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Ethiopia**

**Ministry of Economic and Financial
Development**

**Bureau of Economic and Financial
Development**

The Republic of Finland

**Ministry of Foreign
Affairs**

FinnWASH-BG Programme

**FINAL REPORT
JULY 2009 - JUNE 2015
(Closing July - October 2015)**



**OCTOBER 2015
Assosa**



COVER PAGE

Programme Fact sheet

Programme Title	<i>Rural Water Supply, Sanitation and Hygiene Programme in Benishangul – Gumuz Regional State (FinnWASH-BG)</i>
Programme Number	<i>MFA’s Intervention Code: 23815401</i>
Sector	<i>Social Development</i>
Sub-sector	<i>Water supply and sanitation</i>
Geographical Coverage and Programme sites	<i>Metekel Zone of Benishangul – Gumuz Region, Ethiopia (Dibate, Bullen, Pawe, Mandura and Wombera Woredas</i>
Original duration	<i>July 2009 – June 2013 Implementation Phase</i>
Extension period	<i>July 2013 - June 2015 Implementation Phase</i>
Exit period	<i>July 2015 - October 2015 - Closing</i>
Programme Financing Government of Finland Government of Ethiopia Communities	<i>Total grant from GoF EUR 11,409,563; Total contribution of Benishangul-Gumuz Regional State ETB 11,574,470 (equals EUR 890,334); Total contribution of communities ETB 7,365,000 (equals 536,538).</i>
Beneficiaries	<i>293,879 (population in FinnWASH working area - updated</i>
Overall Objective	<i>Universal access to improved water supply, sanitation and hygiene in Metekel Zone of Benishangul Gumuz Regional State</i>
Programme Purpose	<i>Improved access to safe drinking water supplies, hygienic sanitation, and hand washing facilities in Programme Woredas.</i>
Executing Bodies	<i>Water, Mines and Energy Resources Development Bureau (WMERDB) in partnership with Bureau of Health (BoH), Bureau of Education (BoE) and Bureau of Women, Youth & Children’s Affairs (BoWYCA).</i>
Competent Authorities	<i>The Ministry of Finance and Economic Development (MoFED) represented at the Regional level by the Bureau of Finance and Economic Development (BoFED). The Ministry for Foreign Affairs of Finland / Embassy of Finland in Ethiopia.</i>

Type of Report:

Final Report July 2009 - June 2015

Date and Location:

September 2015, in Assosa, Benishangul - Gumuz Regional State

Preparation of the Report:

Facts delivery by Woredas, Zonal Offices, Bureaux, TA Field Staff . Compiled by Team Leader Tapio Niemi.

Distribution:

- All Bureaux (Water, Health, Education, Women, Youth and Children and BoFED)
- Finnish Embassy and MFA
- Niras Home Office



Rural Water Supply, Sanitation and Hygiene Programme in Benishangul - Gumuz
Regional State, Ethiopia, FinnWASH-BG - Implementation Phase



List of Abbreviations

AIDS	Acquired Immunodeficiency Syndrome
ANRS	Amhara National Regional State
ARDO	Agriculture & Rural Development Office
BGCSI	Benishangul-Gumuz Credit and Saving Institution
BGMFSCo	Benishangul-Gumuz Micro Financing Share Company
BGNRS	Benishangul-Gumuz National Regional State
BH	Borehole
BoARD	Bureau of Agriculture and Rural Development
BoE	Bureau of Education
BoFED	Bureau of Finance and Economic Development
BoH	Bureau of Health
BSF	Bio Sand Filter
CDF	Community Development Fund
CIDA	Canadian International Development Agency
CLTS+H	Community Led Total Sanitation and Hygiene
CMP	Community Managed Project
CPAR	Canadian Physicians for Aid and Relief
CSA	Central Statistical Agency
CT	Care Taker (for springs)
DA	Development Agent
DFID	Department for International Development
EFY	Ethiopian Fiscal Year
EIA	Environmental Impact Assessment
EMA	Ethiopian Mapping Agency
ETB	Ethiopian Birr
EU	European Union
EUR	Euro
EUWI	EU Water Initiative
FA	Field Advisor
FTC	Farmer Training Centre
GBCTE	Gilgel Beles College of Teacher Education
GIS	Geographic Information System
GoE	Government of Ethiopia
GoF	Government of Finland
GPS	Geographic (Global) Positioning System
HDPE	High Density Polyethylene Pipe
HDW	Hand Dug Well
HEW	Health Extension Worker
HIV	Human Immunodeficiency Virus
HRD	Human Resource Development
HTP	Harmful Traditional Practice
HWF	Hand Washing Facility
IEC	Information, Education and Communication
IHS	Improved Hygiene and Sanitation
IO	Information Office
IRFA	Initial Rapid Field Appraisal
JPO	Junior Programme Officer
JTR	Joint Technical Review
KWT	Kebele WASH Team
Lpcd	litre per person per day
M&E	Monitoring and Evaluation
m.a.s.l.	Meters above the sea level
MDG	Millennium Development Goal
MFA	Ministry for Foreign Affairs of Finland
MIS	Monitoring & Information System
MoE	Ministry of Education
MoFED	Ministry of Finance and Economic Development



MoH	Ministry of Health
MoU	Memorandum of Understanding
MoWR	Ministry of Water Resources
MP	Member of Parliament
MSF	Multi Stakeholder Forum
MTR	Mid Term Review
MWI	Medical Waste Incinerator
NGO	Non-governmental Organization
O&M	Operation & Maintenance
ODF	Open Defecation Free
PA	Pump Attendant
PASDEP	Plan for Accelerated and Sustained Development to End Poverty
PC	Programme Coordinator
PD	Programme Document
PIF	Programme Implementation Framework
PIM	Project Implementation Manual
PMC	Programme Management Committee
PTA	Parent-Teacher Association
RiPPLE	Research Inspired Policy and Practice Learning in Ethiopia and the Nile Region
RSC	Regional Steering Committee
RWSC	Regional WASH Steering Committee
RWSEP	Rural Water Supply and Environmental Programme
RWTT	Regional WASH Technical Team
S.D.	Spring Development
SDPRP	Sustainable Development and Poverty Reduction Program
SW	Shallow well
TA	Technical Assistance
TL	Team Leader
ToR	Terms of Reference
ToT	Training of Trainers
TVET	Technical and Vocational Education and Training
UAP	Universal Access Plan
UN	United Nations
UNICEF	United Nations Children's Fund
USD	United States Dollar
VIPL	Ventilated Improved Pit Latrine
WA	Woreda Administration
WASH	Water, Sanitation and Hygiene
WASH-BG	Water Supply, Sanitation and Hygiene in Benishangul-Gumuz
WASHCO	Water, Sanitation and Hygiene Committee
WHO	World Health Organization
WIF	WASH Implementation Framework (latest version from PIF)
WMERDB	Water, Mines and Energy Resources Development Bureau
WOFED	Woreda Office of Finance and Economic Development
WRDF	Water Resources Development Fund
WSC	Woreda Steering Committee
WSDP	Water Sector Development Programme (2002)
WSG	Woreda Support Group
WSS	Water Sector Strategy (2001)
WSSA	Water Supply and Sanitation Advisor
WTD	Water Technology Department
WTWASHT	Woreda Technical WASH Team
WTWASHT	Woreda Technical WASH Team
WUA	Water Users' Association
WWUA	Woreda Water Users' Association / Woreda Water User Association for Sparte Parts
WYCAB	Women, Youth, Children Affairs Bureau
WYCAO	Women, Youth, Children Affairs Office
ZCC	Zone Coordination Committee
ZoFED	Zonal Office of Finance and Economic Development



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1 Executive Summary

1.1 Short Overview of the Programme

FinnWASH- BG Programme started mid of April 2008 in the Region with a 15-month long Planning Phase and continued uninterrupted with the Implementation Phase from July 2009 - June 2013. Programme got a non-cost extension from July 2013 to June 2015 and further a 4-month Exit phase of July - October 2015.

During the Planning phase the Community Development Fund (CDF) approach was tested and transferred to Metekel zone with completed 73 Hand Dug Wells (HDW). Tender bidding was completed in May 2009, Consultant selected and subsequently work plans and budgets prepared and approved for the 1st year's implementation in May - August 2009.

FinnWASH-BG has now completed 6 implementation years. Programme has assisted water to 239,041 people out of the working area's population of 293,879. The Universal Access Plan (UAP) has on an average increased by 90,1% in Bullen, Dibate, Mandura and Pawe woredas when it remains by 53.3% in Wombera. Average of all woredas is 81,1%.

There are 106 Health Centers / Hospitals in which FinnWASH assisted with 58 water points increasing the coverage by 55% and 56 units of 2-door VIPL increasing coverage by 54% and assisting with 71 Medical Waste Incinerators thus increasing the coverage by 69%.

Average Community contribution was 13.69 % of all investments, which is a substantial amount and talks for the strength of CDF concept. It increases the Communities ownership in the water schemes thus rendering sustainability. Altogether GoF invested Birr 101,274,387 in water, VIPL and Incinerators including the 7 % commission of BGCSI.

GoE budget cumulative expenditure 2009 - 2014 was Birr 9,183,193 against the committed Birr 11,574,472 as defined in Programme Document .The remaining amount of Birr 2,391,278 is well in balance with the required GoE budget needs for the 6th year based on the previous experience. It also can be projected that GoE will be reaching the total committed budget obligation of Birr 11,574,472 towards FinnWASH-BG Programme as agreed in PD. The planned budget for 6th year of GoF Birr was 21,363,664.

Big innovative schemes are Ali Spring, Abatachin motorized gravity scheme, Motorized schemes in Berber, Galessa, Senkora, and Solar powered Shallow well in Gesengesa. Advanced Gravity schemes are in Gocher and Dafili and big Protected Springs in Village 45 and 46 and others medium Springs in Wombera woreda.

FinnWASH-BG developed Spare Part Supply System where every woreda has formed a WWUA for spare parts which is the unity of all individual WASHCOs of their woreda. FinnWASH-BG supported the construction of Spare Part Store and conducted mgt training for the WWUA. The WWUA is expected to manage the store by their own funding and personell. The accumulated WASHCO savings on BGCSI accounts in five woredas are Birr 1,142,569 which is remarkable and a good indicator for the water point sustainability.

Programme carried out a comprehensive functionality inventory on all investments. 85 % of FinnWASH - constructed operational facilities were visited. Out of 948 studied operational facilities (includes different water point types, latrines and medical waste incinerators) 870 were functional during the time of the survey which gives us 88.4 % overall functionality, which can be considered as an excellent result. From communal water points 713 out of the total 816 were studied and 625 of them were functional which gives 87.7 % functionality rate based on a 6-year experience. This indicates that CDF/CMP system is sustainable.



Illness reduction

Illness in the area was reported to have reduced after the construction of the water point in 672 water point out of 685 answered giving 98 % illness reduction rate according to the end users. **This excellent result meets one of the set targets of FinnWAS-BG.**

Quality of the water

Average of the water quality in 674 answered points was 4.65 on the scale 1-5 where "1" was considered "very bad" as 5 "very good". Water quality is therefore assessed as very good by the users.

Amount of collected water by household

Average of woreda averages in amount of water collected by households in jerry cans was 3.3 during the dry season and 3.4 during the wet season in answered 660 water points. The UAP of GoE defines the community water target; 15 liter water / person / day / 1.5 km radius from household, which counts 75 liter water per day / household. Note ,that the standard 20 liter jerry can hold 22 liters of water when filled to the rim which users always do. $3.3 / 3.4 \text{ jerry cans} \times 22 \text{ liter} = 72.6 - 74.8 \text{ liters}$ which is the targeted result.

Water point functionality was 92 %, VIPLs were used to 98% in health institutions and to 83% in Schools. Incinerators used to 98%. More details in chapter to Functionality inventory.

According to Bureau of Health statistic the household sanitation has risen to 75.6% in Programme woredas from the 15%, as estimated during the Planning Phase. Table 4-9 WASH Coverage in Woredas according Woreda Offices.

TA Team was very motivated, qualified and worked throughout with the same Experts and Support Staff thus giving sustainability to the actions in the field and capacity building. TA staff had 4 Nissan Patrol cars each running 220,000 km and one Toyota Single cabin Pick-up running 130,000km. No major accidents happened and cars were handed over in good working condition with a set of new tyres, oil and filters changed and washed in and out.TA had its own operational budget which granted smooth and uncomplicated operation.

1.2 Statement on how the Programme is contributing to objectives

FinnWASH-BG (Water supply, Sanitation and Hygiene) has achieved the targets as set in the Programme Document aiming to accelere the overall community development through better health for the total population - including women, girls and marginal groups. Through WASH people are healthier and can work better and save money on health costs. Through school interventions pupils have water and have improved sanitation and higher school attendance - especially for girls when there is VIPL separately constructed for girls and boys in all schools. Many kebeles have achieved ODF status.

1.3 Statement on how the Programme has been able to deliver the outputs

FinnWASH-BG is working through the GoE Governmental system throughout - Bureaux, Zone, Woreda, Kebele. The Bureaux of Water, Health, Education and WYCA have MoU on WASH promotion in BG. FinnWASH-BG has three main components in its budget. A) Community Capacity Building, B) CDF Investments, and C) Capacity building in Bureaux, Zone, Woredas.

Annually FinnWASH-BG is preparing the Work plans and Budgets for all 5 Bureaux, 5 Zonal Offices and 5 Woreda Offices in all 5 Woredas; all together it counts for 35 individual Work plans and Budgets.

There has been moderate TA / WSG support in planning and implementation, which has proved to be vital for the work continuity / efficiency since the GoE staff turn-over has been rapid throughout the Programme requiring constant capacity building. When the CDF/CMP concept was introduced to BG



/ Metekel Zone it required TA component for the rapid start-up of the WASH implementation. WSG assistance was for 4 years.

1.4 CDF / CMP Approach

How CDF/CMP works:

1. **Funds committed.** In FinnWASH-BG funds were from Finland.
2. **Financing channel established.** In FinnWASH Programme it was from MFA - BoFED in Assosa - BGCSI - WASHCO. It worked uncomplicated. BGCSI took 7 % commission.
3. **Approach promoted.** FinnWASH had a substantial Community capacity budget, which was channelled through Woreda Offices to activate Communities. Woreda Officers received CDF / Gender / Sanitation trainings as ToT.
4. **Communities organize and plan.** WASHCOs were formed and plans were made for water development. WASHCOs also promised to build their own traditional pit latrines when they signed their water point construction agreement. Many kebeles were declared ODF.
5. **Training and private sector development.** WASHCOs were trained in all aspects of construction and management. Artisans were trained. Care Takers to water points were trained. Artisan Associations were supported which constructed Springs, Gravity schemes and HDWs.
6. **Approval.** In FinnWASH the Woreda Water Offices / Woreda WASH Committees approved WASHCO plans.
7. **Community contribution.** In FinnWASH the community contribution was substantial 13.7 % of all investment costs. WASHCO savings are Birr 1,2 million in 5 woredas to sustain the water points.
8. **Construction fund released;** In FinnWASH the funds were released by woreda BGCSI branches after initial approval of Woreda Water Office.
9. **Construction.** Communities participated in labour and providing locally available materials. Communities controlled the Artisans on work quality and payments.
10. **Completion.** In FinnWASH His Excellency of President Ahmed Nasser opened Berber, Dafili and Senkora water schemes. Other WASHCOs had smaller celebrations.

1.5 Key findings and recommendations

FinnWASH-BG was progressing well, despite of the challenging working environment in BG with less developed infrastructure, long distance between Assosa and Metekel Zone, communication difficulties, and rapid staff turn-over of GoE staff.

Ali Spring rehabilitation was started during the 5th implementation year after competitive bidding, selecting the winner and announcing the losers about the outcome. The Contractor's contract with Shodeb Engineering PLC was subsequently signed in June 2014 and the works handed over to the Contractor. The works were progressing well and completed in June 2015. Field Supervision was done with the assigned Site Engineer tesfaye Abdissa from WMERDB with assistance of TA.

Ali Spring rehabilitation had a long preparation period - Drafting TOR for the feasibility study - Competitive bidding for the study - Selection of the winner - Making the study including two round of revisions - Assessment of Diga dam feasibility to be included into the Ali Spring rehabilitation - 1st bidding for Ali Spring - 1st selection of the bidding - Cancellation by Embassy of the 1st bid outcome - 2nd bidding - Selection of the winner - Contract signing - Starting of the works. The finding is that it is not to achieve big rehabilitation works. Further the finding is that in BG it usually takes 2 x longer to achieve than planned.

The experience shows that an cost/effective WASH Programme can be launched within a short period of time in a less developed Regional state in Ethiopia. The experience further shows that there is a certain capacity balance in the woredas to perform the annual planned works since the woreda offices have many other duties besides of WASH. Balanced planning and implementation period to cover



100% UAP in woreda could be estimated to last 6-8 years - since a 4 year project will definitely not be enough. According to FinnWASH-BG Programmes set-up - when all costs are included - Euro 45 is needed / head to achieve full WASH coverage, including community water, water and VIPLs in schools, VIPL, water and incinerators in health Posts / Hospitals. In other words; population of 1 million needs 45 Million Euro for a full WASH coverage.

1.6 Links to FinnWASH-BG Programme's Annual Reports

Please, find detailed annual reports for six consecutive years 2009 - 2015 in the link below;
Click to: [FinnWASH-BG - Annual Reports - 6 years](#)

2 Budget and Expenditure

2.1 General Set-up

The *objective of the Programme* was to capacitate communities to plan and manage their own water supply schemes services at all levels to implement and maintain sustainable community managed water and sanitation facilities with Community Development Fund (CDF).

CDF approach has helped to reduce cost per water points due to time saved, use of local construction materials and community labour. Procurement through WASHCOs is also much faster than Procurement by Government structure.

The design and technology used in CDF are simple enough and encouraging, which includes use of local Artisans, local materials and locally available tools and equipment. FinnWASH-BG proved that higher technology level water systems can also be accomplished by CDF.

CDF active involvement of the private sector, provision of local materials, equipment and services which are available at woreda level has had an importance for the success of the Programme.

Generally, CDF means that the rural communities are the end users of the investment funds, which gives the WASHCOs extraordinary opportunities to empower themselves, to manage resources in transparent manner, to make decisions, to familiarize with simple technologies, to create sustainable development and to contribute to building a safe, productive, energetic and health society. The new modality of CDF with its importance taking into account the Region was fully committed to the implementation of FinnWASH-BG Programme, both at political and practical implementation level.

However, there have been throughout some challenges in the implementation such as rapid staff turnover of GoE staff at all levels, continuous evaluation meetings in Woreda offices by Regional and Zone Officials and competition of time with other regular works done by woreda officials.

2.2 FinnWASH-BG Programme's Annual Budgets and Work Plans

2.3 Original Budget for 4 years



Table 2-1 Original Budget for FinnWASH-BG Programme

Budget Finn WASH-BG Implementation Phase July 2009 - June 2013 + (Extension period 2014 - 2015)				
Budget Contributions				
	GoF	GoE	Community	Total
Result 1 & 2: Community Implementation and CDF	5,300,000	487,298	566,538	6,353,836
Result 3: Woreda capacitated	1,000,000	328,646	0	1,328,646
Result 4: Regional and Zonal capacities enhanced	498,146	74,400	0	572,546
10% Contingency (for results 1-4)	680,000	0	0	680,000
Subtotal Results 1-4	7,478,146	890,344	566,538	8,935,028
TA Budget	3,892,550	0	0	3,892,550
GRAND TOTAL	11,370,696	890,344	566,538	12,827,578
Percentage of contribution	88.6%	6.9%	4.4%	

The total of original budget for FinnWASH-BG Programme was Euro 12,827,578 as defined in the Programme Document. The budget is distributed along GoF, GoE and Community Contribution. FinnWASH-BG got a non-cost extension of two years (July 2013 - June 2015) and further an exit period of July 2015 - October 2015.

2.3.1 Fund Transfers from Finland

Table 2-2 Fund Transfers from Finland

Year	Budget for 4 + 2 years	FinnWASH-BG - Fund transfers from MFA to BoFED					
		2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015
EURO	7,478,146	1,536,579	2,095,166	1,791,211	485,119	1,144,163	425,908
BIRR	160,067,944	28,396,292	37,479,709	42,009,089	11,660,900	29,951,470	10,570,483
Exchange rate		18.4802	17.8887	23.4529	24.0372	26.1776	24.8187
Annual transfer %		17.7%	23.4%	26.2%	7.3%	18.7%	6.6%
Balanced Exchange Rate							21.9105
Left over money from 5th year in GoE Bank A/C in Birr							23,405,794
Expenditure of the 6th year up to October 2015 in Birr							24,846,731
Total funds available for the remaining years in Birr							9,129,546

The table shows the fund transfers from Finland over the 6-year Programme period. There were no funds left in Finland since the last transfer was taking place in December 2014. The left over funds after FinnWASH-BG are Birr 9,129,546 which will be utilized by the Metekel woredas as planned and approved in the FinnWASH-BG Board meeting in June 2015. The weighted exchange rate over the 6 year period is 21,9105 which has been used in cost calculations.

The utilization of left over funds will be followed by the COWASH Programme, which will nominate 3 Local Technical Persons to monitor the activities. One of the FinnWASH-BG / TA Teams Nissan Patrol cars will serve COWASH until June 2016.

During 6th implementation year of FinnWASH-BG - the budgeted first, second, third and fourth quarters fund were transferred from Finland on 12 December 2014 amounting birr 10,570,482.88. Left-over money from 2006 E.C budget year at BoFED and Wordas Bank accounts was Birr 23,405,793.76.

BoFED transferred funds for the five programme Woredas, Zone and Bureaux a total of Birr 29,332,124.74 as per annual work plan.

2.4 Total Expenditure of GoF in Results 1-4



Table 2-3 Total Expenditure of GoF in Results 1-4

6 years - Summary expenditure		
	In EURO	In BIRR
Budget	7,478,146	160,067,944
Expenditure	6,903,718	150,938,398
Left over	574,428	9,129,546

Total cumulative funds received from GoF during the 6 years implementation period were Birr 160,067,943.82 or Euro 7,478,146 out of which Birr 150,938,398 or Euro 6,903,718 were utilized. Birr 9,129,546 or Euro 574,428 remained as left over funds. This shows an excellent fund utilization of 92% over the 6 year period in an challenging working environment. The left-over funds will be used in the 2008 Eth. fiscal year as decided in the FinnWASH-BG Board meeting in 18 June 2015 and monitored by the COWASH.

2.4.1 Cumulative Summary of Expenditure in Results 1-4

Table 2-4 Cumulative Summary of Expenditure in results 1-4 in BIRR

CUMULATIVE SUMMARY OF EXPENDITURE BY RESULT AREA in each implementation year in BIRR					
Fiscal Year	Expenditure in Birr				
	Result 1	Result 2	Result 3	Result 4	Total
2002(2009/2010)	1,310,215	11,649,927	6,760,700	5,070,755	24,791,597
2003(2010/2011)	2,146,521	16,210,954	5,255,638	2,172,347	25,785,460
2004(2011/2012)	2,667,598	23,010,047	4,595,925	1,653,690	31,927,260
2005(2012/2013)	2,196,211	20,130,854	4,235,489	844,529	27,407,083
2006(2013/2014)	2,498,188	9,683,232	3,231,486	767,361	16,180,267
2007(2014/2015)	1,940,284	20,589,372	1,755,982	561,093	24,846,731
Total	12,759,017	101,274,387	25,835,220	11,069,774	150,938,398

Table 2-5 Cumul. Summary of Fund Transfers, Left Over and and Exp. in Results 1-4 in EURO

CUMULATIVE SUMMARY OF ANNUAL FUND TRANSFERS, LEFT OVER FUNDS AND EXPENDITURE in each Implementation year in EURO									
Fiscal Year	Transfer		Left Over		Expenditure in Euro				Total
	Birr	Euro	Birr	Euro	Result 1	Result2	Result 3	Result 4	
2002(2009/2010)	28,396,292	1,536,579	3,604,695	195,057	70,898	630,400	365,835	274,388	1,341,522
2003(2010/2011)	37,479,709	2,095,166	11,694,249	653,724	119,993	906,214	293,797	121,437	1,441,442
2004(2011/2012)	42,009,089	1,791,211	10,081,829	429,876	113,743	981,117	195,964	70,511	1,361,335
2005(2012/2013)	11,660,900	485,119	-15,746,183	-655,076	91,367	837,488	176,206	35,134	1,140,195
2006(2013/2014)	29,951,470	1,144,163	13,771,203	526,068	95,432	369,905	123,445	29,314	618,095
2007(2014/2015)	10,570,483	425,908	-14,276,248	-575,221	78,178	829,591	70,752	22,608	1,001,129
Total	160,067,944	7,478,146	9,129,546	574,428	569,612	4,554,715	1,225,999	553,392	6,903,718

The above tables show that most of the funds were used in Results 1-2 in Community Capacity Building and CDF Investments in Water and Sanitation. Result 3 funds were used in Woreda Capacity building which also includes purchase of 5 Toyota Single Cabin Pick-ups - one of each of 5 Woredas, office refurbishment and computers. Result 4 is capacity building and office refurbishment in Regional Bureaux and Zonal Offices, which represents a moderate but an important contribution.

2.4.2 Summary of left over in Result areas 1-4 and Budget for 2015 - 2016



Table 2-6 Summary of left over in Result areas and Budget for 2015 - 2016

SUMMARY OF EXPENDITURE AND LEFT OVER FUNDS BY RESULT AREA for 6 years						Summary Budget for 7th year	
No.		Budget Euro	Expenditure up to June 2015		Left Over Euro	2008 (2015/2016) Budget	
			Euro	Birr		Birr	Euro
1	Result 1 & 2	5,300,000	5,124,328	114,033,404	175,672	6,398,561	402,595
2	Result 3	1,000,000	1,225,999	25,835,220	(225,999)	578,160	36,378
3	Result 4	498,146	553,392	11,069,774	(55,246)	1,309,440	82,389
4	Contingency	680,000			680,000	843,385	53,065
	Total	7,478,146	6,903,718	150,938,398	574,428	9,129,546	574,427

Table shows that there was overspending in Result 3 and 4 which were covered by Contingences. The Result 3 is Woreda capacity building and overspending was to be justified by the facts that there was more a) training needed on yearly basis mainly because of staff turn-over b) purchasing of cars to woredas c) financing Woreda Support Group (WSG) for 4 years instead of the originally planned 2 years.

The overspending in Regional and Zonal capacity building was due to the purchase of one Double Cabin Toyota Pick-up for Women, Youth and Children Affairs Bureau, Rehabilitation of Zonal Training Hall and annual retraining of Staff due to staff turn-over.

Moreover, there was per diem topping-up by GoF funding in 2010 - 2011. This was done because woreda staff were not motivated to come trainings and going into the field by the GoE per diem rate of Birr 70 because it was not covering the food and accommodation and because other donors were at the same time paying Birr 150 or more as per diem. Therefore, FinnWASH-BG topped-up Birr 80 for two years which made the total of Birr 150 (GoE + GoF) for the woreda staff and which improved the situation and work progressed well. However, the decision was retaken and only GoE per diem was allowed for the remaining 3 years with the detrimental effect that the work motivation in woredas deteriorated dramatically! The per diem was reduced in the name of 'harmonization of per diem' among the Donor Communities. The result was that only Finland harmonized by not allowing per-diem topping up when other Donors as UN agencies continued with 'business as usual'. The harmonization should have been done 'upwards' rather than 'downwards'. Lesson learned - hopefully for other Finland funded Projects! It is very unlikely that employees / workers in other donor communities would be accepting cutting of their - 'status quo'.

In FinnWASH-BG Exit strategy, the leading idea in the 2015 - 2016 Budget preparation was to support the sustainability of previous investments, sort out pending payments of large schemes and to pay retention payments. In Community Capacity Building there is financial support to Water User Associations and retraining in management.

Retention payments were left to be paid after FinnWASH-BG in big water schemes in a) Gesengesa water scheme to Solar Pump final retention payment b) left-over / retention payments in Gallessa and Berber water schemes. The funds are included in the approved 2015 -2016 budget / COWASH. RSU unit will be monitoring the activities in 5 Metekel Zone Woredas up to June 2016.

FinnWASH-BG account was closed in BoFED and funds transferred on COWASH account.

3 Amount and Costs of Investments

Based on the figures in data base the Community contributions in percentage can be seen in the table below in different categories.

Table 3-1 Community Contribution in Investments



FinnWASH-BG - Community Contribution in Investments						
Community contribution percentage / facility type / woreda / sector						
Woreda	HDW	SD	SW	BH	VIPL	MWI
Bullen water	22.1	30.1	1.5			
Bullen health	12.4				1.4	7.7
Bullen school	21.3		2		3.2	
Dibate water	15	13.6	3	5.8		
Dibate health	10.7				No data	No data
Dibate school	10.1				0	
Mandura water	20.1	11.7	5.2			
Mandura health	12.3				4.4	4.4
Mandura school	16.2		5.2		3.5	
Pawe water	19	14.5	5.7			
Pawe health	14				6.4	6.6
Pawe school	14.4				7.1	
Wombera water	22	20.1	0	18.4		
Wombera health	14.2				8	4.5
Wombera school	20				6.6	
Average water	19.64	18.00	3.08	n.a	0	0
Average health	12.72	0	0	0	5.05	5.8
Average school	16.4	0	3.6	0	5.1	0

3.1 Summary of GoF and Community Contributions

Altogether FinnWASH assisted 816 functional water points in communities thus providing water for 239,041 people, water in 92 schools / 81 of 6-door VIPLs for an estimated 81,000 pupils, and water in 58 Health Posts / Hospitals and 56 units of 2-door VIPLs in Health Posts / Hospital. Number of incinerators are 71. The calculated direct investment costs of GoF investments are Birr 93,559,705. When the total investment costs of Result 2 count for 101,274,387, including the 7% of BGSCI commission, then the remaining actual direct investments were Birr 94,185,180. The calculated and actual investment costs are 99 % compatible - this comparative counterchecking renders more transparency to FinnWASH activities; financial records are fully in line with the data base and in the data base recorded construction costs. See more detailed analysis in following chapters.

Community contribution of all investments is an average 13.69 %, which is a substantial contribution and talks for the strength of CDF concept. There are many cases where the community contribution was far more than the average, especially when communities really wanted the water points and materials had to be lifted over many hours on donkey back to the construction sites like in Wombera. In comparison, if that had to be made by Contractors then the work had had the cost in manyfolds or may not have been completed at all.

Table 3-2 Summary of FinnWASH-BG Investments

Summary of FinnWASH-BG Assisted WASH Facilities *												
COMMUNAL WATER POINTS	Bullen	Dibate	Mandura	Pawe	Wombera	Summary	People	GoF Contr.	Com. Contr.	Com. %		
Functional Hand Dug Wells	142	174	107	126	148	697	155,643	36,093,104	8,821,162	24.4%		
Functional Shallow Wells	9	12	9	9	1	40	19,335	5,437,559	172,799	3.2%		
Functional Springs	2	17	5	2	49	75	34,569	3,481,002	764,122	22.0%		
Functional boreholes (BH)	0	2	0	0	1	3	9,494	7,164,794	550,362	7.7%		
Functional large Schemes (LS) - Ali Spring	0	0	0	0	1	0	1	20,000	15,000,000	380,000	2.5%	
Sub-Total	153	205	121	138	199	816	239,041	67,176,459	10,688,445	15.9%		
WATER POINTS IN SCHOOLS	Bullen	Dibate	Mandura	Pawe	Wombera	Summary	Pupils					
Functional Hand Dug Wells	15	18	11	22	21	87	87,000					
Functional Shallow Wells	3	0	1	0	1	5	5,000					
Sub-Total	18	18	12	22	22	92	92,000	4,800,769	816,283	17.0%		
WATER POINTS IN HEALTH POSTS	Bullen	Dibate	Mandura	Pawe	Wombera	Summary	People					
Sub-Total	11	12	8	14	13	58	working area	2,797,849	407,752			
TOTAL Communal Water Points	182	235	141	174	234	966	293,879	74,775,076	11,912,480	15.9%		
VIPLIN SCHOOLS	Bullen	Dibate	Mandura	Pawe	Wombera	Summary	Pupils					
Functional latrines	11	10	20	15	25	81	81,000	11,355,300	483,003	4.3%		
VIPLIN HEALTH POSTS / HOSPITAL	Bullen	Dibate	Mandura	Pawe	Wombera	Summary	working area					
Functional latrines	11	8	16	11	10	56	293,879	5,731,057	304,811	5.3%		
INCINERATORS IN HEALTH POST / HOSPITAL	Bullen	Dibate	Mandura	Pawe	Wombera	Summary	working area					
Functional incinerators	14	9	18	13	17	71	293,879	1,698,273	104,565	6.2%		
Total direct investments in WASH facilities in Birr **	218	262	195	213	286	1,174		93,559,705	12,804,859	13.7%		
Total WASH facilities in Euro; rate 21.9105 is the weighted exchange rate over 6 years (euro transfers / deposits in Birr / year)								4,270,085				
Cost of all investments in Result 2, including 7 % commission for BGSCI								101,274,387				
Commission of 7% of BGSCI								7,089,207				
Actual direct investments into construction without BGSCI commission of 7%								94,185,180				
** The total calculated direct investment costs of GoF are Birr 93,559,705 which vary from the actual investment costs of GoF of Birr 94,185,180 in Result 2, without the 7 % BGSCI commission. This is very accurate counterchecking record with the investment database and the actual costs of the financial report showing 99.3 % compatibility. FinnWASH-BG has been very transparent and money has landed where it was intended !												
* Note, that the costs of failed trials of HDWs, abandoned VIPLs and Incinerators HAVE BEEN included in the costs.												



3.2 Costs of Communal Water by Hand Dug Wells

Cost inventory was done for 561 completed and 170 abandoned HDWs. The average direct cost of completed HDW was Birr 47,133 and that of abandoned wells Birr 19,884, without the 7% BGCSI commission. As an end result one functional HDW was directly costing Birr 51,214 / Euro 2,337 or Birr 54,798 when adding the 7% BGCSI commission on an average and when including the additional cost caused by 20.5% of abandoned sites. In other words if we want to achieve 100 successful HDWs we have to start digging in 120.5 places and accept the additional costs.

The cost of water with HDW is Birr 289 / or Euro 13.7 / person by using the weighted exchange rate of 21.9105 of FinnWASH-BG over the 6 year period or Birr 309 / Euro 14.1 when adding the indirect 7% BGCSI commission. Community contribution was remarkable 19.64% out of the direct investment costs. The user number is based on the recorded data base.

Table 3-3 - Number and Cost of HDW

FinnWASH-BG - COMMUNAL WATER - HDW								
	Bullen	Dibate	Mandura	Pawe	Wombera	Total	Average	Pers.
Amount of completed HDWs	142	174	107	126	148	697		
Amount of total abandoned HDWs *	34	20	59	59	8	180		20.5%
Total amount of built HDWs	176	194	166	185	156	877		
Inventory of Costs of HDW (completed)	117	144	106	122	72	561		
Inventory of Cost of HDW (abandoned)	30	19	59	57	5	170		
Total cost of inventoried / completed HDWs (Birr)	6,069,579	6,719,146	4,388,065	6,177,241	3,087,309	26,441,341		
Average costs of inventoried / completed HDWs **	51,877	46,661	41,397	50,633	42,879	233,447	47,133	
Total cost of inventoried / abandoned HDWs	819,720	315,744	865,045	1,257,254	122,452	3,380,215		
Average costs of inventoried / abandoned HDWs **	27,324	16,618	14,662	22,057	24,490		19,884	20.5%
Sum. and av. cost of inventoried HDWs (compl. + aband.)						29,821,555	51,214	
How many households HDWs are serving	6,294	8,218	5,212	6,323	5,082	31,129		
How many people HDWs are serving	31,470	41,090	26,060	31,615	25,408	155,643		
Total investment in woreda on completed HDW + 7% BGCSI	9,013,581	9,935,425	8,501,446	9,474,503	7,989,311	44,914,266	51,214	54,798
Community contribution average 19.64%						8,821,162		
GoF direct contribution						36,093,104		
Total investment in HDW / person (Birr) + 7% BGCSI							289	309
Total investment in HDW / person (Euro) - rate 21.9105							13.17	14.1
* FinnWASH experience shows that 20.5% of started HDWs were abandoned due to hard rock, collapsing of the pit, villagization or other reasons. In other words; if we want to achieve 100 functional water points then work need to be calculated for 120.5 water points. Estimated 17% are failing during the construction. Main reasons for abandoning are; ca. 60% during construction and ca. 15% villagization (Pawe and Mandura) and the rest technical failures and other unexplained. The cost of abandoned is included into the total of functional water points.								
** The calculated average cost of HDWs is based on the database where the costs of successful and abandoned cases have been recorded. The cost of HDWs was collected in the data base to 81% which is very representative figure. Mandura woreda all HDWs were recorded when only one missing but in Wombera the cost coverage record was 49%. The average cost of HDW was calculated with formula; ((Birr 47,133 + (20.5% x 19,884)) equals Birr 51,214.								

3.3 Costs of Communal Water by Shallow Wells

Altogether Birr 5,437,559 of GoF funds when Community contributed by Birr 172,799 which represent 3.08% to complete the construction of 40 successful Shallow Wells. Average direct cost for SW was Birr 140,259 and Birr 150,077 with 7% BGCSI commission. The cost of water per head is Birr 290 / Euro 13.24 or Birr 310 / Euro 14.1 with 7% cBGCSI commission. The lower cost / person in comparison to HDW is based on the fact that the users in SWs are more than in many remote areas with HDWs. Many of the SWs are in villagized villages where the population density is bigger and thus the number of water users. The justification of drilling SWs is; A) because HDWs were not everywhere successful and SW remains as the only option to provide water for communities B) because schools and health posts are situated where they just happen to be and often on hilltops and where HDWs do not always succeed C) Shallow wells are higher yielding than HDWs and are build in places where there is more population pressure.

The failure rate by drilling SWs is 36.5% which means that the holes are dry or drilling was abandoned due to basalt or collapsing the hole. The average direct cost of SW is Birr 140,259 or Birr 150,077 if 7% BGCSI commission is included and including the cost of unsuccessfully drilled holes.

The community contribution was only 3.2% because it is difficult for the communities to contribute the targeted 15% of the total cost due to cost profile of SWs which are highly mechanical



undertakings and possibilities for communities to contribute are limited. However, in terms of absolute Birr the WASHCOs for SWs contribute about the same than WASHCOs to HDWs.

Table 3-4 - Number and Cost of Shallow Wells

FinnWASH-BG - COMMUNAL WATER - SHALLOW WELLS								
	Bullen	Dibate	Mandura	Pawe	Wombera	Total	Average	Pers.
Amount of completed SWs	9	12	9	9	1	40		
Amount of abandoned SWs*	11	3	5	4	0	23		36.5%
Total amount of started SWs	20	15	14	13	1	63		
Amount of rehabilitated SWs	9	3	0	3	0	15		0
Total and average cost of completed SWs	1,536,476	1,613,580	1,067,753	1,187,837	204,712	5,610,358	140,259	
Total and average cost of abandoned SWs	580,723	292,784	445,329	388,744	0	1,707,579	74,243	
Average cost of SWs (completed + abandoned) + 7% BGSCI							140,259	150,077
Total investment in woreda on completed SWs	1,262,330	1,683,107	1,262,330	1,262,330	140,259	5,610,358		
Community contribution 3.08%						172,799		
GoF Contribution						5,437,559		
How many households SWs are serving	1,169	1,019	549	930	200	3,867		
How many people SWs are serving (5 person / household)	5,845	5,095	2,745	4,650	1,000	19,335		
Total investment in HDW / person (Birr) ** + 7% BGSCI							290	310
Total investment in HDW / person (Euro) - rate 21.9105							13.24	14.2

* FinnWASH experience shows that it is not so easy to get high yielding SWs done. Every 36.5% of the drillings end up in dry wells or in technical problems. This is due to hard rock, collapsing of drilling holes and mountainous landscape where many communities, schools and health posts are on hill tops. Note, that the site for schools and health posts can not be changed and as a result many drilling trials fail. Moreover, nobody can tell for sure about the success of the drilling in advance and therefore optimistic approach should be acceptable. Many of the trials were done in schools and health posts where HDWs were tried but failed and where SW remained as the last option to provide water.

** FinnWASH experiences shows that the final cost per person in Birr 310 / Euro 14.1 when the water is provided from shallow wells. The cost is higher than in the case of HDWs but it can be justified with the fact that SWs were normally constructed in sites where HDW construction failed or was expected to fail as on hill top communities, schools and health posts.

3.4 Costs of Communal Water by Protected Springs

FinnWASH-BG assisted WASHCOs with 75 protected springs when the failure rate by building them was only 6.3% with an average cost of Birr 90,179 or Birr 96,492 with 7% BGCSI. Community contribution was 22%, which also supports spring development as the number one option whenever possible. The cost of water is Birr 123 / Euro 5.60 / or Birr 131 / Euro 6.0 / person with 7% BGCSI and the lowest of all systems. Moreover, the expectation of sustainability is best since the springs hardly need any spare parts and the water keeps flowing through the system even if taps would be broken or stolen. This is the recommended system in mountainous areas where there are many streams and springs - even a small spring can yield lot of water over 24 hour period which is collected into a collection chamber. FinnWASH-BG has developed a system for springs for 'flat' areas, as well, such as in villages 45 and 46 in Pawe woreda. However, every spring is different and needs a special design and a qualified designer and careful work supervision.

Table 3-5 - Number and Cost of Protected Springs

FinnWASH-BG - COMMUNAL WATER - PROTECTED SPRINGS								
	Bullen	Dibate	Mandura	Pawe	Wombera	Total	Average	Pers.
Amount of completed springs	2	17	5	2	49	75		
Amount of abandoned springs	2	2	0	1	0	5		6.3%
Total amount of started springs	4	19	5	3	49	80		
Total and average cost of completed springs	220,764	841,982	0	772,642	1,982,200	3,817,587	84,835	
Total and average cost of abandoned spring	100,986	81,277	0	245,273	0	427,536	85,507	
Total of completed and abandoned springs	321,750	923,259	0	1,017,915	1,982,200	4,245,124		
Community contribution 18%						764,122		
GoF Contribution						3,481,002		
Average cost of Springs (completed + abandoned) + 7% BGSCI							90,179	96,492
How many households springs are serving	101	842	3788	300	1882.8	6,914		
How many people springs are serving	505	4210	18940	1500	9414	34,569		
Total investment in HDW / person (Birr) * + 7% BGSCI							123	131
Total investment in HDW / person (Euro) - rate 21.9105							5.60	6.0

* FinnWASH experience shows that the Spring development is the best option to provide water for communities; construction cost is the best / person by only Birr 123 /131, water quality is the best, yield is very reliable and maintenance costs are practically non-existing since water just flows through the system.

Reasons for abandoning **: FinnWASH experience shows that only 5/80 started Spring construction were stopped. The reasons were that the springs stopped yielding after capping them - probably the construction changed the pressure regime and the spring water vein found a new route. Note, that every spring development is different due to the characteristics of the nature and it is not so relevant to count averages.

3.5 Costs of Communal Water by Borehole Schemes

FinnWASH-BG was mandated to test / develop if CDF could be applied in higher technology schemes. The schemes were in Berber, Galessa and Senkora. The three borehole schemes are



motorized water supply systems with a 60 -100 m deep and 8" borehole - generator - submersible pump - reservoir - gravity distribution system for a whole village / town / schools / health posts. The schemes supply 2,000 - 5,000 people. The costs are Birr 815 / 872 or Euro 37.20 / 39.8 person depending of 7 % BGCSI addition.

Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Berber water scheme](#), [FinnWASH-BG - CDs and VIDEO and FILES - Galessa water scheme opening](#), [FinnWASH-BG - CDs and VIDEO and FILES - Senkora water scheme](#), [FinnWASH-BG - CDs and VIDEO and FILES - Gesengesa water scheme](#).

Table 3-6 - Number and Cost of Borehole Schemes

FinnWASH-BG - COMMUNAL WATER - BOREHOLE SCHEMES (BERBER, GALESSA and SENKORA)								
	Bullen	Dibate*	Mandura	Pawe	Wom.**	Total	Average	Pers.
Amount of functional boreholes (BH)	0	2	0	0	1	3		
Amount of abandoned BHs (drilled but not enough yield)	0	4	0	0	0	4		57.1%
Total amount of built BHs	0	6	0	0	1	7		
Total cost of functional BH schemes	0	6,892,631	0	0	0	6,892,631	3,446,315	
Total and average construction cost of abandoned BHs	0	822,525	0	0	0	822,525	205,631	
Total of completed and abandoned boreholes						7,715,156		
Community contribution actual figures from database 5.8% Berber and galessa, 18.4% in Senkora						550,362		
GoF Contribution						7,164,794		
How many households BHs are serving	0	1433	0	0	460	1,893		
How many people BHs are serving	0	7165	0	0	2300	9,465		
Total investment in HDW / person (Birr) * + 7 % BGSCI							815	872
Total investment in HDW / person (Euro) - rate 21.9105							37.20	39.8

* and ** Borehole schemes are in Dibate woreda in Berber and Galessa. In Wombera woreda it is the Senkora scheme.

3.6 Number and Costs of Water Points in Schools

FinnWASH assisted 87 water points in schools. Digging of hand dug wells was very difficult since every 32 % of the trials were not successful due to soil conditions. The cost of one water point in school is Birr 61,055, including 4 SWs / or Birr 65,329 with 7 % BGCSI. The average number of school children per school is estimated 1,000 which gives an investment of Birr 61 / 65 or Euro 2.79 / 3.0 / pupil.

Table 3-7 Number and Cost of Water Points in Schools

FinnWASH-BG - NUMBER OF WATER POINTS IN SCHOOLS								
	Bullen	Dibate	Mandura	Pawe	Wombera	Total	Av. cost	Persen.*
Amount of completed HDWs + SWs	15	18	11	22	21	87	47,133	
Amount of abandoned HDWs*	7	9	11	12	2	41	19,884	32.0%
Total amount of built HDWs	22	27	22	34	23	128		
Amount of Shallow wells	3	0	1	0	1	5	140,259	
Amount of functional water points	18	18	12	22	22	92		
Cost of completed HDWs	706,988	848,385	518,458	1,036,915	989,783	4,100,529		
Cost of abandoned HDWs	139,185	178,953	218,720	238,603	39,767	815,228		
Cost of Shallow wells	420,777	0	140,259	0	140,259	701,295		
Total cost of water points						5,617,052		
Community contribution 16.4%(HDW)+ 1.44%(SW)						816,283		
GoF Contribution						4,800,769		
Average cost of water (HDW + SW) /school + 7% BGSCI							61,055	65,329
Average number of children / school							1,000	
Investment on water / school / pupil / in Birr + 7 % BGSCI							61	65
Investment on water per school child in Euro - rate 21,9105							2.79	3.0

* High rate of unsuccessful HDWs in schools is due to the location, hard rock and basalt and hill top position where there is no shallow ground water.

3.7 Number and Costs of Water Points in Health Posts / Center

FinnWASH-BG supported 58 successful Water points in Health Post / Center when 20 wells never became operational. There was one failed trial for Shallow well, as well. The final investment is Birr 55,269 / Euro 2,522 / Health Post or Birr 59,138 / Euro 2,699 with 7 % BGCSI. The figures show that every 25.6% of HDWs are not successful and digging had to be restarted. There are a few cases where water was not found at all - either by HDWs or SWs.



Table 3-8 Number and Cost of Water points in Health Posts / Center

FinnWASH-BG - NUMBER OF WATER POINTS IN HEALTH POSTS / HOSPITALS									
	Bullen	Dibate	Mandura	Pawe	Wombera	Total	Av. cost	Persen.	
Amount of completed HDWs	11	12	8	14	13	58	47,133		
Amount of abandoned HDWs*	3	2	7	8	0	20	19,884	25.6%	
Total amount of (Completed + abandoned) HDWs	14	14	15	22	13	78			
Amount of abandoned Shallow well	0	1	0	0	0	1	74,243		
Cost of successful HDWs	518,458	565,590	377,060	659,855	612,723	2,733,686			
Cost of abandoned HDWs	59,651	39,767	139,185	159,069	0	397,672			
Cost of abandoned Shallow well		74,243				74,243			
Total / average cost of water points + 7% BGSCI						3,205,601	55,269	59,138	
Community contribution 12.72%						407,752			
GoF Contribution						2,797,849			
Average cost of water / health post / in Birr							55,269	59,138	
Investment on water per health post in Euro - rate 21,9105							2,522	2,699	

3.8 Cost of VIPLs

3.8.1 Number, Costs and Functionality of 6 - door VIPLs in Schools

FinnWASH-BG Programme's Programme Management Committee (PMC) made a decision to build 6-door VIPLs in schools separately for girls and boys. The pit is (4 m x 4m x 4m = 64 m³) and can be expected to last 10-20 years. The walls are masonry stones but there is no bottom concrete slab so that the liquid can percolate into the soil as nutrition for trees and as a consequence composting of solid waste will be possible and the life-span of the pit is extended. Currently there are no lorries in the area to empty any pits. The average direct cost of one 6-door VIPL was Birr 146,152 / Birr 155,965 with 7% addition. The upper structure is made of a) reinforced slab b) concrete brick walls c) wooden roof framework d) corrugated iron sheets e) iron doors f) one of the 6 pits is for wheel chair with an access ramp. Link to: [FinnWASH-BG - CDs - VIPL, Traditional Pits and Hygiene](#).

Total amount of money used in 81 successful and 4 abandoned VIPLs in schools was Birr 11,838,302. Four VIPLs were abandoned due to pit collapsing.

Functionality inventory revealed that physical damage to VIPL was about 9,7% which means stolen doors and frames, cleanliness is a subject of relative assessment but it was found to be 75% clean, latrines had been used to 82.6%, caretaker was assigned in 27.3% and WASH clubs were reported to be 89.3% active.

But the hand washing facility is a sad story. 47 units were constructed out of which 25 have been totally abandoned. However, exceptions are in Mandura woreda which shows 100% utilization rate and in Bullen 33%. Soap was found only in 5 cases. And even if some of the hand washing tanks are still there and basically functional they persist to remain dry - nobody seems to be interested to carry water for other people to wash hands despite of having a functional water point in the school compound! FinnWASH-BG could not solve this problem - if it is a problem at all! School WASH committees should have been taking care of them - in principle.

Link to: [FinnWASH-BG - CDs - VIPL, Traditional Pits and Hygiene](#)



Table 3-9 Number, Cost and Functionality of 6-door VIPLs in Schools

FinnWASH-BG - NUMBER, COST, FUNCTIONALITY OF 6-DOOR VIPL IN SCHOOLS									
6 - door VIPL IN SCHOOLS	Bullen	Dibate	Mandura	Pawe	Wombera	Summary	Pupils / Cost	Pers. / Cost	
Amount of functional latrines *	11	10	20	15	25	81	81,000		
Amount of abandoned latrines		2		2		4			
Total amount of latrines	11	12	20	17	25	85			
Average construction cost of normal 6-door latrine	213,703	117,577	178,553	173,808	150,000	134,547			
Total cost of normal latrines in Birr	1,480,016	1,345,469	2,690,939	2,018,204	3,363,674	10,898,302			
Additional costs by innovative roof rainwater harvesting						940,000			
Total costs in Birr						11,838,302			
Community contribution 4.08% in Birr						483,003			
GoF Contribution in Birr						11,355,300			
GoF contribution in Euro (rate 21.9105)						518,258			
Cost of one VIPL + 7 % BGSCI commission						146,152			155,965
How many percent of the latrines are clean (%)	75	100	89.5	35.7					
Hand washing facility available	7	0	7	4	4	22			46.8%
Amount of abandoned hand washing facilities	0	0	2	23		25			
Total amount of hand washing facilities	7		9	27	4	47			
Are there water and soap available	0		4	1		5			22.7%
Is the hand washing facility in active use (%)	0	0	100.0	33.3	0				
Is there physical damage to latrines (%)	12.5	0	5.6	11.1	0				
Is the latrine in active use (%)	85.7	50	94.7	100	0				
Is there caretaker assigned for the latrine (%)	50	0	10.5	21.4	0				
Has the WASHCO club of the latrine been active (%)	100	100	100.0	57.1	0				

* The number of 6-door VIPLs in schools is bigger (25) than the number of schools since VIPLs was build separately for girls and boys in 25 schools. PMC decided to build VIPLs separately.

3.8.2 6 - door VIPLs in Schools with Roof Rainwater Harvesting

FinnWASH-BG was developing and constructing 8 units of VIPLs with Roof Rainwater Harvesting with the purpose of providing water for hand washing and cleaning the pits. The system included; a) rain gutters to VIPLs, b) intake gutters/pipes, c) 5,000 liter glass fiber tank with masonry foundation d) gate valve chamber for daily water control e) hand washing tank of 80 liter with tap for daily use, e) design and fabricated model of the sieve to glass fiber tank for contractors to follow. The additional cost was Birr 80,000 as approved by PMC. Results are mixed - rainwater harvesting is not appreciated in Ethiopia, as such, which may be one of the reasons for lacking interest of the schools to keep the systems functional. Unfortunately, it seems a long way or a dream until school designers would include rainwater harvesting at the design board to school buildings. Anyway, Architects would do so if asked since the technology is well known and proofed throughout the world - rather it is a policy level decision. It is a wasted natural resource in a country from where the rainfall gives 75% of Nile River water. Anyway, FinnWASH-BG tried to do something to promote hand washing and cleanliness of the VIPLs - perhaps it was worth of the effort?

3.8.3 Number, Costs and Functionality of 2 - door VIPLs in Health Posts / Center

The calculated cost of 2-door VIPLs was Birr 100,598 which were done mainly by Contractors but also by local Artisans in Wombera woreda. Altogether Birr 6,035,868 was used for the construction of 56 pits out of which 4 were abandoned due to pit collapsing at different stages of construction.

Functionality inventory showed that 74.5% of pits were clean and 97.5% had been in use. But there was soap only in one case, caretaker was assigned in 33,3 % and physical damage to the structure was recorded in 11.6% cases.



Table 3-10 Number, Cost and Functionality of 2 - door VIPL in Health Posts / Center

FinnWASH-BG - NUMBER, COST, FUNCTIONALITY OF 2-door VIPL IN HEALTH POSTS / HOSPITAL and interpolated costs.									
2 - door VIPL IN HEALTH POSTS / HOSPITAL	Bullen	Dibate	Mandura	Pawe	Wombera	Sum. / Av.	Popul.	Pers. / Cost	
Amount of functional latrines	11	8	16	11	10	56			
Amount of abandoned latrines	1	0	1	2	0	4		6.7%	
Total amount of latrines	12	8	17	13	10	60			
Average construction cost of latrine	70,898	101,105	101,710	109,689	122,124	100,598			
Total cost of latrines in Birr	850,772	808,840	1,729,064	1,425,956	1,221,237	6,035,868			
Community contribution 5.05 % in Birr						304,811			
GoF Contribution in Birr						5,731,057			
Total cost of latrines in Euro						281,987			
Cost of one latrine in Euro + 7 % BGSCI						4,700		5,029	
How many percent of the latrines are clean (%)	50		71.4	87.5	88.9				
Hand washing facility available	0	0	0	0	0				
Amount of abandoned hand washing facilities	0	0	0	0	0				
Total amount of hand washing facilities	0	0	0	0	0				
Are there water and soap available	0	0	0	0	1				
Is there physical damage to latrines (%)	16.7	0.0	18.2	0.0	0.0				
Is the latrine in active use (%)	100	100	100.0	87.5	100				
Is there caretaker assigned for the latrine (%)	0	0	0	0	33.3				

3.9 Costs and Functionality of Incinerators

The incinerators were mainly done by Contractors at the average cost of Birr 24,315. The bill of quantities were approved by PMC every year and send to woredas as stamped and signed. The end cost of one Incinerator in Euro is 1,269 including 7 % commission by BGCSI. The design was provided by the Bureau of Health and which is the also the recommended Federal design. The functionality inventory revealed that incinerators have been to 98.2 % in active use which is an excellent indicator for the need of taking care of hazardous medical waste. The inventory further showed in detail that the surrounding was 64.3% clean, even if only 23.5% of the cases had a dumping pit close to the incinerator, ash tray had been emptied only in 6.7% of the cases. The unburned material on the grill 47.8% + burned material at the bottom 75.6% indicate also for the active use. Caretaker had been assigned only in 33.3% of the cases. As an end result it can be said that incinerators have been in active use and there is need for that *but* there are shortcomings in the management of them regards to emptying the ash tray into the soil pit and keeping the surrounding safe.

Link to: [FinnWASH-BG - CDs - Functionality survey - Water points, VIPL and MWI](#)

Table 3-11 Number, Cost and Functionality of Incinerators in Health Post / Hospital

FinnWASH-BG - NUMBER OF INCINERATORS IN HEALTH POSTS / HOSPITAL									
INCINERATORS	Bullen	Dibate	Mandura	Pawe	Wombera	Sum. / Av	Popul.	Cost / Av. %	
Amount of functional medical waste incinerators (MWI)	14	9	18	13	17	71			
Amount of abandoned MWIs	0	1	1	1	0	3			
Total amount of MWIs	14	10	19	14	17	74			
Average construction costs of functional MWI	23,283	24,315	23,090	23,344	27,542	24,315			
Total cost of incinerators in Birr	325,960	243,146	438,716	326,811	468,206	1,802,837			
Total cost of incinerators in Euro						84,226			
Community contribution 5.8 % in Birr						104,565			
GoF Contribution in Birr						1,698,273			
Investment per Health Post / Hospital in Euro + 7 % BGSCI							1,186	1,269	
Is the surrounding area clean (%)	36.4	0.0	76.5	81.8	62.5			64.3	
Is there unburned medical waste on the grill (%)	63.6	75.0	41.2	9.1	50.0			47.8	
Is there burned material at the bottom (%)	81.8	100.0	88.2	45.5	62.5			75.6	
Is there soil pit close to the incinerator (%)	9.1	50.0	11.8	9.1	37.5			23.5	
Has the ash tray of the incinerator been emptied (%)	0.0	33.3	0.0	0.0	0.0			6.7	
Is the medical waste incinerator in active use (%)	100.0	100.0	100.0	90.9	100.0			98.2	
Is there caretaker assigned for the MWI (%)	18.2	50.0	0.0	40.0	25.0			33.3	



4 Cumulative Overview of UAP in Woredas

The UAP coverage calculation is based on the CSA / Census 2014 figures and the amount of people served by communal water points. The population of Debre Zeit town, Bullen town and Dibate town woreda were excluded from the population figures because FinnWASH-BG was not developing urban water supply in those Wombera, Bullen and Dibate woreda capital towns.

The UAP in Pawe woreda is actually 113% but in the summary table the figure has been cut down to 100% in order not to distort the average figure of other woredas. In other words; it doesn't help other woredas if Pawe has excess water.

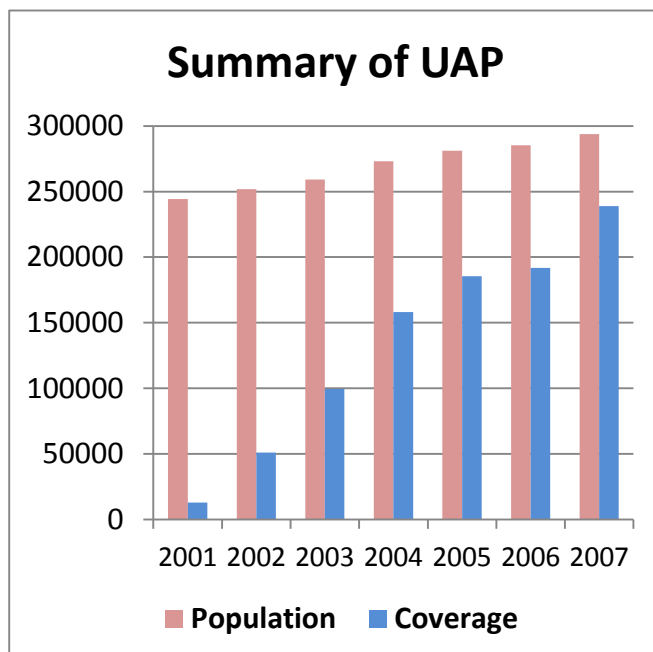
Table 4-1 Population in FinnWASH-BG working area and UAP Coverages

FinnWASH-BG Population and UAP Coverage in working area. CSA / Census 2014.										
	G.Y.	2009	2010	2011	2012	2013	2014	2015		
Woreda	EFY	2001	2002	2003	2004	2005	2006	2007	UAP %	UAP %
Bullen	population	39,017	40,187	41,393	42,635	43,914	45,231	46,588		
FinnWASH	coverage	1,880	8,945	18,560	28,090	35,415	37,665	41,305	88.7%	
Dibate	population	59,296	61,075	62,907	64,794	66,738	68,740	70,802		
FinnWASH	coverage	3,115	9,210	19,495	37,145	48,965	48,965	56,130	79.3%	
Mandura	population	43,225	44,522	45,857	53,183	54,778	56,422	58,113		
FinnWASH	coverage	2,255	9,305	20,425	32,975	37,005	37,005	53,675	92.4%	
Pawe	population	48,325	49,775	51,268	52,806	54,390	51,671	53,221		
FinnWASH	coverage	3,000	13,000	24,050	38,300	39,900	40,400	53,221	100.0%	90.1%
Wombera	Population	54,565	56,202	57,888	59,625	61,414	63,256	65,154		
FinnWASH	Coverage	2,550	10,410	17,025	21,535	24,160	27,710	34,710	53.3%	
Total	Population	244,428	251,760	259,313	273,042	281,234	285,320	293,879		
FinnWASH	Coverage	12,800	50,870	99,555	158,045	185,445	191,745	239,041	81.3%	

Rural populations with green color. Rest are rural & urban combined populations.

4.1 Cumulative development of UAP in Communal Water

Table 4-2 Graphic development of UAP



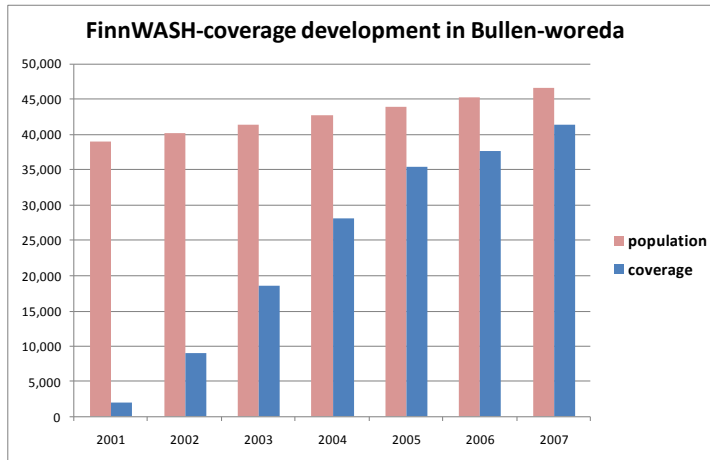
FinnWASH-BG has worked in five woredas serving 239,041 people out of total population of 293,879. Excluded are the Rural towns of Debre Zeit in Wombera, Dibate town and Bullen town where FinnWASH-BG was not doing water urban development. The overall UAP coverage is 81.3%

The slower development in 2006 was due to the concentration of construction of larger schemes in Abatachin, Berber, Galessa, Senkora and Gesengesa and Ali Spring, which were completed 2007.



4.2 UAP development in Bullen woreda

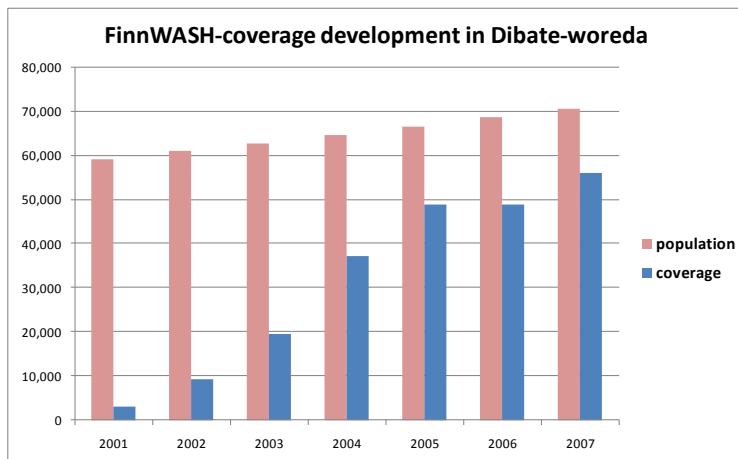
Table 4-3 UAP development in Bullen woreda



The UAP in Bullen reached 88.7%. FinnWASH-BG was not working in Bullen town which was counted as urban and the population of the town has been excluded from the percentage coverage.

4.3 UAP development in Dibate woreda

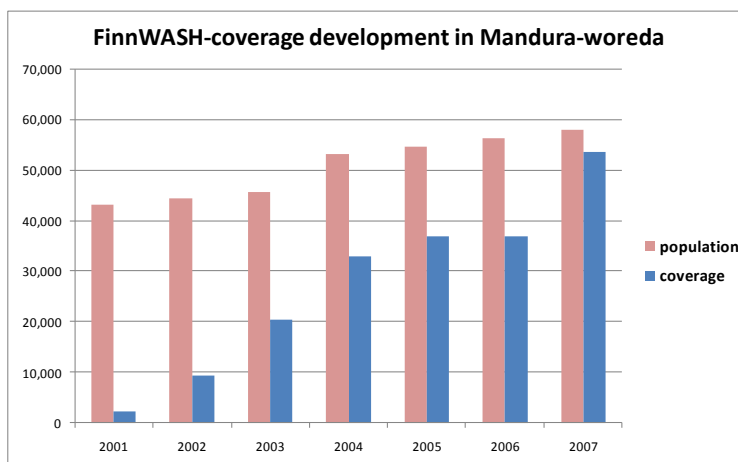
Table 4-4 UAP development in Dibate woreda



UAP in Dibate woreda reached 79.3%. The population of Dibate town was excluded from the equation. However, FinnWASH assister the water system in Berber and Galessa towns. The slower development in 2006 was because of the work concentration in Berber and Galessa.

4.4 UAP development in Mandura woreda

Table 4-5 UAP development in Mandura woreda

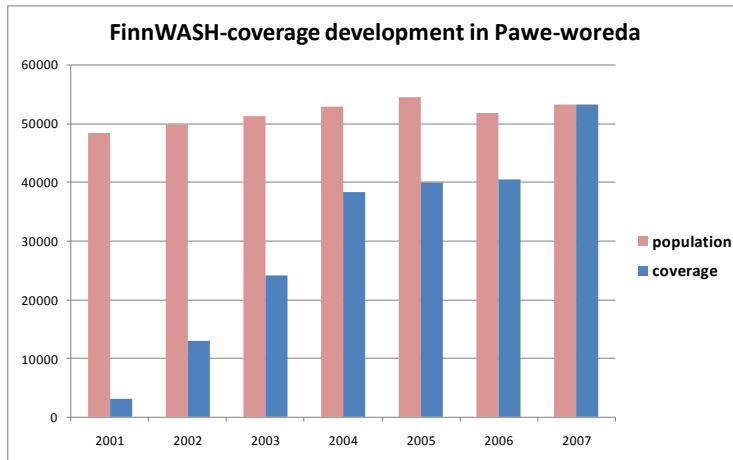


UAP in Mandura woreda reached 92.4% which includes the development of Abatachin gravity scheme by doubling its capacity and supplying the water for the fast expanding Gilgel Beles town and transit communities. Gilgel Beles is the capital of Mandura woreda and Metekel Zone.



4.5 UAP development in Pawe woreda

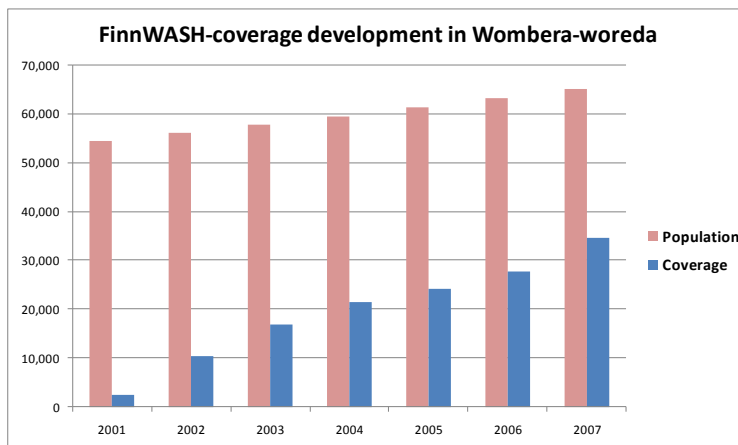
Table 4-6 UAP development in Pawe woreda



With the completion of Ali Spring gravity scheme the UAP reached 113.5% when 20,000 water users were added to cumulative water users. The Ali Spring water distribution system is connected in 20 Kebeles to Health posts, Schools, Nursing College, Agricultural Research Center, and Pawe town Hospital thus serving institutions as well. The slower development in 2006 refers to the Ali Spring construction, which was the main effort in Pawe 2006 - 2007.

4.6 UAP development in Wombera woreda

Table 4-7 UAP development in Wombera woreda



UAP in Wombera woreda reached 53.3 %. The achievement is divided in good results in areas which are accessible but there are vast stretches in southern and western directions where there are communities without access roads. It has been impossible to reach those communities. On the other hand there are many tributaries to Blue Nile River which forms the southern and western borders of Wombera woreda, and which apparently satisfy the people there.

4.7 Cumulative of Water Points and MWIs in Institutions

Table 4-8 Water Points and MWIs in Schools and Health Posts / Hospitals

FinnWASH assisted Water points, VIPL and MWI in Institutions by June 2015													
	Health Post / Center								School				
	Total institutions*	Inst. having water	Cov %	Inst. with VIPL	Cov %	MWI	Cov %	Total institutions*	Schools with water	Cov %	Schools with VIPL	Cov %	
Bullen	18	11	61%	11	61%	14	78%	28	18	64%	11	39%	
Dibate	25	12	48%	8	32%	9	36%	44	18	41%	10	23%	
Pawe	21	8	38%	16	76%	18	86%	34	12	35%	20	59%	
Mandura	22	14	64%	11	50%	13	59%	32	22	69%	15	47%	
Wombera	20	13	65%	10	50%	17	85%	45	22	49%	25	56%	
Total	106	58	55%	56	54%	71	69%	183	92	52%	81	45%	

* Note; During FinnWASH working period the number of Health Post /Center increased by 3 but the number of primary schools by 36, which explains partly the lower coverage figures in schools

Table above shows the status in Institutions by June 2015. Note, that the number of Institutions has increased by 3 units in Health Posts / Center but by 36 Primary Schools over the 6 years. This is one of the reasons why the target level in school water points and VIPLS remains lower. Another factor



which slowed down the construction of VIPLs was the complicated and and in many cases unsuccessful tendering process in woredas and which left the budgeted money unutilized. GoE procurement rules are difficult to follow correctly and when the Officials try to avoid any mistakes in fear of errors then doing nothing is better than doing errors. Common logic says that it is better to be free than in prison!

4.8 Progress in Household sanitation

It has been to some extent difficult to obtain cumulative data on the progress of household sanitation - i.e. on traditional pit latrines and solid waste pits. When WASHCOs make the agreement on Water Point construction the households collectively agree / promise to build their own Traditional Pit Latrines (TPL) on their own cost as determined by the GoE policy of CLTS&H (Community Led Total Sanitation & Hygiene). CLTS&H only allows triggering and advise from Health Extension Workers (HEW), but no subsidies are allowed to be used. There is no mechanism to force the WASHCO members into action if the village triggering and advise are not effective.

Link to triggering and sanitation ToT training: [FinnWASH-BG - CDs and FILES - CLTS](#)

Displayed is the latest information on sanitation progress in Metekel Zone, as provided by the Woreda Health Offices / Water Offices. According to the statistics the cumulative average household sanitation coverage in FinnWASH-BG area by June 2014 was 75.6%. However, this information is not supported by a register of detailed village or household names and/ or GPS coordinates so that verification is subject to trust.

Link to triggering and sanitation ToT training: [FinnWASH-BG - CDs and FILES - CLTS](#)

Table 4-9 WASH Coverage in Woredas according Woreda Offices

WASH Coverages in the Programme Woredas *									
No	Name of Woreda	Community Water Supply		Health				Education	
		Rural	Woreda	Water Supply	VIPL	MWI	House Hold Sanitation	Water Supply	VIPL
1	Mandura	96.8%	93.5%	22.7%	100.0%	81.1%	79.8%	71.8%	67.2%
2	Pawe	76.8%	68.4%	57.0%	90.0%	57.0%	93.0%	47.0%	25.0%
3	Dibatie	79.5%	68.5%	10.7%	71.4%	28.6%	67.4%	47.7%	39.8%
4	Bulen	74.7%	72.6%	66.7%	38.9%	66.7%	70.9%	53.6%	25.0%
5	Wombera	91.0%	87.7%	50.0%	56.8%	50.0%	67.0%	62.2%	22.0%
	Average	83.8%	78.1%	41.4%	76.1%	56.8%	75.6%	56.5%	35.8%
	Average	81.0%							

*Note: This information is provided by woreda offices and do not necessarily fully match with the records of FinnWASH-BG database. Woreda water office has separated the coverage for Rural and Town water.



5 Functionality Inventory of HDWs, VIPLs and MWIs

There has been frequent inquiries about the functionality of the facilities constructed by FinnWASH-BG. Therefore comprehensive functionality inventory of FinnWASH-BG programme's facilities was conducted. The aim was to visit all water points, VIPLs, MWIs and Hand Washing Facilities which had been constructed in 2009 - 2014, including the 75 Water Points from the Planning Phase (01 April 2008 - 30 June 2009).

As a result 85 % of FinnWASH - constructed operational facilities were visited. Most of the data which was not collected were from Dibate-woreda and from institutions. Some of the Wombera woreda's remote low land area sites were left out from the survey due to inaccessible road conditions. Water points built in 2015 were not surveyed but they are included in the calculations assuming they are functional.

Operational facility in this report means that the facility is in use or there is only minor technical problem which can be repaired by local people or woreda water officials with commonly available spare parts. Functionality rate will be calculated out of operational facilities. It gives the figure how many facilities are actually giving water during the time of the survey. Abandoned facilities and hand washing facilities are not calculated in this report.

In part of the analysis average figures are calculated as averages of woreda averages or averages of percentages. Since figures between woredas are so close to each other this method could be selected to fasten the analysis. It is mentioned separately if this method is used.

5.1.1 How Inventory was conducted

Survey consisted of thirty questions for water points, nine for latrines and eight for MWI's. Facilities were observed visually, functionality was tested manually with specified criteria, water was tasted and users were interviewed. Users were asked about the functionality of the water point, possible problems, general usage, pricing, quality of the water, and its implications to health.

Survey questions were designed by TL, FA and JPO. Questionnaire forms were field tested and corrections were made before starting the survey. JPO trained data collectors and conducted training surveys in first few facilities in each of the woredas. Performance of the enumerators was followed in the field by JPO (5 weeks) and TA (2 weeks) ensuring that the inventory was conducted as planned. Counterchecking of the old and new GPS coordinates were done during the inventory.

In the process several corrections were made and some facilities were found which had not been recorded earlier. Surveyors did the interviews and physical examinations of the facilities and painted the unique FinnWASH identification code on it, [FinnWASH-BG - CDs - Functionality survey - Water points, VIPL and MWI\MWI 2.jpg](#), [FinnWASH-BG - CDs - Functionality survey - Water points, VIPL and MWI\VIPL 1.jpg](#). Project car was used for data collection in latter part of the survey period to allow access to distant areas.

After the field work JPO made a follow-up travel to all woredas for the check-up of the inventory forms of any inconsistencies by going them through with the same woreda officers who collected the data. JPO visited + 100 facilities during the survey.

- Survey sheets 1 and 2 can be found as attachments. (Annex 1 and Annex 2)
- Images and videos of the survey can be found in: [FinnWASH-BG - CDs - Functionality survey - Water points, VIPL and MWI](#)

There were two people from water office assigned for data collection in all five woredas. One to two people were assigned from health - and education offices. Budget was separated for vehicle fuel, stationary and per diems. Vehicle maintenance and maintenance per diems were from quarterly



budget. There were slight cost differences between woredas due to different terrain and area sizes. All together the survey cost 12,243 Euros.

5.1.2 Abandoned facilities

Total number of FinnWASH-constructed facilities is 1,450 when also abandoned facilities are calculated, which represent significant amount of effort and reflects the difficulties in working environment. From all FinnWASH-constructed WASH-facilities 352 (24.3 %) have been abandoned. Note, that abandoning in water construction means restarting of construction since CDF principle allows three trials before the undertaking will be totally given up - in other words almost all WASHCOs have got their water points with only few exceptions - mostly in hilltop communities in schools and health posts where even shallow wells remained dry.

Main reason for the high rate of abandoning were the attempted hand dug wells and shallow wells which did not succeed due to hard rock, collapsing of the well or not finding water in shallow wells. This means that the construction was stopped in various stages of the building and location of the water point had to be changed elsewhere. This represent the challenge when making water point in Metekel area. About every third trial fails and digging had to be started again. This is not a problem as such because CDF/CMP allows 3 trials before fully abandoning the well construction. The additional costs are relatively low because the digging is done with manual labor and with community contribution. Note, that casting of concrete rings, which require more expensive materials as cement and reinforcement bars, will be started when the water has been found and successful water point construction is imminent.

Second biggest reason for abandoning was villagization which was mainly done due to government's centralization process. As an example, a sugar plant factory (70,000 ha) which is being built in Pawe woreda relocated two kebeles from people. These kebeles had 23 FinnWASH - constructed facilities from which pump heads were dismantled and used in new locations. Villagization program was not known during the selection of the WASHCO sites and it came as surprise to FinnWASH-BG. Other reasons include total breakdowns due to various reasons, drying of the well, or quality deterioration of the water. Main reasons for abandonment of completed water points are complete drying of the well or severe quality deterioration of the water.

Breakdown of abandonments of different water point types

From HDWs 21 % were abandoned, from SWs 37 %, from SDs 7 %, and from BHs 57 %. It is worth of noticing that spring developments succeed well.

5.1.3 Hand washing facilities

All 47 hand washing facilities (HWF) were dropped from the calculations since only four were (partly) functional. In FinnWASH-BG programme HWFs were provided to schools and health posts / hospitals during the two initial years. One cubic meter metal tanks were locally welded and they stood on their own legs with four installed taps. Tanks were placed close to VIPLs. Construction of HWFs was given up after two years' of testing when the usage results were not promising.

The school & health WASH clubs were supposed to refill and maintain the HWFs but this was not done even if there was a functional water point in the compound. There were also problems with the taps which are easily broken (China standard) or stolen. HWFs can be generally considered as abandoned.

5.1.4 Results of the Inventory

There are altogether 1,098 operational WASH - facilities constructed by FinnWASH. Out of 948 studied operational facilities (includes different water point types, latrines and medical waste incinerators) 870 were functional during the time of the survey which gives us 88.4 % overall functionality, which can be considered as an excellent result.



5.1.5 Sector-specific breakdowns of results

Table 5-1 Functionality Inventory of Communal Water Points

FinnWASH-BG - Functionality inventory of Communal Water Points							
COMMUNAL WATER	Bullen	Dibate	Mandura	Pawe	Wombera	Total	Average
Water point functionality - overall by vision							
Leakages existing (%)	1.4	15.7	27.7	3.6	17.5	66.0	13.2
Ponds existing (%)	20.8	43.9	17.6	22.1	37.0	141.4	28.3
Fence existing (%)	61.1	48.2	27.7	68.6	61.4	267.1	53.4
Litres per minute (HDW)							
Is there unusual sound during pumping (%)	12.8	19.8	20.0	22.1	6.2	80.9	16.2
Is there unusual taste in water (%)	2.9	12.9	7.6	8.7	7.7	39.8	8.0
Is there unusual odor in water (%)	2.9	5.7	9.6	5.5	4.2	28.0	5.6
Technical issues in functional water points (%)							
1) Bearings (%)	9.0	9.3	22.7	2.2	3.2	46.4	9.3
2) Fulcrum pin (%)	4.9	7.9	5.9	1.5	0.6	20.7	4.1
3) Raising pipe (%)	1.4	5.0	1.7	1.5	0.6	10.2	2.0
4) Flange nuts (%)	7.6	20.0	5.9	2.9	7.8	44.2	8.8
5) O-ring (%)	0.7	2.9	5.9	2.9	5.2	17.5	3.5
6) Other (%)	2.1	5.7	9.2	3.6	9.1	29.8	6.0
Reasons for non-functionality (%)							
1A) Bearings (% of non-functionals)	14.3	4.9	11.1	6.3	14.3	50.8	10.2
1B) O-ring (% of non-functionals)	28.6	31.7	22.2	25.0	57.1	164.6	32.9
1C) Raising pipe (% of non-functionals)	25.0	14.6	8.3	21.9	7.1	77.0	15.4
1D) Fulcrum pin (% of non-functionals)	17.9	7.3	12.5	6.3	0.0	43.9	8.8
1E) Other (% of non-functionals)	7.1	24.4	20.8	31.3	21.4	105.0	21.0
2) Not enough water (% of non-functionals)	3.6	4.9	2.8	3.1	0.0	14.4	2.9
3) Management/finance problem (% of non-f)	0.0	7.3	19.4	3.1	0.0	29.9	6.0
4) Other (% of non-functionals)	3.6	4.9	2.8	3.1	0.0	14.4	2.9
How long not functional (in weeks)?	33.3	73.8	39.2	48.9	38.2	233.3	46.7
Has WASHCO tried to fix the water point (% of non-f) ?	50.0	47.8	68.0	0.0	46.2	212.0	53.0
If not, what is the reason (% of non-f) ?	67	96	72	88	77		
1) Beyond capacity (% of cases)	37.5	59.1	94.4	85.7	70.0	346.7	86.7
2) No spare parts (% of cases)	62.5	31.8	27.8	7.1	30.0	159.2	39.8
3) Other (% of cases)	12.5	13.6	5.6	7.1	10.0	48.8	12.2
Has the WASHCO reported woreda of problem (% of cases) ?	50.0	81.8	94.4	50.0	90.0	366.3	91.6
Has the revenue collection started (%)?	99.3	84.9	84.7	83.1	91.4	443.4	88.69
How much money there is available at all WASHCOs ? *	402,203	209,453	133,465	212,847	184,601	1,142,569	228,514
How much money there is available at WASHCO (average) ?	2,793	1,518	1,236	1,689	1,273		1,729
Where the money is?							
1) In bank (%)	100.0	93.9	98.3	93.9	97.9	484.1	96.82
2) With cashier (%)	4.2	37.1	8.4	18.3	7.5	75.6	15.12
3) Other (%)	0.0	0.0	0.0	0.0	0.7	0.7	0.14
How much is the water fee (in Birr) ?							
What is the interval of payment ?							
1) Annually (%)	2.1	1.7	69.5	21.2	30.8	125.4	25.1
2) Every 6 months (%)	0.0	4.3	1.0	2.7	7.5	15.5	3.1
3) Monthly (%)	95.8	91.3	1.0	75.2	61.7	324.9	65.0
4) Per visit (%)	0.7	1.7	0.0	0.0	0.0	2.4	0.5
5) Other (%)	1.4	0.9	28.6	0.9	0.0	31.7	6.3
Why revenue collection is not started ?							
What repairs have been done (%) ?	16.7	23.6	62.2	12.4	19.5	134.3	26.9
1) Bearings (%)	5.6	1.4	52.9	5.1	0.0	65.0	13.0
2) O-ring (%)	10.4	13.6	52.9	7.3	14.3	98.5	19.7
3) Other (%)	4.2	10.0	28.6	9.5	7.1	59.4	11.9
How many households the water point is serving (average) ?	45.3	39.6	69.3	57.6	18.3	230.2	46.0
Jerry cans collected/day during dry season (ave)	4.1	2.9	2.8	3.0	3.6	16.4	3.28
Jerry cans collected / day during wet season (ave)	4.2	3.9	2.7	3.1	2.9	16.9	3.38
Amount of female WASHCO-members (%)	38.5	34.7	42.4	48.8	39.9	204.4	40.9
Amount of male WASHCO-members (%)	61.5	65.3	57.6	51.2	60.1	295.6	59.1
Has the amount of illnesses reduced among users (%) ?	99.3	98.5	99.2	97.8	96.0	490.8	98.2
Is there less water seasonally in the water point (%) ?	11.1	32.4	16.9	22.6	12.0	95.0	19.0
Has the water point ever dried completely (%) ?	0.0	5.1	0.9	0.9	1.3	8.3	1.7
How the users rate the water quality							
1) Very bad (%)	0.0	0.0	0.9	0.0	0.7	1.6	0.3
2) Bad (%)	1.4	0.0	0.0	0.0	1.3	2.7	0.5
3) Medium (%)	1.4	2.2	6.2	5.3	6.7	21.8	4.4
4) Good (%)	22.9	23.1	26.5	30.8	10.7	114.1	22.8
5) Very good (%)	74.3	74.6	66.4	63.9	80.7	359.9	72.0

* Information provided by the Woreda BGSCI office on accumulated WASHCOs' savings.



5.1.5.1 Communal water

From communal water points 713 out of the total 816 were studied and 625 of them were functional which gives 87.7 % functionality rate. This indicates that CDF/CMP system is sustainable. As an average of averages the HDWs are producing 17 liters per minute as the pumping test revealed.

It is further to be noted that Afridev-pump is to be maintained by default every two years. That means that the pump is temporarily out of use for about a month after every two years $(1/24) = 5\%$ assuming the speed of 'fixing' the problems in BG context. That calculates that 5% of all water points are under maintenance at any point of time. In that way the functionality could even be calculated $(87.7\% + 5\% = 92.7\%)$.

Spring developments were the most durable forms of water points. [FinnWASH-BG - CDs - Spring Development](#). Only two out of 75 were non-functional giving 97 % functionality rate. According to TAs experiences from the field this was rather expected - water quality is the best and yield in most cases was exceeding communities' needs. Springs yield even if the water taps were destroyed or stolen. The overflow from collecting chambers gives good water at any time. It was learned that even small springs are worth of being tapped. For example a spring eye yielding 0.1 liter / second means 6 liter per minute or 360 liter hour or 8,640 liter per day which is enough for 576 people.

Reasons for non-functionality

Main reasons for non-functionality of the communal water points were technical. Management, finance, lack of water, or reasons marked as "other" were in minor role.

The biggest technical issue was O-ring / U-seal. These Birr 150 (ca. 6.5 €) spare parts are easily replaceable - *if available*. Second biggest technical issue was "other" which was usually casting, plunger or PVC- pipe problem.

For the long-term sustainability of water investments in the area FinnWASH has constructed spare part stores in woreda administrative compounds and forming of the WWUAs is in progress *to make spare parts available and affordable* close to WASHCOs. The idea is to pool woreda WASHCO money and buy spare parts in bulk to the store administered by the WWUA. During the functionality inventory a list was prepared by Woreda Credit and Savings Institute Office which keep the WASHCO-accounts - which revealed that about 500,000 birr (half million) of WASHCO money is available in every woreda which gives high expectation of water point sustainability once the spare part store system gets functional. Link to: [FinnWASH-BG - Spare Part Supply Chain](#)

Repairs done

In 26 percent of the water points repairs had already been done, which shows that the WASHCOs had taken actions in their own hands and which again talks to the functionality of CDF concept. There were big differences in WASHCOs' activities to repair or maintain the water points, which may be related to the availability of alternative water points or perceptions among tribes to undertake repairs. However, since the project had been running already six years even more repairs could have been expected considering the 2-year service interval of the Afridev pump, which indicates the robustness of Afridev itself.

Average time of non-functionality

On average the time of non-functionality has been 47 weeks. It means it has taken almost a year to get the non-functional water point fixed. As an average of averages only 53 % of the WASHCOs has reported the problem of the water point to woreda water officials. It is not understood why half of the WASHCOs do not report about broken water points.

Observed issues with functional water points

As an average of percentages there are leakages on concrete castings of the well covers in 13 % of the water facilities. These usually mean cracks which might allow surface water to go in the well. There



are ponds around the water point in 28 % of the water points which means that the drainage around the point is not adequate. Fence that prevented animals to get on the water point was constructed around 53 % of the water points. Unusual taste in the water was found in 8 % of the water points and unusual odor in 6 %. One possible explanation for the 'iron' taste is the rising rod inside the PVC - Pipe which is rusting since it is not made of stainless steel; link to [FinnWASH-BG - CDs - Functionality survey - Water points, VIPL and MWI\afridev 8.jpg](#).

Technical issues with functional water points

As an average of percentages there is unusual sound during pumping in 16 % of the water points. This generally indicates that the bearings or the fulcrum pin are worn out and should be replaced. Specific technical problems were observed in 26 % of the water points. In order of prevalence the problems were bearings, missing flange nuts, other technical problems, fulcrum pin, O-ring, and rising pipe. Link to; [FinnWASH-BG - CDs - Functionality survey - Water points, VIPL and MWI](#).

Amount of money in WASHCO accounts

Average amount of money in the WASHCO's account in 661 answered communal water points was 1,729 Birr so the money is not an obstacle for making smaller repairs - rather it is the availability of spares. The field experience shows that water point is used as long as water comes out. The well is considered broken when there is no water at all coming. It is only after that when the people start thinking the repairs. Preventive maintenance is not one of the virtues of Ethiopia! As an average of percentages 97 % of the WASHCOs moneys are saved in the micro finance institutions' accounts and 15 % of the WASCHOs have at least part of the money in the hands of WASCHOs cashier. Amazingly, the accumulated WASHCO savings in five woredas are Birr 1,142,569 which is a good indicator for water point sustainability as informed by the woreda BGCSIs.

Revenue collection

As an average of percentages the revenue collection has started in 89 % of the WASCHOs. As an average of percentages in 38 % of the WASHCOs the fee was under 5 Birr, in 20 % it was 5 Birr, and in 33 % more than 6 Birr. There were differences between the woredas in fee collection intervals. Most commonly the fee was collected once in month but in Mandura woreda 70 % of WASCHOs were paying fees annually.

Most common reason for not starting the fee collection was "not voluntary to pay". As learned from the field, in certain areas people think that the government should provide water for everyone for free, especially Gumuz tribe. Second common reason for not collecting the fee was that the collection just had never started for one reason or another. Collection was also not started if the water point was recently constructed. Ideally fee collection should start immediately when the water comes available so that the users get familiar with the system.

Illness reduction

Illness in the area was reported to have reduced after the construction of the water point in 672 water point out of 685 answered giving 98 % illness reduction rate accordingly to users. ***This excellent result which meets one of the set targets of FinnWAS-BG.***

Quality of the water

Average of the water quality in 674 answered points was 4.65 on the scale 1-5 where "1" was considered "very bad" as 5 "very good". ***Water quality is therefore assessed as very good by the users.*** Most likely the small dislike is coming from the relatively harmless iron taste in water. This might be because the water is lifted through the rising pipe where is rusting rising rod inside. Rod is rusting since it is made of casted iron of 'unidentified' metal mixture (made in India). However, here is no obvious danger of water contamination or health risk and water users are not complaining about it. It could possibly be avoided if the rising rod was made of stainless steel, but which would increase the cost.



Amount of collected water by household

Average of woreda averages in amount of water collected by household in jerry cans was 3.3 during the dry season and 3.4 during the wet season in answered 660 water points. The UAP of GoE defines as community water target; 15 liter water / person / day / 1.5 km radius from household which counts 75 liter water per day / household. Note that the 20 liter jerry can hold 22 liter of water when filled to the rim which users always do. $3.3 / 3.4 \text{ jerry cans} \times 22 \text{ liter} = 72.6 - 74.8 \text{ liter}$ **which is the perfect result.**

5.1.5.2 School-sector

In studied 116 facilities which include water points and latrines 99 were functional which gives 85 % functionality rate for school WASH facilities. (Wombera is omitted from school sector's functionality survey analyses due to lost data.)

Average time of non-functionality and financing of the maintenance

Average time of water point's non-functionality is 41 weeks which demonstrates that it is not any faster in school-sector to get the non-functional water points fixed. It is not again matter of money since on average of averages there is 1,095 Birr in PTAs' account. **In general there is no fee collection organized in institutions and there is no addition to budget for the maintenance of the WASH-facilities which will create problem in future when the facilities need repairs.** In three schools in Bullen money is collected from students and in three schools the water points are used also by neighboring households who are paying a monthly fee.

Illness reduction and water quality

96 % of the schools replied that the amount of illnesses has decreased after the water point. Water quality at schools was rated to 4.5 (very good) on a scale from 1-5. **In optimal cases FinnWASH-constructed facilities enables children not needing to be exposed to contaminated water in their daily life when being home, going to school and visiting health-facilities.**

School latrines and latrine maintenance

There are 81 operational 6-seated latrines constructed to schools by FinnWASH. As an average of percentages 75 % of latrines were clean. However, cleanliness is relative term which was also seen in collected data. In Mandura the figure was 35.7 % whereas in Dibate cleanliness was recorded as 100 %. According to JPOs field visits there was lots of room for improvement in maintenance and cleaning in most of the visited + 10 schools. Some schools had started a system where students were cleaning the toilets on turn by turn basis which resulted the latrines being in better condition.

As an average of percentages there is caretaker assigned for the latrines only in 21 % of the school latrines.

School latrine usage

As an average of percentages the latrines are in active use in 83 % of the schools. Main reason for latrines not being in use is the non-functionality mainly due to broken / stolen doors.

5.1.5.3 Health-sector

In 119 studied operational health WASH-facilities 114 were functional giving 95.8 % functionality rate. All functional water points were HDWs. It is to be mentioned that it is not possible to make HDWs and even shallow wells in all Health Posts due to fixed small plots where groundwater is not always found.

Average time of non-functionality and financing of the maintenance

As an average of averages time of non-functionality is considerably long 47 weeks. Similarly to WASHCOs and PTAs also with the health facilities the money is not an issue. On average there is 1,328 Birr available at health institutions for WASH-facility maintenance. In Dibate there was revenue collection from neighboring household in all studied health institution HDWs, in Bullen in all



but one and in Wombera in half of the health institution HDWs. In Dibate three out of four broken water points have already been repaired once.

Illness reduction and water quality

Illness reduction rate of the water was reported 100 % in all studied health facilities. Average water quality figure was 4.76 on a scale one to five. This was rated as highest “very good” in questionnaire.

Health latrines

There are 56, operational, 2-seated latrines constructed by FinnWASH. Four were abandoned due to villagization.

Health latrine usage and maintenance

98 % of the latrines were in active use. As an average of percentages 74 % were assessed as being clean even though only 7 % percent had assigned caretaker for them. WASH-club was also active in only 21 % of the health-institutions.

Medical waste incinerators

There are 71 operational MWIs constructed by FinnWASH. Three have been abandoned due to villagization.

MWI usage

As an average of percentages 98 % of the MWIs were in active use. This demonstrates that there is demand for this kinds of facilities.

General condition and maintenance of the MWIs

It was observed that the surroundings of the MWI were clean of ampules and medical waste only in 51 % of the health institutions as an average of percentages. Also in 48 % got unburned material on the grill and 76 % got burned material on the bottom. Soil pit was constructed next to the MWIs in only 24 % of the institutions even though it was instructed to be done during construction. The ash tray had been emptied only in 7 % of the incinerators. There were several really bad samples of MWI-maintenance observed by JPO and TL during inventory. In some the soil pits were full of unburned medical trash and incinerators were full of burned material. In several health posts the surroundings of the MWIs were full of burned and unburned medical waste which are hazard to people and animals on the area. Obviously this is a management issue among health institutions!

6 Database management and map production

Woredas have their own respective databases in Excel-format. Databases include different sheets for each sector and for each sector’s abandoned facilities. Each sector have also analyses sheet which automatically writes basic comments accordingly to the new data added to the database. This basic information can be used for woredas' reporting. For reporting purposes there are also sheets for coming next three years which will automatically fill the numerical data for woredas' quarterly and yearly reporting when data is added or changed in database.

There are six generations of maps produced in FinnWASH-BG project. First maps included lots of information including data of soil types, land cover, temperature zones and population density. These data were later dropped and final map data consist of built FinnWASH-facilities, administrative boundaries, major roads, rivers, settlements, and topology.

Final maps were produced as A1- and A3 size woreda maps and one map of all five FinnWASH-woredas. Each facility type got its own coverage map which led to six different types of maps for each woreda (communal water points, school water points, school latrines, health water points, health latrines, and health MWIs). Altogether 31 maps were produced to both A1- and A3 sizes.



In addition to regular maps animation of communal water coverage development was created for the project webpage showing the progress in project area. Also KML-file of project water points was created to be used in Google Earth –software. Same file was used for creating *Google Maps –page* which allows visualization of the constructed FinnWASH-water points in Google Maps via link in the project webpage. FinnWASH web-page was hacked twice.

- FinnWASH webpage could be found in: <http://finnwash-bg.com/>

6.1.1 Excel Data Bases on Investments

The data base gives a transparent picture of what was done and where it is situated and at what cost and how many people investments serve and other details.

Link to; [A3-DATABASES FOR PRINTING AND TO FINAL REPORT](#)

6.1.2 FinnWASH-BG Facilities on Maps in A3 size

All FinnWASH investments were recorded in Excel database and placed on maps. There is a summary map in A3 size for Metekel zone on water points and coverage. Additionally there are A3 maps for each woreda on communal water points, institutional water points, VIPL in schools, VIPL in health posts and MWI. Altogether there are 31 A3 size maps ready for print outs in the following link: [A3-FINNWASH MAPS](#)

6.1.3 FinnWASH-BG Facilities on Maps in A1 size

The same set of 31 maps as in A3 size is also available in A1 size with the advantages that the coverage percentages, village names, roads, terrain etc can be better displayed. The A1 size maps can be used as posters and in presentations. Link to; [A1-FINNWASH MAPS](#).

6.1.4 FinnWASHBG Facilities in Google Maps

Link to FinnWASH facilities in [Google Maps](#)

Through the link you can see all FinnWASH investments placed in the real terrain. The information is compatible with the excel database. However, not all constructions are visible on google earth because of the time difference of taking the satellite images and the later time of construction.



7 Spare Part Supply for Rural Water Points

7.1 Spare parts for Hand Dug Wells

One of the main key concerns of the CDF concept is that if the Communities would be able to keep their water points in operation in the long run out of their own effort. One of the factors is that the Afridev pump has been selected by the GoE as the single pump system in rural areas for hand dug wells and accordingly all of the 697 FinnWASH-BG assisted HDWs are installed with Afridev. Another factor is that the pump and its spare parts are made in India and imported to Ethiopia. The Afridev pump needs maintenance by default and spare parts are compulsorily and periodically needed. Therefore, the availability and affordability of spare parts for Afridev pump are the critical factors for the functionality of Community water points. The third question is if the WASHCOs would have enough know-how and skilled persons to replace the spare parts they purchased - which can be answered with YES since FinnWASH-BG has trained about 30 local Artisans in each of the woredas so that that kind of capability is walking around in the communities.

FinnWASH-BG conducted a feasibility study on Spare Part Chain Supply [FinnWASH-BG - Spare Part Supply Chain/FinnWASH-BG - Spare Part Supply Chain - Final Report - 120506.pdf](#) and organized two interactive feed-back workshops on the approach to be selected. The approach was selected whereby the individual WASHCOs in woredas would form a WWUA for spare parts and finance its operation. FinnWASH-BG would both finance the construction of the building for spare part store / office in each of the woreda administrative compounds and conduct trainings for the WWUA and Woreda Administrators - which have been done.

link to: [FinnWASH-BG - Spare Part Supply Chain](#)



7.2 Saving accounts of WASHCOs

During functionality inventory the BGCSI woreda offices were visited which provided the list of WASHCO savings. The figures show that the total accumulated savings by WASHCOs in 5 woredas is Birr 1,142,569 altogether ! This strongly indicates that there is enough money in WASHCOs' hands to support the Woreda WUA / Spare part stores to purchase the required Afridev spare parts in bulk. It is to be mentioned, that the CDF concept requires opening of saving account by WASHCOs in BGCSI and advance deposit of Birr 1,000.

Figure 7-1 Spare Part Stores in Wombera and Bullen Woreda Administrative Compounds



Figure 7-1 Wombera woreda - WUA's Spare Part Store (left) and in Bullen woreda WUA's Store Keeper proudly showing Afridev pump's spare parts which had been purchased in bulky in Baher Dar by the WWUA with the money contributed by the Bullen WASHCOs. The store has Store Keeper, Finance Accouter and Manager assigned and paid by the WWUA. The WWUA has been legalized by BG Region. Note, the list above the door which shows the prices for available spares.



Protected springs with distribution system are not so vulnerable - the taps can be are often broken or stolen but there may be leakages in the *joints* of *pipes*. However, the repairs are not expensive if the WASHCOs are willing to carry them out. The field experience shows that people are reluctant for repairs / maintenance as long as the water quality remains good and the water keeps flowing and servicing the communities. This may because the level in recognizing the problem may be much lower in rural communities than by academics working at desks in offices who enjoy the bottled water from supermarkets!

Generally, taps, pipes and pipe fittings are available in all hardware stores since they are needed everywhere at affordable prices, which gives good prospects for long-term sustainability of protected springs.

Link to: [FinnWASH-BG - CDs - Spring Development](#)



7.4 Mechanized water schemes

FinnWASH-BG has assisted in the construction and management of Berber, Gallessa, Abatachin, Senkora and Gesengesa water schemes which are fetching water from deep boreholes or big springs (Abatachin) and require generators, pumps, buffer reservoirs and piping systems for deliveries. They serve 2,000 - 5,000 people. The schemes are managed by WUAs which are legalized and which collect the revenues from water sales. It is expected that the schemes will be able to maintain the system since the spare parts are available either in Chagni or in Baher Dar or can be ordered by merchants from Addis Ababa. Availability of spares as such is not the problem - rather it is the willingness and revenue collection and finally the appreciation of the Communities to get safe clean water. FinnWASH-BG has trained the WUAs in financial and mechanical management of the schemes.

7.5 Ali Spring Gravity Scheme

Ali Spring is a special case. It has been privatized and will be run as an enterprise with an office and permanent staff. FinnWASH-BG is proposing the handing over of the Single Cabin Pick Up (23-017) to the scheme's management which was used by TA. Spare parts are all available in Ethiopia - similar to those which were used in the rehabilitation. The scheme is powered by gravity so that the water will further be flowing through the system. Expectation is high for long-term sustainable water supply system which serves + 20,000 people and many institutions in Pawe woreda.

Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Ali Spring Gravity Water Scheme](#)

8 Capacity Building

8.1 Capacity Building in Communities

Table 8-1 Expenditure in Community capacity building

2002(2009/2010)	1,310,215.18
2003(2010/2011)	2,146,521.37
2004(2011/2012)	2,667,597.82
2005(2012/2013)	2,196,210.86
2006(2013/2014)	2,498,187.76
2007(2014/2015)	1,940,283.86
Total	12,759,016.85

Altogether Birr 12,759,016 was spent in community capacity building over 6 years in five woredas to initiate, plan, construct and manage 816 water points serving 239,041 community members.

8.1.1 WASHCO training

Training of WASHCOs is very essential when CDF is practised. WASHCOs need to be initiated, trained in the water point planning, community participation, fund management, procurement and in implementation. Without people's involvement CDF doesn't work. The activities were initiated and followed up by Woreda Officers from Water, Health, Education and Women Affairs.

8.1.2 Pump Attendant / Spring Caretaker training

FinnWASH-BG has assisted 816 community water points and training has been provided for 2 Care Takers for each water point (816 x 2 = 1,532 Care takers). Care Taker training is aimed at sustaining the Water Point management / functionality.

8.1.3 Hygiene and Sanitation training

ToT training has been given to Woreda Health Officers who in turn have conducted CLTS&H in Kebeles / Gotts. Triggering has been done in all kebeles and many of them have been declared ODF. The aim of triggering is to convince whole villages to achieve ODF by construction of traditional pit latrines and to practise hand washing.



Link to ToT, Triggering, Traditional Pits; [FinnWASH-BG - CDs and FILES - CLTS](#), [FinnWASH-BG - CDs - VIPL, Traditional Pits and Hygiene](#)

8.2 Capacity Building in Woredas

Woreda capacity building includes purchase of 5 Toyota Land Cruiser Pick-ups to Woredas, 35 motorcycles, computers and GPS, office refurbishment, trainings, GoF / topping of per diems for two years for trainings and field activities.

Link to; [FinnWASH-BG - CDs and FILES - Capacity building](#)

8.2.1 Basic computer usage, database management and GIS -trainings

Woredas were trained to collect data from the field three times during the project period. Recurring training is necessary due to staff turnover and due to people's tendency to forget tasks which are conducted only once in a year. The last five days training on 5th of November 2014 two people from woreda water offices, one from health - and education offices, and one person from zonal water office were invited.

Training consisted of one day basic computer usage training where the virus-protection was emphasized. Many of the woreda computers are known to be unusable due to viruses. Updated virus protection software and all needed software were delivered as CDs to trainees. All software used in training and in FinnWASH's water point mapping are open source and thus freely downloadable from internet (Windows Defender offline, Open Office, Quantum GIS).

Last four days were training of GPS-use, data collection, data input, data management in spreadsheet software and GIS. Spreadsheet software training consisted of database management, updating, sorting, simple analysis and data conversions. GIS-training included adding data to map, simple operations with data and importing database to GIS-software. As a result, simple, A4-size, printable water point-map was produced for each woreda.

8.2.2 ToT and Practical Artisan training

Field Advisors carried out Artisan trainings for Woreda Water Office staffs every year and woredas were training Artisans practically as a follow-up action. Field Advisors supervised the practical training together with woreda water office staff. As a result every woreda has got about 30 practically trained Artisans, which will give sustainability for the functionality of achievements. Artisan Associations have been formed in all woredas as a pool for Water Point, VIPL, Incinerator or other construction.

8.3 Capacity Building in Bureaux, Zone and Woreda

Capacity building in Bureaux, Zone and Woreda was the component 4 in the FinnWASH-BG budget. The

Table 8-2, shows the summary of expenditure. Bureaux and Zonal offices had annual budgets, which were approved by the Board. The main items included monitoring travels, participation in trainings, purchase of office equipment during the first year, etc. See FinnWASH-BG 2013 - 2014 Annual Budget in detail for Targets, Summary sheets, Budgets for 5 Bureaux, 5 Zonal offices and 25 woreda budgets; Click to; [FinnWASH-BG - Annual Budgets - 6 years\FinnWASH-BG Budget 2014 - 2015 - FINAL -141017.xlsx](#)



Table 8-2 Money used in Capacity building in Bureaux and Zone

Fund used by Regional sectors , Zonal sectors and Woreda Sectors in Birr		
Fiscal year in ethiopian calander	Woreda Capacity building (Result 3)	Regional and Zonal Capacity building(Result 4)
2002	6,760,700	5,070,755
2003	5,255,638	2,172,347
2004	4,595,925	1,653,690
2005	4,235,489	844,529
2006	3,231,486	767,361
2007	1,755,982	561,093
Total	25,835,220	11,069,774

Zonal capacity includes computers, office equipment, repair of Zonal training hall, trainings, monitoring and follow up wash activities in woredas, managing woreda shallow well biddings and assistance of big schemes.

Capacity building in Bureaux includes computers and office furniture, monitoring and follow up of woreda activities as technical activities, trainings, purchase of Toyota Double Cabin Toyota vehicle for Women, Youth, Children Affairs Bureau.



9 Visit of Finland MPs and Finland Embassy

A delegation of 8 MPs and Committee Counsel visited FinnWASH-BG Programme for one day on 8 March 2013 together with Finland Embassy staff. The programme included visits to Dafili Gravity Water Scheme, Dafili Health Post, Village 45 Protected Spring and Primary School in Gilgel Beles for VIP latrine with attached rainwater harvesting, classroom observations and discussions with teachers. The day was rounded by a dinner with a camp fire in a local restaurant. It just happened that Gilgel Beles town was cut-off from water and electricity for three days during the visit, rendering perspective to general working conditions in the area. In their 'thank for you speeches' the delegates were seemingly surprised about the good results in helping rural poor people in this less developed and remote area in Benishangul Gumuz.

Links to CD pictures and videos in the provided memory stick "FinnWASH-BG"; [FinnWASH-BG - CDs and VIDEO and FILES - Dafili gravity water scheme](#), [FinnWASH-BG - CDs - MPs visit](#),

From Finland Embassy in Ethiopia represented were the Ambassador Leo Olasvirta, and First Officer Janne Oksanen, Counselor Marko Saarinen accompanied by Mikaela Kruskopf from Niras Home Office.

Parliament of Finland / The Finance Committee Subcommittee for Administration and Security



Tapani Tölli – Chairman of the Subcommittee
Master of Social Sciences, Municipal Manager
b. 13.6.1951
Present place of residence: Tyrnävä
Oulu constituency
Finnish Centre Party
Minister of Public Administration and Local Government (Kiviniemi) 2010—2011
Member of Parliament since 2003



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Sampsa Kataja
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Oulu constituency
National Coalition Party
Member of Parliament 1999—2007 and since 2011



Raimo Piirainen
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Oulu constituency
Social Democratic Party
Member of Parliament since 2009



Eero Reijonen
Managing Director, Chairman of the Board
b. 10.9.1947
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Pohjois-Karjala constituency
Finnish Centre Party
Member of Parliament since 2003



Ismo Soukola
Senior constable
b. 8.9.1960
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Häme constituency
The Finns Party
Member of Parliament since 2011



Tuula Väättäin
Specialized Nurse, Family Therapist
b. 2.10.1955
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Pohjois-Savo constituency
Social Democratic Party
Member of Parliament since 2003



Mari Nuutila
Committee Counsel



10 Cost effectiveness of FinnWASH-BG Programme

Table 10-1 Cost Effectiveness of FinnWASH-BG Programme

FinnWASH-BG Programme in Ethiopia (Water Supply, Sanitation, Hygiene)			
Analysis on Cost Effectiveness			
ACHIEVEMENTS AND COSTS 2010 - 2012			
INVESTMENTS	NUMBER	PEOPLE SERVED	EURO
Community water points (without the Planning Phase HDWs of 75 units)	643	145 492	1 420 000
Water points in Health Center / Posts	59	168 546	110 000
Water points in Schools	114	228 188	214 000
VIPLs in Schools (one for girls and one for boys, separately)*	78	78 064	390 000
VIPL in Health Center / Posts	84	239 964	315 000
Medical Waste Incinerator	65	185 687	67 000
Sub-Total			2 516 000
CAPACITY BUILDING			
Community capacity building			305 000
Woreda Officials - Capacity building, incl cars, motorcycle, office equipm.			856 000
Regional and Zonal Officials - Capacity building			466 000
Sub-Total			1 627 000
TECHNICAL ASSISTANCE AND LOGISTICS			
Technical Assistance and Cars			2 760 000
Sub-Total			2 760 000
GRAND TOTAL			6 903 000
CONCLUSIONS			
Investment in water / person			9,76
Investment in water in Health Center / Post / person			0,65
Investment in water in Schools / pupil			0,94
Investment in VIPL in Schools / pupil*			5,00
Investment in VIPL in Health Center / Post / person			1,31
Investment in Medical Waste Incinerator / person			0,36
Total Direct Investments / person			18,02
Total Cost in Capacity Building / person / 50 % population of 294,000			8,51
Total investment in TA and logistics / person / 50 % population 294,000			18,78
TOTAL Overall Programme Cost when Everything included / person			45,31
<p>In FinnWASH-BG Programme with an overall investment of Euro 45,31 / person; people could be provided with clean safe water in communities + schools + health centers / posts, VIPLs in Schools separately for girls and boys, MWIs and VIPL in Health Center / Posts.</p> <p>Additionally Governmental Bureaux, Zonal Offices and Woreda Offices have been supported by capacity building, including cars, motorcycles and office equipment and furnishment for sustained work continuation.</p> <p>In other words; In Ethiopian context a TA-assisted Programme serving population of 1 million people needs a total budget Euro 45,31 Million to be fully served with safe water in Communities, Schools, Health Centers / Posts, and with 6-door VIPLs in Schools for girls and boys separately and 2-door VIPLs in Health Centers / Posts and MWIs in Health Centers / Posts.</p> <p>* There are 2 units of 6-door VIPLs in each school separately for girls and boys out of which one is for handy-caps with a access ramp for wheel chair. The pit has a volume of (4m x4m x4m = 64m³) with a solid slap and superstructure and can be expected to serve + 15 years. Pit has percolation to the ground.</p> <p>In comparison, with a cost of one eurofighter jet of euro 90 million a population of 2 million people can be fully and sustainably served in WASH. Development Aid Work in FinnWASH-BG in helping rural poor people has been very cost effective!</p>			





11 Bio Sand Household Water Filter

Please, click. The Concept paper and the Study of Bio Sand Household Filter were made by FinnWASH-BG / TA Team's Engineer Tesfaye Yesigat. Link to: [FinnWASH-BG - Bio Sand Filter](#)

The principal reason was to test possibilities in providing safe drinking water in areas for remote communities in Wombera and Bullen woreda lowlands where the soil formation with rocks is difficult for HDWs and which are inaccessible for drilling rigs to go. Supplies for HDWs are only possible on donkey backs over 20-50 km distance. The problem is that the communities have murky waters in rivers during the rainy seasons. Therefore, Bio Sand Water Filter offers an alternative for safe clean household water.

Testing in FinnWASH-BG was launched and woreda budgets were provided with money to purchase the moulds. Only Pawe woreda did so when other woredas were not showing interest on the development or GoE procurement rules prohibited purchase from a single source. It is to be noted that the Bio Sand Filter moulds can be purchased only in one place in Ethiopia. The funds were provided in 2011 and 2012 for woredas to go ahead.

In Pawe woreda training was conducted for Artisans on casting and fabrication of Bio Sand Filters. The difficulty is that the system requires special grades of sand which is not everywhere available - especially the filter part must be done following the careful designs.

The testing could not proceed to the field testing where CDF concept had been tested on the casting and using Bio Sand Filters in remote communities.

The effort dried up when Engineer Tesfaye Yesigat left FinnWASH-BG Programme in June 2013 and when there was no driving force to follow-up the effort in the field.

11.1 Expectations

- The technology is tested in its performance that it could be used as one of the best options in areas where it is not possible to apply other technologies;
- The raw water turbidity should be less than 50 NTU to use BSF effectively;
- If 100% removal of bacteria is needed, it is advisable to use post chlorination;
- There should be harmonization among key actors to successfully apply the technology (Health, Water and Education);
- The TA team with the help of different actors of the region should look forward in piloting and scaling up of this technology;
- Before applying the technology different capacity building trainings and awareness creation should be made for the users;
- The financers of the program (GoF and GoE) should be convinced and agree to apply CDF for the technology;
- If agreed more detailed workable manuals would be prepared by TA team and present it to PMC and BOARD for approval;
- Some practical training for woreda experts and few artisans how to make BSF and operate would be required.

11.2 Conclusions

- The idea was good but the response from woredas was not there and it turned difficult to motivate woredas for the testing;
- If there is a new approach in any Project it should be provided with adequate financial and man power resources - in FinnWASH-BG it was the Field Advisor Tesfaye Yesigat to push the testing besides of his other duties and when he left the effort collapsed;



- Even if the technology seems simple at first glance then there are technical difficulties to implement as the casting and correct filter material. Community capacity building and acceptability might be other hurdles;
- However, basically we believe that CDF- concept could be used in promoting Bio Sand Household Filter - if enough time and adequate resources are available. Perhaps, the testing in FinnWASH- BG was over ambitious regarding the time frame, human resources and difficulty of the entire task. This time there were too many 'should' and 'would'.

12 Big Water Schemes

The mandate of FinnWASH-BG Programme was to test and prove if higher technology water schemes would be possible to construct by the CDF concept. It was proved to be true and in many cases the Community contribution was more than the required 15%. For example in Gocher Gravity Scheme in Wombera woreda where the Community really wanted to have the scheme. Their contribution included road construction, carrying of pipes uphill digging and closing trenches, labor, sand, stones and cracking ballast. The effort included formation of WUAs, bylaws and legalization of the WUAs, which will run the schemes in the long run. The expected sustainability is high. The next chapters give more details to the schemes.

12.1 Senkora water scheme

Senkora water scheme has been completed. Senkora scheme was also officially opened and taken into use on 01 October 2013 when H.E. President Ahmed Nasser opened the scheme. See Figure 12-2, next page.

Click to; [FinnWASH-BG - CDs and VIDEO and FILES - Senkora water scheme](#)



Figure 12-1 H.E. President Ahmed Nasser officially opening Senkora Water Scheme



H.E. President Ahmed Nasser officially opening Senkora Water Scheme in Wombera woreda.



Senkora Primary School's water stand serving more than 1,200 pupils in Senkora primary and 500 students in Secondary school who are coming also from neighboring villages.



Field Advisor Bezabih Alem observing the shower facility, 3 rooms for girls and 3 rooms for boys, at Senkora Primary School which is situated close to the VIPLs for girls and boys, separately.



Fact Sheet of Senkora Village Water Scheme in Wombera Woreda

- Senkora rural village water scheme is a medium scale of 460 households which has been constructed by CDF approach within FinnWASH-BG Programme;
- The scheme was started in 15 February 2012 and completed in August 2013;
- Senkora is located 10 km south east from Wombera Woreda capital of Debre Zeit along the all weather gravel road to Chagni and Addis Ababa, which is 655 km apart. The village is located at UTM 1170439N, 36P0796881E at the altitude of 2,555 m a.s.l. Annual temperature varies from 17.4 to 21.20 C and it has average annual rainfall of 875mm;
- The Village has a Health post, a Veterinary clinic, a Primary school with 1,200 students and a Secondary school with 500 students. Both schools have Students from Senkora and neighboring villages. All institutions have been connected to the water system;
- The hill-top village didn't have potable water supply until Senkora borehole scheme was completed;
- Most households have traditional pit latrines;
- The system design is done in two 10-year phases; the first one is between 2013 - 2022 and the second one 2023-2032. The projected population in 2032 will be about 2,300. The maximum day demand for the two phases is 1.25 l/s and 2 l/s, respectively, including both public and institutional;
- The scheme has 2.619 km GS rising main, 3.6103 km HDPE gravity main and 1.357 km HDPE distribution lines. It has a 55 m deep borehole with a yield of 6.7 l/sec fitted with a 11 kw submersible pump powered by a 27 Kw generator. Further the scheme has 50m³ reservoir, 4 public water points, 2 school fountains, one public shower (3 girls + 3 boys) and two school showers (3+3), and yard connections with one tap to Church, Veterinary clinic and Health post;
- The planned total construction cost is Birr 4,000,275 including community contribution, but do not include overhead costs covered by the GoE for the work supervision. The community contribution was Birr 734,130 representing 18.4% share of the total cost. The remaining Birr 3,266,145 / 81.6% will be paid by the GoF. Community contribution included local construction materials like stone, sand, eucalyptus poles and labor for pipe trench excavation, back filling, cutting ballast and assist in reservoir construction etc;
- Community deposited Birr 30,000 on Bank Account for Operation & Maintenance;
- The scheme is managed by Senkora Water Users Association (WUA), which has its own bye law of association and has obtained a registration certificate of legality since 25 March 2014 as per Regional Proclamation No - 71/2008;
- WUA is managed by a General Assembly composed of each and every member of the association. An executive WASHCO and the necessary technical staff like plumbers, fee collectors, and/or operator/guard;
- Current water tariff is set by WASHCO, which is Birr 0.5 / 20-liter jerry can. Current monthly **net income** is Birr 500 on an average.

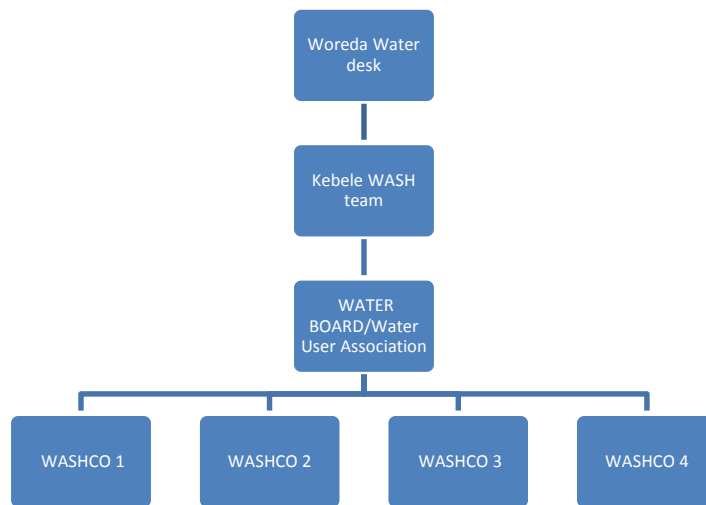
12.2 Gocher Gravity Scheme

A Detail and Design Report was done by Field Advisor Bezabih Alem, which shows the quality of FinnWASH-BG field staff; It is situated at 2,400 m altitude where there was no other than donkey path over the 5-6 km from the wombera main road. But because the community wanted the scheme so much they also prepared the road there so that the construction materials could be taken there by a 4-wheel drive Mercedes truck. Community contribution has been calculated at about 30% of total costs, which shows their total commitment into it.

Link to CDs and Design Documents: [FinnWASH-BG - CDs and FILES - Gocher Gravity Scheme](#)



12.2.1 WASHCO structure to manage the water scheme



- WASHCO 1 is for the health post
- WASHCO 2 is for the elementary school
- WASHCO 3 is for the agricultural service station
- WASHCO 4 is the community WASHCO to manage their public taps
- The WUA has representatives from each WASHCO with the responsibility for the overall management of the scheme.

Members of WASHCOs and the Water Board

Consistent with the CDF manual, each WASHCO has five members, three of whom are women. The same principle has been applied to the WUA except that one person from each of the three institutional WASHCO and two members from the community WASHCO are represented. The five WUA members have been elected from the four WASHCOs among which three of them are women.

Duties and responsibilities of WASHCOs

The three institutional WASHCOs and the community WASHCO have the following duties and responsibilities:

1. To manage their taps/tap stands;
2. To set tariff for their own taps/tap stands in consultation with the WUA;
3. To collect the water fee from the respective users and deposit it in BGCSI sub branch;
4. To select two persons from the users who will be trained to conduct maintenance;
5. To contribute certain amount of money to the WUA either monthly or in any mutually agreed method to be used for the operation and maintenance of the overall gravity main pipe line and associated hydraulic structures, spring capping maintenance and watershed management around spring catchment areas;
6. To assign one person from each institutional WASHCO and two persons from the community WASHCO, that is five members in total who will serve as WUA members;
7. To open and operate a savings account in the Woreda BGCSI sub branch office in the name of each WASHCO;
8. To notify the WUA in writing whenever there is a change in WASHCO membership.

The Water Users Association: Duties and Responsibilities

1. The WUA will act in accordance with the Lissane Hig Gazeta of the Benishangul Gumuz Regional State published on November 1st 2008 in Assosa, Proclamation No. 71/2008 to



provide for the Determination of the Organisation and the Powers and functions of Rural Domestic Water Supply Users' Associations. (The WUA should be given a copy for reference.)

2. The WUA has to register itself with the regulatory authority (details in the Proclamation).
3. To manage the common gravity main pipe line and associated structures including operation and maintenance of spring capping , main pipe line structures and mini watershed management around spring areas.
4. The WUA will select a chairman, secretary and treasurer at its first meeting. The Woreda Water Office will develop job descriptions.
5. To collect the contribution from each WASHCO as per the agreement reached in item no (5) above on the household amount. The amount of contribution other than the upfront money will be determined by the WASHCOs and the WUA in the presence of woreda water desk experts during tariff setting.
6. To open and operate a savings account at BGCSI sub branch office with money from each WASHCO for operation and maintenance of the scheme in general. 250 birr will be contributed from each WASHCO as part of WUA upfront deposit. From each three institutional WASHCOs and the community WASHCO, 250 birr will be collected totaling 1000 Birr upfront contribution deposit for the Water User Association.
7. To open and operate an investment CDF account for the construction of the overall gravity water supply net work including taps.
8. To monitor the activities and status of WASHCOs.
9. To prepare a) physical status or inventory report and b) financial report and present them to all users and WASHCOs. The report will be also submitted to the Kebele WASH team.
10. To have regular quarterly meetings with WASHCOs. During construction there will be weekly meetings. Thereafter, the WUA will have monthly meetings. In case an urgent meeting is needed, it could be called whenever needed. Minutes of meetings to be recorded by the secretary.
11. To make a decision on type and future additional distribution net work or expansion request.
12. To approve or reject any water connection request.
13. To assigns two persons for training e.g. Plumbing training from the Kebele that will take care of the operation and maintenance of the net work as a whole.
14. To decide on the type and amount of incentives needed for the guards, plumbers etc.

12.3 Dafili Gravity Scheme

Fact Sheet of Dafili Gravity Scheme

Scheme Title:	Dafili Gravity Water Supply Scheme in Jigda Silassie Kebele of Mandura Woreda
Sector:	Social development
Sub-sector:	Water supply and sanitation
Water Source:	Dafili Springs
Yield of Protected Spring:	1.5 l/s
Project Purpose:	Access to improved water supply and hygiene Closer access of water to cattle
Coverage:	Five Gotts (Villages) of Dafili sub-Kebele
Existing Number of users:	People, 1238, Cattle heads, 1398
Projected Number of users:	People, 1979, Cattle heads, 2178
Date Started:	April, 2011
Date Completed:	September, 2011
Constructed by:	Locally trained Artisans
Date Commissioned:	February 13, 2012 (Opened by H.E. President Ahmed Nasser)
Executing Bodies:	Water Users Association of Dafili Sub-Kebele in partnership with Water, Mines and Energy Resources Development Office (WMERDO) of Mandura Woreda.



Scheme Components:	A capped spring, a 50m ³ service reservoir, 1627 m pipe line, 5 public fountains and 5 wash stands, 2 shower houses of 4 rooms each and, a 2-room shower house and 3 cattle troughs.
Additional water uses:	Backyard gardening by excess water
Project Financing: Actual:	Total grant from the Government of Finland; ETB 720,000 Total contribution of communities; ETB 90,000 Grand Total; ETB 810,000

Links to: [FinnWASH-BG - CDs and VIDEO and FILES - Dafili gravity water scheme](#)

12.4 Abatachin Motorized Gravity Scheme

Expansion of Abatachin Mechanized Gravity Scheme was done in two phases; a) tapping 4 new springs and connected to the old supply line and b) construction of the second supply line and construction of new 50 m³ reservoir at the hill top in Genet Mariam.

Scheme Title Phase 1:	Abatachin Expansion Water Supply Scheme for Genete Mariam & Kutir
Kutir	2 Kebeles of Mandura Woreda
Sector:	Social development
Sub-sector:	Water supply and sanitation
Water Source:	Abatachin springs
Estimated Yield of Springs (before capping):	2.5 l/s
Current additional Yield of Protected Springs:	4 l/s
Project Purpose:	Access to improved water supply
Existing number of users:	17,100 in Gilgel Beles town, Genet Mariam and Transit Comm; Seven Gotts (Villages) of Genete Mariam and Kutir 2 Kebeles
Date Started:	April 2012
Date of Completion:	June, 2015
Constructed by:	Locally trained Artisans
Executing Bodies:	Water Users Association of Genete Mariam and Kutir 2 Kebeles in partnership with Water Service Board of Gilgel Beles & Genete Mariam and Water Mines and Energy Resources Development Office (WMERDO) of Mandura Woreda.
Scheme Components:	3 springs capped separately, a 50m ³ service reservoir, 2.657 kms pipe lines and 7 public fountains, supply and installation of a surface pump and a generator; dismantling, renovating, transporting from Genete Mariam Kebele and fixing two 10m ³ steel tanks in Kuter 2 Kebele.
Project Financing:	Grant from the Government of Finland = ETB 1,700,064 Contribution of communities = ETB 300,011 Phase 1; Grand Total = ETB 2,000,075

Phase 2: Construction of second supply line and 50m³ reservoir at the hill top in Genet Mariam. The water supply service in Gilgel Beles had been intermittent and dwellers at the periphery of the town had been deprived from getting potable water. Initially, it was mainly due to shortage of water from the springs, but after capping 4 l/s additional water and lifting it through the second supply line some 1,296 households, i.e. about 6,500 more people in Gilgel Beles and its periphery could be served. The second phase of additional pressure line was installed at the cost of Birr 1,373,450

The budget source for the new pressure main on Abatachin expansion scheme was financed by Community, Woreda, FinnWASH-BG 9Mandura Woreda: ETB 53,000
Contribution of communities: ETB 100,000, GB/GM Water Supply Service Board: ETB 150,000.
Grant required from Zone/Region/External Supporters: ETB 1,373,450



Links to: [FinnWASH-BG - CDs and VIDEO and FILES - Abatachin water scheme](#)

12.5 Berber Rural Town Motorized Scheme

Fact sheet of Berber Rural Town Water Supply Scheme

Scheme Title:	Berber Rural Town Water Supply Scheme in Dibatie Woreda
Sector:	Social development
Sub-sector:	Water supply and sanitation
Water Source:	A borehole with a depth of 54 m
Safe Yield the Borehole:	4 l/s
Project Purpose:	Access to improved water supply
Existing Number of Users:	2,365 / 473 households
Projected Number of Users:	3,150
No. of Students in Primary:	1,100
No. of Students in Secondary:	450
Coverage:	5 Gotts (Villages), 2 Schools and a Health Center.
Proposed Impl. duration:	29 February – 15 August 2012
Date Started:	29 February 2012
Status:	Completed and handed over to WASHCO on 15 May 2014
Constructed by:	Water Works Enterprise of BGNRS
Executing Bodies:	WASHCO of Berber town in partnership with Water Office of Dibatie Woreda, Water department of Metekel Zone and WMERDB of BGNRS
Scheme Components:	A borehole, a submersible pump, a generator and a generator house, a 50m ³ service reservoir, public shower (3+3), 7.06 kms pipe lines and 8 public fountains (5 community, 2 Schools and one Health Center).
Project Financing:	Grant from the Government of Finland = ETB 3,592,564.43 Contribution of communities = ETB 330,440 Grand Total = ETB 3,923,004.43

Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Berber water scheme](#)



Figure 12-2 H.E. President Ahmed Nasser opening Berber water scheme



H.E. Ahmed Nasser in public catering at Primary School to open Berber water scheme.



Front left Mr. Harri Seppanen from Niras Home Office at the field visit to the Programme.

Next to him FinnWASH-BG Field Advisor Bezabih Alem Hayiso and Programme Coordinator Desalegne Abebe.

The message was that the Community has to take care of their own water system in the long run.



The whole rural town of Berber is the beneficiary of the water scheme. Currently used by 2,363 residents and 1,550 students in the Primary and secondary schools.



12.6 Galessa Rural Town Motorized Scheme

The Galessa scheme was completed and an official opening of the scheme was done during the FinnWASH-BG Board meeting on 17 June 2014. The opening ceremony was attended by Finland Ambassador Sirpa Maenpaa.

Link to; [FinnWASH-BG - CDs and VIDEO and FILES - Galessa water scheme opening](#)

Fact Sheet on Galessa Rural Town Water Supply Scheme

Scheme Title:	Galessa Rural Town Water Supply Scheme in Dibatie Woreda
Sector:	Social development
Sub-sector:	Water supply and sanitation
Water Source:	A borehole with a depth of 60 m
Safe Yield of the borehole:	11.5 l/s
Project Purpose:	Access to improved water supply
Existing Number of Users:	960 household /4,800 users
Projected Number of Users:	8,900 (15 year planning period)
Coverage:	Seven Gotts (Villages) and a Primary and Secondary schools
No. of Students in Primary:	1,800
No. of Students in Secondary:	650
Construction Started:	29 February 2012
Intended Date of Completion:	15 August 2012
Status:	Completed and officially handed over to the newly established WUA WASHCO on 14 May 2014.
Constructed by:	Water Works Enterprise of BGNRS.
Executing Bodies:	WASHCO of Galessa town in partnership with Water Office of Dibatie Woreda, Water Department of Metekel Zone and WMERDB of BGNRS.
Scheme Components:	A borehole, a submersible pump, a generator and a generator house, a 50m ³ service reservoir, 5 kms pipe lines and 7 fountains (6 communities and one in Primary school and yard connection with one tap to Secondary school), one public shower with (3+3) rooms.
Project Financing:	Grant from the Government of Finland = ETB 2,901,049.73 Contribution of communities = ETB 365,577 Grand Total = ETB 3,266,626.73

Figure 12-3 Finland Ambassador Sirpa Maenpaa for Official opening of Galessa Water Scheme



Finland Ambassador Sirpa Maenpaa and Counselor Marko Saarinen in Gallessa Water Scheme Official Opening Ceremony with Ato Fikadu Tadesse, BG - Regional Parliament Speaker.

12.7 Gesengeza town Solar Powered Scheme

Originally two shallow wells were drilled in Gesengeza community in Wombera woreda which is situated at the hill top. One well was not yielding much but the second hole was very high yielding by 0.7l/sec. Therefore, decision was made to convert it to communal water system powered by solar panels.

Link to CDs and Planning documents: [FinnWASH-BG - CDs and VIDEO and FILES - Gesengeza water scheme](#)

Fact sheet of Gesengeza rural village water scheme:

- Gesengeza rural village is one of the medium scale water schemes which has been constructed using CDF approach within FinnWASH-BG Programme;
- The scheme construction was started in 2012/13 and was completed 2015. The remaining component was the installation of solar panel powered submersible pump which had to be tendered twice;
- Gesengeza is one of Wombera woreda rural village with a current population of 200 households. Most households have traditional pit latrines;
- It is located 20 km from the Wombera Woreda capital of Debre Zeit. The village is geographically located at UTM 1171333N, 36P0854496E at altitude of 2,557 m above sea level;
- The Village has a Health center, a Health post and a Primary school, which are all connected to the water system;
- Annual temperature varies from 17.4 - to 21.2 C with an annual average rainfall of 875 mm;



- The village didn't have potable water supply except one low yielding HDW constructed by GoE funds;
- The system design is done in two phases from 2014 to 2023 and from 2024 to 2039;
- The projected population design period in 2039 is 1,250. Primary school will have 646 students;
- The maximum day demand for the two phases is 0.33 and 0.65 liters per second, respectively. This demand includes both public and institutional water points;
- The scheme has 0.2 km GS rising main, 0.78 km HDPE gravity main and distribution lines. It has a 45 m deep borehole with safe yield of 0.7 l/sec which was fitted with solar submersible pump of 1kw. The scheme has also 25m³ sandwich balancing reservoir, 1 Public water point, 1 School fountain, 1 fountain at Health center, 1 Public shower (3+3) and 1 School shower with six rooms each and a yard connection with a tap at Health post;
- The total construction cost was Birr 936,294, including community contribution. The cost of shallow well drilling was 204,000 Birr. The community contribution was Birr 125,156 or 13.37 %. The remaining Birr 811,138 or 86.63 % has been paid by GoF / FinnWASH-BG. The total construction cost doesn't include overhead costs covered by GoE for work supervision. Community contribution includes local construction materials like stone, eucalyptus poles and labor for pipe trench excavation, ballast breaking, back filling etc;
- The civil work construction has been carried out by local Artisans and Wombera Water Office. The scheme is managed by Gesengesa Water Users Association (WUA), which has its own bye law of association and has obtained a registration certificate of legality since 25 March 2014 as per the Proclamation No.71/2008 of the BG Region;
- WUA is managed by a General assembly composed of each and every member of the association, by an executive WASHCO and the necessary technical staff, including plumbers, fee collectors, operator/guard.



14 Administrative Set-up

14.1 TA Team

FinnWASH-BG was working in two locations; a) in Assosa which is the Capital City of BG and where all the Bureaux are situated and therefore Finn WASH needed a presence there. Team Leader Tapio Niemi worked there from October 2008 - 31 October 2015. Also Finance and Microfinance Advisor was placed in Assosa; the position was occupied by Asmamaw Damtie until December 2010, when he suddenly died on natural causes and was replaced by Berhanu Garo Hordo up to 31 October 2015. FinnWASH has had 5 JPOs who all were placed in Assosa where the GIS unit is situated in BoFED. Antero Keskinen (13mm), Paula Salmela (4mm), Minna Nurmi (12mm), Jaakko Jarvinen (18mm) and Kimmo Koivumaki (24mm).

The other part of the TA Team was placed in Gilgel Beles in Metekel Zone where the actual WASH work happened in five woredas; Bullen, Dibate, Pawe, Mandura and Wombera. The team was led by Water and Sanitation Adviser Michael Wood for 4 years, and assisted by Field Advisor Desalegne Simachew (6 years 4mm), Field Advisor Tesfaye Yesigat (4 years) stationed in Bullen and Field Advisor Bezabih Alem Hayiso (5 years) stationed in Wombera and later in Bullen. TA team had a support staff consisting of 4 Drivers, Office Assistant and Watchmen.

Accountant Mekedes Digafe from Niras Country Office was assisting in the compilation of monthly TA accounts which took about 4 days / month. She managed the payment of Staff salaries, including payment to Tax office and provident fund as per GoE rules. TA accounts were sent to MFA and Niras got the invested money reimbursed. Everything went smoothly.

TA Team had its own operational budget which allowed smooth and uncomplicated field operation regarding per diem, air travel, fuel, hotel, spare tyres, car services and repairs. Occasionally TA funds were used to open in deadlocks in organizing trainings for woreda officials, assisting in internal auditing etc.

14.2 Bureaux, Zone and Woredas

FinnWASH-BG was provided office space in WMERDB compound free of cost which was a major GoE contribution and in Zonal Compound in Gilgel Beles for the TA Staff there.

FinnWASH-BG worked systematically through the GoE government system. Altogether annually 35 workplans and budgets were prepared in interaction with the implementing offices. See sample; [FinnWASH-BG - Annual Budgets - 6 years](#). [FinnWASH-BG - Annual Reports - 6 years](#)

14.3 PMC and Board

FinnWASH-BG had as decision making organ Programme Management Committee, consisting of Team Leader and Bureaux Representatives; it took decisions on bidding opening and winner selection, short term consultancies and approving annual bill of quantities for construction and special financial issues proposed by woredas.

The Board is the highest decision making body, including Embassies and MFA representation. It was meeting twice a year; the most important decision to approve the annual work plans and budgets. Normally the first quarter of the fiscal year was for budget planning, revision and approval and sending to woredas as stamped and signed document. Normally woredas received the approved workplans in September.



14.4 Fund Transfers from Finland

The system worked perfectly. Based on the budget approval and considering the left over funds from the previous year - a request was made to Finnish Embassy on funds transfer. On Embassy's recommendation MFA was sending the funds directly from Helsinki to BoFED in Assosa. Further from BoFED funds were distributed according to budget lines to Bureaux, Zonal offices and Woreda offices. The CDF funds were sent to WASHCOs through BGCSI which took 7 % commission on the service. WASHCOs received the cash for construction from BGCSI branches and sub-branches. Usually the funds arrived in September.

14.5 Cars

WASH Programme can not exist without ground transportation. The distance from Assosa to Gilgel Beles was over the first two years through Nekemte - Bure - Kosovor - Chagni - Gilgel Beles which was a 15-hour non-stop driving. Later on when new bridge was constructed over the Blue Nile along the Sudan board road, it was only 7-hour non-stop driving on rough road. The roads in Metekel are all rough roads made of sharp stones like marble. FinnWASH-BG had 4 Nissan Patrol cars and one Toyota Single Cabin Pick-up. The Nissan have served on an average 230,000 and Pick-up 140,000 km. No major accidents happened. However, it has to be said that the Nissans served well the first 100,000 km but after that problems in chassis emerged - all rear axles were cracked, stabilizers dont last, fixing of air conditioning was given up, bodys are leaking dust heavily inside, steering rod problems, shock absorbers, bearing problems in all wheels, leaking differentials, radiator must be kept very clean, etc. On the other side - the power in the 6-cylinder engines is almost the same as when they were new and no repairs were needed. Also Nissan Patrol gives comfortable ride for the passenger as such. Toyota pick-up is very reliable and comes out with normal services - it is a work horse which needs load on its back. All cars have been handed over to BoFED in good condition with a set of new tyres, oil and filter changed. If maintained they can serve many years - provided that the drivers behave! Management of FinnWASH-BG drivers was based on two fundamental rules; "If you loose your car you loose your job!" and TA Experts controlled the speed for their own safety.

Tyre cost is the single most expensive car maintenance item - one imported set lasts only about 20,000 km on rough roads. The locally manufactured tyres are cheaper than imported from India or Japan but the cost / km is about the same whatever model or brand. One imported set of 4 tyres is currently Birr 25,000 / 23 = Euro 1,086.

15 Woreda Support Group

15.1 Contract Period and Cost

The Programme Document was evaluated twice; First by two independent evaluators assigned by MFA and again to assess the evaluators by Mr. Eero Kantola / MFA and Mr. Antti Inkinen / Embassy of Finland. [FinnWASH-BG - CDs - WORLD VILLAGE exhibition in Helsinki\Mr Inkinen and Mr Kontula on project planning travel.JPG](#). As a result 4 positions from originally proposed TA team in the PD were cut off and WSG formed. TA prepared the ToR for open bidding of the WSG contract. The Efficient Desalegn Berehane and Friends Consultancy was selected as the winners consisting of a Team of four Experts. The team was stationed in Gilgel Beles, it had one car for two years and two cars for 2 years and rented house for office / residence. The WSG contract was initially for 2 years with WMERDB but extended two times to cover a total 4 years when the contract ended June 2014. Look for more details to WSG contracts; [FinnWASH-BG - WSG files\FinnWASH-BG - WSG](#).

The Team had four full-time persons combining expertise in:

- Results-based Monitoring & Evaluation and Planning;
- Water Supply / Hydrogeology;
- Hygiene & Sanitation;



- Community Mobilization / Gender.

Table 15-1 WSG Cost

WSG costs were covered from Capacity building budget totaling Birr 10,163,787.

WSG Cost	
Year	Expenditure
2003	1,496,315
2004	2,338,621
2005	2,587,299
2006	2,857,396
2007 - Retention payment	884,156
Total	10,163,787

15.2 Publications of WSG

WSG produced a number of Manuals and other documents which are linked below;

[FinnWASH-BG - WSG files\Artisan TOT Training Proceeding Report](#)

[FinnWASH-BG - WSG files\CLTS - FACILITATOR GUIDE & TRAINING REPORT](#)

[FinnWASH-BG - WSG files\Community WaSH Plan checklist](#)

[FinnWASH-BG - WSG files\FinnWaSH BG - Fourth Year Report](#)

[FinnWASH-BG - WSG files\FinnWaSH BG - WSG work plan and annual reports](#)

[FinnWASH-BG - WSG files\FinnWASH-BG - WSG](#)

[FinnWASH-BG - WSG files\Monitoring and Evaluation Framework](#)

[FinnWASH-BG - WSG files\Operation and Maintenance Training Manual](#)

[FinnWASH-BG - WSG files\Operation and Maintenance Training May 2004 E.C](#)

[FinnWASH-BG - WSG files\Planning training power point presentation](#)

[FinnWASH-BG - WSG files\RBM training Manual - in amharic](#)

[FinnWASH-BG - WSG files\School Sanitation and Hygiene Training Manual - in Amharic](#)

[FinnWASH-BG - WSG files\Shallow Wells Bid Documents](#)

[FinnWASH-BG - WSG files\Siting and Shallow Wells Supervision Report](#)

[FinnWASH-BG - WSG files\WaSH Inventory formats](#)

[FinnWASH-BG - WSG files\Water Point Siting and Hydrogeological Report](#)

[FinnWASH-BG - WSG files\Woreda WaSH Baseline survey report](#)

[FinnWASH-BG - WSG files\WSG - 2003 - 2006 Annual Reports](#)

16 Cross cutting objectives

16.1 Analysis of cross cutting objectives (Changes, problems, new opportunities)

FinnWASH-BG Programme has systematically followed the WASH approach (Water supply, Sanitation and Hygiene) as it was defined in the Programme Document. The approach is fully in line with the GoE policy of Memorandum of Understanding on WASH coordination with the Ministries of Water, Education and Health. In Benishangul - Gumuz Regional State the three main Bureaus have signed a MOU on cooperation and in which the Bureau of Women, Youth and Children Affairs is also as a signee.

Accordingly, FinnWASH-BG Programme has worked through the GoE administrative system. It can be expected that especially in Woredas - which have the implementing power in Ethiopian Governmental system - will be in a strong position to continue with the WASH activities also after the FinnWASH-BG Programme will face-out. There will always be WASH work to be done in all Woredas because of the ever expanding population but less so in FinnWASH-BG Woredas because of the strong impact of the Programme.



For BG it will remain a challenge to get the funding for the continuation and expansion of WASH Programme in all of the 20 woredas in the three Zones. COWASH Programme definitely will have a supporting role in this but its direct funding from Finland may have its limitations and other donor funding sources will be needed, as well, because BG's own funding resources seem to be limited.

The volume of the remaining WASH sector work in BG within the forthcoming 14 - 20 years can be assessed to be in the category of Euro ca. 40 million. The calculation is as follows: The current population is closing 1 million and will be expanding to 1,5 million within the next 14 years by 3% annual population growth. When excluding the current population of 300,000 in FinnWASH-BG woredas and the estimated current 30% average UAP in the remaining woredas as the baseline and the WASH needs in schools and health posts, it can be calculated that a population of 840,000 people still need to be serviced by WASH. It will be a major undertaking to reach the GoE set targets. The cost will be (840,000 x Euro 45 / person = 37,8 Million Euro) based on the FinnWASH-BG experience.

17 Auditing of the Programme

External auditing was carried out in FinnWASH-BG by KPMG; Link to [FinnWASH-BG - External Auditing - May 2013](#). BoFED carried out internal auditing three times when the final internal auditing took place in September - October 2015 for the fiscal year 2014 - 2015 with the logistical support of TA. [FinnWASH-BG - Audit Report Internal by BoFED - Final 2015.docx](#) The results were satisfactory. Mid-term evaluation was carried out after the second year, including financial review of spendings which were found to be in conformity with the achievements.

18 Handing over of the Programme

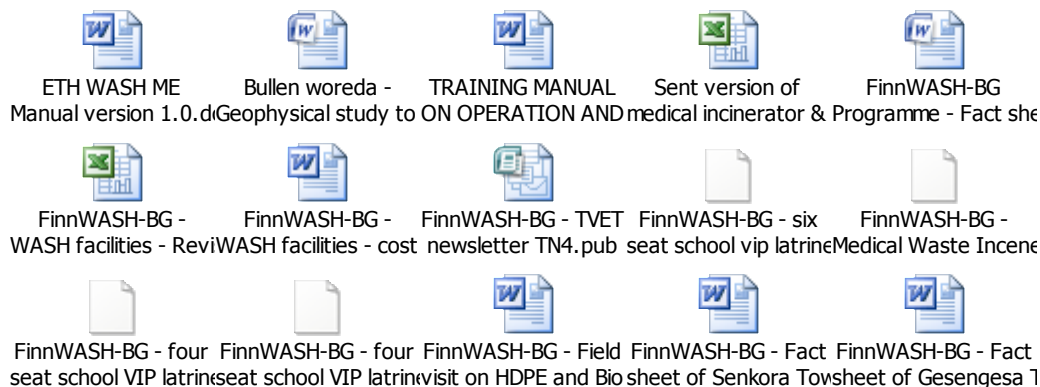
18.1 Assets

It has been planned that the handing over would take place in Gilgel Beles and in Assosa **before** the Board meeting. The plan is to get the handing over lists signed and stamped by the GoE Authorities. The list would be presented in the Final Board meeting which will take place in Gilgel Beles on 23 October 2015.

18.2 Documents, Reports, CDs and Videos

Documents, Reports, CD Pictures, Videos are attached as soft copy to this report in the attached Memory stick of 30 GB. Many of them have been linked to from this master File to enhance the reading experience. The linked folders contain many files.

Link to: [FinnWASH-BG - Studies, Manuals, Publications](#), which are presented below;





FinnWASH-BG - Fact Sheet of Gallessa RurSheet of Dafili , SprinSheet of Berber WateSheet of Abatachin EGUIDE TO ON SITE S/



Finn WASH-BG Gender training manuMainstreaming StrateHygiene And Sanitatic



- Link to: [A1-FINNWASH MAPS](#)
- Link to: [A3-DATABASES FOR PRINTING AND TO FINAL REPORT](#)
- Link to: [A3-FINNWASH MAPS](#)
- Link to: [Finn-WASH audit Report 2015](#)
- Link to: [FinnWASH-BG - ALI SPRING FEASIBILITY STUDY](#)
- Link to: [FinnWASH-BG - ALI SPRING FEASIBILITY STUDY - FINAL REPORTS - 120531](#)
- Link to: [FinnWASH-BG - Ali Spring Independent Study - Vikman](#)
- Link to: [FinnWASH-BG - Annual Budgets - 6 years](#)
- Link to: [FinnWASH-BG - Annual Reports - 6 years](#)
- Link to: [FinnWASH-BG - Bio Sand Filter](#)
- Link to: [FinnWASH-BG - CDF Guidelines](#)
- Link to: [FinnWASH-BG - CDs - Board meeting 19 - 20 February 2013](#)
- Link to: [FinnWASH-BG - CDs - Board meeting travel - 090618](#)
- Link to: [FinnWASH-BG - CDs - Functionality survey - Water points, VIPL and MWI](#)
- Link to: [FinnWASH-BG - CDs - MPs visit](#)
- Link to: [FinnWASH-BG - CDs - Overall Impressions](#)
- Link to: [FinnWASH-BG - CDs - Spring Development](#)
- Link to: [FinnWASH-BG - CDs - VIPL, Traditional Pits and Hygiene](#)
- Link to: [FinnWASH-BG - CDs - WORLD VILLAGE exhibition in Helsinki](#)
- Link to: [FinnWASH-BG - CDs and FILES - Capacity building](#)
- Link to: [FinnWASH-BG - CDs and FILES - CLTS](#)
- Link to: [FinnWASH-BG - CDs and FILES - Gocher Gravity Scheme](#)
- Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Abatachin water scheme](#)
- Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Ali Spring Gravity Water Scheme](#)
- Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Berber water scheme](#)
- Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Dafili gravity water scheme](#)
- Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Galessa water scheme opening](#)
- Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Gesengesa water scheme](#)
- Link to: [FinnWASH-BG - CDs and VIDEO and FILES - Senkora water scheme](#)
- Link to: [FinnWASH-BG - External Auditing - May 2013](#)
- Link to: [FinnWASH-BG - Federal Manuals](#)
- Link to: [FinnWASH-BG - Financial Forms and Manuals](#)
- Link to: [FinnWASH-BG - Financial Report eth 2007](#)
- Link to: [FinnWASH-BG - GIS - Actual coverage files used in maps](#)
- Link to: [FinnWASH-BG - GIS - Actual databases - NOT FOR PRINTING](#)
- Link to: [FinnWASH-BG - GIS related files](#)
- Link to: [FinnWASH-BG - HARMONIZATION - Task Force](#)
- Link to: [FinnWASH-BG - Interbal Audit Report by BoFED 2015 - FINAL](#)
- Link to: [FinnWASH-BG - Latest update for Financial for Final Report](#)
- Link to: [FinnWASH-BG - Multi Stakeholder Forum](#)
- Link to: [FinnWASH-BG - Nissan Patrol and Toyota Pick up](#)
- Link to: [FinnWASH-BG - Spare Part Supply Chain](#)
- Link to: [FinnWASH-BG - Studies, Manuals, Publications](#)
- Link to: [FinnWASH-BG - Training Manual for Medium scale schemes](#)
- Link to: [FinnWASH-BG - WASHCO Procurement Manual](#)



- Link to: [FinnWASH-BG - WSG files](#)
Link to: [FinnWASH-BG - WWUA Rules and regulations](#)
Link to: [WASH - Planning Phase April 2008 - June 2009](#)
Link to: [Animation 564x500 open with browser.gif](#)
Link to: [FinnWASH-BG - Board Meeting - GIS and Database report.pptx](#)
Link to: [FinnWASH-BG - Coverage summary \(1\) - 151007.xlsx](#)
Link to: [FinnWASH-BG - GIS - COMPILED DATA -tn2.xlsx](#)
Link to: [FinnWASH-BG - GIS - COVERAGE CALCULATIONS.xlsx](#)
Link to: [FinnWASH-BG - Harmonisation TASK FORCE - FINAL OUTCOME - 100225.doc](#)
Link to: [FinnWASH-BG - Introduction to FinnWASH facilities.pptx](#)
Link to: [FinnWASH-BG - Logo.docx](#)
Link to: [FinnWASH-BG - logo print.jpg](#)
Link to: [FinnWASH-BG - MP visit - Facts.pptx](#)
Link to: [FinnWASH-BG - MP visit - Securing Sustainability - 130308.pptx](#)
Link to: [FinnWASH-BG Programme - Functionality inventory questionnaire - 150313.xls](#)
Link to: [FinnWASH-BG - Audit Report Internal by BoFED - Final 2015.docx](#)
Link to: [SUMMARY ALL WOREDAS \(2\).xlsx](#)

19 Risks

19.1 Safety

Safety is the main concern which can interrupt any work. Programme area has been safe and calm over the 6-year period. However, there were some incidences on the Sudan border road and FinnWASH-BF staffs and cars decided to travel to Gilgel Beles over longer road of by air. There was Embassy's consensus on this as a precaution.

19.2 Currency rate

FinnWASH-BG has been profiting on the devaluation of Birr which has given more funds for investments. However, the comparative price of cement has remained at the same level which is the main cost factor besides of the reinforcement bars when water points are constructed. Devaluation was from 15 Birr - 23 Birr / Euro.

19.3 Staff turn-over

It was anticipated and it has also happened. The staff turn over in woredas which is the main implementing organization has been rapid which has had an impact on the implementation. When a new person is appointed it takes time until the work routine starts. FinnWASH-BG has had training and retaraining every year for woreda officials to boost implementation. The same has happened in Bureaux and Zonal offices. It is not a surprise - rather it is a system.

19.4 Per diem

The GoE per diem of Birr 70, which GoE was paying was not covering the travel, food and accommodation costs, which had a negative effect on Officers' motivation to perform since they did not want to cover the travels from their own pocket and as an unavoidable result Officers did not participate in training workshops and were not active in field work. At the same time WB and UN organizations were paying per diems at the rate of Birr 150 or higher and workshops were well attended. Action was taken and Embassy allowed FinnWASH-BG to pay per diem topping for two years to reach the same level as UN organizations i.e. (GoE per diem Birr 70 + GoF Birr 80 = Birr 150). Situation improved; work and trainings progressed better in woredas. However, the decision was taken back in the name of harmonization by not allowing per diem topping when other donors continued as 'business as usual'. The motivation dropped and the slowing-down work effect can be



seen in the graphics of physical achievements. The critical question sounds; "Why the harmonization among donors can not be made upwards?" All Finland funded Projects are suffering from the same.

19.5 Infrastructure in Benishangul - Gumuz

It is true that BG is one of the emerging and poor Regional States. Still it can be found out that BG / GoE has been able to contribute to the Programme at the agreed level and work was progressing well - in fact the work cooperation has been good both in financing and human capacity support.

The difficult road conditions, distances and readiness of hardware traders to supply items is not the same as in Amhara or other more developed Regions which causes delayance but doesn't mean work interruption. For Spare Part Supply Chain there has been an action from the programme.

19.6 Soil conditions for water schemes

It was known that the soil conditions would be challenging for HDW digging and even for drilling SWs. It has proved to be true and 20.5% of HDW construction fail when the ratio with SWs is close to 50%. It has its cost and time implications which need to be accepted. Moreover, FinnWASH-BG experience shows that it is better to have more tools in the tool box and there is a place for HDWs. SWs, Spring Development, Motorized Schemes, and even larger schemes like Ali Spring. There is also the socio-economic aspect in it on peoples' preferences, participation and real need for the water. Hydro-Geological Study was conducted in order to help in water point identification in the working area. However, since the location of villages, schools, health posts / hospitals can not be changed then a lot of common sense and field experience must be applied when deciding on the site for HDW, SW, Spring within the maximum 1.5 km radius as the default maximum proximity to communities, schools and health posts/ hospitals. WSG (Woreda Support Group) had Hydrogeologist who was identifying the SW sites and many HDWs. Even a Hydrogeological Professor was hired as a short term Consultant to identify borehole sites with sophisticated instruments in Berber and Senkora schemes - in Senkora it was 100% success but in Berber total failure from the Professor - finally in Berber Field Advisor Tesfaye Yesigat used his common sense and field experience and identified the 5th 'desperate' place which was drilled successfully. He also modified the Berber scheme's design accordingly.

20 Lessons learnt of FinnWASH-BG Programme

1. It has been proved that CDF/ CMP approach can successfully be implemented in an emerging Region as in Benishangul - Gumuz, within a short 15-month Planning Phase and 4-6 year Implementation Phase. UAP was increased by 81.1 % on an average and many VIPLs and Incinerators were constructed by Communities' participation.
2. Communities participation of all investments was 13.7%.
3. The strong indication is that through CDF/CMP bigger gravity schemes and motorized schemes can be also be implemented. FinnWASH-BG has completed Gocher Gravity Scheme Dafili Gravity Scheme, Berber Mechanized Scheme , Senkora Mechanized Scheme , Gallessa Mechanized scheme. It is not wrong to assume - even if it not yet ultimately proved - that the schemes may be even more sustainable than in smaller WASHCOs managing the HDWs, because of the accumulated synergism and the high need of safe water in the communities.
4. The Table 10-1 Cost Effectiveness of FinnWASH-BG Programme displays rough assessment of cost effectiveness of FinnWASH-BG. Considering all GoF costs; investments, TA, cars, capacity building and office equipment in Woredas, Zone and Bureaux it can be calculated that at the cost of Euro 45 / person the entire population can be served with safe water, VIPLs separately for girls and boys and safe water in schools, VIPLs, MWIs and water in Health Posts. Implementation period is about 7-8 years in BG context. The financial commitment of GoE has been 6% and provision of office space and offering its administration for the implementation. The BGCSI has 7% commission for managing CDF funds to WASHCOs.



5. One major reason for the success was a qualified and work motivated TA Team which stayed in the Programme throughout. The access to TA funds granted smooth operation for such essential expenses as per diem, local travel, fuel and servicing the cars and other TA office expenses. The continuity of TA was sustaining the work which had otherwise been affected by the continuous staff turn over of GoE staffs.
6. When all expenses considered, with an investment of EURO 45 / person the full population can be served with communal water, water and VIPLs for schools and health posts hospitals and incinerators for health posts. Additionally, there is a long lasting effect in capacity building through trained Artisan in woredas, woreda and regional offices and handing over of vehicles after the Programme for continued operation by GoE. The results are good and transparent as shown in the financial spreadsheets and in GIS data base.
7. Programme which is working in woreda offices and which is relying on computers would need a 'Computer Doctor'. The Doctor would regularly visit the woreda offices, sort out software problems and clean the systems from viruses etc. It has been very difficult to get reports from woredas and if reports are required something should be done to assist woreda officers. Functional emails may be close in the future to get electronic reports in BG.

21 Recommendations

FinnWASH-BG Programme should be evaluated on long-term sustainability and effectiveness of CDF after 5-10 years of Programme's closing in 2020 - 2025. Data base enables it since the inputs can be found in the field.

Whenever possible priority should be given to spring development since it was found that the cost-benefit ratio is the best, sustainability expectation is the highest and the water quality is excellent. Even small springs yield a lot of water over a 24-hour cycle.

Whenever a meaningful WASH programme is launched in woredas then an inventory should be made on potential places for Spring Development, since it has been found to be the best option to supply community water. Thereby - as design principle - gravity pipelines of 2-5 km of high density polyethylene should be acceptable to bridge the distance between villages and mountainous valleys.

School authorities should take Roof Rainwater Harvesting more seriously and include it as a standard feature to new school buildings and VIPL designs.



Annex 1- Questionnaire for Functionality Inventory - Water Points

WATER POINT - Community/School/Health						
Identification						
Object ID						
Woreda						
Kebele						
Gott						
Scheme site name						
X-coordinate						
Y-coordinate						
Elevation (meters)						
Visual inspection						
Are there leakages around the head work?	Yes	No				
Are there water ponds around the water point?	Yes	No				
Can the fence stop animals entering the facility? (also gate is good)	Yes	No				
Test pumping						
How many litres pump provides in one minute? (about 40 strokes)						
Is there any unusual sound during pumping?	Yes	No				
Water quality test (by asking users)						
Is there unusual taste in the water?	Yes	No				
Is there unusual odor in the water?	Yes	No				
Current problems with the functional pump						
Is there any of the following technical problems	Bearings	Fulcrum pin	Raising pipe	Flange nuts	O-ring	Other
Non-functionality issues						
1. Broken						
a) bearings						
b) O-ring						
c) raising pipe						
d) fulcrum pin						
e) other						
2. Not enough water						
3. Management / finance problem						
4. Other						
How long the water point has been non-functional? (in weeks)						
Has the WASHCO tried to repair the facility?	Yes	No				
If not, what is the reason?	Beyond capacity		No spare parts		Other	
If beyond capacity, has the issue been reported to woreda?	Yes	No				
WASHCO interview						
Is the revenue collection started?	Yes	No				
If started						
How much there is money available at the moment?	In birr					
Where the money is saved?	Bank account	WASHCO cashier	Other			
How much is the water fee?	In birr					
What is the interval of payment?	Annually	6 Months	Monthly	Per visit	Other	
If not started						
What is the reason?						
What repairs WASHCO has paid?	Bearings	O-ring	Other			
How many households are using the water point?						
How many jerry-cans are collected by household / day?	Dry season		Wet season			
How many WASHCO members are there?	Women		Men			
Has the water point reduced illness in the area?	Yes	No				
Is there less water during the dry season?	Yes	No				
Has the well ever dried completely?	Yes	No				
What is the quality of the water accordingly to users?	Very bad	Bad	Medium	Good	Very good	
Remarks						



Annex 2 - Questionnaire for Functionality Inventory - Wash Facilities



LATRINE / Hand washing facility - School and Health	
Identification	
Object ID	
Woreda	
Kebele	
Gott	
Scheme site name	
X-coordinate	
Y-coordinate	
Visual inspection	
Are the latrines clean (no faeces or papers on the floor)?	Yes No
Are there hand washing facilities available?	Yes No
Are there water and soap available in the hand washing facilities?	Yes No
Is the hand washing facility in active use?	Yes No
Is there physical damage to latrines? (list the reasons in remarks)	
WASHCO interview	
Is the latrine in active use?	Yes No
If not, what is the reason?	Not functional Messiness Social taboos Other
Is there caretaker assigned for the latrine / hand washing facility?	Yes No
Has the WASH club been active?	Yes No
Remarks	

MEDICAL WASTE INCINERATOR - Health	
Identification	
Object ID	
Woreda	
Kebele	
Gott	
Scheme site name	
X-coordinate	
Y-coordinate	
Visual inspection	
Is the surrounding area clean? (no ampoules or needles on the ground)	Yes No
Is there unburned medical waste on the grill?	Yes No
Is there burned material at the bottom?	Yes No
Is there soil pit close to the incinerator?	Yes No
Has the ash tray of the incinerator been emptied to the soil pit?	Yes No
WASHCO interview	
Is the medical waste incinerator in active use?	Yes No
If not, what is the reason?	Not functional Messiness Other
Is there caretaker assigned for the medical waste incinerator?	Yes No
Remarks	



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Annex 3 - Bullen woreda investments

Object_ID	Loc_woreda	Loc_kebele	Loc_gott	Scheme_name	Obj_type	Obj_type_ext	Const_y_EC	House_holds	x_GPS_east	y_GPS_north	UTM_zone	Comm_costs	GoF_costs	Total_costs	Functional
2001_bul_002	Bullen	Dobi & Ekonti	Dobi	Dobi Fantable Shibabaw Sefer	HDW		2001	45	821315	1165036	36N	6000	22555	28555	0
2001_bul_003	Bullen	Dobi & Ekonti	Dobi Baruda Mocha	Baruda Mocha	HDW		2001	50	820414	1165692	36N	3600	21359	24959	1
2001_bul_005	Bullen	Addis Alem	Tach Addis Alem	Hargichi	HDW		2001	50	827704	1159636	36N	5720	29458	35178	1
2001_bul_006	Bullen	Addis Alem	Tach Addis Alem	Addis Alem Temert Bet Akababi	HDW		2001	35	828127	1158794	36N	8100	25604	33704	1
2001_bul_007	Bullen	Addis Alem	Tach Addis Alem	Habtamu Debela Sefer	HDW		2001	37	827542	1158863	36N	7500	23816	31316	1
2001_bul_008	Bullen	Addis Alem	Bare	Bare No1	HDW		2001	46	824716	1152046	36N	6120	25584	31704	1
2001_bul_012	Bullen	Metina Gisa	Lay Metti	Lay Metti No1	HDW		2001	41	182640	1173801	37N	3650	29362	33012	1
2001_bul_013	Bullen	Emanjina Goj	Amba	Amba No1	HDW		2001	35	181154	1178292	37N	6000	21671	27671	1
2002_bul_001	Bullen	Metina Gisa	Mehale Metti	Worqu sefer	HDW		2002	35	183009	1173600	37N	4230	20028	24258	1
2002_bul_002	Bullen	Metina Gisa	Tache Metti	Gesese Sefer	HDW		2002	46	184359	1173826	37N			0	1
2002_bul_003	Bullen	Metina Gisa	Tache Metti	Tadese Sefer	HDW		2002	37	184361	1173877	37N			0	1
2002_bul_004	Bullen	Metina Gisa	Bushese	Bushese	HDW		2002	34	185091	1172492	37N			0	1
2002_bul_005	Bullen	Azemina Benosh	Auishu	Auishu	HDW		2002	45	185728	1179841	37N			0	1
2002_bul_008	Bullen	Morana Ekosaki	Tsuntse	Tsuntse No1	HDW		2002	42	178169	1167714	37N			0	1
2002_bul_009	Bullen	Emanjina Goj	Mendi	Mendi No1	HDW		2002	48	171979	1178832	37N			0	1
2002_bul_010	Bullen	Dobi & Ekonti	Tsiged	Tsiged	HDW		2002	40	821724	1171678	36N			0	1
2002_bul_012	Bullen	Baruda	Baruda	Betekrstian Mewcha	HDW		2002	45	813977	1166076	36N			0	0
2002_bul_013	Bullen	Matana Bapurie	Manzen	Manzen	HDW		2002	50	827895	1166977	36N			0	1
2002_bul_014	Bullen	Matana Bapurie	Geghbedore	Aleme Sefer	HDW		2002	47	827104	1165741	36N			0	1
2002_bul_016	Bullen	Addis Alem	Biratu Sefer	Biraftu Sefer	HDW		2002	31	827295	1159792	36N			0	0
2002_bul_017	Bullen	Addis Alem	Lay Addis Alem	Shiferaw Mender	HDW		2002	43	827225	1159736	36N			0	0
2002_bul_018	Bullen	Addis Alem	Bare	Bare No2	HDW		2002	33	824796	1152096	36N			0	1
2002_bul_019	Bullen	Addis Alem	Shewa mender	Shewa Mender	HDW		2002	50	826656	1159729	36N			0	1
2002_bul_020	Bullen	Gongo	Seido	Seido	HDW		2002	45	180362	1153552	37N			0	1
2002_bul_021	Bullen	Gongo	Chefea	Chefea	HDW		2002	45	180323	1149673	37N			0	1
2002_bul_023	Bullen	Bekujina Godorare	Bekoji	Bekoji Megbia No1	HDW		2002	52	823046	1153661	36N			0	1
2002_bul_024	Bullen	Bekujina Godorare	Bekoji	Kureku	HDW		2002	57	823137	1153248	36N			0	1
2002_bul_025	Bullen	Bekujina Godorare	Chefea	Chefea No1	HDW		2002	55	824096	1153791	36N			0	1
2002_bul_026	Bullen	Bekujina Godorare	Tilu Biche	Tilu Biche	HDW		2002	2	818404	1152632	36N			0	1
2002_bul_027	Bullen	Bekujina Godorare	Bekoji	Tulubiche mewcha	HDW		2002	90	822767	1153265	36N			0	1
2002_bul_028	Bullen	Bekujina Godorare	Babkach	Babkach	HDW		2002	2	821047	1150633	36N			0	1
2002_bul_029	Bullen	Bekujina Godorare	Godorare	Godorare	HDW		2002	65	818515	1153743	36N			0	1



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2002_bul_031	Bullen	Chilanko	Chilanko	Gambela Sefer	HDW	2002	51	824035	1147322	36N			0	0
2002_bul_033	Bullen	Chilanko	Chilanko	Gobena Sefer	HDW	2002	51	824445	1146807	36N			0	0
2003_bul_004	Bullen	Chilanko	Chilanko	Gichduki Sefer	HDW	2003	49	823599	1147578	36N	8100	43525	51625	1
2003_bul_005	Bullen	Chilanko	Chilanko	Kersuse Sefer	HDW	2003	51	824868	1146098	36N	8100	45751	53851	0
2003_bul_008	Bullen	Bekujina Godorare	Horra	Horra Wajira Sefer	HDW	2003	55	821867	1155939	36N	7200	44863	52063	1
2003_bul_009	Bullen	Bekujina Godorare	Horra	Horra Wochay Sefer	HDW	2003	45	821461	1153851	36N	9000	46601	55601	1
2003_bul_010	Bullen	Bekujina Godorare	Bekujji	Gambela Sefer	HDW	2003	60	823394	1152924	36N	9000	45589	54589	1
2003_bul_011	Bullen	Bekujina Godorare	Bekujji	Bekujji Megbiya No2	HDW	2003	50	822981	1153756	36N	6840	37085	43925	1
2003_bul_012	Bullen	Bekujina Godorare	Babekach Mewcha	Babekach Mewcha	HDW	2003	41	822767	1153265	36N	7200	48657	55857	0
2003_bul_014	Bullen	Addis Alem	Tach Addis Alem	Gudeta Sefer	HDW	2003	43	828133	1159051	36N	5400	42060	47460	1
2003_bul_015	Bullen	Addis Alem	Tach Addis Alem	Allemayew Sefer	HDW	2003	39	827473	1159190	36N	7020	43596	50616	1
2003_bul_019	Bullen	Baruda	Dorakala	Tarekegn Sezi Sefer	HDW	2003	43	818279	1160082	36N	7380	39418	46798	1
2003_bul_022	Bullen	Emanjina Goj	Amba	Amba No2	HDW	2003	60	181111	1178060	37N	6300	31624	37924	1
2003_bul_023	Bullen	Emanjina Goj	Gojja	Gojja	HDW	2003	41	175175	1177612	37N	6660	36819	43479	1
2003_bul_027	Bullen	Matana Bapurie	Manzin	Merga Sefer	HDW	2003	39	827798	1167665	36N	7740	41564	49304	1
2003_bul_028	Bullen	Matana Bapurie	Gighbedole	Gunden Sefer	HDW	2003	43	827065	1166248	36N	6660	41790	48450	1
2003_bul_029	Bullen	Aygali	Ampu sefer	Ampu Sefer	HDW	2003	42	816105	1183033	36N	6660	34757	41417	0
2003_bul_034	Bullen	Azemina Benosh	Mokan	Tach Mokan	HDW	2003	41	183087	1176443	37N	7200	40165	47365	1
2003_bul_035	Bullen	Azemina Benosh	Gichiwea	Gichiwea No1	HDW	2003	46	184073	1180227	37N	7200	48800	56000	1
2003_bul_036	Bullen	Azemina Benosh	Lay mengi	Lay Mengi No2	HDW	2003	45	184130	1175812	37N	6300	43321	49621	1
2003_bul_040	Bullen	Bullen 2	Denegay Bere	Denegay Bere	HDW	2003	55	181616	1173289	37N	8100	19896	27996	1
2004_bul_001	Bullen	Dosh & Moch	Tach moch	Tach Moch	HDW	2004	37	183624	1182369	37N	6500	32633.5	39133.5	1
2004_bul_002	Bullen	Dosh & Moch	Lay moch	Lay Moch	HDW	2004	50	183776	1182939	37N	9200	35535.6	44735.6	1
2004_bul_003	Bullen	Dosh & Moch	Zembaha	Zembaha	HDW	2004	54	183985	1182088	37N	8100	37129.9	45229.9	1
2004_bul_004	Bullen	Dosh & Moch	Pubong	Pupong No2	HDW	2004	50	183805	1182523	37N	10575	39092	49667	1
2004_bul_005	Bullen	Azemina Benosh	Mehal Benosh	Mehal Benosh	HDW	2004	31	185560	1179241	37N	12200	26004	38204	1
2004_bul_006	Bullen	Azemina Benosh	Tach Mengi No2	Tach Mengi No2	HDW	2004	31	187512	1180262	37N	10575	41066	51641	1
2004_bul_007	Bullen	Azemina Benosh	Gechiwe	Gechiwe No2	HDW	2004	40	183856	1180219	37N	9550	43119.6	52669.6	1
2004_bul_008	Bullen	Azemina Benosh	Mokan	Lay Mokan	HDW	2004	42	182364	1174344	37N	7500	25934	33434	1
2004_bul_009	Bullen	Morana Ekosaki	Dehan	Dehan no 2	HDW	2004	53	178540	1164750	37N	10575	41949	52524	1
2004_bul_012	Bullen	Matana Bapurie	Admasu sefer	Admas Sefer	HDW	2004	64	827549	1165957	36N	8720	35707.7	44427.7	1
2004_bul_013	Bullen	Matana Bapurie	Matta	Fekadu Sefer	HDW	2004	45	172970	1159560	37N	8200	36091	44291	1
2004_bul_015	Bullen	Addis Alem	Aykash	Adamu Sefer	HDW	2004	40	824692	1159256	36N	10560	40901	51461	1
2004_bul_017	Bullen	Addis Alem	Tach Addis Alem	Megi Sefer	HDW	2004	28	828442	1158289	36N	10575	40075	50650	1
2004_bul_018	Bullen	Addis Alem	Tach Addis Alem	Metayi Sefer	HDW	2004	29	171713	1158351	37N	10575	39556	50131	1
2004_bul_019	Bullen	Baruda	Kebkeb	Kebkeb	HDW	2004	41	156506	1164932	37N	8950	41143	50093	1
2004_bul_021	Bullen	Baruda	Baruda	Teha Kela Akababi	HDW	2004	40	814080	1165248	36N	8950	42771	51721	1



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2004_bul_0 22	Bullen	Baruda	Dora Kela	Dora Kela Mesker Sefer	HDW	2004	49	818183	1161724	36N	17750	47848	65598	1
2004_bul_0 23	Bullen	Chilanko	Chilanko	Jawi Sefer	HDW	2004	40	823611	1147655	36N	11850	48681	60531	1
2004_bul_0 24	Bullen	Chilanko	Chilanko	Jawi fekadu Sefer	HDW	2004	35	823879	1147204	36N	13500	46861	60361	1
2004_bul_0 25	Bullen	Dobi & Ekonti	Dobi	Aba Endeshaw Sefer	HDW	2004	42	821576	1165497	36N	10575	38960	49535	1
2004_bul_0 26	Bullen	Bekujina Godorare	Bekuji	Tulubiche	HDW	2004	44	822328	1153344	36N	10575	41486	52061	1
2004_bul_0 27	Bullen	Bekujina Godorare	Bekuji	Babkeche Sefer	HDW	2004	53	822375	1152954	36N	8300	37249	45549	1
2004_bul_0 28	Bullen	Bekujina Godorare	Bekuji	Cheha terara	HDW	2004	41	823300	1152278	36N	8750	39932	48682	1
2004_bul_0 30	Bullen	Bekujina Godorare	Godorare	Gebeya Akababi	HDW	2004	28	814020	1155315	36N	17750	58668	76418	1
2004_bul_0 31	Bullen	Bekujina Godorare	Godorare	Ateache	HDW	2004	34	814075	1155463	36N	7600	35912	43512	1
2004_bul_0 32	Bullen	Bekujina Godorare	Godorare	Temert Bet Mewcha	HDW	2004	52	814123	1154802	36N	10575	46463	57038	1
2004_bul_0 33	Bullen	Bekujina Godorare	Godorare	Mengestu Sefer	HDW	2004	60	815155	1156182	36N	8700	37009	45709	1
2004_bul_0 34	Bullen	Gongo	Lafto	Lay Lafto	HDW	2004	46	182987	1143266	37N	8720	38908	47628	1
2004_bul_0 35	Bullen	Gongo	Chefe Gibe	Chefe Gibe	HDW	2004	45	180339	1143134	37N	7250	35504	42754	1
2004_bul_0 36	Bullen	Aygali	Zengani	Zengani Sefer	HDW	2004	45	816458	1181835	36N	10575	39711	50286	1
2004_bul_0 38	Bullen	Bullen	Gissa Ber	Gissa Ber	HDW	2004	60	181162	1172481	37N	2900	28644	31544	1
2004_bul_0 39	Bullen	Bullen 2	Gijja Ber	Gijja Ber	HDW	2004	70	179921	1174153	37N	2950	32252	35202	1
2004_bul_0 41	Bullen	Bullen 2	Azem Berr	Azem Berr	HDW	2004	35	181048	1174080	37N	6500	35373	41873	1
2004_bul_0 42	Bullen	Bullen Zuria	Ekusaki berr	Ekusaki Berr	HDW	2004	86	180362	1173658	37N	6550	32278	38828	1
2004_bul_0 44	Bullen	Emanjina Goj	Duggi	Duggi No1	HDW	2004	50	180645	1181503	37N	9200	38574	47774	1
2005_bul_0 01	Bullen	Baruda	Baruda	Baruda Temert Bet Akababi	HDW	2005	51	814318	1165944	36N	24940	41406.35	66346. 35	1
2005_bul_0 03	Bullen	Baruda	Baruda	Mulu Wonger	HDW	2005	50	814353	1165594	36N	10750	38588.05	49338. 05	1
2005_bul_0 04	Bullen	Baruda	Baruda	Wonbera Mewcha	HDW	2005	36	813777	1165535	36N	14300	35853.8	50153. 8	1
2005_bul_0 06	Bullen	Bekujina Godorare	Godorare	Godorare Share	HDW	2005	35	813596	1155439	36N	12130	34011.75	46141. 75	1
2005_bul_0 07	Bullen	Bekujina Godorare	Godorare	Godorare Dubangua	HDW	2005	50	814273	1155162	36N	22435	49455.65	71890. 65	1
2005_bul_0 08	Bullen	Bekujina Godorare	Hora	Hora Dufera Sefer	HDW	2005	51	821829	1156001	36N	15665	40456.25	56121. 25	1
2005_bul_0 11	Bullen	Bekujina Godorare	Bekuji	Beterkristiyan	HDW	2005	37	822706	1153924	36N	21735	50742.61	72477. 61	1
2005_bul_0 12	Bullen	Chilanko	Chilanko	Protestant Sefer	HDW	2005	45	824089	1147281	36N	10510	40394.6	50904. 6	1
2005_bul_0 13	Bullen	Chilanko	Chilanko	Deguma Sefer	HDW	2005	25	824774	1146693	36N	21100	48959.4	70059. 4	1
2005_bul_0 15	Bullen	Matana Bapurie	Koze	Koze	HDW	2005	25	827654	1164703	36N	12026	33813.05	45839. 05	1
2005_bul_0 16	Bullen	Matana Bapurie	Gichibadore	Gichibadore Muluwengel	HDW	2005	59	827276	1165930	36N	7230	36557.9	43787. 9	1
2005_bul_0 17	Bullen	Matana Bapurie	Babilkandi	Babilkandi Gishadi Sefer	HDW	2005	52	173437	1162435	37N	9560	36509.4	46069. 4	1
2005_bul_0 18	Bullen	Matana Bapurie	Matta	Mosisa Sefer	HDW	2005	50	828145	1164592	36N	8060	42224	50284	1
2005_bul_0 20	Bullen	Addis Alem	Tach Addis Alem	Mulu Wongele	HDW	2005	50	827938	1158632	36N	11380	43601.6	54981. 6	1
2005_bul_0 21	Bullen	Dosh & Moch	Asuge	Asufe No2	HDW	2005	37	183161	1181135	37N	8115	39502.07	47617. 07	1
2005_bul_0 22	Bullen	Dosh & Moch	Asuge	Morka Sefer	HDW	2005	38	183212	1180571	37N	20650	45570.81	66220. 81	1
2005_bul_0 23	Bullen	Dosh & Moch	Dosh Gishin	Gishin	HDW	2005	42	184169	1182545	37N	14390	43927.45	58317. 45	1
2005_bul_0 25	Bullen	Gongo	Chekorsa	Chekorsa	HDW	2005	42	181000	1158799	37N	22800	52196.58	74996. 58	1



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2005_bul_0 26	Bullen	Gongo	Gishbago	Gishbago Adem Sefer	HDW	2005	50	173398	1153922	37N	26600	37915.85	64515.85	1
2005_bul_0 28	Bullen	Gongo	Gishbago	Lunge	HDW	2005	50	173374	1153766	37N	25250	43198.22	68448.22	1
2005_bul_0 29	Bullen	Gongo	Lafeto	Tach Lafeto	HDW	2005	45	182114	1148262	37N	8875	40377.22	49252.22	1
2005_bul_0 30	Bullen	Gongo	Oma Gote	Oma	HDW	2005	46	182083	1146372	37N	8500	42194.76	50694.76	1
2005_bul_0 31	Bullen	Dobi & Ekonti	Dobi	Akonti Mewcha	HDW	2005	30	822143	1166295	36N	11320	41480	52800	1
2005_bul_0 33	Bullen	Dobi & Ekonti	Dobi	Aba Merdasa Sefer	HDW	2005	32	821890	1165694	36N	14600	43675.6	58275.6	1
2005_bul_0 34	Bullen	Morana Ekosaki	Tsuntse	Tsuntse No2	HDW	2005	42	178168	1167713	37N	10250	30584.05	40834.05	1
2005_bul_0 35	Bullen	Morana Ekosaki	Tach Mora	Tach Mora No2	HDW	2005	50	175285	1165242	37N	16210	36550.3	52760.3	1
2005_bul_0 36	Bullen	Emanjina Goj	Duggi	Duggi No2	HDW	2005	32	179508	1181286	37N	11920	45531.42	57451.42	1
2005_bul_0 37	Bullen	Emanjina Goj	Mindi	Mindi No2	HDW	2005	45	172921	1174906	37N	9700	42103.5	51803.5	1
2005_bul_0 38	Bullen	Metina Gisa	Tach Meti	Gantse Sefer	HDW	2005	32	184220	1174198	37N	16560	34853.9	51413.9	1
2006_bul_0 01	Bullen	Metina Gisa	Tach Metti	Merega Sefer	HDW	2006	50	184324	1173780	37N	15500	42715.4	58215.4	1
2006_bul_0 02	Bullen	Metina Gisa	Lay Metti	Regasa Sefer	HDW	2006	45	182653	1173761	37N	12750	38012	50762	1
2006_bul_0 03	Bullen	Emanjina Goj	Dosh	Dosh	HDW	2006	45	181788	1181169	37N	14150	42535.3	56685.3	1
2006_bul_0 04	Bullen	Emanjina Goj	Etush	Etush	HDW	2006	39	181918	1177588	37N	8950	40466	49416	1
2006_bul_0 06	Bullen	Gongo	Chefe Debel	Chefe Debel	HDW	2006	50	180251	1149257	37N	14850	45668.9	60518.9	1
2006_bul_0 07	Bullen	Baruda	Dorakala	Adaba Sefer	HDW	2006	50	818413	1162136	36N	21150	61231.75	82381.75	1
2006_bul_0 08	Bullen	Bullen 2	Bullen	Eman & Meusecha	HDW	2006	50	180659	1174459	37N	24440	51582.9	76022.9	1
2006_bul_0 09	Bullen	Bullen 1	Bullen Zuria	Bushes Mewecha	HDW	2006	50	181164	1172630	37N	13490	41646.2	55136.2	1
2007_bul_0 01	Bullen	Matana Bapurie	Babikandi	Shewa Sefer	HDW	2007	34	174027	1161684	37N	22370	52576.5	74946.5	1
2007_bul_0 02	Bullen	Addis Alem	Semaniya Tise	Semaniya Tise No2	HDW	2007	32	827935	1159963	36N	21710	54402	76112	1
2007_bul_0 03	Bullen	Addis Alem	Lay Addis Alem	Menedre Hrebu	HDW	2007	34	824101	1161297	36N	10800	29636.9	40436.9	1
2007_bul_0 04	Bullen	Baruda	Kebkeb	Kebkeb No2	HDW	2007	30	814973	1161069	36N	9400	47089	56489	1
2007_bul_0 05	Bullen	Baruda	Baruda	Gettu Sefer	HDW	2007	60	814674	1166026	36N	18100	59112.5	77212.5	1
2007_bul_0 06	Bullen	Dobi & Ekonti	Dobi	Birro Akababi	HDW	2007	61	821750	1165697	36N	13730	51294.25	65024.25	1
2007_bul_0 07	Bullen	Dobi & Ekonti	Dobi	Adaba Mamenoo Sefer	HDW	2007	62	821372	1165072	36N	10950	41862.7	52812.7	1
2007_bul_0 08	Bullen	Dobi & Ekonti	Mazine	Manzene	HDW	2007	44	825855	1172802	36N	13640	42632	56272	1
2007_bul_0 09	Bullen	Bekujina Godorare	Godorare	Genete Amenete Sefer	HDW	2007	34	814298	1155093	36N	24950	54524	79474	1
2007_bul_0 10	Bullen	Bekujina Godorare	Godorare	Guremesa Seyume Sefer	HDW	2007	38	813908	1155371	36N	11500	45228.9	56728.9	1
2007_bul_0 11	Bullen	Bekujina Godorare	Horra	Beke Sefer	HDW	2007	50	821579	1156550	36N	17980	53375	71355	1
2007_bul_0 12	Bullen	Bekujina Godorare	Cheffe	Aba Motty Sefer	HDW	2007	43	821095	1154329	36N	18940	49239.5	68179.5	1
2007_bul_0 13	Bullen	Amanji	Amanji	Efetisi Akababi	HDW	2007	35	179400	1180067	37N	14820	38354.5	53174.5	1
2007_bul_0 14	Bullen	Gongo	Lafeto	Jara Sefere	HDW	2007	38	183476	1145727	37N	18010	52751.55	70761.55	1
2007_bul_0 15	Bullen	Gongo	Geshe	Geshe	HDW	2007	31	182086	1149634	37N	15100	51132	66232	1
2007_bul_0 16	Bullen	Bullen Zuria	Gissa Ber	Gissa Ber No2	HDW	2007	64	181153	1172608	37N	15550	40770	56320	1
2007_bul_0 17	Bullen	Bullen Zuria	Amanji Ber	Amanji Ber No2	HDW	2007	38	180326	1174288	37N	12746	51172	63918	1
2001_bul_0 11	Bullen	Morana Ekosaki	Tach Mora	Tach Mora No1	SD	2001	51	175769	1165857	37N	6000	28964	34964	1



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2005_bul_014	Bullen	Matana Bapurie	Matta	Kebed Kuchi Sefer	SD		2005	50	171630	1163909	37N	60560	125240.32	185800.3	1
2006_bul_014	Bullen	Bullen 2	Bullen 02	WUA Store	Store		2006		180714	1173601	37N	19047	70000	89047	1
2002_bul_036	Bullen	Dobi & Ekonti	Dobi	Gebeya Mewecha	SW	Re	2002	80	821233	1165894	36N			0	1
2003_bul_043	Bullen	Bedore	Bedore	Segga 2	SW		2003	80	173262	1184297	37N	0	186570	186570	1
2003_bul_044	Bullen	Baruda	Baruda	Near HP	SW	Re	2003	80	813997	1165719	36N	350	10000	10350	0
2003_bul_047	Bullen	Dosh & Moch	Asuge	Asuge No1	SW	Re	2003	80	183081	1181127	37N	345	6000	6345	0
2003_bul_048	Bullen	Morana Ekosaki	Dehan	Dehan 01	SW	Re	2003	80	178789	1164489	37N	385	10000	10385	1
2003_bul_049	Bullen	Matana Bapurie	Babikandi	Babikandi	SW	Re	2003	80	173765	1162696	37N	250	7000	7250	1
2003_bul_050	Bullen	Matana Bapurie	Matta	Asefa Sefer	SW	Re	2003	80	828531	1164353	36N	700	10000	10700	1
2003_bul_051	Bullen	Azemina Benosh	Lay Mengi	Lay Mengi No1	SW	Re	2003	80	184223	1176019	37N	140	3000	3140	1
2003_bul_052	Bullen	Metina Gisa	Gissa	Gissa	SW	Re	2003	80	182698	1171232	37N	140	4000	4140	1
2003_bul_053	Bullen	Chilanko	Chilanko	Chilanko	SW	Re	2003	80	824148	1146352	36N	315	6000	6315	0
2004_bul_046	Bullen	Epar	Epar	Ekonti	SW		2004	50	814123	1198518	36N	3500	186954	190454	1
2004_bul_050	Bullen	Epar	Epar	Mehal Mojimb	SW		2004	50	814953	1197126	36N	500	122358	122858	1
2004_bul_054	Bullen	Chilanko	Chilanko	Dereje sefer	SW		2004	40	824798	1146372	36N	3000	217768.2	220768.2	1
2004_bul_055	Bullen	Chilanko	Chilanko	Awoke Wubete Sefer	SW		2004	34	824501	1146876	36N	2000	151847	153847	1
2004_bul_056	Bullen	Bedore	Bedore	Bedore Ketena 2	SW		2004	45	172871	1184651	37N	2500	116533	119033	1
2005_bul_005	Bullen	Baruda	Baruda	Abafelke Sefer	SW		2005	50	813652	1165484	36N	2500	166765.93	169265.9	1
2005_bul_019	Bullen	Matana Bapurie	Mata Zuria	Gibirina Tabiya Akababi	SW		2005	50	171679	1163659	37N	3500	191394.21	194894.2	1
2005_bul_024	Bullen	Dosh & Moch	Dosh	Getachew Sefer	SW		2005	50	183001	1181739	37N	3000	117160.7	120160.7	1
2003_bul_018	Bullen	Addis Alem	Addis Alem	Addis Alem HP HDW	HDW	Hp	2003		828050	1158710	36N	4900	54599	59499	1
2003_bul_033	Bullen	Dobi & Ekonti	Dobi	Dobi HC HDW	HDW	Hp	2003		820999	1165448	36N	6300	70600	76900	1
2003_bul_039	Bullen	Azemina Benosh	Benosh	Benosh HP HDW	HDW	Hp	2003	50	185743	1179881	37N	7020	44113	51133	1
2004_bul_066	Bullen	Bekuji	Bekuji	Bekuji HP HDW	HDW	Hp	2004		823215	1153265	36N	7500	53184	60684	1
2004_bul_067	Bullen	Metina Gisa	Metina Gisa	Meti HP HDW	HDW	Hp	2004		182917	1173418	37N	6300	42299	48599	1
2004_bul_068	Bullen	Dobi & Ekonti	Ekonti	Ekonti HP HDW	HDW	Hp	2004		822881	1168277	36N	4200	38713	42913	1
2004_bul_069	Bullen	Chilanko	Chilanko	Chilanko HP HDW	HDW	Hp	2004		824425	1146711	36N	4250	23269	27519	1
2005_bul_039	Bullen	Gongo	Gongo	Gongo HP HDW	HDW	Hp	2005		180447	1149981	37N	11070	51460.6	62530.6	1
2006_bul_010	Bullen	Bedore	Bedore	Bedore HP HDW	HDW	Hp	2006		173253	1184510	37N	7100	47414.6	54514.6	1
2006_bul_012	Bullen	Baruda	Baruda	Baruda HP HDW	HDW	Hp	2006	50	823845	1165636	36N	8100	45425.25	53525.25	1
2002_bul_047	Bullen	Addis Alem	Addis Alem	Addis Alem HP MWI (2)	MWI	Hp	2002		828202	1158744	36N				1
2002_bul_048	Bullen	Baruda	Baruda	Baruda HP MWI	MWI	Hp	2002		813962	1165535	36N				1
2002_bul_049	Bullen	Azemina Benosh	Benosh	Benosh HP MWI	MWI	Hp	2002		185617	1179871	37N				1
2002_bul_050	Bullen	Mora	Mora	Mora HP MWI	MWI	Hp	2002		177513	1167251	37N				1
2002_bul_051	Bullen	Doshina Moch	Doshina Moch	Dosh HP MWI	MWI	Hp	2002		183754	1182239	37N				1
2002_bul_052	Bullen	Dobi & Ekonti	Dobi	Dobi HC MWI	MWI	Hp	2002		820980	1165435	36N				1
2002_bul_053	Bullen	Mata	Mata	Mata HP MWI	MWI	Hp	2002		172061	1163984	37N				1



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2002_bul_0 54	Bullen	Emanji	Emanji	Emanji HP MWI	MWI	Hp	2002		179949	1178705	37N				1
2003_bul_0 58	Bullen	Bekuji	Bekuji	Bekuji HP MWI	MWI	Hp	2003		823225	1153323	36N	0	18805	18805	1
2003_bul_0 59	Bullen	Addis Alem	Addis Alem	Addis Alem HP MWI	MWI	Hp	2003		828050	1158710	36N	0	18898	18898	1
2003_bul_0 60	Bullen	Chilango	Chilanko	Chilanko HP MWI	MWI	Hp	2003		824135	1146807	36N	0	20911	20911	1
2006_bul_0 19	Bullen	Doshina Moch	Doshina Moch	Dosh HP MWI(2)	MWI	Hp	2006		182597	1181080	37N	2220	27242.1	29462.1	1
2006_bul_0 20	Bullen	Epar	Epar	Epar HP MWI	MWI	Hp	2006		813794	1199378	36N	2230	26108.1	28338.1	1
2003_bul_0 54	Bullen	Doshina Moch	Doshina Moch	Dosh HP VIPL	VIPL2	Hp	2003		182615	1181083	37N	0	126122	126122	1
2003_bul_0 55	Bullen	Emanji	Emanji	Emanji HP VIPL	VIPL2	Hp	2003		180010	1178708	37N	0	121691	121691	1
2004_bul_0 71	Bullen	Bekoji	Bekuji	Bekuji HP VIPL	VIPL2	Hp	2004		832055	1153322	36N		19168.2	19168.2	1
2004_bul_0 72	Bullen	Dobi & Ekonti	Ekonti	Ekonti HP VIPL	VIPL2	Hp	2004		180447	1149981	37N		19026	19026	1
2004_bul_0 73	Bullen	Addis Alem	Addis Alem	Addis Alem HP VIPL(2)	VIPL2	Hp	2004		828235	1158728	36N		19168	19168	1
2005_bul_0 40	Bullen	Bekuji	Bekuji	Bekuji HP VIPL	VIPL2	Hp	2005		823194	1153343	36N		68479.38	68479.38	1
2005_bul_0 42	Bullen	Addis Alem	Addis Alem	Addis Alem HP VIPL	VIPL2	Hp	2005		828235	1158728	36N		68390.38	68390.38	1
2006_bul_0 17	Bullen	Metina Gisa	Metina Gisa	Meti HP VIPL	VIPL2	Hp	2006		182850	1173374	37N	3700	90885.8	94585.8	1
2006_bul_0 18	Bullen	Mora	Mora	Mora HP VIPL	VIPL2	Hp	2006		177518	1167248	37N	5520	95928.04	101448	1
2002_bul_0 07	Bullen	Bullen	Bullen	Bullen Millenium PS HDW	HDW	Sc	2002		181081	1173318	37N				0
2002_bul_0 15	Bullen	Addis Alem	Tach Addis Alem	Addis Alem PS HDW	HDW	Sc	2002		828040	1158717	36N				1
2002_bul_0 22	Bullen	Aygalli	Aygalli	Aygalli PS HDW	HDW	Sc	2002		816637	1182550	36N				0
2002_bul_0 34	Bullen	Meti	Gisa	Gisa Amechache BAE HDW	HDW	Sc	2002		183463	1173805	37N				0
2002_bul_0 35	Bullen	Azemina Benosh	Benosh	Benash PS HDW	HDW	Sc	2002		185637	1179781	37N				1
2002_bul_0 39	Bullen	Dosh	Dosh	Dosh PS HDW	HDW	Sc	2002		183313	1181674	37N				1
2003_bul_0 13	Bullen	Bekuji	Bekujji	Bekujji PreS HDW	HDW	Sc	2003		822790	1153851	36N	9450	44483	53933	1
2003_bul_0 24	Bullen	Goja	Goja	Goja PS HDW	HDW	Sc	2003		175318	1177644	37N	8100	48724	56824	0
2003_bul_0 25	Bullen	Mora	Mora	Mora PS HDW	HDW	Sc	2003		177600	1167324	37N	7020	50275	57295	1
2004_bul_0 60	Bullen	Badore	Badore	Badore PS HDW	HDW	Sc	2004		173332	1183913	37N	2500	36811	39311	1
2004_bul_0 62	Bullen	Meti	Gisa Amechache	Gisa Amechache PS HDW	HDW	Sc	2004		182209	1170321	37N	1700	27864	29564	1
2004_bul_0 63	Bullen	Dosh	Dosh	Dosh PS HDW(2)	HDW	Sc	2004		183206	1181677	37N	2500	34097	36597	1
2005_bul_0 43	Bullen	Dobi & Ekonti	Dobi	Dobi SS HDW	HDW	Sc	2005		822276	1165975	36N	27615	44511.2	72126.2	1
2005_bul_0 47	Bullen	Gongo	Gongo	Gongo PS HDW	HDW	Sc	2005		180523	1149093	37N	9000	52496.75		1
2005_bul_0 48	Bullen	Benash	Benash	Benash PS HDW	HDW	Sc	2005		185584	1179477	37N	13590	51313.2		1
2005_bul_0 49	Bullen	Bekuji	Godorare	Godorare PS HDW	HDW	Sc	2005		814121	1154801	36N	10200	12603	22803	1
2005_bul_0 50	Bullen	Mata	Babilkandi	Babilkandi PS HDW	HDW	Sc	2005		173748	1162202	37N	16720	48610		1
2007_bul_0 18	Bullen	Bekujina Godorare	Godorare	Godorare primary school HDW	HDW	Sc	2007	43	814205	1154824	36P	27940	51978.4	79918.4	1
2002_bul_0 37	Bullen	Bullen	Bullen	Bullen Millenium PS HWF	HWF	Sc	2002		181020	1173798	37N				1
2002_bul_0 38	Bullen	Bullen 01	Bullen 01	Bullen PS & SS HWF	HWF	Sc	2002		180215	1173198	37N				1
2002_bul_0 40	Bullen	Emanji	Emanji	Emanji PS HWF	HWF	Sc	2002		180211	1179117	37N				1
2002_bul_0 41	Bullen	Mora	Mora	Mora PS HWF	HWF	Sc	2002		177659	1167366	37N				1



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2002_bul_0 42	Bullen	Mata	Mata	Mata PS HWF	HWF	Sc	2002		171847	1163850	37N					1
2002_bul_0 43	Bullen	Addis Alem	Tach Addis Alem	Addis Alem PS HWF	HWF	Sc	2002		823105	1158717	36N					1
2002_bul_0 46	Bullen	Baruda	Baruda	Baruda PS HWF	HWF	Sc	2002		814492	1165998	36N					1
2002_bul_0 45	Bullen	Dobi & Ekonti	Egandbo & Ekonti	Egandbo & Ekonti PS SW	SW	Sc	2002		821405	1166128	36N					0
2003_bul_0 46	Bullen	Emanji	Emanji	Emanji PS SW	SW	ScRe	2003		180286	1179252	37N	175	4000	4175		1
2004_bul_0 70	Bullen	Chilanko	Chilanko	Chilanko PS SW	SW	Sc	2004		824523	1146623	36N	2500	127274	129774		1
2002_bul_0 44	Bullen	Dobi & Ekonti	Dobi	Egandbo & Ekonti PS VIPL	VIPL	Sc	2002		821499	1166123	36N					1
2003_bul_0 56	Bullen	Baruda	Baruda	Baruda PS VIPL	VIPL	Sc	2003		814371	1166131	36N	2100	240634	242734		1
2003_bul_0 57	Bullen	Bekuji	Bekuji	Bekuji PS VIPL(2)	VIPL	Sc	2003		822790	1153851	36N	2100	244840	246940		1
2004_bul_0 74	Bullen	Badore	Badore	Badore PS VIPL(2)	VIPL	Sc	2004		173441	1184295	37N					1
2004_bul_0 75	Bullen	Dosh	Dosh	Dosh PS VIPL	VIPL	Sc	2004		183446	1181782	37N		189968	189968		1
2004_bul_0 76	Bullen	Epar	Epar	Epar PS VIPL(2)	VIPL	Sc	2004		813707	1199244	36N		240	240		1
2005_bul_0 44	Bullen	Epar	Epar	Epar PS VIPL	VIPL	Sc	2005		813707	1199244	36N		268703.05	268703 .1		1
2005_bul_0 45	Bullen	Badore	Badore	Badore PS VIPL	VIPL	Sc	2005		173441	1184295	37N		133493.99			1
2005_bul_0 46	Bullen	Dosh	Dosh	Dosh PS VIPL	VIPL	Sc	2005		183446	1181782	37N		1461			1
2006_bul_0 15	Bullen	Metina Gisa	Meti	Meti PS VIPL	VIPL	Sc	2006		182945	1173353	37N	16734	278896.76	295630 .8		1
2006_bul_0 16	Bullen	Mata	Mata	Mata PS VIPL	VIPL	Sc	2006		171878	1163908	37N	12360	239348.3	251708 .3		1



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Annex 4 - Dibate woreda investments

Object_ID	Loc_woreda	Loc_kebele	Loc_gott	Scheme_name	Obj_type	Obj_type_ext	Const_y_EC	House_holds	X_GPS_east	Y_GPS_north	UTM_zone	Comm_costs	GoF_costs	Total_costs	Functional
2006_dib_002	Dibate	Berber	Berber	Berber Rural Town Water Supply Scheme	BH		2007	473	191361	1168686	37N	33440	3592564	3626004	1
2006_dib_003	Dibate	Galessa	Galessa	Galessa Rural Town Water Supply Scheme	BH		2007	960	184847	1156138	37N	365577	2901049.76	3266626.76	1
2001_dib_016	Dibate	Dibate 2	Amaneamba	Amaneamba training site	HDW		2001	50	201439	1192940	37N	3650	43738	47388	0
2001_dib_017	Dibate	Yamp	Yamp	Yampe	HDW		2001	50	196487	1193618	37N	6920	39280	46200	1
2001_dib_018	Dibate	Angtock	Warka sefer	Warka sefer	HDW		2001	50	195580	1188681	37N	6499	36662	43161	1
2001_dib_019	Dibate	Kidoh	Kidoh	Kidoh	HDW		2001	35	191883	1185896	37N	7519	35461	42980	1
2001_dib_023	Dibate	Jan	Jane Beshane Asaga	Jane Beshane Asaga	HDW		2001	48	184651	1169153	37N	9187	41247	50434	1
2001_dib_025	Dibate	Wubigishi	Sheshe	Sheshe	HDW		2001	80	190226	1197318	37N	7565	40436	48001	1
2001_dib_026	Dibate	Mondermo	Mondermo	Semanyatesh NOT CORRECT	HDW		2001	65	193861	1175244	37N	9343	41287	50630	1
2001_dib_027	Dibate	Girz	Komed Base	Komed Base	HDW		2001	80	195217	1182801	37N	8112	44083	52195	0
2002_dib_001	Dibate	Parziet	Parziet	Par	HDW		2002	48	196731	1181413	37N			0	1
2002_dib_002	Dibate	Parziet	Parziet	Mehal Parzeit	HDW		2002	71	197026	1180522	37N			0	1
2002_dib_004	Dibate	Girz	Mahale Girz	Girz No1	HDW		2002	81	193425	1179499	37N			0	1
2002_dib_005	Dibate	Girz	Dense	Addis Alem	HDW		2002	49	193172	1178609	37N			0	1
2002_dib_006	Dibate	Girz	Mogar	Mogar No1	HDW		2002	49	195026	1178325	37N			0	1
2002_dib_007	Dibate	Girz	Zeyit	Zeit	HDW		2002	61	195184	1180675	37N			0	1
2002_dib_009	Dibate	Mondermo	Mondermo	Layignaw	HDW		2002	50	193774	1176868	37N			0	1
2002_dib_010	Dibate	Zegeh	Key Afer	Key Afer	HDW		2002	63	189374	1176243	37N			0	1
2002_dib_011	Dibate	Zegeh	Bari	Bari	HDW		2002	43	191288	1175802	37N			0	1
2002_dib_013	Dibate	Donben	Donben	Donben No5	HDW		2002	70	192723	1167592	37N			0	1
2002_dib_014	Dibate	Donben	Donben	Donben No4	HDW		2002	43	192270	1167440	37N			0	1
2002_dib_015	Dibate	Donben	Mittrie	Mittrie	HDW		2002	51	190215	1167520	37N			0	1
2002_dib_017	Dibate	Bechati	Demeder	Demeder	HDW		2002	43	183615	1164952	37N			0	1
2002_dib_018	Dibate	Bechati	Demeder	Regasa	HDW		2002	47	183757	1165705	37N			0	1
2002_dib_019	Dibate	Galessa	Jejebegisa	Manden	HDW		2002	50	188850	1153793	37N			0	1
2002_dib_020	Dibate	Chancho	Mehal Gish Gara	Mehal Gish Gara	HDW		2002	66	187874	1152782	37N			0	1
2002_dib_021	Dibate	Chancho	Adem Ketena	Adem Gott	HDW		2002	61	187990	1151449	37N			0	0
2002_dib_023	Dibate	Qorqa	Cheliya	Cheliya	HDW		2002	50	189040	1145761	37N			0	1
2002_dib_024	Dibate	Gipo	Odo Abatafi	Odo Abatafi	HDW		2002	63	183041	1157702	37N			0	1
2002_dib_025	Dibate	Gipo	Timehertebet Zuria	Timehertebet Zuria	HDW		2002	45	184727	1157592	37N			0	1
2002_dib_026	Dibate	Gipo	Seido	Seido	HDW		2002	48	181794	1154336	37N			0	1
2002_dib_027	Dibate	Gipo	Gondere	Gondere Sefer	HDW		2002	35	181876	1157702	37N			0	0
2003_dib_001	Dibate	Yamp	Wokomp	Wokomp	HDW		2003	51	190411	1195561	37N	6250	32740	38990	1
2003_dib_002	Dibate	Yamp	Yamp	Gedem	HDW		2003	45	190662	1194680	37N	7500	41874	49374	1
2003_dib_003	Dibate	Parzeit	D/Didiya (Parzeit)	Disha & Dimina	HDW		2003	54	196651	1183443	37N	6700	38000	44700	0
2003_dib_004	Dibate	Parzeit	Parzeit	Nekosa	HDW		2003	42	194641	1182423	37N	4500	32976.6	37476.6	1
2003_dib_005	Dibate	Parzeit	Warka sefer	Warka No1	HDW		2003	50	190558	1197053	37N	6250	37500	43750	1
2003_dib_006	Dibate	Donben	T/Mitri	T/Mitri	HDW		2003	45	190262	1176052	37N	7000	39500	46500	1
2003_dib_007	Dibate	Donben	Sinzay Muslim	Sinzay Muslim	HDW		2003	51	190934	1170571	37N	6570	35500	42070	1
2003_dib_008	Dibate	Donben	Tach Feleke Sefer	Tach Donben Feleke Sefer	HDW		2003	37	195030	1177004	37N	7400	36094	43494	1
2003_dib_009	Dibate	Donben	Lay Gishko	Lay Gishko	HDW		2003	45	193048	1168024	37N	7500	35192	42692	1
2003_dib_010	Dibate	Donben	Sinzay Amhara	Sinzay Amhara Sefer	HDW		2003	50	192705	1167901	37N	6500	34000	40500	1
2003_dib_011	Dibate	Donben	Tach Gishkoli	Tach Gishkoli	HDW		2003	45	197036	1169745	37N	6500	34000	40500	1
2003_dib_012	Dibate	Donben	Ibiango	Ibiango	HDW		2003	41	192654	1166785	37N	6500	33462	39962	1
2003_dib_013	Dibate	Angtock	Dibisho	Dibisho	HDW		2003	39	208710	1191193	37N	6000	32752	38752	1
2003_dib_014	Dibate	Angtock	Flwha	Flwha	HDW		2003	50	208843	1190446	37N	5500	31800	37300	0
2003_dib_015	Dibate	Angtock	Dibzaria	Dibzaria	HDW		2003	50	209745	1190244	37N	6400	32769	39169	1
2003_dib_016	Dibate	Angtock	Dibkdwa	Dibkdwa	HDW		2003	42	203354	1190511	37N	6900	28127	35027	0
2003_dib_017	Dibate	Angtock	Diwawya	Diwawya training site	HDW		2003	40	207744	1190355	37N	4000	30175	34175	1



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2003_dib_018	Dibate	Angtock	Didiya	Didiya	HDW		2003	36	208710	1190143	37N	6500	30934	37434	0
2003_dib_019	Dibate	Berber	Berber	Nechil No1	HDW		2003	50	192713	1188631	37N	6950	40500	47450	1
2003_dib_020	Dibate	Berber	Berber	Nechil No2	HDW		2003	45	199731	1183511	37N	6900	43340	50240	1
2003_dib_021	Dibate	Berber	Berber	Sorga No1	HDW		2003	45	190540	1190533	37N	6525	37500	44025	1
2003_dib_022	Dibate	Berber	Berber	Sorga No2	HDW		2003	40	194904	1190943	37N	6500	38700	45200	1
2003_dib_023	Dibate	Legebuna	Mesgid Sefer	Mesgid Sefer	HDW		2003	37	187965	1170508	37N	5500	26212	31712	1
2003_dib_024	Dibate	Legebuna	Begen	Begen No1	HDW		2003	50	190309	1173002	37N	7000	40318	47318	0
2003_dib_025	Dibate	Kidoh	Beker	Beker	HDW		2003	50	192265	1185260	37N	6700	37680	44380	0
2003_dib_026	Dibate	Kidoh	Mehal Kidoh	Mehal Kidoh 1	HDW		2003	49	191908	1185898	37N	6570	35750	42320	0
2003_dib_027	Dibate	Korka	Amomcho	Amomcho	HDW		2003	45	185450	1138069	37N	7500	42500	50000	1
2003_dib_028	Dibate	Korka	Jogo	Jogo	HDW		2003	36	195929	1192215	37N	6500	42500	49000	1
2003_dib_029	Dibate	Korka	Mehal Korka	Mehal Korka	HDW		2003	48	185566	1137684	37N	6700	42180	48880	1
2003_dib_030	Dibate	Girz	Girz	Girz No2	HDW		2003	42	195214	1179016	37N	6700	40064	46764	1
2003_dib_031	Dibate	Girz	Dense	Dense (Adamu Kandu Sefer)	HDW		2003	56	192426	1176225	37N	6500	35859	42359	1
2003_dib_032	Dibate	Girz	Girz	Girz No3	HDW		2003	45	190355	1178205	37N	6500	35500	42000	0
2003_dib_033	Dibate	Komed	Wolab (Girz)	Wolamp	HDW		2003	54	190253	1184411	37N	7150	40805.5	47955.5	0
2003_dib_037	Dibate	Parzeit	Parzeit	Korkochi	HDW		2003	50	196272	1177930	37N		36400	36400	1
2003_dib_038	Dibate	Geses	Wotaq	Wotaq	HDW		2003	72	196041	1185302	37N	7000	41150	48150	1
2003_dib_039	Dibate	Bechati	Bechati	Bechati No2	HDW		2003	44	185258	1165629	37N	6500	34696	41196	1
2003_dib_040	Dibate	Galessa	Manden	Ethicha Sefer	HDW		2003	40	192701	1152191	37N	6300	35825	42125	1
2003_dib_041	Dibate	Zegeh	Addis Alem	Addis Alem 2	HDW		2003	25	189027	1186097	37N	6700	43050	49750	1
2003_dib_042	Dibate	Dibate 01	Kuasmeda	Kuasmeda	HDW		2003	54	200123	1191734	37N	6500	28133	34633	1
2003_dib_043	Dibate	Dibate 02	Lay Mecha	Lay Mecha	HDW		2003	50	200760	1191927	37N			0	1
2003_dib_044	Dibate	Jan	Jane Modrim	Jane Modrim	HDW	Re	2003	48	188070	1170345	37N	2500	16560	19060	0
2003_dib_045	Dibate	Gipo	Menged Dar	Gipo.No.4	HDW	Re	2003	54	183460	1157550	37N	1500	14133	15633	1
2003_dib_047	Dibate	Yamp	Chobonja	Chibanja	HDW	Re	2003	40	197240	1194320	37N	2300	16175	18475	0
2003_dib_048	Dibate	Yamp	Dibzaria	Dibzaria 2	HDW	Re	2003	50	196730	1193965	37N			0	1
2003_dib_049	Dibate	Angtock	Getachew sefer	Getachew sefer	HDW	Re	2003	54	208710	1190140	37N	2500	15276	17776	1
2003_dib_052	Dibate	Galessa	Manden	Manden 2 (rehabilitated)	HDW	Re	2003	50	192710	1186092	37N	3000	7250	10250	1
2003_dib_054	Dibate	Komed	Kushmenge	Kushmenge	HDW	Re	2003	50	195619	1183472	37N	5000	30000	35000	1
2003_dib_058	Dibate	Zegeh	Mesereta	Mesereta	HDW		2003	50	189336	1180583	37N			0	1
2003_dib_059	Dibate	Yamp	Yamp	Aldaro Sefer	HDW	Re	2003	30	200523	1191859	37N			0	0
2003_dib_060	Dibate	Wubigishi	Liga Gott	Liga Gott	HDW		2003	72	200523	1191859	37N			0	0
2004_dib_001	Dibate	Yamp	Yamp	Terara	HDW		2004	50	196728	1193961	37N	7000	45894	52894	1
2004_dib_002	Dibate	Yamp	Yamp	Wekamp	HDW		2004	50	195608	1192853	37N	6500	39989	46489	1
2004_dib_003	Dibate	Sirben	Didishuwa	Didishuwa No1	HDW		2004	50	204545	1195180	37N	6250	35226.5	41476.5	1
2004_dib_004	Dibate	Sirben	Didishuwa	Didishuwa No2	HDW		2004	50	204551	1196016	37N	6250	36443.7	42693.7	1
2004_dib_005	Dibate	Sirben	Yadiga	Yadiga	HDW		2004	50	205021	1201664	37N	6500	39123.5	45623.5	1
2004_dib_006	Dibate	Sirben	Dadush	Dadush 1	HDW		2004	50	204824	1201028	37N	6450	38968	45418	1
2004_dib_007	Dibate	Sasmanden	Girma gott	Girma Gott	HDW		2004	50	199156	1183283	37N	5700	36541.5	42241.5	1
2004_dib_008	Dibate	Sasmanden	Warka	Warka No2	HDW		2004	50	200147	1188239	37N	5790	32280	38070	1
2004_dib_009	Dibate	Parzeit	Parzeit	T/Bet Zuria	HDW		2004	50	199106	1183183	37N	6597	43224	49821	1
2004_dib_010	Dibate	Parzeit	Yeshe Sefer	Yeshe Sefer	HDW		2004	50	198869	1183653	37N	7000	44000	51000	1
2004_dib_011	Dibate	Parzeit	Parzeit	Nekossa No2	HDW		2004	50	196275	1177929	37N	6980	40549.25	47529.25	1
2004_dib_012	Dibate	Parzeit	Parzeit	Goraw Sefer	HDW		2004	50	196232	1177982	37N	6900	42154	49054	0
2004_dib_013	Dibate	Girz	Zeyit	Zeyit	HDW		2004	50	195187	1180660	37N	6500	42705	49205	1
2004_dib_014	Dibate	Bechati	Nefas Gora	Nefas Gora	HDW		2004	50	184653	1165377	37N	6250	45000	51250	1
2004_dib_015	Dibate	Mondermo	Mondermo	Lay-Mondermo	HDW		2004	50	193151	1172434	37N	5500	40500	46000	1
2004_dib_016	Dibate	Mondermo	Mondermo	Semanyatesh	HDW		2004	50	193681	1175816	37N	6450	41363	47813	1
2004_dib_017	Dibate	Berber	Berber	Chefe jega	HDW		2004	50	190513	1190521	37N	6553	43691	50244	1
2004_dib_019	Dibate	Donben	Tach Donben	Hebatoki	HDW		2004	50	192879	1167842	37N	5950	34557.3	40507.3	1
2004_dib_020	Dibate	Gipo	Werabu	Werabu	HDW		2004	50	186469	1164087	37N	9245	52422	61667	1
2004_dib_021	Dibate	Gipo	Mehal Gipo	Mehal Gipo	HDW		2004	50	184259	1160010	37N	6250	39697.7	45947.7	1
2004_dib_022	Dibate	Gipo	Gipo	Gipo No4	HDW		2004	50	184747	1158606	37N	8345	50382	58727	1
2004_dib_023	Dibate	Gipo	Enegimaidy	Enegimaidy	HDW		2004	50	183462	1157551	37N	8400	51103	59503	1
2004_dib_024	Dibate	Tuski Gambela	Werji	Werji	HDW		2004	50	188304	1162848	37N	7650	43000	50650	1
2004_dib_025	Dibate	Tuski Gambela	Gambella	Amhara Sefer	HDW		2004	50	189054	1162276	37N	7650	43369.9	51019.9	1
2004_dib_026	Dibate	Tuski Gambela	Gambella	Gambella No1	HDW		2004	50	188848	1159395	37N	7900	48286	56186	1



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2004_dib_027	Dibate	Tuski Gambela	Gambella	Gambella No2	HDW		2004	50	189592	1161894	37N	6250	39100	45350	1
2004_dib_028	Dibate	Tuski Gambela	Chingo	Chingo	HDW		2004	50	189468	1161725	37N	6790	40441	47231	1
2004_dib_029	Dibate	Galessa	Jejebegisa	Kebero Sefer	HDW		2004	50	189680	1157238	37N	7345	44546	51891	1
2004_dib_030	Dibate	Galessa	Jejebegisa	Kebero Sefer 2	HDW		2004	50	189529	1157388	37N	6500	42212	48712	1
2004_dib_031	Dibate	Galessa	Babeny	Babeny	HDW		2004	50	189432	1157588	37N	6750	38497	45247	1
2004_dib_032	Dibate	Galessa	Manden	Engulule	HDW		2004	50	189639	1157437	37N	6800	39672	46472	1
2004_dib_033	Dibate	Galessa	Dore Shine Sefer	Dore Shine Sefer	HDW		2004	50	189543	1157395	37N	6800	39470	46270	1
2004_dib_034	Dibate	Chancho	Lay Geshe	Lay Geshe	HDW		2004	50	193439	1151034	37N	10250	57626	67876	1
2004_dib_035	Dibate	Chancho	Tach Gishingar	Tach Gishingar	HDW		2004	50	188032	1153234	37N	7245	43812	51057	1
2004_dib_036	Dibate	Korka	Ayana jaleta sefer	Ayana jaleta sefer	HDW		2004	50	186074	1137059	37N	7370	45776	53146	1
2004_dib_037	Dibate	Korka	Sukeny	Sukeny	HDW		2004	50	189445	1137341	37N	7245	45420	52665	1
2004_dib_038	Dibate	Korka	Banfo	Banfo	HDW		2004	50	186712	1138533	37N	7180	43093	50273	1
2004_dib_039	Dibate	Senbosire	Amsalu sefer	Amsalu sefer	HDW		2004	50	182090	1136289	37N	6370	39774	46144	1
2004_dib_040	Dibate	Alibassa	M/Gefere	M/Gefere	HDW		2004	50	195403	1131360	37N	10120	52617	62737	1
2004_dib_041	Dibate	Muzen	Misireta	Misireta	HDW		2004	50	190637	1130306	37N	7390	44685.5	52075.5	1
2004_dib_042	Dibate	Muzen	Bolshewu	Bolshewu	HDW		2004	50	190275	1132075	37N	6900	43845	50745	1
2004_dib_043	Dibate	Muzen	Gichi jana	Gichi jana	HDW		2004	50	191011	1130016	37N	7249	43044	50293	1
2004_dib_051	Dibate	Bechati	Mender	Mender 2	HDW		2004	50	182867	1166237	37N	3270	19941	23211	1
2004_dib_052	Dibate	Tusky Gambela	Gambella	Gambella	HDW	Re	2004	50	188859	1160015	37N	3250	25000	28250	0
2004_dib_053	Dibate	Sirben	Dadush	Dadush 2	HDW		2004	50	204202	1201160	37N	2000	5000	7000	0
2004_dib_054	Dibate	Ydanip	Wubidwu	Wubidwu	HDW		2004	50	195540	1192850	37N			0	1
2004_dib_065	Dibate	Donben	Hezamo Sefer	Donben Hezamo Sefer	HDW		2004	60	192689	1176941	37N	7500	43707.5	51207.5	1
2004_dib_066	Dibate	Donben	Mesgid Sefer	Mesgid Sefer (spring?)	HDW		2004	60	192753	1167590	37N	6250	39471	45721	1
2004_dib_072	Dibate	Sirben	Temehert Bet zuria	Temehert Bet Zuria	HDW	Re	2004	50	204804	1201192	37N			0	1
2005_dib_001	Dibate	Galessa	Jejebegisa	Tigre	HDW		2005	29	189309	1155972	37N	9000	44971.5	53971.5	1
2005_dib_002	Dibate	Galessa	Jejebegisa	Abafent	HDW		2005	28	189637	1156688	37N	8500	46683.3	55183.3	1
2005_dib_003	Dibate	Galessa	Jejebegisa	Kebero No3	HDW		2005	41	190072	1156710	37N	8725	54180.5	62905.5	1
2005_dib_004	Dibate	Galessa	Jejebegisa	Gelila	HDW		2005	32	188151	1155454	37N	9270	50425	59695	1
2005_dib_005	Dibate	Galessa	Mehale Jejebegisa	Migegengisa	HDW		2005	58	189060	1156225	37N	9750	55113	64863	1
2005_dib_007	Dibate	Chancho	Ginby	Ginby	HDW		2005	22	185512	1154801	37N	9500	50213	59713	1
2005_dib_008	Dibate	Korka	Dimitu	Dimitu	HDW		2005	25	185649	1140160	37N	7500	40570	48070	1
2005_dib_009	Dibate	Korka	Bonfo	Bonfo No2	HDW		2005	30	185718	1135512	37N	8250	49159	57409	1
2005_dib_011	Dibate	Korka	Kobelilu	Kobelilu	HDW		2005	24	188655	1145047	37N	8700	50392	59092	1
2005_dib_012	Dibate	Korka	Bolojawe	Bolojawe	HDW		2005	37	188629	1145172	37N	8470	50138.6	58608.6	1
2005_dib_013	Dibate	Senbosire	Boli	Boli	HDW		2005	26	185073	1137054	37N	6750	43580	50330	1
2005_dib_014	Dibate	Senbosire	Dalety	Dalety	HDW		2005	28	185713	1137214	37N	9275	48728	58003	1
2005_dib_015	Dibate	Senbosire	Arengema	Arengema	HDW		2005	27	185649	1137160	37N	6500	4553	11053	1
2005_dib_017	Dibate	Alibassa	Tuluwbichi	Tuluwbichi	HDW		2005	50	195398	1136333	37N	9100	52255	61355	1
2005_dib_018	Dibate	Alibassa	Aidiyo	Aidiyo	HDW		2005	60	195470	1135852	37N	9100	52503	61603	1
2005_dib_019	Dibate	Alibassa	M/Alibassa	M/Alibassa	HDW		2005	53	195498	1135751	37N	9250	51350	60600	1
2005_dib_020	Dibate	Alibassa	Gofe	Gofe	HDW		2005	63	196768	1138984	37N	9700	55574	65274	1
2005_dib_021	Dibate	Alibassa	Tsiwagena	Tsiwagena	HDW		2005	80	197275	1138941	37N	6870	46592	53462	1
2005_dib_022	Dibate	Alibassa	Bapuwa	Bapuwa	HDW		2005	44	197209	1138668	37N	9250	51747	60997	1
2005_dib_023	Dibate	Alibassa	M/Gefere	M/Gefere 2	HDW		2005	43	195949	1199232	37N	8750	45808	54558	1
2005_dib_024	Dibate	Alibassa	Awalegenber	Awalegenber	HDW		2005	38	196383	1138485	37N	9500	55500	65000	1
2005_dib_025	Dibate	Alibassa	Gishaya	Gishaya	HDW		2005	30	196082	1138708	37N	9700	54849	64549	1
2005_dib_026	Dibate	Jan	Jan	Jangora	HDW		2005	69	188080	1170349	37N	9500	53155	62655	1
2005_dib_027	Dibate	Legebuna	Gishay	Gishay	HDW		2005	48	190437	1173012	37N	6250	42148	48398	1
2005_dib_028	Dibate	Legebuna	Wondhan	Wondhan	HDW		2005	38	192745	1173362	37N	7250	45756	53006	1
2005_dib_029	Dibate	Gulfen	Siren	Siren No2	HDW		2005	62	191767	1168742	37N	9250	48318.9	57568.9	1
2005_dib_030	Dibate	Gulfen	Siren	Siren No1	HDW		2005	48	192710	1168142	37N	9250	48990	58240	1
2005_dib_032	Dibate	Gulfen	Angoshi	Angoshi No2	HDW		2005	32	193217	1137206	37N	9000	4800	13800	1
2005_dib_033	Dibate	Mondermo	Mondermo	Tice No3	HDW		2005	40	193622	1175817	37N	7650	45511.5	53161.5	1
2005_dib_034	Dibate	Mondermo	Lay	Mondermo No3	HDW		2005	31	195362	1176432	37N	6700	41584.4	48284.4	1
2005_dib_035	Dibate	Mondermo	Mondermo	Tuge No1	HDW		2005	41	195623	1174800	37N	9050	4948	13998	1
2005_dib_036	Dibate	Mondermo	Mondermo	Tuge No2	HDW		2005	48	195305	1173546	37N	7500	43111.8	50611.8	1
2005_dib_037	Dibate	Girz	Mogar	Mogar No2	HDW		2005	29	192392	1176165	37N	8200	45972	54172	1
2005_dib_038	Dibate	Girz	Dense	Dense No3	HDW		2005	35	192480	1176225	37N	9250	49279.5	58529.5	1



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2005_dib_039	Dibate	Girz	Zeyit	Zeyit No3	HDW		2005	32	190345	1178200	37N	9250	47500	56750	1
2005_dib_041	Dibate	Zegeh	Bari	Bari 2	HDW		2005	40	191334	1176733	37N	7500	45024	52524	1
2005_dib_042	Dibate	Zegeh	Key Afer	Key Afer 2	HDW		2005	47	189330	1176753	37N	7500	46881	54381	1
2005_dib_043	Dibate	Sasmanden	Burso sefer	Burso Sefer	HDW		2005	23	200597	1187540	37N	8750	44428	53178	1
2005_dib_045	Dibate	Yamp	Jihaji-Wechedged	Jihaji-Wechedged	HDW		2005	36	197182	1194362	37N	8230	43831	52061	1
2005_dib_047	Dibate	Donben	Oromo Sefer	Oromo Sefer	HDW		2005	37	193164	1167065	37N	9000	47957	56957	1
2005_dib_050	Dibate	Gipo	Werabu	Werabu 2	HDW		2005	31	186524	1163821	37N	6700	42963	49663	0
2005_dib_051	Dibate	Gipo	Gipo	Babu	HDW		2005	28	185171	1160123	37N	9700	54418	64118	1
2005_dib_055	Dibate	Donben	Lay	Mitire	HDW		2005	22	197229	1161431	37N	5025	26109	31134	1
2005_dib_057	Dibate	Girz	Zeyit	Zeyit No2	HDW	Re	2005	30	190435	1184511	37N	3150	21000	24150	1
2005_dib_075	Dibate	Girz	Dense	Seid Kebede Sefer	HDW		2005	50	193369	1179330	37N			0	1
2001_dib_014	Dibate	Angtock	Matemaryme	Matemaryme	SD		2001	40	202716	1190353	37N	9200	46870	56070	0
2001_dib_015	Dibate	Angtock	Matemaryme	Matemaryme	SD		2001	40	203414	1191063	37N				1
2003_dib_055	Dibate	Sasmanden	Diwon	Diwon	SD		2003	60	190074	1190465	37N	7000	43000	50000	1
2003_dib_056	Dibate	Sasmanden	Diwon	Diwon rehabilited	SD	Re	2003	50	199150	1183280	37N	1900	15000	16900	1
2004_dib_063	Dibate	Berber	Berber	Lay Witsi	SD		2004	60	193151	1172434	37N	10500	55915.5	66415.5	1
2004_dib_064	Dibate	Zegeh	Bari	Bari spring	SD		2004	60	191424	1176836	37N	4500	28040.6	32540.6	1
2004_dib_067	Dibate	Gipo	Chokorsa	Chokorsa	SD		2004	60	183433	1151032	37N	1500	68622	70122	1
2004_dib_068	Dibate	Galessa	Enegimaidy	Enegimaidy Sefer	SD		2004	60	185344	1156312	37N	7250	45139	52389	1
2004_dib_069	Dibate	Galessa	Jejebegisa	Kebero Sefer Spring	SD		2004	60	189672	1157206	37N	7100	45963	53063	1
2004_dib_070	Dibate	Tach Donben	Tach Donben	Shinasha Sefer	SD		2004	60	192679	1168780	37N	2950	17268	20218	1
2004_dib_071	Dibate	Goncha	Shewa Ber	Shewa Ber	SD		2004	60	207996	1205570	37N	4500	15973	20473	1
2005_dib_006	Dibate	Galessa	Gerbi	Gerbi	SD		2005	42	187970	1158088	37N	10000	60343	70343	1
2005_dib_010	Dibate	Korka	Dalety	Dalety spring	SD		2005	50	186614	1141488	37N	11250	63124	74374	1
2005_dib_016	Dibate	Alibassa	Markato	Markato	SD		2005	34	198017	1136012	37N	10000	59383.9	69383.9	1
2005_dib_031	Dibate	Gulfen	Angoshi	Angoshi No1	SD		2005	39	197727	1158944	37N	10000	65390	75390	1
2005_dib_052	Dibate	Gipo	M/Gipo	M/Gipo	SD		2005	42	185991	1160068	37N	11500	63537.8	75037.8	1
2005_dib_056	Dibate	Zegeh	Gebre sefer	Gebre sefer	SD		2005	25	189354	1181226	37N	5000	34262	39262	1
2002_dib_039	Dibate	Mondermo	Mondermo	Lay Mondermo No1	SW	Re	2002	27	193590	1176722	37N			0	1
2002_dib_040	Dibate	Yamp	Yamp	Gedem SW	SW	Re	2002	35	195871	1192876	37N	924	6160	7084	1
2003_dib_057	Dibate	Wubigishi	Lige	Lige	SW	Re	2003	60	193740	1195970	37N	2250	15000	17250	1
2004_dib_055	Dibate	Angtock	Memberselam	Memberselam	SW		2004	80	207745	1190617	37N	5700	132224	137924	1
2004_dib_056	Dibate	Angtock	Mehal Angtock	Mehal Angtock	SW		2004	80	203286	1190376	37N	5250	127039	132289	1
2004_dib_057	Dibate	Legebuna	Begen	Begen No2	SW		2004	80	188622	1173513	37N	5200	130399	135599	1
2004_dib_058	Dibate	Legebuna	Mehal Legebuna	Mehal Legebuna	SW		2004	80	190633	1173801	37N	5250	134409	139659	1
2004_dib_059	Dibate	Girz	Komed	Komed	SW		2004	80	195609	1183489	37N		128329	128329	0
2004_dib_060	Dibate	Kidoh	Mehal Kidoh	Mehal Kidoh 2	SW		2004	80	195234	1185623	37N		76210	76210	1
2005_dib_040	Dibate	Girz	Komed. Ditsamiya	Komed. Ditsamiya	SW		2005	56	191334	1176733	37N	3000	183221.69	186221.69	1
2005_dib_044	Dibate	Yamp	Yamp	Chibanja SW	SW		2005	77	197242	1194322	37N	3000	113775.4	116775.4	1
2005_dib_046	Dibate	Dibate	Tachimecha	Tachimecha	SW		2005	120	200865	1192191	37N	2000	141441.64	143441.64	1
2005_dib_048	Dibate	Donben	Tach Donben	Dibikula	SW		2005	58	197014	1161413	37N	5700	113775.4	119475.4	1
2005_dib_049	Dibate	Donben	Tach Donben	Chabato	SW		2005	42	197129	1162061	37N	5700	108055.54	113755.54	1
2005_dib_053	Dibate	Kidoh	Mehal Kidoh	Mehal Kidoh 3	SW		2005	64	195285	1185627	37N	5000	154565.88	159565.88	1
2002_dib_008	Dibate	Girz	Tenakela	Girz H.P.	HDW	Hp	2002		196184	1182668	37N			0	1
2002_dib_016	Dibate	Bechati	Bechati	Bechati H.P.	HDW	Hp	2002		185766	1165461	37N			0	1
2002_dib_031	Dibate	Berber	Berber	Berber H.C.	HDW	Hp	2002		190721	1170555	37N			0	1
2002_dib_033	Dibate	Bechati	Bechati	Bechati H.P.	HDW	Hp	2002		185966	1165465	37N			0	1
2002_dib_035	Dibate	Galessa	Galessa	Galessa	HDW	Hp	2002		185751	1154156	37N			0	1
2005_dib_073	Dibate	Korka	Korka	Korka H.P.	HDW	Hp	2005		185373	1138097	37N	5720	47818	53538	1
2003_dib_063	Dibate	Dibate	Dibate 2	Dibate HC	HDW	Hp	2003		201233	1192689	37N			0	0
2002_dib_028	Dibate	Dibate	Dibate 2	Dibate 2 HC	MWI	Hp	2002		201146	1192521	37N			0	1
2002_dib_032	Dibate	Berber	Berber	Berber H.C.	MWI	Hp	2002		190721	1170555	37N			0	1
2002_dib_036	Dibate	Galessa	Galessa	Galessa H.P.	MWI	Hp	2002		185751	1154156	37N			0	1
2002_dib_037	Dibate	Zegeh	Zegeh	Zegeh H.P.	MWI	Hp	2002		189562	1176943	37N			0	1
2002_dib_038	Dibate	Girz	Girz	Girz H.P.	MWI	Hp	2002		196284	1182638	37N			0	1
2002_dib_029	Dibate	Sasmanden	Dewon	Dewon H.P.	VIPL	Hp	2002		185664	1137806	37N			0	1
2002_dib_030	Dibate	Parzeit	Parzeit	Parzeit H.P.	VIPL	Hp	2002		197094	1180921	37N			0	1
2002_dib_034	Dibate	Bechati	Bechati	Bechati H.P.	VIPL	Hp	2002		185966	1165465	37N			0	1
2003_dib_064	Dibate	Dibate	Dibate 2	Dibate HC	VIPL	Hp	2003		201279	1192749	37N			0	1
2002_dib_042	Dibate	Mondermo	Mondermo	Mondermo Pre.S.	VIPL	Sc	2002		193712	1176368	37N			0	1
2002_dib_003	Dibate	Parziet	Parzeit	Parzeit P.S.	HDW	Sc	2002		198978	1183142	37N			0	0



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2002_dib_012	Dibate	Berber	Berber	Berber P.S.	HDW	HDW	Sc	2002		193597	1170704	37N					0	1
2002_dib_022	Dibate	Qorqa	Cheliya	Cheliya P.S.	HDW	HDW	Sc	2002	32	190337	1146184	37N					0	1
2003_dib_061	Dibate	Girz	Girz	Girz P.S.	HDW	HDW	Sc	2003		193445	1180104	37N					0	1
2003_dib_046	Dibate	Galessa	Galessa	Galessa P.S.	HDW	HDW	ScRe	2003		186840	1155576	37N	1500	12000		13500		1
2003_dib_050	Dibate	Angtock	Angtock	Angtock P.S.	HDW	HDW	ScRe	2003		207741	1190350	37N	3000	20000		23000		1
2004_dib_091	Dibate	Galessa	Galessa	Galessa Pre.S.	VIPL	VIPL	Sc	2004		186678	1155415	37N					0	1
2004_dib_078	Dibate	Galessa	Manden	Manden P.S.	HDW	HDW	Sc	2004		191412	1155136	37N	6000	47818.5		53818.5		0
2004_dib_079	Dibate	Chancho	Chancho	Chancho P.S.	HDW	HDW	Sc	2004		186430	1151800	37N	6895	50571		57466		1
2004_dib_080	Dibate	Korka	Korka	Korka P.S.	HDW	HDW	Sc	2004		185310	1138605	37N	6490	42721		49211		1
2004_dib_081	Dibate	Alibassa	Alibassa	Alibassa P.S.	HDW	HDW	Sc	2004		195414	1135737	37N	6750	48087		54837		1
2004_dib_082	Dibate	Tach Donben	Tach Donben	Tach Donben P.S.	HDW	HDW	Sc	2004		197041	1162698	37N	6700	43054		49754		1
2004_dib_083	Dibate	Bechati	Bechati	Bechati P.S.	HDW	HDW	Sc	2004		187292	1165659	37N	6500	53593		60093		1
2004_dib_088	Dibate	Galessa	Galessa	Galessa P.S.	VIPL	VIPL	Sc	2004		186352	1155225	37N		117577		117577		1
2004_dib_089	Dibate	Donben	Donben	Donben P.S.	HDW	HDW	Sc	2004		193200	1167046	37N		55355		55355		1
2005_dib_064	Dibate	Parziet	Par	Par P.S.	HDW	HDW	Sc	2005		196845	1181142	37N	5500	55345		60845		1
2005_dib_065	Dibate	Mondermo	Mondermo	Mondermo P.S.	HDW	HDW	Sc	2005		193522	1176477	37N	5000	50654		55654		1
2005_dib_066	Dibate	Senbosire	Senbosire	Senbosire P.S.	HDW	HDW	Sc	2005		181613	1134766	37N	5250	48688		53938		1



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Annex 5 - Mandura woreda investments

Object_ID	Loc_woreda	Loc_kebele	Loc_gott	Scheme_name	Obj_type	Obj_type_ext	Const_y_EC	House_holds	X_GPS_east	Y_GPS_north	UTM_zone	Comm_costs	GoF_costs	Total_costs	Functional
2001_man_029	Mandura	Photomanjarie	Ochichya	Ochichya	HDW		2001	40	214699	1241637	37N	7225	37621	44846	0
2001_man_031	Mandura	Duhanz Baguna	Dijana	Dijana	HDW		2001	40	208203	1224438	37N	5900	32405	38305	0
2001_man_039	Mandura	Kuter 2 (Edida)	Zebrawrk	Zebrawrk	HDW		2001	30	213033	1228934	37N	5800	35314	41114	0
2002_man_001	Mandura	Photomanjarie	Addis Sefer	Addis Sefer	HDW		2002	40	214712	1242442	37N	6320	33395	39715	0
2002_man_007	Mandura	Duha Gubash	Whiba	Whiba	HDW		2002	50	207028	1218268	37N	6305	31191	37496	0
2002_man_022	Mandura	Dach Lumbia	Bagure	Bagure	HDW		2002	93	209543	1209952	37N	8525	41710.69	50235.69	0
2002_man_030	Mandura	Dikul	Dikul	Dikul No2	HDW		2002	46	213115	1223070	37N	11665	30215	41880	0
2002_man_035	Mandura	Jigda Silassie	Ashina	Ashina	HDW		2002	40	221316	1226765	37N	13180	29400	42580	0
2002_man_037	Mandura	Jigda Silassie	Ankuha	Ankuha	HDW		2002	50	222121	1230682	37N	12340	28300	40640	0
2003_man_005	Mandura	Jigda Silassie	Gichehiya kutir-2	Gichehiya kutir-2	HDW		2003	50	220718	1226202	37N	6825	35702.8	42527.8	0
2003_man_010	Mandura	Bahus	Bizrakani	Bizrakani	HDW		2003	50	211637	1212993	37N	8100	30152.16	38252.16	0
2003_man_011	Mandura	Bahus	Dushniba	Dushniba	HDW		2003	50	211654	1213182	37N	7120	28772.6	35892.6	0
2003_man_027	Mandura	Gilgel Beles zuria	Ankussa	Ankussa	HDW		2003	50	209397	1231751	37N	6775	40769.07	47544.07	0
2003_man_053	Mandura	Kuter 2 (Edida)	Andarge sefer	Andarge Sefer	HDW		2003	50	215563	1229623	37N	6900	30841.82	37741.82	0
2003_man_054	Mandura	Photomanjarie	Wondbil	Wondbil	HDW		2003	50	214665	1241453	37N	6880	34234.25	41114.25	0
2003_man_057	Mandura	Dabuh Giorgis	Kuisa	Kuisa	HDW		2003	74	216218	1225052	37N	9642.5	27951.5	37594	0
2004_man_004	Mandura	Duha Gubash	Duha Gubash	Duha Gubash Kutir 2	HDW		2004	50	209786	1219762	37N	7623	36545.04	44168.04	0
2004_man_023	Mandura	Gumade	Dabuh gott	Dabuh Gott	HDW		2004	50	225627	1231670	37N	7165	35982.75	43147.75	0
2004_man_040	Mandura	Maksegnit	Guampra	Lema Sefer	HDW		2004	50	213492	1219086	37N	7655	37867.47	45522.47	0
2004_man_045	Mandura	Maksegnit	Dibgotina	Dibgotina No2	HDW		2004	50	213321	1216330	37N	7189	36710.06	43899.06	0
2004_man_051	Mandura	Dikul	Dubacha	Dubacha	HDW		2004	50	213160	1224254	37N	7861	38255.5	46116.5	0
2004_man_052	Mandura	Wudit	Simaya	Simaya	HDW		2004	50	207428	1213488	37N	6566	31874.91	38440.91	0
2005_man_002	Mandura	Bahus	Bahus	Migisefer	HDW		2005	45	211164	1212930	37N	6160	35520.75	41680.75	0
2005_man_006	Mandura	Dach Lumbia	Dadush	Dadush No3	HDW		2005	50	210020	1210362	37N	12520	35323.46	47843.46	0
2005_man_009	Mandura	Tunidadoh	Dibibegen	Dibibegn	HDW		2005	55	197673	1205799	37N	16245	42406.45	58651.45	0
2001_man_028	Mandura	Photomanjarie	Metoalka	Metoalka Sefer	HDW		2001	50	214958	1241988	37N	7875	35621	43496	1
2001_man_030	Mandura	Kuter 2 (Edida)	Mekuriaw sefer	Mekuriaw Sefer	HDW		2001	50	212479	1228541	37N	6200	30599	36799	1
2001_man_033	Mandura	Dabuh Giorgis	St.Georges	Georges	HDW		2001	51	215758	1224188	37N	5500	30087	35587	1
2001_man_035	Mandura	Gumade	Kanaqami	Kanagami	HDW		2001	42	229505	1230360	37N	10750	28804	39554	1
2001_man_036	Mandura	Gumade	Addis Alem	Addis Alem No2	HDW		2001	56	227014	1229262	37N	7500	27958	35458	1
2001_man_038	Mandura	Jigda Silassie	Dafili	Dafili	HDW		2001	40	219656	1228568	37N	6300	27894	34194	1
2002_man_008	Mandura	Duha Gubash	Gibta	Gibta No1	HDW		2002	50	207027	1218754	37N	9960	31421	41381	1
2002_man_009	Mandura	Duha Gubash	Dudria	Dudria No1	HDW		2002	39	206903	1218985	37N	9865	30495.3	40360.3	1
2002_man_010	Mandura	Duha Gubash	Dudria	Dudria No2	HDW		2002	38	206829	1219181	37N	8945	29499.5	38444.5	1
2002_man_018	Mandura	Wudit	Zifha	Zifha	HDW		2002	50	209559	1216530	37N	11458	28683.9	40141.9	1
2002_man_032	Mandura	Dikul	Manzira Beyene	Manzira Beyene sefer	HDW		2002	36	213282	1224784	37N	11675	30600	42275	1
2002_man_033	Mandura	Dikul	Manzira Asraleka	Manzira Asraleka sefer	HDW		2002	36	213007	1224963	37N	9950	29900.24	39850.24	1
2002_man_036	Mandura	Jigda Silassie	Genanew	Genanew	HDW		2002	50	220786	1230137	37N	11360	29780	41140	1
2002_man_046	Mandura	Babissa	Dubange	Dubange	HDW		2002	50	216772	1219292	37N	11010	31647	42657	1
2002_man_049	Mandura	Babissa	Maru	Maru	HDW		2002	60	216684	1219781	37N	9855	31141.93	40996.93	1
2002_man_050	Mandura	Wudit	Kulite	Kulite	SD		2002	60	209940	1215690	37N	2625	46350.35	48975.35	1
2003_man_001	Mandura	Jigda Silassie	Sanklit gott	Sanklit Gott	HDW		2003	50	220101	1224553	37N	8460	30758.5	39218.5	1
2003_man_002	Mandura	Jigda Silassie	Enjibara	Enjibara gott	HDW		2003	50	220842	1225050	37N	7230	31501	38731	1
2003_man_003	Mandura	Jigda Silassie	Gichehiya gott	Gichehiya Gott No1	HDW		2003	50	220957	1225691	37N	7160	34289.66	41449.66	1
2003_man_004	Mandura	Jigda Silassie	Omoza	Omoza	HDW		2003	50	221039	1225699	37N	6690	34659.7	41349.7	1
2003_man_006	Mandura	Dafili	Qumba	Qumba No2	HDW		2003	50	219860	1228988	37N	7640	36125.3	43765.3	1
2003_man_008	Mandura	Dafili	Qumba kutir-1	Qumba kutir-1	HDW		2003	50	220052	1228850	37N	7600	36767.45	44367.45	1



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2003_man_014	Mandura	Bahus	Dabuh	Dabuh	HDW	2003	50	212016	1213142	37N	7360	28885.32	36245.32	1
2003_man_016	Mandura	Bahus	Gudi Sefer	Gudi Sefer	HDW	2003	50	211301	1212626	37N	7440	31701.3	39141.3	1
2003_man_021	Mandura	Duhanz Baguna	Kurate & Desanbe	Kurate & Desanbe	HDW	2003	55	208276	1224818	37N	7680	32928	40608	1
2003_man_022	Mandura	Duhanz Baguna	Kusha	Kusha Kutir 2	HDW	2003	39	207586	1225112	37N	7920	30874.5	38794.5	1
2003_man_023	Mandura	Duhanz Baguna	Kurate	Kurate Kutir 1	HDW	2003	50	209819	1225860	37N	7800	35505.29	43305.29	1
2003_man_024	Mandura	Duhanz Baguna	Desembe	Bole sefer	HDW	2003	49	207848	1223883	37N	12500	35533.6	48033.6	1
2003_man_026	Mandura	Gilgel Beles zuria	Biangua	Biangua	HDW	2003	30	208796	1233480	37N	6240	30973.8	37213.8	1
2003_man_028	Mandura	Gilgel Beles zuria	Balkuta	Balkuta	HDW	2003	28	208069	1231782	37N	6475	29916	36391	1
2003_man_029	Mandura	Gilgel Beles zuria	Wodaguna	Wodaguna	HDW	2003	31	209231	1232498	37N	6870	25897.5	32767.5	1
2003_man_030	Mandura	Gilgel Beles zuria	Wogdie	Wogdie	HDW	2003	38	208443	1231484	37N	6480	33666.85	40146.85	1
2003_man_033	Mandura	Dikul	Dikul	Dikul No1	HDW	2003	50	212776	1223620	37N	11008.5	30929.2	41937.7	1
2003_man_035	Mandura	Duha Gubash	Wohiba kutir-2	Wohiba kutir-2	HDW	2003	40	207145	1218653	37N	6800	31800	38600	1
2003_man_036	Mandura	Duha Gubash	Damazine	Damazine	HDW	2003	37	210202	1220020	37N	6690	34659.7	41349.7	1
2003_man_038	Mandura	Duha Maksegnit	Gejew sefer	Gejew Sefer	HDW	2003	50	212972	1215221	37N	7520	28593.25	36113.25	1
2003_man_040	Mandura	Duha Maksegnit	Dibgotina gott	Dibgotina Gott	HDW	2003	50	214475	1216548	37N	6732	31392.45	38124.45	1
2003_man_044	Mandura	Wudit	Chihugua	Chihugua	HDW	2003	50	208541	1214488	37N	7128	26566.4	33694.4	1
2003_man_049	Mandura	Wudit	Kumba	Kumba	HDW	2003	50	207842	1218310	37N	11655	31137.5	42792.5	1
2003_man_050	Mandura	Kuter 2 (Edida)	Adigo Jirit sefer	Adigo Jirit Sefer	HDW	2003	50	215659	1228858	37N	6920	30009.5	36929.5	1
2003_man_051	Mandura	Kuter 2 (Edida)	Abadebasu sefer	Abadebasu Sefer	HDW	2003	50	216964	1229104	37N	6960	31872.8	38832.8	1
2003_man_052	Mandura	Kuter 2 (Edida)	Jirit sefer	Jirit Sefer	HDW	2003	50	216164	1229548	37N	6500	31254.19	37754.19	1
2003_man_055	Mandura	Dach Lumbia	Dangur	Dangur	HDW	2003	97	209310	1210607	37N	8200	29034.4	37234.4	1
2003_man_059	Mandura	Jigda Silassie	Dafili	De Daha	SD	2003	248	221301	1229474	37N	90025	655000	745025	1
2004_man_001	Mandura	Duha Gubash	Aftahun	Aftahun	HDW	2004	50	206515	1218711	37N	7531	36367.73	43898.73	1
2004_man_002	Mandura	Duha Gubash	Alem Guaguya	Wutila No3	HDW	2004	50	207467	1220963	37N	7253	35000	42253	1
2004_man_003	Mandura	Duha Gubash	Maya	Maya	HDW	2004	50	207425	1221825	37N	7311	35842.5	43153.5	1
2004_man_005	Mandura	Duha Gubash	Gulagusha	Gulagusha	HDW	2004	50	207024	1220158	37N	6800	31121.6	37921.6	1
2004_man_006	Mandura	Dabuh Giorgis	Wotisha	Wotisha	HDW	2004	50	215860	1223795	37N	7854	29724.02	37578.02	1
2004_man_007	Mandura	Dabuh Giorgis	Anzina	Anzina	HDW	2004	50	216743	1224503	37N	8001	30763.6	38764.6	1
2004_man_008	Mandura	Babissa	Mawite	Gumgum	HDW	2004	50	216037	1221261	37N	7554	34984.27	42538.27	1
2004_man_009	Mandura	Babissa	Babissa No.1	Dugusa	HDW	2004	50	216338	1220795	37N	7476	34586.3	42062.3	1
2004_man_010	Mandura	Babissa	Dubanga	Dubanga No2	HDW	2004	50	216420	1218696	37N	8112	36472.92	44584.92	1
2004_man_011	Mandura	Babissa	Mawite	Gumgum No1	HDW	2004	50	216284	1221321	37N	7221	31197.88	38418.88	1
2004_man_012	Mandura	Babissa	Gumgum	Dugese	HDW	2004	50	215969	1220914	37N	7443	35254.9	42697.9	1
2004_man_015	Mandura	Tunidadoh	Wotsika	Wotsika	HDW	2004	50	201597	1211810	37N	9176	41000	50176	1
2004_man_016	Mandura	Tunidadoh	Demazin	Demazin	HDW	2004	50	199802	1211920	37N			0	1
2004_man_019	Mandura	Gumade	Ajahi	Ajahi No2	HDW	2004	50	230512	1230382	37N	7838	31710.66	39548.66	1
2004_man_020	Mandura	Gumade	Ajahi	Ajahi No1	HDW	2004	50	230118	1230531	37N	8005	41000	49005	1
2004_man_021	Mandura	Gumade	Bikolo	Bikolo No2	HDW	2004	50	225987	1228802	37N	7892	31822.7	39714.7	1
2004_man_024	Mandura	Gumade	Kanagami	Kanagami	HDW	2004	50	229215	1230469	37N	7890	35319.3	43209.3	1
2004_man_025	Mandura	Gumade	Addis Alem	Addis Alem No2	HDW	2004	50	227147	1229465	37N	7693	34000	41693	1
2004_man_026	Mandura	Gumade	Asmera	Asmera No1	HDW	2004	50	227578	1230739	37N	6851	30388.7	37239.7	1
2004_man_029	Mandura	Gumade	Asmera	Asmera No2	HDW	2004	50	226132	1231318	37N	7125	34447.16	41572.16	1
2004_man_032	Mandura	Dach Lumbia	Dagunda	Dagunda No2	HDW	2004	50	205840	1208706	37N	7213	29596.8	36809.8	1
2004_man_033	Mandura	Dach Lumbia	Dagunda	Dagunda No1	HDW	2004	50	205732	1208206	37N	7510	29655.96	37165.96	1
2004_man_034	Mandura	Dach Lumbia	Dadush Kutir 2	Dadush No2	HDW	2004	50	209944	1210896	37N	8556	35203.89	43759.89	1
2004_man_036	Mandura	Dach Lumbia	Dadush	Dadush No1	HDW	2004	50	209975	1210474	37N	7867	31369.8	39236.8	1
2004_man_037	Mandura	Dach Lumbia	Dakuaja	Dakuaja No2	HDW	2004	50	205440	1208725	37N	6928	29264.21	36192.21	1
2004_man_038	Mandura	Dach Lumbia	Dakuaja	Dakuaja No1	HDW	2004	50	206340	1208835	37N	7267	31682.28	38949.28	1
2004_man_039	Mandura	Maksegnit	Guampra	Fetene Sefer	HDW	2004	50	213533	1218671	37N	6800	31774.16	38574.16	1
2004_man_041	Mandura	Maksegnit	Guampra	Agaje Sefer	HDW	2004	50	213492	1218993	37N	7433	37924.6	45357.6	1
2004_man_042	Mandura	Maksegnit	Dapude	Dapude	HDW	2004	50	215092	1216972	37N	6765	34229.6	40994.6	1
2004_man_044	Mandura	Maksegnit	Bangiha	Bangiha	HDW	2004	50	213585	1216864	37N	7013	35932.61	42945.61	1
2004_man_046	Mandura	Ajenta	Wolanba	Wolanba No1	HDW	2004	50	201850	1218688	37N	7233	37022.2	44255.2	1
2004_man_048	Mandura	Ajenta	Sibha	Sibha	HDW	2004	50	204106	1215600	37N	7215	34701.01	41916.01	1
2004_man_054	Mandura	Wudit	Aykanza/Demazin	Aykanza	HDW	2004	50	207429	1213195	37N	6567	26662.2	33229.2	1
2004_man_055	Mandura	Wudit	Dudria	Dudria	HDW	2004	50	207210	1213712	37N	6437	26933.2	33370.2	1
2004_man_062	Mandura	Maksegnit	Bahir Zaf gott	Bahirzaf	SD	2004	60	213817	1217065	37N	8100	41200	49300	1



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2004_man_063	Mandura	Genet Mariyam	Genete Mariyam & Kutir 2	Abatachin spring	SD	2004	340	218349	1226884	37N	130000	849800	979800	1
2004_man_056	Mandura	Duha Gubash	Wutila	Wutila No1	SW	2004	80	207884	1221058	37N	7750	123393.69	131143.69	1
2004_man_059	Mandura	Ajenta	Empiago	Empiago	SW	2004	80	202490	1213269	37N	6200	140355.35	146555.35	1
2005_man_001	Mandura	Jigda Sillasie	Ashina	Ashina No3	HDW	2005	43	220880	1226026	37N	12870	36396.76	49266.76	1
2005_man_003	Mandura	Duha Maksegnit	Abaye sefer	Abaye Sefer	HDW	2005	48	213593	1218232	37N	13551	40609.5	54160.5	1
2005_man_004	Mandura	Dach Lumbia	Bagure	Bagur No2	HDW	2005	45	209468	1209435	37N	14360	40605	54965	1
2005_man_005	Mandura	Dach Lumbia	Dach	Dach Gott	HDW	2005	48	209556	1210273	37N	13840	35799.85	49639.85	1
2005_man_007	Mandura	Gumade	Dabu gott	Dabu Gott	HDW	2005	41	225204	1231821	37N	13500	40900	54400	1
2005_man_008	Mandura	Gumade	Bikolo	Bikolo No3	HDW	2005	42	225184	1229170	37N	12050	40620.5	52670.5	1
2005_man_010	Mandura	Gilgel Beles zuria	Dibabign	Dibgina	SW	2005	48	209223	1231151	37N	5430	95439.85	100869.85	1
2005_man_011	Mandura	Tunidadoh	Gidee	Gidee	SW	2005	57	199928	1209204	37N	5674	106299.3	111973.3	1
2005_man_014	Mandura	Gedim Dafili	Dirib	Dirib	SW	2005	57	187389	1204671	37N	6102	113900.76	120002.76	1
2005_man_015	Mandura	Gedim Dafili	Massa	Massa	SW	2005	60	189147	1207683	37N	5890	107700.04	113590.04	1
2005_man_016	Mandura	Gedim Dafili	Maksegnit	Maksegnit	SW	2005	50	187710	1205454	37N	6210	115024.81	121234.81	1
2005_man_017	Mandura	Gedim Dafili	Wodina	Wodina	SW	2005	58	188305	1206662	37N	5897	102845.99	108742.99	1
2005_man_018	Mandura	Gedim Dafili	Dibilig	Dibilig	SW	2005	59	188893	1200391	37N	5899	107741.17	113640.17	1
2006_man_004	Mandura	Genet Mariyam	Genete Mariyam & Kutir 2	Abatachin spring phase 2	SD	2007	3080	218349	1226884	37N	100000	904728	1004728	1
2007_man_001	Mandura	Gilgel Beles 01	Gilgel Beles	Spare part store	Store	2007		210114	1234708	37P	4620	146982	151602	
2002_man_021	Mandura	Wudit	Wudit	Wudit H.P. HDW	HDW Hp	2002		209754	1215960	37N	6110	37800	43910	0
2004_man_064	Mandura	Duha Gubash	Duha Gubash	Duha Gubash H.P. HDW	HDW Hp	2004		207029	1218273	37N	5645	41000	46645	1
2004_man_072	Mandura	Jigda Silassie	Jigda Silassie	Jigda Silassie H.P. HDW	HDW Hp	2004		221233	1225283	37N	4245	35000	39245	1
2002_man_060	Mandura	Photomanjarie	Photomanjarie	Photomanjarie H.P. MWI	MWI Hp	2002		210183	1234967	37N		17851	17851	1
2002_man_061	Mandura	Kuter 2 (Edida)	Edida	Edida H.P. MWI	MWI Hp	2002		212996	1229009	37N		17851	17851	1
2002_man_063	Mandura	Duhanz Baguna	Duhanz Baguna	Duhanz Baguna H.P. MWI	MWI Hp	2002		205054	1222757	37N		17851	17851	1
2002_man_064	Mandura	Jigda Silassie	Jigda Silassie	Jigda Silassie H.P. MWI	MWI Hp	2002		221221	1225568	37N		17851	17851	1
2002_man_065	Mandura	Wudit	Zefiha	Wudit H.P. MWI	MWI Hp	2002		209759	1215885	37N		17851	17851	1
2003_man_064	Mandura	Gumade	Gumadie	Gumadie H.P. MWI	MWI Hp	2003		226302	1229441	37N	985	17536	18521	1
2003_man_065	Mandura	Bahus	Bahus	Bahus H.P. MWI	MWI Hp	2003		211607	1212924	37N	1213	17536	18749	1
2003_man_066	Mandura	Ajenta	Ajenta	Ajenta H.P. MWI	MWI Hp	2003		205165	1216163	37N	1191	17536	18727	1
2003_man_067	Mandura	Gilgel Beles Zuria	Essisa	Essisa H.P. MWI	MWI Hp	2003		208701	1231313	37N	1097	17536	18633	1
2003_man_068	Mandura	Tunidadoh	Tunidadoh	Tunidadoh H.P. MWI	MWI Hp	2003		200201	1209722	37N	1102	17536	18638	1
2004_man_080	Mandura	Dikul	Dikul	Dikul H.P. MWI	MWI Hp	2004		212769	1223997	37N	1711	27160.84	28871.84	1
2004_man_081	Mandura	Duha Maksegnit	Duha Maksegnit	Duha Maksegnit H.P. MWI	MWI Hp	2004		214170	1216603	37N	2105	28613.17	30718.17	1
2004_man_082	Mandura	Duha Gubash	Wuhaba	Duha Gubash H.P. MWI	MWI Hp	2004		206659	1218652	37N	1548	26290.835	27838.835	1
2004_man_083	Mandura	Babisa	Babisa	Babisa H.P. MWI	MWI Hp	2004		216480	1219938	37N	1822	29426.23	31248.23	1
2004_man_084	Mandura	Dafili	Health Post	Dafili H.P. MWI	MWI Hp	2004		221415	1229553	37N	1998	27969.725	29967.725	1
2004_man_085	Mandura	Dach Lumbia	Dach Lumbia	Dach Lumbia H.P. MWI	MWI Hp	2004		209275	1209937	37N	1570	28556.225	30126.225	1
2005_man_032	Mandura	Dach Lumbia	Dakuaja	Dakuaja H.P. MWI	MWI Hp	2005		205841	1208804	37N	1000	30240.92	31240.92	1
2002_man_057	Mandura	Photomanjarie	Photomanjarie	Photomanjarie H.P. VIPL	VIPL2 Hp	2002		210183	1234967	38N	3000	79854	82854	1
2002_man_058	Mandura	Kuter 2 (Edida)	Edida	Edida H.P. VIPL	VIPL2 Hp	2002		213008	1229018	37N	3000	79854	82854	1
2003_man_062	Mandura	Tunidadoh	Tunidadoh	Tunidadoh H.P. VIPL	VIPL2 Hp	2003		200211	1209719	37N	6590	102263	108853	1
2003_man_063	Mandura	Gilgel Beles Zuria	Essisa	Essisa H.P. VIPL	VIPL2 Hp	2003		208721	1231307	37N	6315	98263	104578	1
2004_man_075	Mandura	Bahus	Bahus	Bahus H.P. VIPL	VIPL2 Hp	2004		211607	1212924	37N	6376	106451.59	112827.59	1
2004_man_076	Mandura	Duha Maksegnit	Duha Maksegnit	Duha Maksegnit H.P. VIPL	VIPL2 Hp	2004		214160	1216578	37N	6848	108705	115553	1
2004_man_077	Mandura	Duha Gubash	Wuhaba	Duha Gubash H.P. VIPL	VIPL2 Hp	2004		206669	1218631	37N	6453	96419.11	102872.11	1
2004_man_078	Mandura	Dach Lumbia	Dach Lumbia	Dach Lumbia H.P. VIPL	VIPL2 Hp	2004		209231	1209939	37N	7559	116200	123759	1
2004_man_079	Mandura	Dafili	Dafili	Dafili H.P. VIPL	VIPL2 Hp	2004		221436	1229564	37N	6353	99348.716	105701.716	1
2005_man_028	Mandura	Jigda Silassie	Jigda Silassie	Jigda Silassie H.P. VIPL	VIPL2 Hp	2005		221221	1225568	37N	1000	87216.75	88216.75	1
2005_man_029	Mandura	Wudit	Zefiha	Wudit H.P. VIPL	VIPL2 Hp	2005		209863	1216080	37N	1000	92849.5	93849.5	1
2005_man_030	Mandura	Dikul	Dikul	Dikul H.P. VIPL	VIPL2 Hp	2005		212863	1224205	37N	1000	93187.5	94187.5	1
2005_man_031	Mandura	Ajenta	Ajenta	Ajenta H.P. VIPL	VIPL2 Hp	2005		205165	1216163	37N	1000	89352.5	90352.5	1
2006_man_008	Mandura	Gedim Dafili	Gedim Dafili	Gedim Dafili H.P. VIPL	VIPL2 Hp	2006		187256	1206080	37N	5900	111576	117476	1
2002_man_025	Mandura	Dach Lumbia	Dach Lumbia	Dach Lumbia P.S. HDW	HDW Sc	2002		209721	1210442	37N	9400	34750.4	44150.4	1
2003_man_031	Mandura	Dikul	Dikul	Dikul P.S. HDW 2	HDW Sc	2003		212232	1223390	37N	10755	39955.5	50710.5	1
2003_man_058	Mandura	Gumade	Gumadie	Gumadie P.S. HDW	HDW Sc	2003		226446	1229621	37N	7561	32000	39561	1
2004_man_066	Mandura	Ajenta	Wolamba	Wolamba P.S. HDW	HDW Sc	2004		201593	1219680	37N	4561	35318.3	39879.3	1
2004_man_065	Mandura	Babissa	Babissa	Babissa P.S. HDW	HDW Sc	2004		216665	1219679	37N	5434	37508.23	42942.23	1



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2006_man_001	Mandura	Dach Lumbia	Daquaja	Daquaja P.S. HDW	HDW	Sc	2006	206114	1209239	37N	5655	35341	40996	1
2006_man_003	Mandura	Duha Gubash	Wuhaba	Wuhaba P.S. School	HDW	Sc	2006	207015	1219447	37N	5809	34716	40525	1
2006_man_002	Mandura	Wudit	Wudit	Wudit P.S. HDW	HDW	Sc	2006	209047	1215399	37N	5740	33768	39508	0
2002_man_053	Mandura	Dabuh Giorgis	Dabuh	Dabuh Giorgis P.S. HWF	HWF	Sc	2002	215638	1224056	37N		9202	9202	1
2002_man_055	Mandura	Mandura	Mandura	Mandura P.S. HWF	HWF	Sc	2002	218780	1227639	37N		13400	13400	1
2002_man_054	Mandura	Tunidadoh	Tunidadoh	Tunidadoh P.S. HWF	HWF	Sc	2002	200218	1209872	37N		9000	9000	1
2003_man_071	Mandura	Dikul	Dikul	Dikul P.S. HWF	HWF	Sc	2003	212368	1223365	37N	594	10000	10594	1
2003_man_069	Mandura	Gumade	Gumadie	Gumadie P.S. HWF	HWF	Sc	2003	226563	1229577	37N	690	10000	10690	1
2003_man_070	Mandura	Jigda Silassie	Jigda	Jigda P.S. HWF	HWF	Sc	2003	221203	1224968	37N	662	10000	10662	1
2004_man_086	Mandura	Ajenta	Ajenta	Ajenta P.S. HWF	HWF	Sc	2004	205032	1215845	37N	675	11870	12545	1
2005_man_013	Mandura	Gedim Dafili	G/Dafili	G/Dafili P.S. SW	SW	Sc	2005	188819	1206451	37N	5910	108440.01	114350.01	1
2002_man_052	Mandura	Dabuh Giorgis	Dabuh	Dabuh Giorgis P.S. VIPL	VIPL	Sc	2002	215638	1224056	37N	10000	90000	100000	1
2003_man_061	Mandura	Gilgel Beles Zuria	Essisa	Essisa P.S. VIPL	VIPL	Sc	2003	208700	1231173	37N	8758	137463	146221	1
2003_man_060	Mandura	Gumade	Gumadie	Gumadie P.S. VIPL	VIPL	Sc	2003	226563	1229577	37N	15675	259426	275101	1
2004_man_073	Mandura	Ajenta	Wolamba	Wolamba P.S. VIPL	VIPL	Sc	2004	202061	1219474	37N	19578	313257	332835	1
2004_man_074	Mandura	Gilgel Beles 01	Gilgel Beles 01	Gilgel Beles P.S. VIPL	VIPL	Sc	2004	209390	1234860	37N	19200	300000	319200	1
2005_man_019	Mandura	Duha Maksegnit	Duha Maksegnit	Duha Maksegnit P.S. VIPL (M)	VIPL	Sc	2005	214606	1216584	37N	500	150341.13	150841.13	1
2005_man_020	Mandura	Duha Maksegnit	Duha Maksegnit	Duha Maksegnit P.S. VIPL (F)	VIPL	Sc	2005	214606	1216584	37N	500	150342.13	150842.13	1
2005_man_022	Mandura	Gedim Dafili	Dafili	Dafili P.S. VIPL	VIPL	Sc	2005	221503	1229598	37N	1000	143743.69	144743.69	1
2005_man_025	Mandura	Genet Mariyam	Genet Mariyam	Genet Mariyam P.S. VIPL M	VIPL	Sc	2005	218780	1227639	37N	500	140152.61	140652.61	1
2005_man_026	Mandura	Genet Mariyam	Genet Mariyam	Genet Mariyam P.S. VIPL F	VIPL	Sc	2005	218780	1227639	37N	500	140152.61	140652.61	1
2005_man_023	Mandura	Photomanjarie	Photomanjarie	Photomanjarie P.S. VIPL M	VIPL	Sc	2005	214706	1242344	37N	500	138082.2	138582.2	1
2005_man_024	Mandura	Photomanjarie	Photomanjarie	Photomanjarie P.S. VIPL F	VIPL	Sc	2005	214706	1242344	37N	500	138082.2	138582.2	1
2005_man_021	Mandura	Wudit	Wudit	Wudit P.S. VIPL	VIPL	Sc	2005	209253	1215281	37N	1000	136248.22	137248.22	1
2006_man_005	Mandura	Dach Lumbia	Dach Lumbia	Dach Lumbia P.S. VIPL	VIPL	Sc	2006	209712	1210113	37N	10000	255535	261565	1
2006_man_006	Mandura	Duha Gubash	Wuhaba	Wuhaba P.S. VIPL	VIPL	Sc	2006	207001	1219343	37N	6050	137742	143792	1
2006_man_007	Mandura	Tunidadoh	Tunidadoh	Tunidadoh P.S. VIPL	VIPL	Sc	2006	200316	1210134	37N	6030	129964	135994	1



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Annex 6 - Pawe woreda investments

Object_ID	Ioc_woreda	Ioc_kebele	Ioc_gott	Scheme_name	Obj_type	Obj_type_ext	Const_y_EC	House_holds	X_GPS_east	Y_GPS_north	UTM_zone	Comm_costs	GoF_costs	Total_costs	Functional
2001_paw_045	Pawe	LV 130 V 14	LV 130	Shola Mender	HDW		2001	50	217986	1251212	37N	7947.5	28787.5	36735	0
2001_paw_054	Pawe	Almu	Addis sefer	Yodirow Hamurit Gebeya Sefer	HDW		2001	50	215499	1246100	37N	6290	26910.1	33200.1	0
2002_paw_018	Pawe	Ketena 1 Mender 49	K1 V49	Abo Belay's Water	HDW		2002	50	206179	1241958	37N	11925	46007	57932	0
2002_paw_026	Pawe	Ketena 1 Mender 49	K1 V46	Mender 47	HDW		2002	50	202028	1244712	37N	10621	43113	53734	0
2002_paw_043	Pawe	Ketena 2 Mender 134	K2 v134 block 2	Block 7	HDW		2002	50	216953	1240776	37N	11620	40000	51620	0
2002_paw_060	Pawe	Ketena 2 Mender 30	V6	Mewale Hsan	HDW		2002	50	214821	1248885	37N	9851	34997	44848	0
2003_paw_003	Pawe	Ketena 1 Mender 14	Mender 16	V 16 Zone 1	HDW		2003	50	220984	1256777	37N	7225	40233	47458	0
2003_paw_013	Pawe	Mekane Selam	Mender 46	Wore'elu Sefer	HDW		2003	50	201706	1245156	37N	9420	43711	53131	0
2003_paw_021	Pawe	Ketena 2 Mender 134	Mender 134	Block 12	HDW		2003	50	216822	1240042	37N	10225	47000	57225	0
2003_paw_030	Pawe	Ketena 2 Mender 134	Mender 134	Goraw Sefer	HDW		2003	50	216401	1240199	37N	11475	58144	69619	0
2003_paw_037	Pawe	Ketena 2 Mender 14	Mender 14	Bahar Dar Sefer	HDW		2003	50	225378	1255505	37N	10500	48632	59132	0
2003_paw_040	Pawe	Ketena 2 Mender 12	V11	Zone 3	HDW		2003	50	225330	1253076	37N	11724	55844	67568	0
2003_paw_048	Pawe	Ketena 1 Mender 49	Mender 46	Addisu Sefer	HDW		2003	50	201586	1244871	37N	13232	62361	75593	0
2004_paw_036	Pawe	Debire Work	K2 V12	V12 Zone 4	HDW		2004	50	228084	1252210	37N	7651	43773.5	51424.5	0
2004_paw_056	Pawe	Ketena 1 Mender 104	K1 V104	Tach Dawnt	HDW	Re	2004	50	206876	1253801	37N	505	2972	3477	0
2001_paw_040	Pawe	LV 134	LV132	Sar sefer	HDW		2001	50	218263	1240798	37N	7300	33669	40969	1
2001_paw_041	Pawe	LV 134	LV131	Zone 4	HDW		2001	50	217883	1244066	37N	7300	33653.6	40953.6	1
2001_paw_042	Pawe	LV 23/45	V23	Budn Hulet V23	HDW		2001	50	222361	1250171	37N	12010	44288	56298	1
2001_paw_043	Pawe	LV 23/46	LV 9	Abaguta Dej	HDW		2001	50	221889	1251219	37N	12320	38763	51083	1
2001_paw_044	Pawe	LV 23/47	LV 45	Abageto Sefer	HDW		2001	50	221919	1250448	37N	10101	32088	42189	1
2001_paw_051	Pawe	Mender 3	V3	Medihin Block 1	HDW		2001	50	212005	1242504	37N	7400	32655	40055	1
2001_paw_052	Pawe	Mender 4	V4	Bono 1 Tim 5	HDW		2001	50	213485	1244620	37N	8700	34365	43065	1
2002_paw_001	Pawe	Pawe ketema	Gebeya sefer	Gebeya Sefer	HDW		2002	50	217248	1252895	37N	11940	38849	50789	1
2002_paw_002	Pawe	Pawe ketema	Tele	Tele Sefer	HDW		2002	50	217073	1252687	37N	16332	46892	63224	1
2002_paw_004	Pawe	Almu	Memheran sefer	Memheran Sefer	HDW		2002	50	214558	1245632	37N	11508	26939	38447	1
2002_paw_006	Pawe	Almu	Addis Sefer	Almu Sefer	HDW		2002	50	215837	1245767	37N	10000	34608	44608	1
2002_paw_008	Pawe	Felege selam	K2 v4 block 1	Bono 2 Tim 2	HDW		2002	50	213524	1244347	37N	11000	35267	46267	1
2002_paw_009	Pawe	Ketena 2 Mender 17	V17	Fareta Sefer	HDW		2002	50	213508	1253937	37N	10560	31268	41828	1
2002_paw_010	Pawe	Ketena 2 Mender 17	K2 V17	Wolekitie Sefer	HDW		2002	50	218798	1257948	37N	10675	35377.75	46052.75	1
2002_paw_014	Pawe	Ketena 1 Mender 127	V101	Block 1	HDW		2002	50	204773	1243301	37N	11620	42413	54033	1
2002_paw_016	Pawe	Ketena 1 Mender 127	V101	Block 2 (3)	HDW		2002	50	204773	1243301	37N	10590	42328	52910	1
2002_paw_017	Pawe	Ketena 1 Mender 127	V127	Block 2 (2)	HDW		2002	50	205262	1243333	37N	9800	37811	47611	1
2002_paw_019	Pawe	Ketena 1 Mender 49	K1 v50	Zemed Yelesh	HDW		2002	50	204405	1243581	37N			0	1
2002_paw_020	Pawe	Ketena 1 Mender 49	K1 V50	Aba Ezigu Water	HDW		2002	50	204409	1243577	37N	9310	29761	39071	1
2002_paw_022	Pawe	Ketena 1 Mender 49	K1 V50 Megenteya	K2 V127 Megenteya	HDW		2002	50	203768	1244595	37N	10270	38418	48688	1
2002_paw_024	Pawe	Ketena 1 Mender 49	K1 V51	Bulokutu Water	HDW		2002	50	205205	1242341	37N	9956	34950.59	44906.59	1
2002_paw_032	Pawe	Ketena 1 Mender 104	K1 V104	Shmel Mender	HDW		2002	50	205566	1253762	37N	4890	26363	31253	1
2002_paw_033	Pawe	Ketena 1 Mender 104	K1 v104	Berejat	HDW		2002	50	206323	1253163	37N	10250	40035	50285	1
2002_paw_034	Pawe	Ketena 1 Mender 104	K1 V104	Yekowasa	HDW		2002	50	209065	1254487	37N	9750	34323.5	44073.5	1
2002_paw_036	Pawe	Ketena 2 Mender 1	K2 V1	K2 V1 Block 1	HDW		2002	50	210041	1239765	37N	11080	39008	50088	1
2002_paw_037	Pawe	Ketena 2 Mender 1	K2 V1	K2 V1 Block 2	HDW		2002	50	210040	1239791	37N	10910	32663.2	43573.2	1
2002_paw_038	Pawe	Ketena 2 Mender 1	K2 V2 Block 1	Abayemataw Wuha	HDW		2002	50	210657	1236365	37N	11110	39751	50861	1
2002_paw_039	Pawe	Ketena 2 Mender 1	K2 V2	K2 V2 Block 2	HDW		2002	50	209930	1236037	37N	10280	35024	45304	1
2002_paw_040	Pawe	Ketena 2 Mender 1	K2 V51	K2 V51 Community	HDW		2002	50	207719	1239994	37N	11300	40109.1	51409.1	1



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2002_paw_044	Pawe	Ketena 2 Mender 28/29	K2 v29	Mofa sefer	HDW	2002	50	222313	1246085	37N	11160	40692	51852	1	
2002_paw_045	Pawe	Ketena 2 Mender 12	K2 V11	Zone 2	HDW	2002	50	225704	1253075	37N	12117	39008	51125	1	
2002_paw_046	Pawe	Ketena 2 Mender 24	v24	Segno Gebeya	HDW	2002	50	233506	1258142	37N	6900	26595	33495	1	
2002_paw_047	Pawe	Ketena 2 Mender 26	K2 v26	Akababi 2	HDW	2002	50	228805	1262791	37N	11870	40824	52694	1	
2002_paw_049	Pawe	Ketena 2 Mender 14	K2 v130		HDW	2002	50	228216	1257237	37N	6500	33977	40477	1	
2002_paw_053	Pawe	Ketena 2 Mender 23/25	K2 V23	Budn Semnt	HDW	2002	50	222347	1249666	37N	11237	33623	44860	1	
2002_paw_055	Pawe	Ketena 2 Mender 23/25	K2 V10	Yehusen Degaf	HDW	2002	50	223764	1252476	37N	12000	43620.5	55620.5	1	
2002_paw_056	Pawe	Ketena 2 Mender 30	V30	Zone 8	HDW	2002	50	213722	1251126	37N			0	1	
2002_paw_057	Pawe	Ketena 2 Mender 30	V30	V30 Zone 3	HDW	2002	50	217771	1251080	37N	9240	32707.5	41947.5	1	
2002_paw_059	Pawe	Ketena 2 Mender 30	V7	V7 Zone 4	HDW	2002	50	216281	1252340	37N	9520	29168	38688	1	
2002_paw_061	Pawe	Ketena 2 Mender 30	V5	Hadya sefer	HDW	2002	50	210451	1246008	37N	10500	35009	45509	1	
2002_paw_065	Pawe	Ketena 2 Mender 3	K2 V3	V3 Block 2	HDW	2002	50	212918	1244964	37N	10112	35272.65	45384.65	1	
2002_paw_066	Pawe	Ketena 2 Mender 3	Tefenaqaye sefer	Zelan Sefer	HDW	2002	50	211491	1242724	37N	13142	40721	53863	1	
2003_paw_001	Pawe	Ketena 1 Mender 26	Mender 26	Akababi 1	HDW	2003	50	228764	1262694	37N	10500	38432	48932	1	
2003_paw_004	Pawe	Ketena 1 Mender 30	Mender 30	Zone 6	HDW	2003	50	218193	1251256	37N	9340	50846	60186	1	
2003_paw_005	Pawe	Ketena 2 Mender 7	Hamusit	Hamusit Community	HDW	2003	50	216886	1250901	37N	10500	42114	52614	1	
2003_paw_006	Pawe	Mender 49	Mender 49	Demasie's Water	HDW	2003	50	206655	1242156	37N	11230	53798	65028	1	
2003_paw_007	Pawe	Abat Belese	Tach sefer	Wuarkaw	HDW	2003	50	210338	1235990	37N	8370	39768	48138	1	
2003_paw_008	Pawe	Abat Belese	Megenteya	Megenteya	HDW	2003	50	208079	1239158	37N	7823	32350.5	40173.5	1	
2003_paw_012	Pawe	Mekane Selam	Mender 51	Bodin 20	HDW	2003	50	205352	1243407	37N	8740	39936.5	48676.5	1	
2003_paw_014	Pawe	Ketena 2 Mender 17	Mender 9	Community HDW (4)	HDW	2003	50	217627	1260585	37N	8980	41218	50198	1	
2003_paw_015	Pawe	Ketena 2 Mender 30	Catholic Sefer	Timhrt bet Akababy	HDW	2003	50	216402	1252029	37N	10850	52500	63350	1	
2003_paw_019	Pawe	Ketena 2 Mender 23/45	Mender 9	Budn Hulet	HDW	2003	50	222019	1251574	37N	8720	41958.5	50678.5	1	
2003_paw_020	Pawe	Ketena 2 Mender 28/29	Mender 28	Sekota sefer	HDW	2003	50	220763	1247608	37N	10525	40247	50772	1	
2003_paw_022	Pawe	Ketena 2 Mender 134	Mender 131	Mota sefer	HDW	2003	50	218045	1244549	37N	10430	42500	52930	1	
2003_paw_027	Pawe	Ketena 1 Mender 104	Mendere 105	Yemer Shumebet Gon	HDW	2003	50	206183	1254619	37N	11240	42288	53528	1	
2003_paw_028	Pawe	Semen Sefer (Almu town)	Farmer Sefer	Zelan Sefer (Almu)	HDW	2003	50	216348	1245391	37N	10870	41876.5	52746.5	1	
2003_paw_029	Pawe	Almu	Meskerem Hotel	Muslim Sefer	HDW	2003	50	215475	1246200	37N	8530	37285.5	45815.5	1	
2003_paw_031	Pawe	Ketena 2 Mender 134	Mender 132	Block 2	HDW	2003	50	218450	1240810	37N	8525	373636	42891	1	
2003_paw_032	Pawe	Ketena 2 Mender 134	Mender 131	Zone 1 South	HDW	2003	50	217434	1244181	37N	9550	47342	56892	1	
2003_paw_033	Pawe	Ketena 2 Mender 23/45	Mender 23	Mota Sefer V10	HDW	2003	50	222568	1249384	37N	10225	46233.5	56458.5	1	
2003_paw_034	Pawe	Ketena 2 Mender 23/45	Mender 10	Betekristian Akababi	HDW	2003	50	223663	1252810	37N	11500	51069.5	62569.5	1	
2003_paw_035	Pawe	Ketena 2 Mender 2	Mender 2	Budn Sabat	HDW	2003	50	211054	1236244	37N	11550	42500	54050	1	
2003_paw_036	Pawe	Felege Selam	Mender 4	Bono 5 Tim 4	HDW	2003	50	213244	1244825	37N	10500	44382	54882	1	
2003_paw_038	Pawe	Ketena 2 Mender 12	Mender 13	Mesgidu Akababi	HDW	2003	50	225897	1253854	37N	10500	45245.5	55745.5	1	
2003_paw_039	Pawe	Ketena 2 Mender 12	V11	Zone 1	HDW	2003	50	225687	1253518	37N	10243	42623.5	52866.5	1	
2003_paw_042	Pawe	Ketena 1 Mender 17	Mender 8		HDW	2003	50	216530	1259235	37N	10113	42048.5	52161.5	1	
2003_paw_045	Pawe	Ketena 2 Mender 21	Mender 20	Kalahiwot Church Sefer	HDW	2003	50	222256	1263387	37N	10132	43114	53246	1	
2003_paw_046	Pawe	Ketena 1 Mender 127	Mender 127	Buden 1	HDW	2003	50	205290	1248212	37N	9342	38023.5	47365.5	1	
2003_paw_047	Pawe	Ketena 1 Mender 127	Mender 101	Buden 6	HDW	2003	50	204338	1248616	37N	11850	48552	60402	1	
2003_paw_049	Pawe	Ketena 1 Mender 104	Wadelo	Wadelo	HDW	2003	50	206401	1254313	37N	9172	39318.5	48490.5	1	
2003_paw_050	Pawe	Ketena 1 Mender 104	Berber gott	Berber Community	HDW	2003	50	209527	1254715	37N	9948	42500	52448	1	
2003_paw_051	Pawe	Ketena 1 Mender 49	Mender 48		HDW	2003	50	203344	1243905	37N	15954	66413.7	82367.7	1	
2003_paw_052	Pawe	Almu	Sar Sefer	Sar Sefer near to school	HDW	2003	50	211564	1246164	37N	10956	41877	52833	1	
2003_paw_056	Pawe	Almu	40 Betoach	40 Betoach Sefer	HDW	2003	50	215416	1246172	37N	9850	42500	52350	1	
2004_paw_104	Pawe	Ketena 1 Mender 2	V2	Jawi Megenteya	HDW	2004	60	207022	1241683	37N			0	1	
2004_paw_003	Pawe	Felege Selam	Tim-1	Mechael sefer (Bono 4)	HDW	2004	50	213591	1245044	37N	8425.95	42129.75	50555.7	1	
2004_paw_004	Pawe	Felege Selam	Tim-5	BONO 6 Tim 5	HDW	2004	50	213388	1244329	37N	5898.45	39323	45221.45	1	
2004_paw_005	Pawe	Medihin	Mender 4	Medihin Tele Sefer	HDW	2004	50	213055	1244751	37N	7481.92	39378.5	46860.42	1	
2004_paw_007	Pawe	Medihin	Mowcha	Megbia	HDW	2004	30	212065	1242075	37N			0	1	
2004_paw_008	Pawe	Medihin	Plastic sefer	Workemeda	HDW	2004	50	215331	1244699	37N	7350.75	40881.93	48232.68	1	
2004_paw_009	Pawe	Ketena 2 Mender 26	K2V26	Akababi No1	HDW	2004	50	228530	1262277	37N	6924.777	40733.95	47658.727	1	
2004_paw_010	Pawe	Addis Beles	K2 V21	Denkorcho Church Sefer	HDW	2004	50	226533	1260652	37N	8343.61	43913.75	52257.36	1	
2004_paw_013	Pawe	Addis Beles	K2 V22	V 22	HDW	2004	50	226626	1260858	37N	5874.69	36716.8	42591.49	1	



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2004_paw_016	Pawe	Pawe Town	K2 V7	Selit Gebeya	HDW		2004	50	214841	1251551	37N	8876.772	49315.67	58192.442	1	
2004_paw_028	Pawe	Almu	Agip sefer	Agip Sefer	HDW		2004	50	214242	1245345	37N	7897	41561	49458	1	
2004_paw_031	Pawe	Addis Zemen	K2 V14	FTC Sefer	HDW		2004	50	225752	1255426	37N	8383.04	49312	57695.04	1	
2004_paw_032	Pawe	Debire Work	K2 V13	Wollo Sefer	HDW		2004	50	228567	1253987	37N	7288	38354.1	45642.1	1	
2004_paw_033	Pawe	Debire Work	K2 V12	Kamp Sefer	HDW		2004	50	227834	1252789	37N	8850.8	51472	60322.8	1	
2004_paw_034	Pawe	Debire Work	K2 V12	Group 1	HDW		2004	50	227936	1253099	37N	9167	45835	55002	1	
2004_paw_035	Pawe	Debire Work	K2 V12	Church Sefer	HDW		2004	50	227480	1252941	37N	9804.68	52694.5	62499.18	1	
2004_paw_037	Pawe	Ketena 2 Mender 24	v24	Zone 5	HDW		2004	50	231845	1257041	37N	8149.9	50311.75	58461.65	1	
2004_paw_039	Pawe	Ketena 2 Mender 30	Catholic sefer	Alebaenew dejaf	HDW		2004	50	216402	1252029	37N	8520.31	45668.4	54188.71	1	
2004_paw_040	Pawe	Ketena 2 Mender 30	V6	Denekew Gibi	HDW		2004	50	216165	1250533	37N	6564	42432.5	48996.5	1	
2004_paw_041	Pawe	Ketena 2 Mender 30	V5	Agew sefer	HDW		2004	50	215237	1248699	37N	7641.33	44949	52590.33	1	
2004_paw_042	Pawe	Ketena 2 Mender 23/45	K2 V9	Mekazen Akababi	HDW		2004	50	222120	1251252	37N	11770.3	58301.5	70071.8	1	
2004_paw_043	Pawe	Ketena 2 Mender 23/45	K2 V10	Mesno Community	HDW		2004	50	223830	1251972	37N	8165.69	42977.3	51142.99	1	
2004_paw_044	Pawe	Ketena 2 Mender 23/45	K2 V23	Mehal Sefer	HDW		2004	50	222070	1249994	37N	6916.41	45442.75	52359.16	1	
2004_paw_046	Pawe	Ketena 2 Mender 23/45	K2 V45	Buden 17	HDW		2004	50	221918	1250073	37N	10023	40725	50748	1	
2004_paw_049	Pawe	Ketena 2 Mender 134	K2 V123	Buloketu Sefer	HDW		2004	50	218392	1240858	37N	7562.96	43311.5	50874.46	1	
2004_paw_050	Pawe	Abat Belese	K2 V2	Belese Tiq	HDW		2004	50	209935	1235611	37N	5903	37357.1	43260.1	1	
2004_paw_051	Pawe	Abat Belese	K2 V1	Budn 4	HDW		2004	50	209870	1239293	37N	6959.23	40348.4	47307.63	1	
2004_paw_052	Pawe	Mekane Selam	K1 V50	35 Magenteya	HDW		2004	50	203926	1243516	37N	8125.6	42240	50365.6	1	
2004_paw_053	Pawe	Mekane Selam (V49)	K1 V50 FTC	FTC Akababi	HDW		2004	50	204468	1243081	37N	5758	33283.5	39041.5	1	
2004_paw_057	Pawe	Ketena 2 Mender 23/45	K2 V9	Aba Shanko Bet	HDW	Re	2004	50	222172	1248958	37N	551	2750	3301	1	
2005_paw_001	Pawe	Pawe	Geb Yaw	Wushametaya	HDW		2005	55	217117	1253346	37N	9556	62424.5	71980.5	1	
2005_paw_003	Pawe	Ketena 2 Mender 23/41 (K2 V23/45)	K2 V23	Budn 1	HDW		2005	61	222702	1249899	37N	12110	50000	62110	1	
2005_paw_004	Pawe	Ketena 2 Mender 12	Mesgede	Mesgede Sefer	HDW		2005	46	228111	1252804	37N	12649	55000	67649	1	
2005_paw_005	Pawe	Almu	Foke	Foke Sefer	HDW		2005	59	215007	1245960	37N	11969	45000	56969	1	
2005_paw_006	Pawe	Almu	Plastic	Plastic Sefer	HDW		2005	62	215279	1245813	37N	12580	41402	53982	1	
2006_paw_004	Pawe	Almu	Adari	Adari 1	HDW		2006	50	214699	1246448	37N	12649	55000	67649	1	
2006_paw_005	Pawe	Almu	Adari	Adari 2	HDW		2006	50	214531	1246473	37N	12110	50000	62110	1	
2006_paw_006	Pawe	Ketena 1 Mender 24		Ali Spring	LS		2007	7100	235493	1258359	37N	0	3503244	3503244	0	
2003_paw_057	Pawe	Ketena 2 Mender 23/45	Mender 45	Akele Spring	SD		2003	200	221521	1250164	37N	34205	224212.45	258417.45	1	
2004_paw_074	Pawe	Mekane Selam	K1 V46	Motero Water	SD		2004	100	201773	1245858	37N	77750	436474.05	514224.05	1	
2006_paw_007	Pawe	Mender 7	Pawe Town	Pawe store	STORE		2006		216685	1252369	37N	2312	69856	72168	1	
2004_paw_070	Pawe	Ketena 2 Mender 23/45	K2 V10	K2 V10 Community SW	SW	Re	2004	80	214471	1253033	37N	515	2992	3507	0	
2002_paw_042	Pawe	Ketena 2 Mender 134	K2 v134 block1	Block 3	SW		2002	50	216615	1240363	37N	10560	39616.5	50176.5	1	
2004_paw_058	Pawe	Addis Beles	K2 V20	Addis Beles	SW		2004	80	222188	1263702	37N	6389	123799.2	130188.2	1	
2004_paw_060	Pawe	Ketena 2 Mender 30	V30	V30 Zone 3 SW	SW		2004	80	223830	1251972	37N	5363	111742.63	117105.63	1	
2004_paw_062	Pawe	Ketena 2 Mender 23/45	K2 V9	Maksegnet Gebeya	SW		2004	80	222259	1250546	37N	7535	139063.89	146598.89	1	
2004_paw_063	Pawe	Ketena 2 Mender 134	K2 V134	Zone 1 North	SW		2004	80	218970	1246814	37N	7717	149856.47	157573.47	1	
2004_paw_064	Pawe	Ketena 2 Mender 134	k2v134	Block 17	SW		2004	80	216851	1240263	37N	7677	150217.86	157894.86	1	
2004_paw_065	Pawe	Mekane Selam	K1 V49	Etanesh's Water	SW		2004	80	205514	1242360	37N	7545	133837.92	141382.92	1	
2004_paw_067	Pawe	Ketena 1 Mender 127	V101	Ruden 5	SW		2004	80	204369	1248507	37N	5129	113996.2	119125.2	1	
2004_paw_069	Pawe	Ketena 1 Mender 104	K2 V104	Dawnt Mender	SW		2004	80	204644	1248491	37N	8785	148844.86	157629.86	1	
2004_paw_071	Pawe	Ketena 2 Mender 26	k2 V26	Mekagen	SW	Re	2004	80	228205	1264624	37N	512	3000	3512	1	
2004_paw_072	Pawe	Ketena 1 Mender 127	V127	V 127 Community SW	SW	Re	2004	80	205605	1249699	37N	544	2598.5	3142.5	1	
2002_paw_041	Pawe	K2 v1	V12	K2 V1 HP HDW	HDW	Hp	2002		209577	1239297	37N	3000	46472	49472	1	
2002_paw_084	Pawe	K2 V1	V1	K2 V1 HP VIPL	VIPL2	Hp	2002		209585	1239303	37N	6000	80000	86000	1	
2002_paw_086	Pawe	K1 V4		K1 V4 HP VIPL	VIPL2	Hp	2002		209193	1246600	37N	6000	80000	86000	1	
2002_paw_088	Pawe	K1 V127	V127	K1 V127 HP MWI	MWI	Hp	2002		204848	1248681	37N	1305.76	20456.24	21762	1	
2002_paw_089	Pawe	K1 V51	V149	K1V51 HP MWI	MWI	Hp	2002		205077	1242764	37N	1305.76	20456.24	21762	1	
2002_paw_090	Pawe	K2 V24	V24	K2 V24 HP MWI	MWI	Hp	2002		231703	1257690	37N	1305.76	20456.24	21762	1	
2002_paw_091	Pawe	K2 V14	V14	K2 V14 HP MWI	MWI	Hp	2002		225773	1255379	37N	1305.76	20456.24	21762	1	
2002_paw_092	Pawe	K2 V23/45	V23	K2 V23/4 HP MWI	MWI	Hp	2002		222056	1249986	37N	1305.76	20456.24	21762	1	
2002_paw_093	Pawe	K2 V30	V30	K2 V30 HP MWI	MWI	Hp	2002		209065	1251320	37N	1305.76	20456.24	21762	1	
2003_paw_041	Pawe	Ketena 2 Mender 12	V12	K2 V12 HP HDW	HDW	Hp	2003		227306	1253031	37N	7063	44423	51486	1	



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2003_paw_060	Pawe	K2 V26	V26	K2 V26 HP VIPL	VIPL2	Hp	2003		228642	1262403	37N	7698	119500	127198	1	
2003_paw_061	Pawe	K1 V104	V104	K1 V104 HP VIPL	VIPL2	Hp	2003		206279	1253675	37N	7815	118901	126716	1	
2003_paw_062	Pawe	K2 V12	V127	K2 V12 HP VIPL	VIPL2	Hp	2003		227270	1253013	37N	8023	116796	124819	1	
2003_paw_063	Pawe	Almu	Almu	Almu HP MWI	MWI	Hp	2003		214750	1245859	37N	1498	20000	21498	1	
2004_paw_075	Pawe	K1 V104	V104	K1 V104 HP HDW	HDW	Hp	2004		206321	1253668	37N	8263	45906.65	54169.65	1	
2004_paw_076	Pawe	Feleg Selam	Feleg Selam	Felege Selam HP HDW	HDW	Hp	2004		213346	1244692	37N	9269	46345	55614	1	
2004_paw_078	Pawe	K2 V28/29	V28	K2 V28/29 HP HDW	HDW	Hp	2004		221226	1247244	37N	8955	49750	58705	1	
2004_paw_079	Pawe	K2 V23/45	V23	K2 V23/45 HP HDW	HDW	HpRe	2004		222066	1249969	37N	2319	14495	16814	1	
2004_paw_080	Pawe	K2 V30	V30	K2 V30 HP HDW	HDW	HpRe	2004		217783	1251308	37N	2401	15000	17401	0	
2004_paw_093	Pawe	Addis beles	V21	K2 V21 HP VIPL	VIPL2	Hp	2004		224653	1260283	37N	6612.5	98680	105292.5	1	
2004_paw_095	Pawe	Medihin	Medihin	Medihin HP VIPL	VIPL2	Hp	2004		212138	1242421	37N	7251	98680	105931	1	
2004_paw_097	Pawe	Debre work	V12	K2 V12 HP MWI	MWI	Hp	2004		227285	1253006	37N	1489	23320	24809	1	
2004_paw_098	Pawe	k2v134	k2 v131	K2 V131 HP MWI	MWI	Hp	2004		217533	1244417	37N	1541	23680	25221	1	
2005_paw_017	Pawe	Almu	Almu	Almu HP VIPL	VIPL2	Hp	2005		214743	1245853	37N			0		
2005_paw_015	Pawe	Feleg Selam	Tena Tabya	Feleg Selam HC HDW	HDW	Hp	2005		213583	1245419	37N	8700	47996.5	56696.5	1	
2005_paw_016	Pawe	K2 V26	V26	K2 V26 Clinic HDW	HDW	Hp	2005		228627	1262441	37N	5950	45000	50950	1	
2006_paw_003	Pawe	K2 V21	V21	K2 V21 Hp HDW	HDW	Hp	2006	50	224653	1260283	37N	10044	51000	61044	1	
2006_paw_012	Pawe	K2 V28/29	V28	K2 V28/29 HP VIPL	VIPL2	Hp	2006		221226	1247244	37N	6540	109015	115555	1	
2006_paw_013	Pawe	Felege Selam	Felege Selam	Felege Selam HP MWI	MWI	Hp	2006		213352	1244676	37N	2312	24181	26493	1	
2006_paw_014	Pawe	K2 V1	V1	K2 V1 HP MWI	MWI	Hp	2006		209585	1239303	37N	2312	25875	28187	1	
2002_paw_028	Pawe	Mekane Selam	V49	K1 V49 PS HDW	HDW	Sc	2002		205907	1242544	37N	4320	57396.5	61716.5	1	
2002_paw_054	Pawe	K2 v23/45	V23	K2 V23 PS HDW	HDW	Sc	2002		222691	1249530	37N	4225	44496.5	48721.5	1	
2003_paw_002	Pawe	K2 M26	Mender 26	K2 V26 PS HDW	HDW	Sc	2003		228441	1262594	37N	7250	42500	49750	1	
2003_paw_017	Pawe	Ketena 2 Mender 134	Mender 134	K2 V134 PS HDW	HDW	Sc	2003		216691	1240384	37N	8440	63000	71440	1	
2003_paw_024	Pawe	Ketena 2 Mender 17	V17	K2 V7 PS HDW	HDW	Sc	2003		217768	1256597	37N	9740	44040.6	53780.6	0	
2003_paw_026	Pawe	Ketena 2 Mender 127	Mender 127	K1 V127 PS HDW	HDW	Sc	2003		204917	1248704	37N	11910	56465.7	68375.7	1	
2004_paw_081	Pawe	Felege Selam	V4	K2 V4 FCS HDW	HDW	Sc	2004		213213	1244585	37N	8851.7	52068	60919.7	1	
2004_paw_083	Pawe	Addis Zemen	V16	K2 V16 PS HDW	HDW	Sc	2004		221273	1256918	37N	8341.36	43901.9	52243.26	1	
2004_paw_085	Pawe	K1 V104	V104	K1 V104 PS	HDW	Sc	2004		206342	1253556	37N	10829.69	54148.45	64978.14	0	
2004_paw_086	Pawe	Mekane Selam	K1 V51	K1 V51 PS HDW	HDW	Sc	2004		204730	1243114	37N	9033.4	56461.15	65494.55	1	
2005_paw_009	Pawe	K2 V23/45	K2 V10	KS V10 PS HDW	HDW	Sc	2005		223767	1252521	37N	12270	61908	74178	1	
2005_paw_010	Pawe	K2 V12	K2 V11	K2 V11 PS HDW	HDW	Sc	2005		225574	1253371	37N	6095	48434	54529	1	
2005_paw_011	Pawe	K1 V49	V46	K1 V46 PS HDW	HDW	Sc	2005		201495	1245350	37N	9650	60000	69650	1	
2005_paw_012	Pawe	K2 V30	Dangur	K2 V5 PS HDW	HDW	Sc	2005		214191	1248480	37N	9556	51500	61056	0	
2006_paw_001	Pawe	Medin	V3	K2 V3 PS HDW	HDW	Sc	2006	50	212109	1242526	37N	9556	50350	59906	1	
2006_paw_002	Pawe	Abat Beles	V1	K2 V1 PS HDW	HDW	Sc	2006	50	209520	1239355	37N	11060	55000	66060	1	
2002_paw_082	Pawe	K2 V23/45	V23	K2 V23 PS HWF	HWF	Sc	2002		222650	1249577	37N	268	4200	4468	0	
2003_paw_066	Pawe	K1 V7	V6	K1 V6 PS HWF	HWF	Sc	2003		213365	1252730	37N	301	5000	5301	0	
2004_paw_100	Pawe	K2 V30	V5	K2 V5 PS HWF	HWF	Sc	2004		214140	1248523	37N	381	6000	6381	1	
2004_paw_102	Pawe	Mekane selam	V49	K1 V49 PS HWF	HWF	Sc	2004		205827	1242387	37N	402	6000	6402	1	
2002_paw_067	Pawe	Mekane Selam	V46	K1 V46 PS VIPL (M)	VIPL	Sc	2002		201479	1245081	37N			0	1	
2002_paw_069	Pawe	K2 V4	V4	K2 V4 FCS VIPL	VIPL	Sc	2002		213287	1244565	37N	6510.62	102000	108511	1	
2002_paw_070	Pawe	Felege Selam	V4	K2 V4 PS VIPL	VIPL	Sc	2002		213086	1244577	37N	6511	102000	108511	1	
2002_paw_071	Pawe	Pawe ketema	Hospital Sefer	Diga Ber PS VIPL	VIPL	Sc	2002		216288	1253208	37N	6511	102000	108511	1	
2003_paw_058	Pawe	Almu	Almu	Almu PS VIPL (F)	VIPL	Sc	2003		214671	1246002	37N	46502	292475.95	338977.95	1	
2004_paw_089	Pawe	K2 V24	V24	K2 V24 PS VIPL	VIPL	Sc	2004		231669	1257851	37N	8877	140900	149777	1	
2004_paw_090	Pawe	Debire work	V12	K2 V12 PS VIPL (F+M)	VIPL	Sc	2004		227452	1252856	37N	8991.5	140900	149891.5	1	
2004_paw_091	Pawe	K2 V23/45	V23	K2 V23 PS (F)	VIPL	Sc	2004		222574	1249693	37N	17552	280900	298452	1	
2004_paw_092	Pawe	Addis zemen	V14	K2 V14 PS VIPL (F+M)	VIPL	Sc	2004		225434	1256110	37N	18611	280900	299511	1	
2004_paw_094	Pawe	Almu	Almu	Almu PS VIPL (M)	VIPL	Sc	2004		214743	1245855	37N	6580	97100	103680	1	
2006_paw_008	Pawe	K1 V49	V49	K1 V49 PS VIPL	VIPL	Sc	2006		205831	1242410	37N	9925	140640	150565	1	
2006_paw_009	Pawe	K1 V127	V127	K1 V127 PS VIPL	VIPL	Sc	2006		204984	1248694	37N	7987	140379	148366	1	
2006_paw_010	Pawe	Abat Beles	V2	K2 V2 PS VIPL	VIPL	Sc	2006		209177	1235915	37N	8675	139367	148042	1	
2006_paw_011	Pawe	K2 V30	V30	K2 V30 PS VIPL	VIPL	Sc	2006		217762	1251167	37N	7654	139055	146709	1	



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Annex 7 - Wombera woreda investments

Ioc_gott	Scheme_name	Obj_type	Obj_type_ext	Const_y_EC	House_holds	X_GPS_east	Y_GPS_north	UTM_zone	Comm_costs	GoF_costs	Total_costs	Functional
Senkora	Senkora village water scheme	BH		2003	460	797105	1171630	36N	734130	3266145	4000275	1
Gombobdu	Gombobdu	HDW		2001	50	802774	1169077	36N	8090	34747	42837	1
Jangro	Jangro	HDW		2001	24	803126	1171638	36N	7482	33582	41064	1
Tumi	Tumi	HDW		2001	50	801233	1171685	36N	6880	31559	38439	1
Adame	Adame No1	HDW		2001	50	799464	1169506	36N	7270	32707	39977	1
Debub Senkora	Debub Senkora No1	HDW		2001	14	796097	1169069	36N	7630	36499	44129	0
Misireta	Misireta	HDW		2001	22	792213	1172302	36N	9698	46061	55759	0
Tibi Gibi	Senyo Gebeya	HDW		2001	43	791280	1167840	36N	8120	34349	42469	1
Lopi	Lopi	HDW		2001	22	794395	1169790	36N	8920	42797	51717	1
Babo	Babo Kutane	HDW		2001	27	796226	1172545	36N	7550	30070	37620	1
Gida	Gida	HDW		2001	50	793652	1172434	36N	6900	33560	40460	0
Ammuma	Ammuma	HDW		2001	20	793015	1179035	36N	6523	31419	37942	0
Aleltu	Aleltu	HDW		2001	50	792733	1178004	36N	7870	35545	43415	1
Chalelka	Cheleleka	HDW		2001	81	796889	1179740	36N	8160	39248	47408	1
Dodotagure	Dodotagure No2	HDW		2001	50	790211	1180393	36N	8430	35944	44374	1
Aleltushaka	Shaka No1	HDW		2001	50	794643	1177688	36N	7623	38237	45860	0
Tishi	Tishi	HDW		2001	50	794316	1180927	36N	7820	32560	40380	1
Degamanasibu	Degamanasibu No1	HDW		2001	50	788485	1174549	36N	7800	38546	46346	1
Geli	Geli	HDW		2001	15	788570	1182405	36N	7930	34547	42477	1
Mensibu	Wato	HDW		2001	28	789605	1171829	36N	7310	35245	42555	1
Alelitu	Alelitu	HDW		2002	47.8	795347	1179363	36N			0	1
Babo-Misireta	Babo Misireta No1	HDW		2002	47.2	793540	1181176	36N			0	1
Sanki Babo	Sanki Babo	HDW		2002	46.4	792463	1181882	36N			0	1
Wole	Wole No2	HDW		2002	53.8	793654	1180003	36N			0	1
Ebach	Ebach	HDW		2002	42.4	798858	1178271	36N			0	1
Demena	Demena No1	HDW		2002	42	796919	1178027	36N			0	1
Lomicha Abatola	Lomicha Abatola	HDW		2002	27	789254	1185713	36N			0	1
Lomicha	Chancho Lomicha	HDW		2002	23	792480	1180997	36N			0	1
Nekeriba	Nekeriba	HDW		2002	21.6	792352	1178782	36N			0	1
Babo	Babo No2	HDW		2002	27.2	790800	1178088	36N			0	1
Mura	Mura No1	HDW		2002	42	782097	1180312	36N			0	1
Duda-Hora	Duda-Hora No1	HDW		2002	47	786286	1180809	36N			0	1
Geliburka	Geliburka No1	HDW		2002	35.6	786376	1177502	36N			0	1
Duda-Abayi	Duda-Abayi No1	HDW		2002	49.8	790199	1175061	36N			0	1
Mecha	Mecha	HDW		2002	29.4	794245	1175877	36N			0	1
Manasibu	Manasibu	HDW		2002	39.4	791443	1173439	36N			0	0
Debub Senkora	Debub Senkora No2	HDW		2002	31.4	795544	1168962	36N			0	0
Ogari	Ogari Qutir 1	HDW		2002	35.4	798234	1169914	36N			0	1
Adame	Adame Qutir 2	HDW		2002	51.4	799940	1169376	36N			0	1
Jangiro-Haro	Jangiro-Haro	HDW		2002	35.2	801491	1172249	36N			0	1
Tumi Michael	Tumi Michael	HDW		2002	43.4	801468	1170874	36N			0	1
Sefera Kasa	Sefera Kasa No2	HDW		2002	33.2	803251	1169605	36N			0	0
Abirina	Abirina No1	HDW		2002	35.2	794190	1161186	36N			0	1
Demoya	Demoya	HDW		2002	89.8	777282	1179502	36N			0	1
Begondi	Begondi	HDW		2002	49.6	777282	1188282	36N			0	1
Misireta	Misireta 2	HDW		2002	50	772750	1179502	36N			0	1
Oda	Oda	HDW		2002	81	777910	1173006	36N			0	1
Aegala	Aegala	HDW		2002	50	767172	1189917	36N			0	1
Baniya	Baniya	HDW		2002	57.4	765637	1189980	36N			0	1
Dereba	Dereba	HDW		2003	27	793037	1177423	36N			0	1



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Aleltu	Aleltu Kutir 2	HDW	2003	24	792976	1177464	36N				0	1
Dudahora	Dudahora	HDW	2003	19	780412	1178730	36N				0	1
Gesengesa	Gesengesa	HDW	2003	42	805586	1171285	36N				0	1
Trimi	Trimi No1	HDW	2003	25	806036	1168990	36N				0	1
Sefera Kassa	Sefera Kassa No2	HDW	2003	25	803961	1170326	36N				0	1
Lomicha	Tumi Lomicha	HDW	2003	25	803128	1170864	36N				0	1
Shetiro	Shetiro	HDW	2003	32	801182	1170177	36N				0	1
Debub Senkora	Debub Senkora No3	HDW	2003	18	796754	1169456	36N				0	1
Mekelo	Mekelo	HDW	2003	27	790631	1169999	36N				0	1
Tibi Gibi	Tibi Gibi	HDW	2003	35	799713	1167178	36N				0	1
Billi	Billi	HDW	2003	34	797718	1179366	36N				0	1
Shaka	Shaka No2	HDW	2003	50	794028	1177743	36N				0	1
Jima	Jima	HDW	2003	28	792768	1182743	36N				0	1
Begondi	Begondi No2	HDW	2003	50	772939	1188205	36N				0	1
Godere	Godere	HDW	2003	50	772749	1188737	36N				0	1
Amara	Amara Sefer	HDW	2003	20	792414	1173318	36N				0	1
Bari	Bari	HDW	2003	15	791213	1171453	36N				0	0
Kori	Kori	HDW	2003	36	793059	1164942	36N				0	1
Kitar Mender 1	Mender 1	HDW	2003	47	789618	1163552	36N				0	1
Abamergo	Abamergo No1	HDW	2003	15	789618	1156040	36N				0	1
Desila	Desila	HDW	2003	50	805764	1192273	36N				0	1
Elbasser	Elbasser	HDW	2003	36	805943	1173370	36N				0	1
Shawe	Shawe	HDW	2003	90	804327	1192099	36N				0	1
Eyaja	Eyaja	HDW	2003	98	805291	1191864	36N				0	1
Legahora	Legahora	HDW	2003	85	806649	1161802	36N				0	0
Ashi-Agafari	Ashi-Agafari	HDW	2003	27	812042	1161544	36N				0	1
Mindit	Mindit No1	HDW	2003	17	798810	1176903	36N				0	1
Dingo	Dingo No1	HDW	2003	16	781058	1181855	36N				0	1
Mura	Mura No2	HDW	2003	23	782084	1183864	36N				0	0
Geliburka	Geliburka No2	HDW	2003	18	787276	1178108	36N				0	1
Geli	Geli No2	HDW	2003	17	782781	1182598	36N				0	1
Ogari	Ogari Qutir 2	HDW	2003	24	796787	1168230	36N				0	1
Addis Alem	Addis Alem	HDW	2003	15	800207	1172128	36N				0	1
Oda	Oda 2	HDW	2003	78	777590	1173459	36N				0	1
Temerte Bete Akebabe	Temerte Bete Akebabe	HDW	2003	12	811307	1163209	36N				0	
Lopi	Lopi 2	HDW	2004	22	792185	1167982	36N	9440	31902.22	41342.22		1
Chore	Chore	HDW	2004	25	787417	1170201	36N	11210	30399.35	41609.35		1
Anger	Anger Qutir 1	HDW	2004	19	789973	1172841	36N	8499.4	26303.48	34802.88		1
Anger	Anger Qutir 2	HDW	2004	18	789917	1172366	36N	10574	29143.11	39717.11		1
Babo Doya	Babo Doya	HDW	2004	19	797919	1171301	36N	9260	26410.18	35670.18		1
Mender 2	Mender 2	HDW	2004	19	791213	1163182	36N	15048	31075.08	46123.08		1
Adanisa	Adanisa No1	HDW	2004	21	788908	1164233	36N	9830	32350.63	42180.63		1
Abirina	Abirina No2	HDW	2004	22	793552	1162896	36N	11830	27012.43	38842.43		1
Abirina	Abirina No3	HDW	2004	20	793429	1162055	36N	12030	31924.71	43954.71		1
Addis-Alem	Addis-Alem No1	HDW	2004	20	809188	1167810	36N	5960	29041.93	35001.93		1
Addis-Alem	Addis-Alem No3	HDW	2004	22	810722	1163959	36N	8375	35093.83	43468.83		1
Berenda	Berenda	HDW	2004	21	810671	1162953	36N	9055	32899.49	41954.49		1
Sefera Kassa	Sefera Kassa No1	HDW	2004	50	804245	1171261	36N	7390	10273.23	17663.23		1
Finfine	Finfine	HDW	2004	15	799535	1173121	36N	12290	31159.83	43449.83		1
Shola Ber	Shola Ber	HDW	2004	16	800693	1170216	36N	9220	28770.03	37990.03		1
Botoro	Botoro	HDW	2004	17	801287	1165246	36N	7660	32416.83	40076.83		1
Lopi	Lopi-Alelitu	HDW	2004	30	792836	1169145	36N	12300	29714.5	42014.5		1
Lopi-Dodota	Lopi-Dodota	HDW	2004	25	776793	1157528	36N	9170	34930.18	44100.18		1
Chokorsa	Chokorsa	HDW	2004	20	789414	1178215	36N	10220	26550.34	36770.34		1
Duda-Hora	Duda-Hora	HDW	2004	26	787823	1178730	36N	6480	9064	15544		1
Dore	Dore	HDW	2004	32	795725	1182186	36N	11820	32058.45	43878.45		1
Wale	Wale No2	HDW	2004	19	792599	1180879	36N	11415	36273.5	47688.5		1



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Gida	Gida Sefer	HDW		2004	18	792102	1181842	36N	9920	32686.29	42606.29	1
Mindit	Mindit No3	HDW		2004	18	799497	1175482	36N	9005	23609.48	32614.48	1
Dingo	Dingo No2	HDW		2004	18	779775	1176350	36N	8713	28597.98	37310.98	1
Tulu-Chali	Tulu-Chali No1	HDW		2004	27	782716	1176271	36N	13409	33226.73	46635.73	0
Sonbo	Sonbo No1	HDW		2005	20	793611	1169251	36N	9500	40400.21	49900.21	1
Mensibu	Mensibu No3	HDW		2005	17	789203	1171377	36N	9720	34917.8	44637.8	1
Lebugida	Lebugida Kambo Sefer	HDW		2005	15	791780	1163468	36N	8970	31464.23	40434.23	1
Abaroro	Abaroro No1	HDW		2005	15	790385	1163110	36N	8950	33117.73	42067.73	1
Adanisa	Adanisa No2	HDW		2005	17	791886	1155866	36N	8620	34714.83	43334.83	1
Adanisa	Adanisa No.3	HDW		2005	17	789449	1163918	36N	10070	40771.23	50841.23	1
Lebugida	Lebugida No1	HDW		2005	16	790010	1164149	36N	9650	37869.13	47519.13	1
Abamergo	Abamergo No2	HDW		2005	18	791986	1155866	36N	10220	42179.83	52399.83	1
Bari	Bari No2	HDW		2005	20	792111	1173147	36N	9426	35169.08	44595.08	1
Babogilo	Babogilo No1	HDW		2005	19	795026	1173147	36N	9310	37035.33	46345.33	1
Gunsiya	Gunsiya No1	HDW		2005	17	803907	1157746	36N	8775	35153.7	43928.7	1
Kersa	Kersa No1	HDW		2005	15	806501	1161402	36N	12495	40993.64	53488.64	1
Gonbobdu	Hara Faro	HDW		2005	16	801170	1168948	36N	10025	33918.12	43943.12	1
Trimi	Trimi No2	HDW		2005	13	806379	1169028	36N	9725	32240.47	41965.47	1
Shaka	Shaka No3	HDW		2005	33	795743	1178788	36N	9960	38673.25	48633.25	1
Laylomicha	Laylomicha Sefer	HDW		2005	7	791219	1183086	36N	7095	30452.85	37547.85	0
Bedeaja Kusye	Bedeaja Kusye No1	HDW		2005	13	786831	1189207	36N	8615	33718.75	42333.75	0
Minjo Sida	Mindo Sida	HDW		2005	12	781836	1180531	36N	9140	36498.35	45638.35	1
Demena	Demena No2	HDW		2005	22	797882	1175889	36N	14920	44884.05	59804.05	0
Mindit	Mindit No4	HDW		2005	20	799930	1175570	36N	12060	40478.55	52538.55	1
Shola Ber	Shola Ber Rehab.	HDW	Re	2005	50	794570	1174573	36N			0	1
Aleltu	Aleltu 2	HDW		2006	50	791516	1168704	36N	12150	33170	45320	1
A/Alem	A/Alem	HDW		2006	50	790794	1168251	36N	6450	36108	42558	1
Baritulu	Baritulu	HDW		2006	50	794553	1180310	36N	7020	36992	44012	1
Demena	Demena (Shokl Bere)	HDW		2006	50	794645	1174890	36N	9500	34344	43844	1
Daka	Daka	HDW		2006	50	794348	1180454	36N	9620	34928	44548	1
Chancho	Chancho No4	HDW		2006	50	790049	1185530	36N	9620	31474	41094	1
Abrehina	Abrehina No4	HDW		2006	50	792993	1162724	36N	17950	37847	55797	1
Aleltu	Aleltu No3	HDW		2007	50	793170	1176604	36N			0	1
Temblala	Temblala	HDW		2007	50	796895	1179195	36N			0	1
Dodotagure	Dodotagure No3	HDW		2007	50	796035	1180588	36N			0	1
Addis Alem	Addis Alem No2	HDW		2007	50	789722	1168362	36N			0	1
Tuminakachema	Tuminakachema	HDW		2007	50	800908	1170787	36N			0	1
Abaroro	Abaroro No3	HDW		2007	50	789703	1162791	36N			0	1
Adanisa	Adanisa No4	HDW		2007	50	788310	1163389	36N			0	1
Adanisa	Adanisa No6	HDW		2007	50	788522	1164072	36N			0	1
Abaroro	Abaroro No4	HDW		2007	50	790034	1162355	36N			0	1
Mender 1	Mender 1 No2	HDW		2007	50	790066	1161672	36N			0	1
Babo	Babo No1	SD		2001	30	791184	1179580	36N	8985	39998	48983	1
Hamus-Gebeya	Hamus-Gebeya No1	SD		2002	59.4	783404	1179351	36N			0	1
Manasibu	Manasibu spring	SD		2002	56	789810	1170074	36N			0	1
Gonji	Gonji	SD		2002	54.4	798968	1166441	36N			0	1
Mender 1	Mender 1 Spring	SD		2002	180	790487	1161172	36N			0	1
Gergna	Gergna	SD		2003	22	792469	1180410	36N			0	1
Arrara	Arrara	SD		2003	19	791921	1179514	36N			0	1
Mesreta	Mesreta No2	SD		2003	23	794001	1181709	36N			0	1
Tulu Meskela	Tulu Meskela	SD		2003	21	798591	1181016	36N			0	1
Aroji	Aroji	SD		2004	30	801673	1167956	36N	11359.09	39043.2	50402.29	1
Aerimacho	Aerimacho	SD		2004	16	789457	1180517	36N	9930	53311.82	63241.82	1
Amuma	Amuma	SD		2004	41	789567	1180038	36N	11670	41631.93	53301.93	1
Tach Lomicha	Tach Lomicha No1	SD		2004	24	790976	1182356	36N	6585	14262.64	20847.64	1
Tach Lomicha	Tach Lomicha No2	SD		2004	17	790759	1182417	36N	12305	52256.52	64561.52	1
Mura	Mura No4	SD		2004	20	782514	1181075	36N	15782.1	38884.2	54666.3	1



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Duda-Hora	Duda-Hora No2	SD	2004	17	786078	1179881	36N	11519.5	47691.15	59210.65	1
Arara	Arara No1	SD	2004	26	781315	1182177	36N	14107.3	46355.3	60462.6	1
Duda-Abayi	Duda-Abayi No2	SD	2004	29	790495	1175835	36N	37370.68	48030.26	85400.94	1
Mindit	Mindit No2	SD	2004	20	783202	1176734	36N	10658.6	44018	54676.6	1
Geli-Shinasha	Geli-Shinasha Sefer	SD	2004	23	787734	1182632	36N	10680	26217.24	36897.24	1
Dingo	Dingo No3	SD	2005	14	781454	1180983	36N	15985	39857.6	55842.6	1
Homus Gebeya	Homus Gebeya No.2	SD	2005	44	782717	1178846	36N	26600	129662.2	156262.2	1
Duda Kilitu	Duda Kilitu	SD	2005	53	783987	1178989	36N	59040	308664.5	367704.5	1
Arara	Arara No2	SD	2005	24	781905	1181230	36N	12525	69790.7	82315.7	1
Mura	Mura No3	SD	2005	5	782614	1180679	36N	12825	56369.15	69194.15	1
Bedeaja	Bedeaja No1	SD	2005	14	790500	1189805	36N	10095	35565.55	45660.55	1
Bedesa	Bedesa Sefer	SD	2005	10	785866	1182947	36N	11225	48608.95	59833.95	1
Babo	Babo No3	SD	2005	19	791994	1178484	36N	13775	38510.73	52285.73	1
Mehale Bollele	Mehale Bollele No1	SD	2006	20	783646	1180207	36N	15833	68993	84826	1
Mehale Bollele	Mehale Bollele No2	SD	2006	9	783623	1180239	36N	14398	66220	80618	1
Dingo	Dingo No4	SD	2006	9	781276	1180850	36N	9214	56876	66090	1
Kora Boru	Kora Boru	SD	2006	10	785791	1180425	36N	11691	61641	73332	1
Abaroro	Abaroro No2	SD	2006	12	790740	1165241	36N	16772	47843	64615	0
Lebugida	Lebugida No2	SD	2006	12	788860	1161988	36N	16902	54066	70967	1
Ulange	Ulange No1	SD	2007	60	784411	1181118	36N			0	1
Abangaro	Abangaro	SD	2007	60	785237	1181366	36N			0	1
Dudahora	Dudahora No3	SD	2007	60	786032	1181434	36N			0	1
Dudahora	Dudahora No4	SD	2007	60	785702	1181437	36N			0	1
Arara	Arara No3	SD	2007	60	781208	1181531	36N			0	1
Mura	Mura No5	SD	2007	60	781419	1180654	36N			0	1
Wajeti	Wajeti	SD	2007	60	788809	1174011	36N			0	1
Babo	Babo No4	SD	2007	60	793449	1181601	36N			0	1
Jima	Jima No2	SD	2007	60	792438	1182371	36N			0	1
Wole	Wole No4	SD	2007	60	793366	1180207	36N			0	1
Babo Daro	Babo Daro	SD	2007	60	796568	1174243	36N			0	1
Shola Ber	Shola Ber No2	SD	2007	60	793657	1174889	36N			0	1
Tulu Bari	Tulu Bari No2	SD	2007	60	791823	1170832	36N			0	1
Ebach	Ebach No2	SD	2007	60	798939	1178351	36N			0	1
Adanisa	Adanisa No5	SD	2007	60	789607	1162840	36N			0	1
Debre Zeit	Debre Zeit Store	Store	2006		791587	1175559	36N	10600	69939	80539	1
Gesengesa Goti	Gesengesa Goti	SW	2004	200	806077	1171355	36N	0	204712	204712	1
Addis Alem	Addis Alem H.P. HDW	HDW	2002		792740	1179527	36N			0	1
Ambifata	Ambifata H.P. HDW	HDW	2002		790510	1169309	36N			0	1
Module	Gewula H.P. HDW	HDW	2004		798435	1168733	36N	8600	31479.43	40079.43	0
Gesengesa	Gesengesa H.P. HDW	HDW	2004		805720	1171679	36N	69150	437271	506421	1
Sanki	Sanki H.P. HDW	HDW	2004		794768	1180713	36N			0	1
Sanki	Sanki H.P. MWI	MWI	2002		794829	1180734	36N			0	1
Ambifata	Ambifata H.P. MWI	MWI	2002		790529	1169216	36N			0	1
Tumi	Tumi H.P. MWI	MWI	2003		801992	1171478	36N			0	1
Module	Gewula H.P. MWI	MWI	2004		798432	1168728	36N			0	1
Hamus Gebeya	Minjo H.P. MWI	MWI	2004		783101	1179349	36N			0	1
Aetoshimo	Aetoshimo H.P. MWI	MWI	2005		794654	1172419	36N			0	1
Manasibu	Manasibu H.P. VIPL	MWI	2005	80	786595	1175123	36N	1170	27723	28893	1
Addis Alem	Addis Alem H.P. MWI	MWI	2006		792733	1179521	36N	1300	24890	26190	1
Addis Alem	Addis Alem H.P. VIPL	VIPL2	2002		792742	1179524	36N			0	1
Ambifata	Ambifata H.P. VIPL	VIPL2	2002		790518	1169208	36N			0	1
Sanki	Sanki H.P. VIPL	VIPL2	2002		794831	1180727	36N			0	1
Hamus Gebeya	Minjo H.P. VIPL	VIPL2	2005	143.4	783181	1179557	36N	7685	112514	120199	1
Chanicho	Chanicho H.P. VIPL	VIPL2	2005	118	789966	1184896	36N	6900	115305	122205	1
Aetoshimo	Aetoshimo H.P. VIPL	VIPL2	2005	69.4	794742	1172619	36N	7200	113281	120481	1
Module	Gewula H.P. VIPL	VIPL2	2005	72.8	798518	1168960	36N	7200	112723	119923	1
Tumi	Tumi H.P. VIPL	VIPL2	2006		805312	1171620	36N	15000	110001	125001	1



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Gesengesa	Gesengesa H.P. VIPL	VIPL2	Hp	2006		805661	1171473	36N	15000	109933	124933	1
Sanki	Sanki P.S. HDW	HDW	Sc	2002		794860	1180625	36N			0	1
Aebech	Aebech P.S. HDW	HDW	Sc	2002		797803	1177352	36N			0	1
Senkora	Senkora P.S. HDW	HDW	Sc	2002		796404	1170056	36N			0	1
Ebech	Ebech P.S. HDW	HDW	Sc	2002		797803	1177352	36N			0	1
Ashi-School area	Ashi-School P.S. HDW	HDW	Sc	2003	32	811383	1162417	36N			0	1
Bedesa-Kusaya	Bedesa-Kusaya P.S. HDW	HDW	Sc	2004		789774	1184160	36N	6575	27572.35	34147.35	1
Aba-Mergo	Aba-Mergo P.S. HDW	HDW	Sc	2004		787731	1201139	36N	9030	31242.33	40272.33	1
Ayishi	Ayishi P.S. HDW	HDW	Sc	2004		806310	1161418	36N	6066	42885.7	48951.7	1
Tesso-Boka	Tesso-Boka P.S. HDW	HDW	Sc	2004		778920	1173201	36N	10075	34137.63	44212.63	1
Kitar-Michael	Kitar-Michael P.S. HDW	HDW	Sc	2004		790944	1164114	36N	9380	28068.33	37448.33	1
Ambifata	Ambifata school P.S. HDW	HDW	Sc	2004		790537	1168963	36N	3290	9105.21	12395.21	1
Beji-Fechi	Beji-Fechi P.S. HDW	HDW	Sc	2005	27.8	810216	1174547	36N	11525	48821.59	60346.59	1
Gombobdu	Gombobdu P.S. HDW	HDW	Sc	2005	21	801776	1168935	36N	7875	32640.57	40515.57	1
Senkora	Senkora P.S. HWF	HWF	Sc	2002		796404	1170056	36N			0	1
Gesengesa	Gesengesa P.S. HWF	HWF	Sc	2002		805312	1171293	36N			0	1
Wogidi	Wogidi P.S. HWF	HWF	Sc	2002		807184	1167960	36N			0	1
Chancho Bedessa	Chancho Bedessa P.S. HWF	HWF	Sc	2002		784274	1185603	36N			0	1
Minjo	Minjo P.S. SD	SD	Sc	2005	106.8	783404	1179396	36N	8995	41664.13	50659.13	1
Debre Zeit	D/Ziet P.S. VIPL	VIPL	Sc	2004		791362	1175366	36N			0	1
Debre Zeit	D/Ziet Milinium P.S. VIPL	VIPL	Sc	2004		791528	1176417	36N			0	1
Ambifata	Ambifata school P.S. VIPL	VIPL	Sc	2004		790705	1169087	36N			0	1
Gesengesa	Gesengesa P.S. VIPL	VIPL	Sc	2005	106.8	805412	1171509	36N	13975.5	60273.4	74248.9	1
Aebech	Aebech P.S. VIPL	VIPL	Sc	2005	55.4	798189	1177791	36N			0	1
Sanki	Sanki P.S. VIPL	VIPL	Sc	2005	133.8	795000	1181046	36N			0	1
Tumi	Tumi P.S. VIPL	VIPL	Sc	2005	62.2	801625	1171606	36N			0	1
Amumma	Amumma P.S. VIPL2	VIPL	Sc	2006		784562	1184231	36N	15030	307849	322879	1
Bollele	Bollele P.S. VIPL2	VIPL	Sc	2006		785055	1180784	36N	18480	307914	326394	1



Annex 8 - FinnWASH-BG Programme - Logframe and Achievements

Overall Objective	Objectively Verifiable Indicators	Status at completion	Assumptions
Universal access to improved water source, sanitation and hygiene in Benishangul - Gumuz	<ul style="list-style-type: none"> 98% of rural people in Benishangul-Gumuz have the following minimum water supply service level by 2012: maximum distance of 1.5 km to water point; availability of at least 15 liters a person a day and water quality meeting the national standards 100% rural people in Benishangul-Gumuz have at least the lowest cost latrine with a hand washing facility that ensures a clean and healthful living environment both at home and in the neighborhood of users by 2012 Incidence of water and hygiene related diseases, particularly diarrhea reduced by # % (by 2013) 	<ul style="list-style-type: none"> FinnWASH-BG assisted 816 functional water points to communities for 239,041 people at the total direct cost of GoF of Birr 67,176,459 and Community Contribution of birr 10,688,445 which represent 15.9%. 92 water points in schools for ca.92,000 pupils at the cost of Birr 4,800,769 (GoF) and 816,283 (Comm. contribution, 5.88%) covering 52% of schools. 58 water points in Health Post / Center at the cost of Birr 2,797,849 (GoF) and Birr 407,752 (Com. Contr. 14.6%) covering 55 % of Health posts / Hospitals. The UAP coverage in Bullen woreda was 88.7%, Dibate 79.3%, Pawe 113%, Mandura 92.45 and in Wombera 53.3% . the lower UAP in Wombera is due to inaccessible lowland areas to very remote villages. Average in amount of water collected by households was 3.3 jerry cans during the dry season and 3.4 during the wet season in inventoried 660 water points. The UAP of GoE defines as community water target; 15 liter water / person / day / 1.5 km radius from household, which counts 75 liter water per day / household. Note, that the 20 liter jerry can hold 22 liter of water when filled to the rim which users always do. $3.3 / 3.4 \text{ jerry cans} \times 22 \text{ liter} = 72.6 - 74.8 \text{ liter}$ which is a perfect result. According to Woreda Health Offices the cumulative Household Sanitation was 75.6% in June 2014. FinnWASH-BG follows the GoE CLTS policy whereby only advice is allowed and no subsidies. Health Extension workers carried out triggering in Villages. Functionality inventory; Illness in the area was reported to have reduced after the construction of the water point in 672 water point out of 685 answered giving 98 % illness reduction rate according to users. This is an excellent result and meets one of the set targets of FinnWAS-BG. Functionality inventory; Quality of the water; Average of the water quality in 674 answered points was 4.65 on the scale 1-5 where "1" was considered "very bad" as 5 "very good". The water quality is thus excellent. 	<ul style="list-style-type: none"> Other stakeholders attain the UAP targets in non-programme woredas. Regional authorities will be able to mobilize also additional funds and resources from other WASH actors for e.g. shallow wells and other possible technologies where CDF approach is inapplicable. Prevailing peace and security remains unchanged. No major change in climate affects implementation.
Programme Purpose	Objectively Verifiable Indicators	Status at completion	Assumptions



<p>Increased capacity in the Region to plan and manage the WASH programme for the achievement of UAP goals in Benishangul - Gumuz, using CDF as a strategic funding mechanism for community empowerment.</p>	<ul style="list-style-type: none"> • Communities capable to plan, construct and manage water, sanitation and hand washing (WASH) facilities and assume responsibility for future re-investment • Woredas capable to support communities in the construction and management of water supply facilities • Regional Bureaux able to coordinate their and development partner' s support to woredas and provide information on approaches concerning WASH • Donors and NGOS interested in CDF approach and have access to relevant guidelines to apply it in their programmes 	<ul style="list-style-type: none"> • Investment funds were reaching WASHCOs through BGMCI by 7 % commission and it worked well - the beneficiaries got the money for WASH activities from Woreda sub-brances of BGCSI. With the support of Woreda and FinnWASH good results were achieved. The flow of money from MFA to end users was uncomplicated and smooth. The records kept on achievements are fully matching with the funds used • FinnWASH-BG experience shows that the fund flow from Finland straight to BoFED and further via BGCSI to WASHCOs worked very well. • Annual plans and budgets were prepared in interaction with Bureaux and Woreda offices. The capacity building budgets at Community, Bureaux and Woreda level were substantial. • Regional Bureaux were part of the planning and budgeting according to the MOU of Bureaux on WASH activities. FinnWASH-BG supported with annual plans all 5 Bureaux, 5 Zonal offices and 5 Offices in five woredas. Altogether there were 35 annual budgets. • Finland Embassy organized CDF Summit to promote CDF in the Country. Finland started to support Sector Wide Policy in promoting CDF and COWASH Programme emerged. FinnWASH-BG became 'victim of its own success' and Phase II of the Programme could therefore not be planned. • Spare Part Supply Chain was developed and put in place in woredas to provide spare parts to Afridev pumps. The new concept is based on the formation of Woreda Water User Associations for spare part mgt. The WUAs buy the parts on bulky with their own savings and keeps it revolving from own funding. • FinnWASH-BG assisted hand washing facilities to schools and health posts for two years. The activity was dropped because of low-responsiveness of users. Functionality inventory showed that almost all of the installations were broken or not in use. Filling of hand washing tanks of FinnWASH-BG or any other organization remains basically an unsolved problem, despite of Schools having WASH Committees. • FinnWASH-BG has trained woreda officials (ToT) in water point construction and who in return have organized annually practical training/ retraining of Artisan. There are ca 30 trained Artisan in each woreda totalling 150. • Region follows the GoE principle of CLTS on community sanitation which says that only advise is allowed without any subsidies. Woreda Health Extension Workers have been triggering the communities for their own traditional pit latrine construction with effective results. 	<ul style="list-style-type: none"> • Regional government and lower level authorities committed to provide adequate resources to cover salaries, per diems and other operational costs. • Zonal, woreda and kebele staff able to and interested in prioritizing sanitation and hygiene. • Communities are committed to and able to contribute to water points and can afford latrines. • Regional Government endorses and promotes CDF approach • Regional Government is committed to facilitating community managed water supply facilities. • WASH activities are incorporated into the performance evaluation of relevant staff at all levels. • WASH structures will support streamlining of various development partner approaches on e.g. incentives. • HIV/AIDS do not seriously affect communities' and government's resources.
Results	Objectively Verifiable Indicators	Status at completion	Assumptions
<p>Result 1: Institutionalized community capacity to construct and maintain community managed water supply and adopt appropriate technologies and behaviors related to sanitation and hygiene sustainably.</p>	<ul style="list-style-type: none"> • All communities in Programme Woredas have developed, implemented and evaluated their Community WASH plans • Total number of WASHCO members Number of active members by gender in management group (people who come to half or more meetings in the past 12 months) • At least 60% of WASHCO members women in leadership role of WASHCO (either a chairperson, treasurer or secretary) % of rural population using 	<ul style="list-style-type: none"> • FinnWASH-BG has managed an excellent data base on achievements, which shows that work was done and plans executed. • Every water point has a formed WASHCO which has opened a saving account in woreda BGCSI branch. According to BGCSI records the accumulated WASHCO savings are on an average Birr 228,514 / woreda. This gives confidence on the sustainability of the water points since WASHCOs have money for spare parts and repairs. • Functionality inventory asked after the number of female / male ration which is remarkable 40.9 / 59.1 among WASHCO members. • Altogether 816 communal water points were constructed serving 239,041 people. • Functionality rate among water points was found to be 92.7% . • WASHCOs have already been repairing the schemes in 26. % • WASHCOs have started with revenue collection in 88.9 % • Altogether 966 water point were created including Community, Schools and Health Post/ Center. • Each woreda has formed WUA for Spare Part Supply financed by the end users themselves. • All WASHCOs have savings accounts. 	<ul style="list-style-type: none"> • Schools, FTCs and other stakeholders also promote health, sanitation and hygiene among their target groups. • Material/supplies available on the market for construction



	<p>improved water sources by type (number 1): protected dug well, protected bore hole, protected spring, piped, public standpipe, piped water into plot or house piped, public standpipe, piped water into plot or house number of un-served rural population to which improved services have been extended in the past 12 months (number 3)</p> <ul style="list-style-type: none"> • % of new, expanded or rehabilitated schemes completed according to plan (number 5) • % of functional rural Public Protected Water Supply Schemes (PPWSS) (number 6): • Functioning, functioning but faulty, not functioning, abandoned (dry) number and % of schools with functioning PPWSS and minimum standard latrines (number 10) • number 84 % of health facilities with water and latrines with water (number 11) • % of HHs with a functioning latrine meeting minimum standards (number 12) • % of HHs with a functioning hand washing facility (number 13) • % of people washing hands after defecation 	<ul style="list-style-type: none"> • FinnWASH-BG supported Woreda Health Offices who in turn were promoting CLTS according to the policy of GoE. 75 of households have traditional pit latrines. • There are 106 health Posts in the working area; out of them 55% have water, 54 % VIPLs and 69 % MWIs. • There are 183 schools in the working area; FinnWASH has increased the coverage by 52 % with water, by 45% with VIPLs. The number of schools increased by 36 over 6 years Programme period. 	
<p>Result 2: CDF mechanism institutionalized as a mechanism to finance WASH investments</p>	<ul style="list-style-type: none"> • % of new, expanded or rehabilitated PPWSS schemes completed according to plan (number 5) • Frequent planning and reporting between communities, woredas and BGMFSC sub-branches institutionalized • BGMFSC sub-branches capable of disbursing cash to WASHCOs within the time limits agreed in the agreement between WASHCOs and WSC 	<ul style="list-style-type: none"> • Altogether 966 water points / schemes were successfully completed in five woredas in communities, schools and health posts/hospitals. The direct investment cost was Birr 74,775,076 by GoF, Birr 11,912,480 by Community representing 15.9% contribution. The BDSCI 7 % is not included in these figures. • WASHCOs have opened saving accounts and accumulated savings are Birr Bullen 402,203, Dibate 209,453, Pawe 133,465, Mandura 212,847 and Wombera 184,601 totaling Birr 1,142,569. The savings are expected to enable sustainable management of water schemes. The idea is that WASHCOs would not need to report to woredas about problems but would instead of being able to independently run their own schemes. • Money flow has been good in FinnWASH through the axis; MFA - BoFED - BGCSI sub branches - WASHCOs. • Community contribution has been substantial 13.69 % of all direct investment costs. 	
Results	Objectively Verifiable Indicators ¹	Status at completion	Assumptions



<p>Result 3: Institutionalized capacity at woreda level to support communities in implementing WASH activities, including re-investment</p>	<ul style="list-style-type: none"> • % of women representation on Woreda Steering Committees and Woreda Technical WASH Teams • Programme woredas able to co-ordinate sector offices according to WASH MoU • % of kebeles with WASH action plan (number 15) • Woreda multi-year Strategic Plans (sets out woreda strategies, targets and schedules for achieving WASH coverage over 3 to 5 year period) plans prepared and approved by end of year 1. • Annual Woreda WASH plans and budgets prepared on the basis of community WASH plans and Kebele WASH plans • Woreda Council approves WASH plans, budgets and replenishment requests on a timely basis • Authorities at kebele and woreda level capable to organize the various WASH data collection exercises at the interval proposed • Mechanisms for mainstreaming gender as a cross-cutting issue adopted by Woredas • TA in water supply improvements decreased (measured by the ratio of TA expenditure / water point annually) 	<ul style="list-style-type: none"> • Staff turn-over has been a permanent phenomenon every year in woredas. To counteract this FinnWASH has provided training and retraining for woreda officials every year. Women have participated as their capacity as woreda officials. • MOU is among the Water Bureau, Health Bureau, Education Bureau and in BG also with Women, Youth and Children Affairs Bureau is included. Accordingly, all sectors participate in woreda steering committees. All woredas participated in annual work planning, budgeting and review workshops. • WASH activities have taken place in all kebeles (100%). Reference to FinnWASH-BG Data Base, where records are in woreda-kebele - up to even gott (village) levels. Every water point has its own 'baptized' name and GPS readings. • The Master Plan for FinnWASH-BG was to achieve 100% UAP in all woredas - IRFA base line study indicated 15% water coverage in the areas as base line. If overall coverage of 90.1% in Bullen, Dibate, Pawe, Mandura is added to the baseline then ca.100% water supply coverage has been reached. The UAP in Wombera is 53.3% by FinnWASH efforts from rural population and assuming 15% coverage by other actors the total coverage can be ca. 68% - excluded are remote inaccessible lowland areas. • Annual Work plans and budgets were prepared in close interaction with the woredas. The plans were based on the existing WASHCO applications on water points but the volume of annual work was taking account the woreda absorption capacity and available FinnWASH-BG funds. • Annual work plans and budgets were approved by the FinnWASH-BG Board, thereafter stamped and signed by BoFED and sent to Woredas for implementation, which regularly happened during June - September. • FinnWASH-BG / TA Staff has throughout assisted Woredas to compile / provide Quarterly financial and Physical reports. It is to be noted that 'reporting is not one of the virtues in Ethiopia' as FinnWASH Coordinator Ato Minilik Wube stated. It has proved to be true also in FinnWASH-BG. • Women, Youth, Children Affairs Bureau has been one of the MOU partners throughout. WYCB received one Toyota Double Cabin car for monitoring from capacity building budget. • Calculations have been made for the cost of water inclusive 7 % BGCSI commission are; HDW (Birr 309 /Euro 14.1 / person), Springs (131 Birr / Euro 6.0 / person), Shallow well (Birr310 / Euro 14.2 / person), Big Bore Hole Schemes (Birr 872 / Euro 39.8 / person). • The average cost of completed HDW was Birr 54,798 / Euro 2,501 including the 20,5% of abandoned cases and 7 % BGCSI commission. Average cost for a SW was Birr 150,077 including 7 % BGCSI. The average cost of Spring was 96,492 including & % BDSI. The big schemes are all individual cases and the cost is better reflected over the cost / head. However, FinnWASH-BG experience shows that all kind of schemes are needed, and it is possible to construct them with CDF, depending on the constellation of conditions / facts. • FinnWASH-BG has trained on an average 30 Artisans in all woredas to make HDWs with Afridev pump so that that kind of know-how remains available. Also 2 care takers were trained for every water point. 	<ul style="list-style-type: none"> • Woreda capacity is not seriously affected by staff turnover. • WAO having staff strength with the skills to mobilize and engage women to actively participate in WASH activities
<p>Results</p>	<p>Objectively Verifiable Indicators¹⁵</p>	<p>Status at completion</p>	<p>Assumptions</p>
<p>Result 4: Institutionalized capacity at zonal and regional levels to support WASH activities and replicate CDF approach</p>	<ul style="list-style-type: none"> • Staff of relevant Bureaux (WMERDB, BoH, BoE, BoFED, BGMFSC) capable of replicating CDF approach in other woredas and beyond water supply • BoH and Zonal Health Office Staff capable of organizing Training of Trainers Programmes to their staff in PHAST and Community WASH Planning 	<ul style="list-style-type: none"> • Bureaux have been preparing Work plans and Budgets with FinnWASH-BG over 6 years and are well acquainted with the planning proceedings. However, turnover has affected the speed and quality of planning, monitoring and reporting. • Bureau of WYCA has got a car from FinnWASH-BG from capacitybuilding budget to support capacity building, monitoring in woredas and zone. Training courses have been organized as planned in the annual budgets. • BoH has worked through woreda Health Officials. • Institutional memory is sometimes walking away when people leave or are taking new positions in the organization. However, the GoE governmental system keeps its pace - with or without FinnWASH-BG. • BoFED GIS unit also had a lot of personal changes and its location was moved as well. FinnWASH-BG data base on Water Points, VIPLs, Incinerators has been 	<ul style="list-style-type: none"> • Regional and zonal capacities are not seriously affected by staff turnover. • There is a favorable policy and political environment for mainstreaming gender in place. • Resources mobilized to mainstream gender in WASH and other



	<ul style="list-style-type: none"> • Relevant Bureaux capable of ensuring institutional memory • BoFED GIS unit can provide reports and data sets to the respective woreda offices in a timely manner • CDF adopted by other donors and NGOs ensuring expansion of CDF funded project implementation in other woredas in Benishangul-Gumuz and in other regions of Ethiopia • Minimum 33% women to men on PMC, RSC and ZCC • TA in water supply, sanitation and hygiene phased out. 	<p>maintained with woredas and the final database has been delivered there altogether with printed maps. Woredas have GPS tools and computers to maintain the data bases. Coordination between woredas and BoFED GIS unit has been weak.</p> <ul style="list-style-type: none"> • UNICEF has tried to adopt CDF in Bambasi woreda. UNICEF makes centralized purchases of water point components - as well. World Bank works as before by providing funds to the woreda. Obviously it takes time to change old systems. There is another problem of channeling GoE funds to WASHCOs through private banks which is not allowed by GoE procurement rules - at this stage. • Women have been represented in PMC according to the current positions in Bureaux. Regional Steering Committee exists only on paper but is not operational! The same is for Zonal Coordination Committee - it is not meeting and it has not any implementing power. On this issue Finland Embassy formed 'Harmonization Task Force' to promote coordination among donors. See folder FinnWASH-BG - HARMONIZATION - Task Force. The obvious shortcoming of PIM / WIF is that federal level gives tasks to regions without facilitation - a poorer region like BG can't realize. It is still a long way to one plan - one budget - one report. There are no plans to construct / establish BG Regional WASH Coordination Office and employ permanent staff with adequate salary packages. Money flow from Consolidated Trust Fund may not yet easily find its way to WASHCOs. • TA is closing 31.10.2015. The work is done, funds used, time over, Game over. 	<p>development interventions.</p>
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Annex 9 - Coverage map - All woredas

Annex 10 - Coverage map - Bullen woreda

Annex 11 - Coverage map - Dibate woreda

Annex 12 - Coverage map - Pawe woreda

Annex 13 - Coverage map - Wombera woreda