

***Itoleka Sub-Location, Itoleka Location, Central Division
(91 Participants & 18 Non-participants)***

Household Demography

Head of the Household sex (%)

Sex	Participants	Non-participants
Female	74.7	77.8
Male	25.3	22.2
Total	100.0	100.0

Head of the Household age category

Age bracket	Participants	Non-participants
20 ò years	9.9	5.6
20 < years ó 35	34.1	55.6
35 < years ó 55	20.9	27.8
55 < years ó 70	26.4	11.1
70 < years	8.8	0
not reported	0	0
Total	100.00	100.00

Head of Household level of education

Level	Participants	Non-participants
informal	38.5	33.3
primary	44.0	55.6
secondary	16.5	11.1
tertiary	1.1	0
university	0	0
not reported	0	0
Total	100.0	100.0

Head of household main occupation (%)

Occupation	Participants		Non-participants	
	Main occupation	Secondary occupation	Main occupation	Secondary occupation
subsistence farmer	64.8	5.5	50.0	11.1
businessman	6.6	1.1	33.3	0
regular employment	9.9	11.0	5.6	11.1
wage earner	1.1	1.1	5.6	5.6
other	2.2	2.2	0	0
not reported	15.4	79.1	5.6	72.2
Total	100.0	100.00	100.0	100.0

Household annual income-% (KShs.)

Income	Participants	Non-participants
10,000 ò income	26.4	16.7
10,000 < income ó 30,000	22.0	38.9
30,000 < income ó 50,000	13.2	11.1
50,000 < income ó 100,000	4.4	16.7
100,000 < income	1.1	5.6
not reported	33.0	11.1
Total	100.0	100.0

Household size(%)

Size	Participants	Non-participants
3 ò members	9.9	5.6
3 < members ó 8	78.0	77.8
8 < members ó 12	12.1	11.1
12 < members	0	5.6
not reported	0	0
Total	100.0	100.0

Household composition (%)

Composition	Participants	Non-participants
females =males	16.5	
females > males	37.4	
females < males	46.2	
Total	100.0	100.0

Household Inventory (Assets)

Main house thatch

Thatch type	Participants	Non-participants
iron sheets	84.6	72.2
grass	15.4	27.8
other	0	0
Total	100.0	100.0

Main house floor type

	Participants	Non-participants
cemented	27.5	33.3
un-cemented	72.5	66.7
other	0	0
Total	100.0	100.0

Main house number of rooms

<i>Number of houses</i>	<i>Participants</i>	<i>Non-participants</i>
one room	19.8	27.8
two or three	61.5	55.6
four or five	16.5	16.7
six and more	2.2	0

not reported	0	0
Total	100.0	100.0

Wall material- main house

Wall material	Participants	Non-participants
brick/mud	47.3	61.1
brick/cement	47.3	38.9
block/cement	2.2	0
poll/mud	3.3	0
Total	100.0	100.0

Household with toilets

	Participants	Non-participants
households with toilets	78.0	88.9
households without toilets	22.0	11.1
not reported	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	9.9	57.1	22.0	11.1	33.3	22.2
one	26.4	0	0	27.8	0	0
1 < number ó 5	26.4	37.4	40.7	27.8	55.6	22.2
5 < number ó 10	23.1	5.5	24.2	22.2	11.1	44.4
10 < number	14.3	0	13.2	11.1	0	11.1
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	26.4	16.7
0 < donkeys ó 3	71.4	83.3
more than four	2.2	0
not reported	0	0
Total	100.0	100.0

Number of jembes, spades, mattocks, etc.

	Participants	Non-participants
nil	2.2	0
0 < jembes ó 5	62.6	77.8
5 < jembes ó 10	29.7	11.1
10 < jembes	5.5	5.6
not reported	0	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	54.9	49.5	71.4	86.8	40.7	92.3	98.9
0 < number ó 3	45.1	50.5	28.6	13.2	58.2	7.7	1.1
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	38.9	50.0	77.8	100.0	38.9	94.4	100.0
0 < number ó 3	50.0	50.0	22.2	0	61.1	5.6	0
3 < number	11.1	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	53.8	4.4	55.6	0
5 < acres ó 10	22.0	0	22.2	0
10 < acres ó 50	23.1	0	22.2	0
50 < acres	0	0	0	0
not reported	1.1	95.6	0	100.0
Total	100.0	100.0	100.0	100.0

Main land use (%)

Use	Participants		Non-participants	
	main use	second main use	main use	second main use
homestead	0	63.7	0	66.7
agriculture	96.7	3.3	100.0	5.6
livestock grazing	3.3	31.9	0	27.8
rented out	0	1.1	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	96.7	0	100.0
charcoal	0	3.3	0	0

solar	0	0	0	0
gas	0	0	0	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	1.1	0
1993-1997	0	0
1998-2001	3.3	0
no response	4.4	0
not migrated	91.2	100.0
Total	100.0	100.0

Nature of migration

	Participants	Non-participants
permanent	4.4	0
temporary	0	0
working outside the location	0	0
no response	4.4	0
not migrated	91.2	100.0
Total	100.0	100.0

Place of settlement

	Participants	Non-participants
village	2.2	0
town	2.2	0
abroad	0	0
no response	4.4	0
not applicable	91.2	100.0
Total	100.0	100.0

Reasons for migration

	Participants	Non-participants
in search of employment	0	0
land inadequacy	3.3	0
drought coping	0	0
marriage	0	0
other	0	0
no response	4.4	0
not migrated	92.3	100.0
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	After	Before	After IWSS	Before	After	Before	After

	IWSS	IWSS	IWSS		IWSS	IWSS	IWSS	IWSS
20 ò litres	17.6	3.3	37.4	4.4	60.4	51.6	1.1	3.3
20 < litres ó 40	57.1	81.3	42.9	47.3	14.3	22.0	0	1.1
40 < litres ó 60	18.7	13.2	15.4	26.4	9.9	7.7	0	0
60 < litres ó 80	4.4	2.2	2.2	19.8	1.1	1.1	0	0
80 < litres ó 100	0	0	2.2	2.2	0	0	0	0
100 < litres	0	0	0	0	0	0	0	0
not reported	2.2	0	0	0	14.3	17.6	98.9	95.6
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 watering	Other uses
20 ò litres	11.1	33.3	61.1	5.6
20 < litres ó 40	72.2	61.1	22.2	11.1
40 < litres ó 60	16.7	5.6	5.6	0
60 < litres ó 80	0	0	0	0
80 < litres ó 100	0	0	0	0
100 < litres	0	0	0	0
not reported	0	0	11.1	83.3
Total	100.0	100.0	100.0	100.0

Choice of Water Source: Factor influencing choice of water source:

Participants- dry season

<i>Factor/Percentage</i>	<i>Rank 1</i>	<i>Rank 2</i>	<i>Rank 3</i>
distance	60.4	6.6	0
quality	2.2	1.1	2.2
quantity	6.6	1.1	0
Multiple use	12.1	11.0	0
Reliability	3.3	2.2	0
No alternative	2.2	4.4	0
not reported	13.2	73.7	97.8
Total	100.0	100.0	100.0

Participants- wet season

<i>Factor/Percentage</i>	<i>Rank 1</i>	<i>Rank 2</i>	<i>Rank 3</i>
distance	30.8	9.9	0
multiple use	3.3	4.4	0
quality	28.6	6.6	2.2
quantity	12.1	25.3	3.3
Reliability	24.2	1.1	1.1
No alternative	0	1.1	14.3
not reported	1.1	51.7	79.1
Total	100.0	100.0	100.0

Non-participants- dry season

<i>Factor/Percentage</i>	<i>Rank 1</i>	<i>Rank 2</i>	<i>Rank 3</i>
distance	44.4	16.7	0
quality	5.6	5.6	0

quantity	0	11.1	5.6
Multiple use	0	5.6	0
Reliability	5.6	0	5.6
No alternative	38.9	5.6	0
not reported	5.6	55.6	88.9
Total	100.0	100.0	100.0

Non-participants- wet season

Factor/Percentage	Rank 1	Rank 2	Rank 3
distance	38.9	27.8	0
quality	11.1	5.6	0
quantity	0	0	0
Multiple use	0	5.6	0
Reliability	5.6	0	0
No alternative	38.9	0	5.6
not reported	5.6	61.1	94.4
Total	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	72.2	0	30.8	0	22.0
piped	0	0	0	0	0	0
springs	0	0	0	0	0	0
scoop-hole	100.0	11.1	100.0	45.1	98.9	24.2
bore-hole	0	0	0	0	0	0
rock catchment	0	16.7	0	2.2	0	0
roof catchment	0	0	0	20.9	0	24.2
sand dam	0	0	0	1.1	1.1	27.5
wells	0	0	0	0	0	0
earth dam	0	0	0	0	0	2.2
not reported	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Depth of scoop holes (ft)

<i>Depth (ft)</i>	<i>Non-participants</i>	<i>Participants (Before IWSS)</i>	<i>Participants (After IWSS)</i>
2 ò depth	5.6	2.2	50.5
2 < depth ó 5	50.0	35.6	12.1
5 < depth ó 10	38.8	20.0	0
10 <depth ó15	5.6	3.3	0
15 <depth	0	3.3	0
not applicable	0	18.9	18.7
not reported	0	16.6	18.7
Total	100.0	100.0	100.0

Quality of water from main source before and after IWSS

Quality	Non-Participants		Participants (Before IWSS)		Participants (After IWSS)	
	Dry Season	Wet season	Dry season	Wet season	Dry season	Wet season
Clean/clear/good	100.0	100.0	98.9	100.0	98.9	97.8
Dirty/coloured/bad smell	0	0	1.1	0	0	2.2
Salty	0	0	0	0	0	0
Other	0	0	0	0	1.1	0
not reported	0	0	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

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

Litres	Non-participants		Participants (Before IWSS)		Participants (After IWSS)	
	Dry season	Wet season	Dry season	Wet season	Dry season	Wet season
40 ò quantity	0	0	6.6	7.7	1.1	5.5
40 < quantity ó 60	11.1	22.2	17.6	28.6	7.7	15.4
60 < quantity ó 80	33.3	33.3	31.9	24.2	27.5	16.5
80 < quantity ó 100	11.1	16.7	20.9	15.4	15.4	31.9
100 > quantity	27.8	22.2	14.3	16.5	28.6	20.9
not reported	16.7	5.6	8.8	7.7	19.8	9.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

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

Kilometres	Non-participants		Participants (Before IWSS)		Participants (After IWSS)	
	Dry season	Wet season	Dry season	Wet season	Dry season	Wet season
0.5 ò Km	66.7	61.1	39.6	44.0	44.0	59.3
0.5 < Km ó 2	33.3	27.8	51.6	34.1	49.5	17.6
2 < Km ó 5	0	0	7.7	5.5	6.6	3.3
5 < Km ó 10	0	0	1.1	1.1	0	0
10 < Km ó 15	0	0	0	0	0	0
not reported	0	11.1	0	15.4	0	19.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

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

Hours	Non-participants		Participants (Before IWSS)		Participants (After IWSS)	
	Dry season	Wet season	Dry season	Wet season	Dry season	Wet season
0.5 ò hour	55.6	72.2	26.4	36.3	24.2	19.8
0.5 < hours ó 1	38.9	22.2	47.3	35.2	49.5	45.1
1 < hours ó 2	5.6	0	25.3	12.1	25.3	26.4

2 < hours ó 5	0	0	1.1	1.1	1.1	7.7
5 < hours ó 10	0	0	0	0	0	1.1
10 > hours	0	0	0	0	0	0
not reported	0	5.6	0	15.4	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Trips to the main water source in a day

Trips	Non-participants		Participants (Before IWSS)		Participants (After IWSS)	
	Dry season	Wet season	Dry season	Wet season <i>n</i>	Dry season <i>n</i>	Wet season
One	16.7	44.4	42.9	40.7	42.9	40.7
two	55.6	16.7	48.4	29.7	50.5	25.3
three	22.2	27.8	4.4	7.7	5.5	5.5
four and five	5.6	5.6	4.4	4.4	1.1	7.7
more than five	0	0	0	0	0	0
not reported	0	5.6	0	17.6	0	20.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

Main water use from the main water source

Main use	Non-participants		Participants (Before IWSS)		Participants (After IWSS)	
	Dry season	Wet season	Dry season	Wet season	Dry season <i>n</i>	Wet season
drinking	0	0	0	0	0	0
washing/cleaning	11.1	11.1	0	2.2	4.4	12.1
cooking	0	0	0	2.2	0	0
general	88.9	88.9	97.8	93.3	93.4	85.7
livestock watering	0	0	2.2	0	0	2.2
not reported	0	0	0	2.2	2.2	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Who used to fetch water before and after IWSS?

Who	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
husband	0	0	0
wife	61.1	61.5	57.1
boys	0	0	1.1
girls	0	6.6	7.7
house-help	0	1.1	1.1
girls/husband	0	0	0
boys/husband	0	0	0
husband/wife	0	0	0
wife/boys	0	6.6	8.8
wife/girls	16.7	6.6	2.2
wife/house-help	0	0	0
boys/girls	0	13.2	19.8
boys/house-help	0	0	1.1
girls/house-help	5.6	0	0

husband/house-help	0	0	0
wife/Children	16.7	4.4	1.1
wife/D.I.L	0	0	0
no response	0	0	0
Total	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	5.6	11.0	8.8
donkey	50.0	76.9	64.8
bicycle	0	0	1.1
cart/wheel barrow	5.6	0	0
motor vehicle		0	0
human labour/donkey	38.9	12.1	25.3
human labour/cart/wheel barrow	0	0	0
human labour/motor vehicle	0	0	0
donkey/cart/wheelbarrow	0	0	0
not reported	0	0	0
Total	100.0	100.0	100.0

General Impact of IWSS (Participants)

	increased	decreased	no change
water	90.1	0	1.1
distance	3.3	30.8	3.3
disease	0	0	1.1
crop farming	0	0	1.1
kitchen gardening	0	0	1.1
vegetable growing	12.1	0	1.1
livestock watering	69.2	0	1.1
brick making	17.6	0	1.1
bee keeping	8.8	0	1.1
body washing	41.1	0	1.1
clothes washing	8.8	0	1.1
utensil washing	40.7	0	1.1
tree nurseries	42.9	0	1.1
house washing	3.3	0	1.1
terracing	12.1	0	1.1

Water rationing (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
yes	0	1.1	1.1
no	100.0	98.9	98.9
not reported	0	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	0	1.1	1.1
Queuing	0	0	0
other	0	0	0

not reported	100.0	98.9	98.9
Total	100.0	100.0	100.0

Accessibility of your nearest dam

	Percent
accessible	85.7
not accessible	8.8
other characteristics	3.3
not reported	2.2
Total	100.0

Satisfied with the sand dam project?

	Percent
Satisfied	100.0
Not satisfied	0
not reported	0
Total	100.0

Why satisfied?

	Percent
Plenty of water for domestic use	36.3
Farm productivity has increased	0
Increased water for watering animals	50.5
Water helped in construction of houses	2.2
Reduced distances to water source	4.4
Other reasons	4.4
Not reported	2.2
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 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	15.4
Not shifted	83.5
No response	1.1
Not reported	0
Total	100.0

If not shifted, reason

	Percent
Traditional water source nearer	26.4
No opportunity for multiple use	1.1

the well dries up in dry season	6.6
water not clean	12.1
other	34.1
no response	1.1
not reported	18.9
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	46.2	50.0	100.0	100.0	98.9	100.0	20.9	26.4
once	17.6	10.0	0	0	0	0	1.1	1.1
twice	26.4	24.4	0	0	1.1	0	3.3	0
thrice	7.7	11.1	0	0	0	0	2.2	0
rarely	2.2	2.2	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	8.8	8.8
not applicable/no response	0	0	0	0	0	0	51.6	51.6
not reported	0	2.2	0	0	0	0	12.1	12.1
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
daily	27.8	94.4	94.4
once	16.7	0	0
twice	38.9	0	0
thrice	16.7	5.6	0
rarely	0	0	0
when dirty	0	0	0
doesn't	0	0	0
not applicable	0	0	0
not reported	0	0	5.6
Total	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	0
covering well with lid	11.1	0	0
locking gate	0	0	0
watchman	0	0	0
no protection	88.9	0	0
not applicable	0	0	0
local arrangements	0	0	0
not reported	0	100.0	100.0
Total	100.0	100.0	100.0

Soil conservation

Terracing before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil	11.1	14.3	14.3
0 < number ó 3	22.2	7.7	5.5
3 < number ó 5	22.2	44.0	44.0
5 < number ó 10	33.3	27.5	29.7
10 < number	11.1	6.6	6.6
no response	0	0	0
not reported	0	0	0
Total	100.0	100.0	100.0

Tree planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil	16.7	41.8	31.9
0 < number ó 5	16.7	4.4	5.5
5 < number ó 10	44.4	28.6	27.5
10 < number ó 50	22.2	25.3	35.2
50 < number	0	0	0
no response	0	0	0
not reported	0	0	0
Total	100.0	100.0	100.0

Gabions before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil	83.3	95.6	94.5
0 < number ó 5	5.6	0	0
5 < number ó 10	0	0	0
10 < number	5.6	0	0
no response	0	0	0
not reported	5.6	4.4	5.5
Total	100.0	100.0	100.0

Misonzo before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil	16.7	14.4	10.0
0 < number ó 5	27.8	32.2	31.1
5 < number ó 10	44.4	45.6	47.8
10 < number	11.1	6.7	11.1
no response	0	1.1	0
not reported	0	0	0
Total	100.0	100.0	100.0

Grass planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
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Yes	88.9	77.8	86.8
No	11.1	20.0	13.2
no response	0	0	0
Not reported	0	2.2	0
Total	100.0	100.0	100.0

Waterborne diseases mitigation measures

Boiling (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Boil drinking water	77.8	86.8	86.8
not reported	22.2	13.2	13.2
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	0	3.4	8.8
not reported	100.0	96.6	91.2
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	4.4
not reported	100.0	100.0	95.6
Total	100.0	100.0	100.0

Dry stagnant waters before and after IWSS (%)

	Before IWSS	After IWSS
Dry stagnant water	0	0
not reported	100.0	100.0
Total	100.0	100.0

Inoculation before and after IWSS (%)

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

	Before IWSS	After IWSS
Using nets	0	0

not reported	100.0	100.0
Total	100.0	100.0

Observing cleanliness of utensils before and after IWSS (%)

	Non-participants	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

Mode of choosing water source committee members/dam committee members

Participants:

	Participants (Dam committee)			
	Nomination	Election	Selection	Other mode
Yes	0	5.5	94.5	0

Participants:

By whom	Participants (Dam committee)			
	Nomination	Election	Selection	Other mode
not reported	100.0	94.5	5.5	100.0
community	0	5.5	72.5	0
provincial administration	0	0	0	0
political leaders	0	0	0	0
dam members	0	0	22.0	0
Other	0	0	0	0
Total	100.0	100.0	100.0	100.0

Non-Participants:

	Non-participants			
	Nomination	Election	Selection	Other mode
Yes	0	0	5.6	0

Non-participants:

By whom	Participants (Dam committee)			
	Nomination	Election	Selection	Other mode
not reported	0	0	0	0
community	0	0	5.6	0
provincial administration	0	0	0	0
political leaders	0	0	0	0
dam members	0	0	0	0
Other	0	0	94.4	0
Total	100.0	100.0	100.0	100.0

Participants: Duration in office- dam committee

	Percent
not reported	0
one month	6.6
half-year	75.8

one year	7.7
two years	1.1
more than two years	4.4
not stated	2.2
indefinitely	1.1
no response	1.1
Total	100.0

Non-participants: Duration in office- committee

	Percent
not reported	0
one month	0
half-year	0
one year	0
two years	0
not stated	5.6
indefinitely	0
no response	94.4
Total	100.0

Participants: Factored considered when choosing dam committee member

<i>Factor</i>	<i>Considered</i>
honesty	0
transparency	1.1
trustworthy	2.2
respectable	5.5
religious	2.2
social	1.1
ability to lead	20.9
hard working	4.4
faithful	0
active	28.6
commitment	13.2
age/experience	2.2
good in communication	14.3
maturity	17.6
participation	2.2
availability	1.1
wealth	0
other aspect	13.2

Impact of dam committee in regard to:

<i>Factor</i>	<i>Positive</i>	<i>Negative</i>	<i>no impact</i>
age	96.7	0	0
religion	97.8	0	0
political party affiliation	96.7	0	2.2
wealth	97.8	0	0
gender	96.7	0	0

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

	Non-participants	Participants
yes	5.6	89.0
no	0	11.0
no response	0	0
not reported	94.4	0
Total	100.0	100.0

Linkage between dam and other committees?

	Non-participants	Participants
yes	0	7.7
no	5.6	92.3
not reported	94.4	0
Total	100.0	100.0

If yes to linkage, how?

	Non-participants	Participants
considering community committee members in dam committee	0	0
dam committee members considered in other community committee	0	3.3
dam committee members opinion sought in development issues	0	3.3
no response	0	0
other	0	1.1
not reported	100.0	92.3
Total	100.0	100.0

Participants: Other general benefits derived from IWSS

	Percent
yes	13.2
no	84.6
not reported	2.2
Total	100.0

Non-participants: Member of any community group?

	Percent
no response	0
yes	44.4
no	55.6
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	0
community members interact freely while working together	0	5.6
women contribute to a fund to uplift their	0	0

welfare		
community formed groups for planting vegetables and seedlings for sale	0	5.6
formation of groups to help in harvesting/terracing and other undertakings	6.6	0
making new friends	0	0
other	5.5	5.6

Influence of development agenda by community

	Non-participants	Participants
yes	16.7	38.5
no	83.3	60.4
not reported	0	1.1
Total	100.0	100.0

If influence yes, how:

<i>How</i>	<i>Non-participants</i>	<i>Participants</i>
the community is free to express its interests during development meeting	4.4	5.6
before any law/bylaw/rule is passed people community is consulted	0	0
done through <i>barazas</i> whereby members air their views freely	7.7	5.6
through consultation with those concerned	0	0
involved when discussing development ideas	6.6	5.6
headman (administrators) consults with the people and forwards their views	8.8	0
chairpersons of groups, headmen and other leaders consulted through formation of groups	5.5	0
any other way	11.0	0

Participants: Impact of increased water after IWSS:

	improved	declined	the same
health	94.5	0	4.4
cleanliness	91.2	0	7.7
leisure	86.8	3.3	8.8
girl-child school absenteeism	7.8	7.8	32.2
boy-child school absenteeism	7.7	33.0	46.2
girl-child school punctuality	82.4	2.2	12.1
boy-child school punctuality	79.1	2.2	14.3
cooking at the right time	79.1	2.2	16.5

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

	positive	negative	no effect
health	72.2	11.1	0
cleanliness	83.3	0	0
leisure	83.3	0	0

girl-child school absenteeism	27.8	55.6	0
boy-child school absenteeism	27.8	55.6	0
girl-child school punctuality	72.2	0	11.1
boy-child school punctuality	72.2	0	11.1
cooking at the right time	66.7	5.6	11.1

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

	positive	negative	no impact
health	16.7	0	0
cleanliness	16.7	0	0
leisure	11.1	5.6	0
girl-child school absenteeism	0	11.1	5.6
boy-child school absenteeism	0	11.1	5.6
girl-child school punctuality	16.7	0	0
boy-child school punctuality	16.7	0	0
cooking at the right time	16.7	0	0

Participants: Increase in water impact

	improved	declined	the same
security	93.4	3.3	2.2
pregnancy rates	76.9	4.4	17.6
community cohesiveness	91.2	7.7	0
marriage rates	80.2	11.0	7.7

Non-participants: water availability impact on the following

	positive	negative	no impact
security	83.3	0	0
pregnancy rates	66.7	0	16.7
community cohesiveness	66.7	11.1	5.6
marriage rates	72.2	0	11.1

Non-participants: water scarcity impact on the following

	positive	negative	no impact
security	16.7	0	0
pregnancy rates	11.1	0	0
community cohesiveness	11.1	0	0
marriage rates	11.1	0	0

Is trekking long distances by girls regarded as good?

	Non-participants	Participants
good	11.1	4.4
bad	88.9	95.6
no response	0	0
not reported	0	0
Total	100.0	100.0

bad

	Non-participants	Participants
tiring	44.4	46.2
compromise other household duties	16.7	13.2

develop irresponsible behaviour-early pregnancies/marriages	38.9	24.2
leads to school absenteeism/lateness	0	4.4
not generally safe	27.8	16.5
other reason	5.6	2.2

good

	Non-participants	Participants
body exercise and good health	5.6	0
test of adulthood- could take care of themselves	0	1.1
other reason	5.6	3.3

Impact of the project in relation to trek (Participants)

	percent
time	17.6
absenteeism/lateness in school improved	1.1
school drop out rates lowered	11.0
improved security of girls	13.2
increased time for leisure	11.0
distance to water source reduced	0
other impact	39.6
no impact	5.5

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	0	0	0	0	0	0
2 < hours ó 4	0	0	0	1.1	0	0
4 < hours ó 6	16.7	5.6	7.7	7.7	1.1	3.3
6 < hours ó 8	83.3	94.4	78.0	76.9	78.0	75.8
8 < hours	0	0	14.3	14.3	16.5	16.5
not reported	0	0	0	0	4.4	4.4
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)	16.6	16.5
husband (elsewhere)	0	1.1
wife (in the household)	5.6	4.4
wife (elsewhere)	0	1.1
friends	50.0	48.4
local administration (headman/Ass. Chief/Chief)	27.8	24.2
none	0	2.2
religious leaders	0	0
other	0	1.1
not reported	0	1.1
Total	100.0	100.0

Economic activities (%):

Mentioned	Non-participants	Participant (Before IWSS)	Participant (After IWSS)
agriculture	100.0	96.7	97.8
goat/sheep	77.8	74.7	71.4
cattle	66.7	47.3	51.6
vegetable growing	22.2	17.6	16.5
kitchen gardening	33.3	3.3	5.5
brick making	16.7	12.1	13.2
tree nurseries	22.2	7.7	8.8
bee keeping	0	0	3.3

New crops/activities introduced after IWSS:

New crop/activity	Percent
spinach growing	0
vegetable growing	2.2
fish	0
<i>sukuma wiki</i>	4.4
onions	0
tomatoes	2.2
<i>ndania</i>	0
sugar cane	0
arrow roots	0
fruits	0
other crop	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	0
soil fertility- tree planting and terracing	0
reduced cost of buying salt lick for animals	0
vegetables- plenty and cheap	0
increased sand for construction	0
other benefit	1.1

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

	Percent
attracted- total	1.1
leased land to cultivate	1.1
paid sand dam fees before leasing the land	0

Use of time saved from walking long distances:

	Percent
<i>Shamba</i> work	20.9
taking care of livestock	1.1

making bricks	5.5
kitchen gardening	1.1
tending tree nursery	1.1
business	5.5
leisure	35.2
other activities	8.8

Cost of water per 20 litre jerrican (KShs)

	Dry season			Wet season		
	Non-participants	Participants		Non-participants	Participants	
		Before IWSS	After IWSS		Before IWSS	After IWSS
5 ò shillings	50.0	37.4	46.2	55.6	39.6	48.4
5 < shillings ó 10	44.4	54.9	51.6	38.9	52.7	49.5
10< shillings ó 15	0	5.5	0	0	5.5	0
15 < shillings ó 20	0	0	0	5.6	0	0
20 < shillings	5.6	0	0	0	0	0

Controlled measure

Measure	Non-participants	Participants
covering the well with a lid	0	2.2
washing of clothes not allowed in the IWSS	0	0
only participants are allowed	0	0
planting of grass to check erosion	0	0
children not allowed to play near the IWSS	0	0
other control/plan (eg. prayers)	0	49.5
not controlled	100.0	31.9

If not controlled, why?

Why	Non-participants	Participants
it is a public/natural resource	72.2	2.2
participants are responsible people- respect their efforts	0	0
other reason	27.8	18.7

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	41.8	11.0	20.9	0	0	0
washing clothes inside the dam/well	42.9	9.9	20.9	0	0	0
watering animals in the dam/well	42.9	9.9	19.8	0	0	0
spraying vegetables/crops chemicals around the dam/well	42.9	9.9	20.9	0	0	0
defecating/urinating near the dam/well	40.7	9.9	20.9	0	0	0
dropping objects in the source	42.9	9.9	20.9	0	0	0

Non-participants:

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

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

	Non-participants	Participants
dam/source committee members	0	4.4
chairperson of the dam committee	0	0
provincial administration	0	1.1
community	0	1.1
watchman	0	0
no body/party	0	35.2
government	5.6	0
no maintenance required	83.3	22.0
owner	0	5.5
Sasol/other NGO	0	2.2
other	5.6	5.5
not reported	5.6	23.1
Total	100.0	100.0

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

	Non-participants	Participants
dam committee members	0	56.0
chairperson of the dam committee	0	3.3
no body/party	0	2.2
provincial administration	0	0
community	0	0
politicians	0	0
no funds needed	72.2	0
sasol/ngo	0	0
other	5.6	5.5
not reported	22.2	33.0
Total	100.0	100.0

Operation and maintenance contribution by households if applicable (KShs)

	Non-participants	Participants
25 ò KShs.	0	2.2
25 < KShs ó 50	0	0

50 < KShs ó 75	0	2.2
75 < KShs ó 100	0	0
100 < KShs	0	0
in kind (labour)	0	0
no funds needed	5.6	5.5
not reported	94.4	90.1
Total	100.0	100.0

Frequency of dam/source committee meetings

	Non-participants	Participants
monthly	0	6.6
once/three months	0	0
semi annually	0	5.5
never meet	44.4	30.8
when there is need	5.6	3.3
other	0	1.1
no committee reported	5.6	0
not reported	44.4	52.7
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	72.2	62.6	62.6	72.2	62.6	62.6	72.2	62.6	62.6
wife	16.7	24.2	24.2	16.7	24.2	24.2	16.7	24.2	24.2
husband/wife	11.1	7.7	7.7	11.1	7.7	7.7	11.1	7.7	7.7
children	0	0	0	0	0	0	0	0	0
father/mother-in-law	0	5.5	5.5	0	5.5	5.5	0	5.5	5.5
boys	0	0	0	0	0	0	0	0	0
girls	0	0	0	0	0	0	0	0	0
other	0	0	0	0	0	0	0	0	0

Impact of increased family income to family unit

	Percent
positive	96.7
negative	2.2
the same	0
no response	1.1
not reported	0
Total	100.0

Has increased incomes/opportunities led to conflict at:

	Percent
at family level not reported	100.0
at community level not reported	97.8

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

	Percent

100 ò KShs	2.2
100 < KShs ó 200	0
200 < KShs ó 500	0
500 < KShs ó 1,000	0
1,000 < KShs	0
not fixed	82.4
not reported	15.4
Total	100.0

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

	Percent
sheep	0
goat	0
cow	0
other	7.7
no response	1.1
not reported	91.2
Total	100.0

Value household attach to their water source

	Non-participants	Participants
500 ò KShs	0	0
500 < KShs ó 1,000	0	2.2
1,000 < KShs ó 5,000	0	1.1
5,000 < KShs ó 10,000	5.6	0
10,000 < KShs	94.4	95.6
not acceptable (invaluable)	0	0
not reported	0	1.1
Total	100.0	100.0

Willingness to pay for improved water resource

	Non-participants	Participants
500 ò KShs	66.7	83.5
500 < KShs ó 1,000	22.2	6.6
1,000 < KShs ó 5,000	0	1.1
5,000 < KShs ó 10,000	0	0
10,000 < KShs	0	0
not reported	11.1	8.8
Total	100.0	100.0

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

	Participants	Non-participants
report to chair/person	14.3	0
report to provincial administration	69.2	0
quit the source	0	0
report to SASOL	0	0
question the dam committee	7.7	0
alert other members and ask for a meeting	4.4	5.6

advice the management accordingly	0	0
request management to quit office	0	0
other	4.4	0
not reported	0	94.4
Total	100.0	100.0

Willingness to take up leadership position

	Participants	Non-participants
willing to up leadership position	70.3	5.6
not willing to lead	29.7	0
not reported	0	94.4
Total	100.0	100.0

Ownership of water resource (sand dam):

	Non-participants		Participants	
	True	False	True	False
community	16.7	83.3	93.4	6.6
individual	0	100.0	1.1	98.9
government	61.1	38.9	19.8	80.2
schools	0	100.0	2.2	96.7
KANU	0	100.0	0	100.0
SASOL/ NGOs	0	100.0	27.5	72.5
SDP	0	100.0	0	100.0
Christians	0	100.0	0	100.0
<i>Kathambi</i>	0	100.0	0	100.0
other	33.3	61.1	0	100.0

Why own the water resource (sand dam): Reasons

	community participated		it is a natural resource		sponsored		other	
	NP	P	NP	P	NP	P	NP	P
community	38.9	79.1	22.2	2.2	0	0	27.8	9.9
individual	11.1	12.1	27.8	7.7	0	8.8	50.0	54.9
government	0	6.6	50.0	13.2	0	7.7	50.0	57.1
schools	0	2.2	33.3	7.7	0	9.9	50.0	64.8
KANU	0	1.1	33.3	8.8	0	6.6	50.0	62.6
SASOL/ NGOs	0	24.2	33.3	5.5	0	7.7	50.0	48.4
SDP	0	1.1	33.3	8.8	0	6.6	50.0	62.6
Christians	0	0	33.3	7.7	0	7.7	50.0	63.7
<i>Kathambi</i>	0	0	33.3	7.7	0	7.7	50.0	61.5
other	0	4.4	55.6	16.5	0	9.9	33.3	47.3

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	1.1	0
report to dam/source committee chairperson	0	0	5.5	1.1
report to other members	0	0	4.4	0

report to the head man	0	0	54.9	0
report to the provincial administration	55.6	77.8	0	83.5
report to SASOL/sponsor	0	0	0	0
report to the police	27.8	16.7	29.7	1.1
beat up the person	0	0	0	2.2
banish him/her	0	0	0	0
force him/her to bear the cost	0	0	0	4.4
use force to stop him/her	5.6	0	0	0
no action	5.6	5.6	3.3	0
other	5.6	0	1.1	6.6
no response	0	0	0	1.1
Total	100.0	100.0	100.0	100.0

Any other comment

	Non-participants	Participants
more dams needed	0	14.3
congratulations- SASOL	0	6.6
sand dams are beneficial- increased incomes	0	0
satisfied with the location	0	1.1
sand dam too far, water source near home required	0	6.6
need IWSS	27.8	12.1
water source near home required	33.3	0
no comment	5.6	1.1
not reported	33.3	58.2
Total	100.00	100.0