere districts: This includes topographical maps, existing studies, existing borehole logs, geological reports and maps, water quality records, etc. The available information will be analyzed to provide basic understanding of groundwater resource situation in the three districts. Findings of this review will be presented in an interim report and used to plan and guide the actual field surveys.	X						
	Activity 1.2 Geophysical and Hydro-geological field data collection in Dollow, Garbahaarey and Baardhere districts: The geophysical investigations will be done at 20 sites (5 in Dollow, 10 in Garbahaarey and 5 in Baardhere districts) using Vertical Electrical/IP Soundings technology. GPS Coordinates, Photos etc of the investigation sites will also be collected. For the Hydrogeological data collection visits will be done to existing water sources in the three districts and information collected on GPS co-ordinates, static water level, yield, basic water quality (EC, pH, TDS), water usage, ownership, and other parameters specified in the SWIMS field standard data collection forms. At least one photo and a water sample will be taken for each source visited for detailed laboratory analysis. Details on the study area are available in the attached document "Area to be Investigated"		X	X	X	X		
	Activity 1.3 Data analysis and interpretation: Preliminary and final hydrogeology and geophysics data analysis and interpretation will be done, and presentation on the findings done to the WASH Cluster. The geophysics data interpretation and analysis will include generation of resistivity curves and estimation of groundwater availability, depths and recommendations for drilling. A detailed ground water resources database and technical report will be compiled with accompanying information products including raw and processed data on hydrogeology and geophysics investigations, proposed drilling depths, etc.							X

M & E DETAILS

Activity Description	M & E Tools to use	Means of verification	Month (s) when planned M & E will be done													
			1	2	3	4	5	6	7	8	9	10	11	12		
Activity 1.1 Review of existing secondary data and resources for Dollow, Garbahaarey and Baardhere districts: This includes topographical maps, existing studies, existing borehole logs, geological reports and maps, water quality records, etc. The available information will be analyzed to provide basic understanding of groundwater resource situation in the three districts. Findings of this review will be presented in an interim report and used to plan and guide the actual field surveys.	- Other	Database, maps and interim report		X												
Activity 1.2 Geophysical and Hydro-geological field data collection in Dollow, Garbahaarey and Baardhere districts: The geophysical investigations will be done at 20 sites (5 in Dollow, 10 in Garbahaarey and 5 in Baardhere districts) using Vertical Electrical/IP Soundings technology. GPS Coordinates, Photos etc of the investigation sites will also be collected. For the Hydrogeological data collection visits will be done to existing water sources in the three districts and information collected on GPS co-ordinates, static water level, yield, basic water quality (EC, pH, TDS), water usage, ownership, and other parameters specified in the SWIMS field standard data collection forms. At least one photo and a water sample will be taken for each source visited for detailed laboratory analysis. Details on the study area are available in the attached document "Area to be Investigated"	- Data collection - GPS data - Photo with or without GPS data - Survey - Verification	20 sites investigated for borehole drilling (10 in Garbahaarey, 5 in Dollow and 5 in Baardheere districts); hydrogeology data collected on existing water sources in the three districts								X	X					

Activity 1.3 Data analysis and interpretation: Preliminary and final hydrogeology and geophysics data analysis and interpretation will be done, and presentation on the findings done to the WASH Cluster. The geophysics data interpretation and analysis will include generation of resistivity curves and estimation of groundwater availability, depths and recommendations for drilling. A detailed ground water resources database and technical report will be compiled with accompanying information products including raw and processed data on hydrogeology and geophysics investigations, proposed drilling depths, etc.

- Other

GIS database, study report, proposed drilling depths for the 20 investigated sites

X X

OTHER INFORMATION

Coordination with other Organizations in project area	Organization	Activity
	1. WASH Cluster	Identification of investigation sites and updating of hydrogeology data
	2. Somali Government	Coordination of field surveys
	3. District administrations	Field data collection and training activities
	4. Gedo Technical Working Group	Preliminary analysis for groundwater potential classification in Gedo region
Gender theme support	Yes	
Outline how the project supports the gender theme	Women and men will be involved throughout project implementation and equal representation will be ensured. Field data collection in Somalia is difficult and requires extensive and long travel distances with teams in many cases spent the nights away from their families. Given the Somali culture, participation of women in this activity is not foreseen. The project will ensure all data collected in the field is dis-aggregated according to gender. Women and children are mostly affected by lack of water, and the results of this study will improve their lives by increasing water availability and reducing the time spent searching for water. On the other hand, this study will result in improved water for livestock production and other economic activities where men are involved.	
Select (tick) activities that supports the gender theme	<input checked="" type="checkbox"/> Activity 1.1: Review of existing secondary data and resources for Dollow, Garbahaarey and Baardhere districts: This includes topographical maps, existing studies, existing borehole logs, geological reports and maps, water quality records, etc. The available information will be analyzed to provide basic understanding of groundwater resource situation in the three districts. Findings of this review will be presented in an interim report and used to plan and guide the actual field surveys.	
	<input checked="" type="checkbox"/> Activity 1.2: Geophysical and Hydro-geological field data collection in Dollow, Garbahaarey and Baardhere districts: The geophysical investigations will be done at 20 sites (5 in Dollow, 10 in Garbahaarey and 5 in Baardhere districts) using Vertical Electrical/IP Soundings technology. GPS Coordinates, Photos etc of the investigation sites will also be collected. For the Hydrogeological data collection visits will be done to existing water sources in the three districts and information collected on GPS co-ordinates, static water level, yield, basic water quality (EC, pH, TDS), water usage, ownership, and other parameters specified in the SWIMS field standard data collection forms. At least one photo and a water sample will be taken for each source visited for detailed laboratory analysis. Details on the study area are available in the attached document "Area to be Investigated"	
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BUDGET

A:1 Staff and Personnel Costs	1.1 International Staff									
	Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount(USD)	Organization	CHF	%charged to CHF
	1.1.1	Hydrogeologist Team Leader	1	9000	2	Month	18,000.00	0.00	18,000.00	
	1.1.2	Geophysist	1	6750	2	Month	13,500.00	0.00	13,500.00	
	1.1.3									
	1.1.4									
	1.1.5									
	1.1.6									
	1.1.7									
	1.1.8									
	1.1.9									
	1.1.10									
	Subtotal					31,500.00	0.00	31,500.00		
Budget Narrative:										
	1.2 Local Staff									
Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount(USD)	Organization	CHF	%charged to CHF	
1.2.1	National Consultant - Hydrologist	1	3000	3	Month	9,000.00	0.00	9,000.00		
1.2.2	National Consultant - GIS Officer	1	3000	3	Month	9,000.00	0.00	9,000.00		
1.2.3	National Consultant - Remote Sensing Officer	1	3000	3	Month	9,000.00	0.00	9,000.00		
1.2.4	National Consultant - Operations Assistant	1	2000	3	Month	6,000.00	0.00	6,000.00		
1.2.5										
1.2.6										
1.2.7										
1.2.8										
1.2.9										

1.2.10										
Sub Total							33,000.00	0.00	33,000.00	
Budget Narrative:										
B:2 Supplies, Commodities, Materials	Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount (USD)	Organization	CHF	%charged to CHF
	2.1.1									
	2.1.2									
	2.1.3									
	2.1.4									
	2.1.5									
	2.1.6									
	2.1.7									
	2.1.8									
	2.1.9									
	2.1.10									
	Sub Total							0.00	0.00	0.00
Budget Narrative:										
C:3 Equipment	Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount(USD)	Organization	CHF	%charged to CHF
	3.1.1	Hydrogeological and IT equipment	2	5000	1	One time	10,000.00	0.00	10,000.00	
	3.1.2									
	3.1.3									
	3.1.4									
	3.1.5									
	3.1.6									
	3.1.7									
	3.1.8									
	3.1.9									
	3.1.10									
	Sub Total							10,000.00	0.00	10,000.00
Budget Narrative:										
D:4 Contractual Services	Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount(USD)	Organization	CHF	%charged to CHF
	4.1.1	Hydrogeological field survey contract	1	80000	1	Lumpsum	80,000.00	0.00	80,000.00	
	4.1.2	Laboratory testing of water samples	60	100	1	Lumpsum	6,000.00	0.00	6,000.00	
	4.1.3	Presentation of survey results in Mogadishu and Nairobi	2	885	1	Day	1,770.00	0.00	1,770.00	
	4.1.4									
	4.1.5									
	4.1.6									
	4.1.7									
	4.1.8									
	4.1.9									
	4.1.10									
	Sub Total							87,770.00	0.00	87,770.00
Budget Narrative:										
E:5 Travel	Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount(USD)	Organization	CHF	%charged to CHF
	5.1.1	Vehicle rental for field survey	2	120	60	Day	14,400.00	0.00	14,400.00	
	5.1.2	Freight and transport	1	1000	1	Trips	1,000.00	0.00	1,000.00	
	5.1.3	Transport for water samples to Nairobi	1	3000	1	Trip	3,000.00	0.00	3,000.00	
	5.1.4									
	5.1.5									
	5.1.6									

5.1.7										
5.1.8										
5.1.9										
5.1.10										
Sub Total						18,400.00	0.00	18,400.00		

Budget Narrative:

F:6 Transfers and Grants to Counterparts

Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount (USD)	Organization	CHF	%charged to CHF
6.1.1	Money vendor cost	1	245.65	1	one time	245.65	0.00	245.65	
6.1.2									
6.1.3									
6.1.4									
6.1.5									
6.1.6									
6.1.7									
6.1.8									
6.1.9									
6.6.10									
Sub Total						245.65	0.00	245.65	

Budget Narrative:

G:7 General Operating and Other Direct Costs

Code	Budget Line Description	Units	Unit Cost	Duration	TimeUnit	Amount (USD)	Organization	CHF	%charged to CHF
7.1.1	Stationary and office materials	1	500	3	Month	1,500.00	0.00	1,500.00	
7.1.2	Office Rent	1	1000	3	Month	3,000.00	0.00	3,000.00	
7.1.3	Communication	1	500	3	Month	1,500.00	0.00	1,500.00	
7.1.4									
7.1.5									
7.1.6									
7.1.7									
7.1.8									
7.1.9									
7.1.10									
Sub Total						6,000.00	0.00	6,000.00	

Budget Narrative:

TOTAL						186,915.65	0.00	186,915.65		
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H.8 Indirect Programme Support Costs

Code	Budget Line Description	Amount(USD)	Organization	CHF	%charged to CHF
8.1.1	Indirect Programme Support Costs	0.00	0.00	13,084.35	7.0001
GRAND TOTAL		186,915.65	0.00	200,000.00	

Other sources of funds

Description	Amount	%
Organization	0.00	0.00
Community	0.00	0.00
CHF	200,000.00	100.00
Other Donors	a)	0.00
	b)	0.00
TOTAL	200,000.00	

LOCATIONS

Region	District	Location	Standard Cluster Activities	Activity	Beneficiary Description	Number	Latitude	Longitude	P.Code
Gedo	Baardheere	Baardheere			Rural and urban women and men	25000	2.339935	42.285981	NA-3805-R07-011
Gedo	Doolow	Doolow			Rural and urban women and men	25000	4.16358	42.07617	NB-3813-W02-001
Gedo	Garbahaarey	Garbahaarey			Rural and urban women and men	25000	3.328	42.219879	NA-3801-S05-001
TOTAL						75,000			

DOCUMENTS

Document Description

1. Areas to be Investigated
2. BOQ Hydrogeology and IT Equipment
3. Direct Costs