Mulutu Sub-Location, Kyangwithya West Location, Central Division (19 Participants)

Household Demography

Head of the Household sex (%)

Sex	Participants	Non-participants
Female	63.2	
Male	36.8	
Total	100.0	100.0

Head of the Household age category

Age bracket	Participants	Non-participants
20 ò years	0	
20 < years ó 35	5.3	
35 < years ó 55	31.6	
55 < years ó 70	52.6	
70 < years	10.5	
Total	100.00	100.00

Head of Household level of education

Level	Participants	Non-participants
informal	15.8	
primary	63.2	
secondary	15.8	
tertiary	5.3	
Total	100.0	100.0

Head of household main occupation (%)

Occupation	Participants		Non-participants	
	Main occupation	Secondary occupation	Main occupation	Secondary occupation
subsistence farmer	78.9	26.3		
businessman	0	10.5		
regular employment	5.3	10.5		
wage earner	15.8	0		
other	0	5.3		
not reported	0	47.4		
Total	100.0	100.00	100.0	100.0

Household annual income-% (KShs.)

Income	*Participants*	*Non-participants*
10,000 ò income	5.3	
10,000 < income ó 30,000	5.3	
30,000 < income ó 50,000	26.2	
50,000 < income ó 100,000	31.6	
100,000 < income	0	
not reported	31.6	
Total	100.0	100.0

Household size(%)

Size	**Participants**	**Non-participants**
3 ò members	0	
3 < members ó 8	89.5	
8 < members ó 12	10.5	
12 < members	0	
not reported	0	
Total	100.0	100.0

Household composition (%)

Composition	**Participants**	**Non-participants**
females =males	5.3	
females > males	21.1	
females < males	73.7	
not reported	0	
Total	100.0	100.0

Household Inventory (Assets)

Number of houses (%)

Number of houses	Participants	Non-participants
one	0	
two or three	68.4	
four or five	31.6	
more than five	0	
Total	100.0	100.0

Main house thatch

Thatch type	Participants	Non-participants
iron sheets	89.5	
grass	10.5	
tiles	0	0
Total	100.0	100.0

Main house floor type

	Participants	Non-participants
cemented	42.1	0
un-cemented	57.9	
other	0	0
Total	100.0	100.0

Main house number of rooms

Number of houses	*Participants*	*Non-participants*
one room	0	
two or three	57.9	
four or five	36.8	
six and more	5.3	
Total	100.0	100.0

Wall material- main house

Wall material	Participants	Non-participants
brick/mud	31.6	
brick/cement	68.4	
block/cement	0	
poll/mud	0	0
not reported	0	0
Total	100.0	100.0

Household with toilets

	Participants	Non-participants
households with toilets	100.0	0
households without toilets	0	0
Total	100.0	100.0

Other household possessions

Number of chicken and ducks, cows and goats(%)

	Participants			Non-participants		
	Chicken/ ducks	Cows	Goats	Chicken/ ducks	Cows	Goats
nil	26.3	47.4	31.6			
one	21.1	0	0			
1 < number ó 5	26.3	42.1	57.9			
5 < number ó 10	26.3	10.5	5.3			
10 < number	0	0	5.3			
not reported	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Number of donkeys

	Participants	Non-participants
nil	52.6	
0 < donkeys ó 3	47.4	
3 < donkeys ó 5	0	0
Total	100.0	100.0

Number of jembes, spades, mattocks, etc.

	Participants	Non-participants
nil	0	
0 < jembes ó 5	52.6	
5 < jembes ó 10	36.8	
10 < jembes	10.5	0
not reported	0	
Total	100.0	100.0

Number of Ox-ploughs, Bicycles, carts/wheel barrows, plant machines, Transistor radios, television sets(%)

Participants

	Ox-ploughs	bicycles	carts/wheel barrows	plant machines	radios	TV	motor vehicles
nil	63.2	68.4	47.4	100.0	47.4	100.0	94.7

0 < numberó 3	36.8	31.6	52.6	0	52.6	0	5.3
3< number	0	0	0	0	0	0	0
not reported	0	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Non-Participants

	Ox-ploughs	bicycles	carts/wheel barrows	plant machines	radios	TV	motor vehicles
nil							100.0
0 < numberó 3							0
3< number	0	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Land

Land ownership total land rented (acreage)

	Participants		Non-participants	
	owned	rented	owned	rented
5 ò acres	100.0	0		
5 < acres ó 10	0	0		
10 < acres	0	0		
no response	0	0	0	0
not reported	0	100.0	0	
Total	100.0	100.00	100.0	100.0

Main land use (%)

Use	*Participants*		*Non-participants*	
	main use	*second main use*	*main use*	*second main use*
homestead	5.3	89.5		
agriculture	94.7	0		
livestock grazing	0	10.5		
rented out	0	0	0	0
not reported	0	0	0	0
Total	100.0	100.0	100.0	100.0

Source of energy

Source of energy

	Participants		Non-participants	
	main	second main	main	second main
firewood	100.0	0	100.0	0
kerosene	0	94.7	0	
charcoal	0	5.3	0	
not reported	0	0	0	0
Total	100.0	100.0	100.0	100.0

Migration

Year of migration

	Participants	Non-participants
1990-1992	0	0
1993-1997	15.8	
1998-2001	0	
not migrated	84.2	
Total	100.0	100.0

Nature of migration

	Participants	Non-participants
permanent	10.5	
temporary	5.3	
working outside the location	0	
not migrated	84.2	
Total	100.0	100.0

Place of settlement

	Participants	Non-participants
village	5.3	0
town	10.5	
abroad	0	
not applicable	84.2	
Total	100.0	100.0

Reasons for migration

	Participants	Non-participants
in search of employment	5.3	
land inadequacy	5.3	
marriage	3.9	
other	5.3	
not migrated	84.2	
Total	100.0	100.0

Daily water use

Daily water use before and after IWSS- litres (Participants)

	Cooking		***Washing/cleaning***		***livestock watering***		***Other uses***	
	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS
20 ò litres	10.5	0	78.9	10.5	68.4	26.3	0	15.8
20 < litres ó 40	84.2	57.9	21.1	42.1	5.3	36.8	0	0
40 < litres ó 60	5.3	42.1	0	0	0	10.5	0	0
60 < litres ó 80	0	0	0	21.1	0	5.3	0	0
80 < litres ó 100	0	0	0	21.1	0	0	0	0
100 < litres	0	0	0	5.3	0	0	0	0
not reported	0	0	0	0	26.3	21.1	100.0	84.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Daily water use - litres (Non-participants)

	Cooking	***Washing/cleaning***	***livestock***	***Other uses***

			watering	
20 ò litres				
20 < litres ó 40				
40 < litres ó 60				
60 < litres ó 80				
80 < litres ó 100				
100 < litres				
not reported				
Total	100.0	100.0	100.0	100.0

<u>Choice of Water Source:</u> Factor influencing choice of water source:

Participants-

	Dry season			***Wet season***		
Factor/Percentage	*Rank 1*	*Rank 2*	*Rank 3*	*Rank 1*	*Rank 2*	*Rank 3*
distance	36.8	15.8	15.8	21.1	31.6	0
quality	10.5	26.3	10.5	10.5	15.8	5.3
quantity	5.3	21.1	15.8	26.3	10.5	0
Multiple use	21.1	10.5	5.3	15.8	31.6	0
Reliability	15.8	0	0	5.3	5.3	5.3
No alternative	5.3	26.3	0	10.5	5.3	5.3
not reported	5.3	0	52.6	10.5	0	84.2
Total	100.0	100.0	100.0	100.0	100.0	100.0

Non-participants-

	Dry season			***Wet season***		
Factor/Percentage	*Rank 1*	*Rank 2*	*Rank 3*	*Rank 1*	*Rank 2*	*Rank 3*
distance						
quality						
quantity						
Multiple use						
Reliability						
No alternative						
not reported						
Total	100.0	100.0	100.0	100.0	100.0	100.0

Main Source of Water

Source	**Non-Participants**		**Participants (Before IWSS)**		**Participants (After IWSS)**	
	Dry Season	**Wet season**	***Dry season***	***Wet season***	***Dry season***	***Wet season***
river			0	5.3	0	0
piped			5.3	10.5	10.5	0
springs			0	0	0	0
scoop-hole			84.2	47.4	57.9	36.8
roof catchment			0	31.6	0	26.3
sand dam			0	0	10.5	10.5
wells			10.5	0	21.1	21.1
earth dam			0	0	0	0
bore-hole			0	0	0	0
rock-catchment			0	5.3	0	0
not reported			0	0	0	5.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Depth of scoop holes (ft)

Depth (ft)	***Non-participants***	***Participants (Before IWSS)***	***Participants (After IWSS)***
2 ò depth		0	57.9
2 < depth ó 5		26.3	26.3
5 < depth ó 10		47.4	0
10 <depth ó15		15.8	0
15 <depth		0	0
not applicable		10.5	0
not reported		0	15.8
Total	100.0	100.0	100.0

Quality of water from main source before and after IWSS

	Non-participants		**Participants (Before IWSS)**		**Participants (After IWSS)**	
Quality	**Dry Season**	**Wet season**	***Dry season***	***Wet season***	***Dry season***	***Wet season***
Clean/clear/good			84.2	89.5	100.0	94.7
Dirty/coloured/bad smell			15.8	10.5	0	0
Salty			0	0	0	0
Other			0	0	0	0
not reported			0	0	0	5.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Quantity of water from main source before and after IWSS (litres)

	Non-participants		**Participants (Before IWSS)**		**Participants (After IWSS)**	
Litres	**Dry season**	**Wet season**	***Dry seaso***	***Wet season***	***Dry seaso***	***Wet season***

			n		***n***	
40 ò quantity			36.8	36.8	15.8	21.1
40<quantityó60			26.3	26.3	15.8	5.3
60<quantityó80			31.6	31.6	15.8	15.8
80<quantityó100			0	5.3	21.1	26.3
100>quantity			0	0	31.6	26.3
not reported			5.3	0	0	5.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Distance to the main water source before and after IWSS (Km)

	Non-participants		**Participants (Before IWSS)**		**Participants (After IWSS)**	
Kilometres	**Dry season**	**Wet season**	***Dry season***	***Wet season***	***Dry season***	***Wet season***
0.5 ò Km			15.8	47.4	89.5	57.9
0.5 < Km ó 2			52.6	31.6	10.5	21.1
2 < Km ó 5			21.1	21.1	0	0
5 < Km ó 10			10.5	0	0	0
10 < Km ó 15			0	0	0	0
15 < Km			0	0	0	0
not reported			0	0	0	21.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

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Time taken to and from the main water source (hours)

	Non-participants		**Participants (Before IWSS)**		**Participants (After IWSS)**	
Hours	**Dry season**	**Wet season**	***Dry season***	***Wet season***	***Dry season***	***Wet season***
0.5 ò hour			5.3	52.6	57.9	63.2
0.5 < hours ó 1			47.4	36.8	31.6	21.1
1 < hours ó 2			31.6	5.3	10.5	0
2 < hours ó 5			15.8	5.3	0	0
5 < hours ó 10			0	0	0	0
10 > hours			0	0	0	0
not reported			0	0	0	15.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Trips to the main water source in a day

	Non-participants		**Participants (Before IWSS)**		**Participants (After IWSS)**	
Trips	**Dry season**	**Wet season**	***Dry season***	***Wet seaso n***	***Dry seaso n***	***Wet season***
0ne			47.4	73.7	5.3	26.3
two			31.6	10.5	47.4	26.3
three			21.0	15.8	15.8	10.5
four and five			0	0	21.1	21.1
more than five			0	0	5.3	0
not reported			0	0	5.3	15.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Means of fetching water (main) before and after IWSS

Means	Non- participants	Participants (Before IWSS)	Participants (After IWSS)
human labour		84.2	52.6
donkey		10.5	31.6
cart/wheel barrow		0	0
motor vehicle		0	0
human labour/donkey		5.3	10.5
human labour/cart/wheel barrow		0	5.3
donkey/cart/wheelbarrow		0	0
not reported		0	0
Total	100.0	100.0	100.0

General Impact of IWSS (Participants)

	increased	decreased
water	89.5	10.5
distance	15.8	63.2
disease	21.1	0
crop farming	15.8	0
kitchen gardening	0	0
vegetable growing	63.2	0
livestock watering	38.9	0
brick making	52.6	0
bee keeping	15.8	0
body washing	57.9	0
clothes washing	52.6	0
utensil washing	10.5	0
tree nurseries	10.5	0
house washing	26.3	0
terracing	0	0
other	0	0

Water rationing (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
yes		26.3	0
no		73.7	100.0
not reported		0	0
Total	100.0	100.0	100.0

Mode of water rationing before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
Restricted to a fixed amount of water per day		15.8	0
Queuing		0	0
other		0	0
not reported		84.2	100.0
Total	100.0	100.0	100.0

Accessibility of your nearest dam

	Percent
accessible	89.5

not accessible	10.5
other characteristics	0
not reported	0
Total	100.0

Satisfied with the sand dam project?

	Percent
Satisfied	94.7
Not satisfied	5.3
not reported	0
Total	100.0

Why satisfied?

	Percent
Plenty of water for domestic use	63.2
Farm productivity has increased	21.1
Increased water for watering animals	0
Water helped in construction of houses	0
Reduced distances to water source	5.3
Other reasons	5.3
Not reported	5.3
Total	100.0

If not satisfied, why?

	Percent
No opportunity for multiple use	0
The well dries up in the dry season	0
The water in the well is not clean	0
The well is too shallow	0
Other reasons	0
Not reported	100.0
Total	100.0

Shift from the traditional water source?

	Percent
Shifted	94.7
Not shifted	5.3
No response	0
Not reported	0
Total	100.0

If not shifted, reason

	Percent
Traditional water source nearer	0
No opportunity for multiple use	0
the well dries up in dry season	0
water in the well not clean	0
other	0
no response	0
not reported	100.0

Total	100.0

Participants-Sanitation before/after IWSS

Per week	**Clothe washing**		**Body washing**		**Utensil washing**		**House washing**	
	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS
daily	0	78.9	68.4	100.0	100.0	100.0	73.7	94.7
once	63.2	15.8	0	0	0	0	5.3	0
twice	26.3	5.3	10.5	0	0	0	5.3	0
thrice	10.5	0	21.1	0	0	0	0	0
rarely	0	0	0	0	0	0	0	0
when dirty	0	0	0	0	0	0	0	0
never used to/doesn't	0	0	0	0	0	0	0	0
not applicable	0	0	0	0	0	0	0	0
not reported	0	0	0	0	0	0	15.8	5.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Non-participants: Sanitation

Per week	**Clothe washing**	**Body washing**	**Utensil washing/day**	**House washing**
daily				
once				
twice				
thrice				
rarely				
when dirty				
doesn't				
not applicable				
not reported				
Total	100.0	100.0	100.0	100.0

Protection of water points before and after IWSS

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
fencing		0	0
covering well with lid		0	26.3
watchman		0	0
no protection		94.7	52.6
not applicable		0	5.3
locking gate		0	0
animal separate watering point		0	0
local arrangements		0	0
not reported		5.3	15.8
Total	100.0	100.0	100.0

Soil conservation

Terracing before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)

nil		42.1	5.3
0 < number ó 3		31.6	10.5
3 < number ó 5		15.8	21.1
5 < number ó 10		5.3	52.6
10 < number		0	5.3
not reported		5.3	5.3
Total	100.0	100.0	100.0

Tree planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil		52.6	15.8
0 < number ó 5		26.3	10.5
5 < number ó 10		5.3	10.5
10 < number ó 50		10.5	42.1
50 < number		0	15.8
not reported		5.3	5.3
Total	100.0	100.0	100.0

Gabions before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil		100.0	100.0
0 < number ó 5		0	0
5 < number ó 10		0	0
10 < number		0	0
not reported		0	0
Total	100.0	100.0	100.0

Misonzo (Ridges) before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil		31.6	5.3
0 < number ó 5		52.6	36.8
5 < number ó 10		10.5	52.6
10 < number		0	0
not reported		5.3	5.3
Total	100.0	100.0	100.0

Grass planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Yes		42.1	68.4
No		52.6	26.3
Not reported		5.3	5.3
Total	100.0	100.0	100.0

Waterborne diseases mitigation measures

Boiling (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Boil drinking water		31.6	100.0
not reported		68.4	0
Total	100.0	100.0	100.0

Chemicals application before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Treat drinking water with chemicals		5.3	0
not reported		94.7	100.0
Total	100.0	100.0	100.0

Clean/clear compound/bushes before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
clean/clear compound		0	0
not reported		100.0	100.0
Total	100.0	100.0	100.0

Dry stagnant waters before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
Dry stagnant water		0	0
not reported		100.0	100.0
Total	100.0	100.0	100.0

Inoculation before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Inoculation		0	0
not reported		100.0	100.0
Total	100.0	100.0	100.0

Eating well cooked food before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
well cooked food	0	0	0
not reported	100.0	100.0	100.0
Total	100.0	100.0	100.0

Use of mosquito nets food before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
Using nets	0	0	0
not reported	100.0	100.0	100.0
Total	100.0	100.0	100.0

Observing cleanliness of utensils before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
Utensil cleanliness	0	0	0
not reported	100.0	100.0	100.0
Total	100.0	100.0	100.0

Other measure before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
other measure	0	0	0
not reported	100.0	100.0	100.0
Total	100.0	100.0	100.0

Mode of choosing water source committee members/dam committee members

No water resource committee mentioned in Non-participants case

Nomination?

	Participants (Dam committee)			
	Nomination	Election	Selection	Other mode
Yes	10.5	15.8	52.6	0
Other	89.5	84.4	41.4	100
Total	100.0	100.0	100.0	100.0

If nomination, by whom?

By whom	Participants (Dam committee)			
	Nomination	Election	Selection	Other mode
not reported	73.7	15.8	36.8	100.0
community	0	10.5	47.4	0
provincial administration	0	5.3	0	0
political leaders	0	0	0	0
dam members	15.8	5.3	0	0
Other	10.5	63.2	15.8	0
Total	100.0	100.0	100.0	100.0

Duration in office- dam committee

	Percent
not reported	15.8
one month	31.6
half-year	10.5
one year	0
two years	0
more than two years	5.3
not stated	15.8
indefinitely	0
no response	21.1
Total	100.0

Impact of dam committee in regard to:

Factor	*Positive*	*Negative*	*no impact*	*indifferent*
age	84.2	0	0	0
religion	84.2	0	0	0
political party affiliation	57.9	26.3	15.8	0
wealth	68.4	15.8	0	0
gender	78.9	5.3	0	0

Community give people who have not had opportunity to lead a chance to lead

	Non-participants	Participants
yes		73.7
no		26.3
no response	0	0
not reported	0	0
Total	100.0	100.0

Linkage between dam and other committees?

	Participants
yes	15.8
no	84.2

If yes to linkage, how?

	Participants
considering community committee members in dam committee	0
dam committee members considered in other community committee	0
dam committee members opinion sought in development issues	10.5

Participants: Other general benefits derived from IWSS

	Percent
yes	63.2
no	5.3
not reported	31.5
Total	100.0

Non-participants: Member of any community group?

	Percent
no response	4.5
yes	22.7
no	72.7
Total	100.0

Participants: If yes benefits yes

Non-participants: If a member of community group- benefits

	participants	non-participants
advice from older people to young members of the society	0	
community members interact freely while working together	5.3	
women contribute to a fund to uplift their welfare	16.7	
community formed groups for planting vegetables and seedlings for sale	15.8	
formation of groups to help in harvesting/terracing and other undertakings	10.5	
making new friends	0	

other	5.3	

Influence of development agenda by community

	Participants	Non-participants
yes	89.5	
no	10.5	
not reported	0	0
Total	100.0	100.0

If influence yes, how:

How	*Non-participants*	*Participants*
the community is free to express its interests during development meeting		21.1
before any law/bylaw/rule is passed people community is consulted		0
done through *barazas* whereby members air their views freely		15.8
through consultation with those concerned		10.5
involved when discussing development ideas		26.7
headman (administrators) consults with the people and forwards their views		0
chairpersons of groups, headmen and other leaders consulted through formation of groups		0
any other way		15.8

Participants: Impact of increased water after IWSS:

	improved	declined	the same
health	78.9	5.3	15.8
cleanliness	94.7	0	5.3
leisure	89.5	0	10.5
girl-child school absenteeism	5.3	0	89.5
boy-child school absenteeism	15.8	0	78.9
girl-child school punctuality	89.5	0	5.3
boy-child school punctuality	94.7	0	0
cooking at the right time	100.0	0	0

Non-participants: impact of water availability on the following:

	positive	negative	no effect
health			
cleanliness			
leisure			
girl-child school absenteeism			
boy-child school absenteeism			
girl-child school punctuality			
boy-child school punctuality			
cooking at the right time			

Non-participants: Impact of water scarcity on the following:

	positive	negative	no impact
health			
cleanliness			
leisure			
girl-child school absenteeism			
boy-child school absenteeism			
girl-child school punctuality			
boy-child school punctuality			
cooking at the right time			

Participants: Increase in water impact

	improved	declined	the same
security	78.9	5.3	10.5
pregnancy rates	52.6	0	47.4
community cohesiveness	89.5	0	10.5
marriage rates	57.9	5.3	36.8

Non-participants: water availability impact on the following

	positive	negative	no impact
security			
pregnancy rates			
community cohesiveness			
marriage rates			

Non-participants: water scarcity impact on the following

	positive	negative	no impact
security			
pregnancy rates			
community cohesiveness			
marriage rates			

Is trekking long distances by girls regarded as good?

	Non-participants	Participants
good		0
bad		100.0
no response		0
not reported		0
Total	100.0	100.0

bad

	Non-participants	Participants
tiring		47.4
compromise other household duties		21.4
develop irresponsible behaviour-early pregnancies/marriages		47.4
leads to school absenteeism/lateness		5.3
not generally safe		36.8
other reason		5.6

good

	Non-participants	Participants

body exercise and good health		0
test of adulthood- could take care of themselves		0
other reason		0

Impact of the project in relation to trek (Participants)

	percent
time	31.6
absenteeism/lateness in school improved	6.3
school drop out rates lowered	0
improved security of girls	0
increased time for leisure	0
distance to water source reduced	0
other impact	0
no impact	10.5

Hours of sleep

	Non-participants		Participants (Before IWSS)		Participants (After IWSS)	
	dry season	wet season	dry season	wet season	dry season	wet season
2 ò hours			5.3	0	0	0
2 < hours ó 4			15.8	0	0	0
4 < hours ó 6			31.6	26.3	10.5	0
6 < hours ó 8			47.4	73.7	84.2	89.5
8 < hours			0	0	5.3	10.5
not reported			0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Whom do you consult before participating in community projects (sand dam project)

	Non-participants	Participants
husband (in the household)		10.5
husband (elsewhere)		0
wife (in the household)		0
wife (elsewhere)		0
friends		31.6
local administration (headman/Ass. Chief/Chief)		57.9
religious leaders		0
Political leaders		0
none		0
other		0
not reported		0
Total	100.0	100.0

Economic activities (%):

Mentioned	Non-participants	Participant (Before IWSS)	Participant (After IWSS)
agriculture		100.0	78.9
goat/sheep		15.8	10.5
cattle		31.8	21.1
vegetable growing		42.1	63.2
kitchen gardening		5.3	5.3
brick making		31.6	52.6
tree nurseries		22.2	47.4
bee keeping		0	15.8

New crops/activities introduced after IWSS:

New crop/activity	Percent
spinach growing	10.5
vegetable growing	52.6
fish	0
sukuma wiki	36.8
onions	5.3
tomatoes	31.6
ndania	0
sugar cane	5.3
arrow roots	10.5
fruits	15.8
other crop	26.3

Contribution of the following activities after IWSS (KShs)

Activity	500ò value	500<valueó1000	1000<valueó5000	5000<valueó10,000	10,000<value
agriculture	0	0	0	0	0
goats/sheep	0	0	0	0	0
cattle	0	0	5.3	0	0
vegetable growing	0	0	10.5	0	0
kitchen gardening	0	0	15.8	0	0
brick making	0	5.3	5.3	0	0
tree nurseries	0	10.5	0	0	0
bee keeping	0	0	0	0	0
sugar cane	0	0	0	0	0
business	5.3	0	0	0	0

Indirect benefits:

	mentioned (%)
increased land value	0
increased livestock reproduction rates	0
able to pay school fees- increased income	0
able to cloth the family- increased income	0

increased land productivity- increased water and terracing	11.1
soil fertility- tree planting and terracing	0
reduced cost of buying salt lick for animals	5.9
vegetables- plenty and cheap	0
increased sand for construction	16.7
other benefit	0

Whether IWSS has served as incentive to people to buy/lease land

	Percent
attracted- total	31.6
leased land to cultivate	31.6
paid sand dam fees before leasing the land	0

Use of time saved from walking long distances:

	Percent
Shamba work	10.5
taking care of livestock	0
making bricks	0
kitchen gardening	36.8
tending tree nursery	5.6
business	0
leisure	12.5
other activities	10.5

Contribution of the activity undertaken owing to increased time availability (KShs):

	Shamba work	tending livestock	making bricks	kitchen gardening	tending tree nursery	business	other activities
500 ò value	0	0	0	0	0	0	10.5
500 < value ó 1,000	0	0	0	0	0	0	0
1000 < value ó 5,000	5.3	0	0	0	0	0	0
5,000 < value ó 10,000	0	0	21.1	0	0	0	0
10,000 < value	0	0	10.5	0	0	0	0

Cost of water per 20 litre jerrican (KShs)

	Dry season			Wet season		
	Non-participants	Participants		Non-participants	Participants	
		Before IWSS	After IWSS	0	Before IWSS	After IWSS
5 ò shillings	0	15.8	68.4	0	36.8	89.5
5 < shillings ó 10	0	36.8	31.6	0	42.1	10.5
10< shillings ó 15	0	5.3	0	0	5.3	0
15 < shillings ó 20	0	31.6	0	0	5.3	0
20 < shillings	0	0	0	0	0	0

Is the use of your water resource (IWSS) controlled/planned to avoid negative consequences

	Non-participants	Participants
yes		42.1

no		52.6

Controlled measure

Measure	Non-participants	Participants
covering the well with a lid		26.3
washing of clothes not allowed in the IWSS		0
only participants are allowed		0
planting of grass to check erosion		0
children not allowed to play near the IWSS		0
other control/plan (eg. prayers)		5.3

If not controlled, why?

Why	Non-participants	Participants
it is a public/natural resource		22.2
participants are responsible people- respect their efforts		0
other reason		5.3

Pollution penalties/action(%)

Participants:

Type of pollution	pays fine	report to dam committee	report to provincial administration	report to Sasol	warning/ cautioned	excommunicated
washing inside the dam/well	21.1	10.5	26.3	0	0	5.3
washing clothes inside the dam/well	21.1	10.5	26.3	0	0	5.3
watering animals in the dam/well	21.1	10.5	26.3	0	0	5.3
spraying vegetables/crops chemicals around the dam/well	21.1	10.5	26.3	0	0	5.3
defecating/urinating near the dam/well	21.1	10.5	26.3	0	0	5.3
dropping objects in the source	21.1	10.5	26.3	0	0	5.3

Non-participants:

Type of pollution	pays fine	report to dam committee	report to provincial administration	warning/ cautioned	excommunicated
washing inside the dam/well					
washing clothes inside the dam/well					
watering animals in the dam/well					
spraying vegetables/crops chemicals around the dam/well					
defecating/urinating near the dam/well					
dropping objects in the source					

Who is responsible for operation and maintenance of your water resource (Sand dam/well)

	Non-participants	Participants
dam committee members		5.3
chairperson of the dam committee		10.5
provincial administration		0
community		42.1
watchman		0
no body/party		15.8
no maintenance required		0
owner		0
Sasol		0
other		26.3

Source of funds for operation and maintenance of the IWSS if applicable

	Non-participants	Participants
dam committee members	0	10.5
chairperson of the dam committee	0	15.8
provincial administration	0	0
community	0	5.3
politicians	0	0
no funds needed	0	0
no O&P required	0	0
sasol	0	0

Operation and maintenance contribution by households if applicable (KShs)

	Non-participants	Participants
25 ò KShs.	0	10.5
25 < KShs ó 50	0	10.5
50 < KShs ó 75	0	0
75 < KShs ó 100	0	0
100 < KShs	0	0
in kind (labour)	0	0
no funds needed	0	0

Frequency of water source committee (dam committee) meetings

	Non-participants	Participants
monthly	0	47.4
once/three months	0	0
semi-annually	0	0
never meet	0	26.3
when there is need	0	0
other	0	0
no committee reported	0	0
not reported	0	26.3
Total	100.0	100.0

Control over family resources:

	Income			Labour			Expenditure		
	NP	P		NP	P		NP	P	
		Before IWSS	After IWSS		Before IWSS	After IWSS		Before IWSS	After IWSS

husband		31.6	15.8		31.6	21.1		31.6	21.1
wife		36.8	42.1		36.8	42.1		36.8	42.1
husband/wife		21.1	26.3		21.1	26.3		21.1	26.3
children		0	0		0	0		0	0
boys		0	0		0	0		0	0
girls		0	0		0	0		0	0
father-in-law		10.5	10.5		10.5	10.5		10.5	10.5
mother-in-law		0	0		0	0		0	0
other		0	0		0	0		0	0
not reported		0	5.3		0	0		0	0

Impact of increased family income to family unit

	Percent
positive	94.7
negative	5.3
the same	0
not reported	0

Has increased incomes/opportunities led to conflict at:

	Percent
at family level not reported	94.7
at community level not reported	100.0

Laid down conditions for joining IWSS to non-participants: pays fees (KShs)

	Percent
100 ò KShs	5.3
100 < KShs ó 200	0
200 < KShs ó 500	0
500 < KShs ó 1,000	0
1,000 < KShs	0
not fixed	68.4
not reported	26.3
Total	100.0

Laid down conditions for joining IWSS to non-participants: fines in kind

	Percent
goat	0
sheep	0
cow	0
other	26.3
not reported	73.7
Total	100.0

Value household attach to their water source

	Non-participants	Participants
500 ò KShs		0
500 < KShs ó 1,000		0
1,000 < KShs ó 5,000		0
5,000 < KShs ó 10,000		0
10,000 < KShs		100.0

not acceptable (invaluable)		0
not reported		0
Total	100.0	100.0

Willingness to pay for improved water resource

	Non-participants	Participants
500 ò KShs		63.2
500 < KShs ó 1,000		10.5
1,000 < KShs ó 5,000		0
5,000 < KShs ó 10,000		0
10,000 < KShs		5.3

Suppose you perceive wrong committee management (dam committee), what measure would you take?

	Participants
report to chair/person	5.3
report to provincial administration	42.1
quit the source	0
report to SASOL	0
question the dam committee	15.8
alert other members and ask for a meeting	0
advice the management accordingly	0
request management to quit office	0
other	21.1
not reported	15.8
Total	100.0

Willingness to take up leadership position

	Non-participants	Participants
willing to up leadership position	0	68.4
not willing to lead	0	31.6
not reported	0	0
Total	100.0	100.0

Ownership of water resource (sand dam):

	Non-participants		Participants	
	True	False	True	False
community			0	0
individual			36.8	63.2
government			0	0
schools			0	0
KANU			0	0
SASOL/NGOs			6.7	93.3
SDP			0	0
Christians			21.1	78.9
Kathambi			0	0
other			5.3	78.9

Why own the water resource (sand dam): Reasons

	community	it is a natural	sponsored	other	no response

	participated		resource							
	NP	P	NP	P	NP	P	NP	P	NP	P
community		68.4		15.8		0		10.5		0
individual		21.1		15.8		21.1		21.1		0
government		10.5		10.5		26.3		5.3		0
schools		0		10.5		5.3		5.3		0
KANU		5.3		10.5		15.8		5.3		0
SASOL		10.5		0		10.5		0		0
NGOs		0		0		0		0		0
SDP		0		10.5		15.8		5.3		0
Christians		10.5		15.8		31.6		5.3		0
Kathambi		0		10.5		15.8		5.3		0
other		10.5		10.5		5.3		5.3		0

Suppose somebody started demolishing your water resource (sand dam), what action would you take (%):

	Non-participants		Participants	
	As an individual	As a member of the community	As an individual	As a member of the community
ask him/her why			0	0
report to source/dam committee chairperson			5.3	5.3
report to other members			15.8	0
report to the head man			10.5	0
report to the provincial administration			0	68.4
report to SASOL			0	0
report to the police			36.8	0
beat up the person			0	5.3
banish him/her			0	0
use force to stop him/her			5.3	21.1
no action			0	0
report to the donor			0	0
other			15.8	0
no response			10.5	5.3
Total	100.0	100.0	100.0	100.0

Any other comment

	Non-participants	Participants
more dams needed/dams needed		10.5
congratulations- SASOL		5.3
sand dams are beneficial- increased incomes		0
satisfied with the location		26.3
sand dam too far, water source near home required		15.8
need IWSS		0
water source near home required		0
no comment		0
not reported		42.1
Total	100.00	100.0