

***Ithumula/Maluma Sub-Location, Nzambani Location, Chuluni Division
(154 Participants & 22 Non-participants)***

Household Demography

Head of the Household sex (%)

Sex	Participants	Non-participants
Female	56.5	59.1
Male	43.5	40.9
Total	100.0	100.0

Head of the Household age category

Age bracket	Participants	Non-participants
20 ò years	2.0	0
20 < years ó 35	40.1	57.2
35 < years ó 55	34.2	23.8
55 < years ó 70	19.7	19.0
70 < years	3.9	0
Total	100.00	100.00

Head of Household level of education

Level	Participants	Non-participants
informal	31.8	22.7
primary	56.5	59.1
secondary	11.0	18.2
tertiary	0.6	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	76.6	14.9	72.7	13.6
businessman	3.9	6.5	18.2	9.1
regular employment	5.2	0.6	9.1	0
wage earner	10.4	7.1	0	9.1
other	1.9	3.2	0	4.5
not reported	1.9	67.5	0	63.6
Total	100.0	100.00	100.0	100.0

Household annual income-% (KShs.)

Income	Participants	Non-participants
10,000 ò income	27.3	31.8
10,000 < income ó 30,000	50.0	45.5
30,000 < income ó 50,000	12.3	13.6
50,000 < income ó 100,000	4.5	9.1
100,000 < income	0.6	0
not reported	2.6	0

Total	100.0	100.0
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Household size(%)

Size	Participants	Non-participants
3 ò members	9.7	9.2
3 < members ó 8	68.8	72.7
8 < members ó 12	13.6	13.6
12 < members	5.8	4.5
not reported	1.3	0
Total	100.0	100.0

Household composition (%)

Composition	Participants	Non-participants
females =males	22.7	31.8
females > males	34.4	36.4
females < males	41.6	31.8
not reported	1.3	
Total	100.0	100.0

Household income sources (%)

	Participants		Non-participants	
	Main	Secondary	Main	Secondary
crop farming	57.1	26.6	54.5	40.9
livestock	1.3	5.8	0	9.1
business	8.4	4.5	18.2	4.5
regular employment	16.9	3.2	9.1	4.5
wage earning	9.1	15.6	13.6	4.5
pottery		1.3		
other	3.2	0	4.5	0
no response	1.9	1.3	0	4.5
not reported	1.9	41.6	0	31.8
Total	100.0	100.00	100.0	100.0

Income sources contribution (%)

(KShs.)	Participants		Non-participants	
	Main (%)	Second (%)	Main (%)	Second (%)
10,000 ò	12.3	27.9	18.2	45.5
10,000 < income ó 30,000	40.9	24.0	45.4	18.2
30,000 < income ó 50,000	22.7	4.5	27.3	0
50,000 < income ó 100,000	16.2	1.9	9.1	0
10,000 < income	5.2	0	0	0
no response	1.3	1.3	0	4.5
not reported	1.3	40.3	0	31.8
Total	100.0	100.0	100.0	100.0

Household Inventory (Assets)

Number of houses (%)

Number of houses	Participants	Non-participants
one	8.4	22.7
two or three	64.3	54.6
four or five	26.6	22.7
more than five	0.6	0
Total	100.0	100.0

Main house thatch

Thatch type	Participants	Non-participants
iron sheets	72.7	72.7
grass	26.6	27.3
tiles	0.6	0
Total	100.0	100.0

Main house floor type

	Participants	Non-participants
cemented	33.1	18.2
un-cemented	66.2	81.8
other	0.6	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	41.6	50.1
two or three	43.5	40.9
four or five	13.6	4.5
six and more	1.3	4.5
Total	100.0	100.0

Wall material- main house

Wall material	Participants	Non-participants
brick/mud	60.4	68.2
brick/cement	32.5	27.3
block/cement	0	4.5
poll/mud	6.5	0
not reported	0.6	0
Total	100.0	100.0

Household with toilets

	Participants	Non-participants
households with toilets	66.2	54.5
households without toilets	33.8	45.5
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	18.2	84.4	40.3	22.7	63.6	50.0
one	10.4	13.0	41.6	18.2	22.7	22.7
1 < number ó 5	41.6	1.3	14.3	40.9	9.1	0
5 < number ó 10	18.2	0	1.9	4.5	0	18.2
10 < number	11.7	0	0.6	13.6	4.5	9.1
not reported	0	1.3	0.6	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Number of donkeys

	Participants	Non-participants
nil	51.9	81.8
0 < donkeys ó 3	48.1	18.2
3 < donkeys ó 5	0	0
Total	100.0	100.0

Number of jembes, spades, mattocks, etc.

	Participants	Non-participants
nil	9.1	4.5
0 < jembes ó 5	66.9	86.4
5 < jembes ó 10	22.7	9.1
10 < jembes	0.6	0
not reported	0.6	
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	61.7	74.0	83.8	83.1	44.8	94.8	94.8
0 < numberó 3	37.0	24.7	14.9	15.6	53.9	2.6	3.9
3< number	0	0	0	0	0.6	1.3	0
not reported	1.3	1.3	1.3	1.3	0.6	1.3	1.3
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	68.2	59.1	72.7	77.3	40.9	95.5	100.0
0 < numberó 3	31.8	40.9	27.3	22.7	59.1	4.5	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	64.3	7.1	59.1	27.3

5 < acres ó 10	20.8	2.6	31.8	4.5
10 < acres	11.7	0.6	9.1	0
no response	2.6	2.6	0	0
not reported	0.6	87.0	0	68.2
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	5.2	52.6	4.5	54.5
agriculture	84.4	9.7	91.0	4.5
livestock grazing	9.1	35.7	4.5	40.9
rented out	0.6	0.6	0	0
not reported	0.6	1.3	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	95.5	5.2	100.0	0
kerosene	3.2	26.6	0	81.8
charcoal	1.3	3.2	0	18.2
not reported	0	64.9	0	0
Total	100.0	100.0	100.0	100.0

Food intake:

Type of Breakfast (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
tea/coffee	68.2	63.0	74.0
porridge	31.8	31.8	22.7
other	0	6.2	3.3
Total	100.0	100.0	100.0

Breakfast value before and after IWSS (KShs.)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
140 ò value	54.5	34.4	25.3
140 < value ó 350	31.8	53.2	55.2
350 < value ó 500	4.5	5.8	9.1
500 < value	4.5	3.2	6.5
no response	4.5	3.2	3.9
Total	100.0	100.0	100.0

Lunch before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
<i>ugali</i>	72.7	60.4	63.6
<i>githeri</i>	27.3	33.1	32.5
other	0	3.9	2.6
not reported	0	2.6	1.3
Total	100.0	100.0	100.0

Lunch value before and after IWSS (KShs.) (%)

	Non-Participants	Participants (Before IWSS)	Participants (After IWSS)
140 ò value	4.5	10.4	7.8
140 < value ó 350	40.9	42.2	42.2
350 < value ó 500	36.5	30.5	31.2
500 < value	13.6	12.3	11.7
not reported	4.5	4.6	7.1
Total	100.0	100.0	100.0

Dinner/supper before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
<i>ugali</i>	18.2	29.9	31.8
<i>githeri</i>	81.8	66.2	64.3
other	0	1.3	2.6
not reported	0	2.6	1.3
Total	100.0	100.0	100.0

Dinner value before and after IWSS (KShs.)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
140 ò value	0	7.2	5.2
140 < value ó 350	50.0	37.7	40.9
350 < value ó 500	31.8	35.7	31.2
500 < value	13.7	9.7	12.3
not reported	4.5	9.7	10.4
Total	100.0	100.0	100.0

Preparation, service and order of service

	Participants			Non-participants		
	Who prepares	Who serves	Who is served first	Who prepares	Who serves	Who is served first
wife	59.1	59.7	4.5	63.6	63.6	0
Husband	1.3	1.9	33.8	4.5	4.5	27.3
children	19.5	20.1	1.3	22.7	22.7	4.5
husband/children	0	0	0.6	0	0	0
house-help	0	1.3	0	0	0	0
husband/wife	1.3	0	0.6	0	0	0
wife/children	14.9	13.0	0	9.1	9.1	0
wife/house-help	0.6	0.6	0	0	0	0
all members	0.6	0.6	59.1	0	0	68.2

other	2.6	2.6	0	0	0	0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Migration

Year of migration

	Participants	Non-participants
1990-1992	3.2	9.1
1993-1997	3.2	4.5
1998-2001	7.8	9.1
not migrated	85.8	77.3
Total	100.0	100.0

Nature of migration

	Participants	Non-participants
permanent	4.5	4.5
temporary	1.9	4.5
working outside the location	7.8	13.6
not migrated	85.8	77.3
Total	100.0	100.0

Place of settlement

	Participants	Non-participants
village	6.5	0
town	7.7	22.7
abroad	0	0
not applicable	85.8	77.3
Total	100.0	100.0

Reasons for migration

	Participants	Non-participants
in search of employment	19.0	13.7
land inadequacy	1.3	4.5
marriage	3.9	4.5
not migrated	85.8	77.3
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	16.2	7.8	22.1	11.0	11.7	8.4	0.6	1.3
20 < litres ó 40	24.7	20.8	20.8	20.1	11.7	12.3	0.6	1.3
40 < litres ó 60	24.7	22.7	26.6	22.1	6.5	9.1	0.6	1.3
60 < litres ó 80	32.5	46.1	27.9	43.5	8.4	9.7	0.6	2.6
80 < litres ó 100	0	1.9	0.6	1.9	5.2	5.2	0	2.6
100 < litres	0	0	0	0.6	1.3	0	0	0.6

not reported	1.9	0.6	1.8	0.6	55.2	55.2	97.4	90.3
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	40.9	50.0	22.7	13.6
20 < litres ó 40	50.0	45.5	9.1	0
40 < litres ó 60	9.1	4.5	0	0
60 < litres ó 80	0	0	0	0
80 < litres ó 100	0	0	0	0
100 < litres	0	0	4.5	0
not reported	0	0	63.6	86.4
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>	<i>Rank 4</i>	<i>Rank 5</i>	<i>Rank 6</i>
distance	78.6	16.9	2.6	0	0.6	1.3
quality	9.7	41.6	14.3	0.6	0.6	1.3
quantity	5.2	9.7	30.5	3.9	0	0
Multiple use	1.9	13.0	1.9	0	0	0
Reliability	0.6	2.6	7.8	3.2	1.3	0
No alternative	1.9	7.1	11.0	19.5	0.6	0
not reported	1.9	9.1	31.7	72.6	96.7	97.4
Total	100.0	100.0	100.0	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>	<i>Rank 4</i>	<i>Rank 5</i>	<i>Rank 6</i>
distance	41.6	40.9	7.8	3.2	0	1.3
quality	50.6	8.4	7.8	0.6	0	0
quantity	0	20.1	23.4	4.5	0	0
Multiple use	1.9	11.7	4.5	0.6	0.6	0
Reliability	0.6	1.9	6.5	5.8	0.6	.6
No alternative	0	5.8	19.5	11.7	0.6	0
not reported	5.1	11.0	30.5	73.3	98.1	98.1
Total	100.0	100.0	100.0	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>	<i>Rank 4</i>	<i>Rank 5</i>	<i>Rank 6</i>
distance	54.5	27.3	9.1	0	0	0
quality	0	22.7	22.7	4.5	0	0
quantity	0	0	13.6	0	0	0
Multiple use	0	9.1	4.5	0	0	0
Reliability	0	9.1	0	0	0	0
No alternative	18.2	9.1	9.1	9.1	0	0
not reported	27.3	22.7	40.9	86.3	100.0	100.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Non-participants- wet season

Factor/Percentage	Rank 1	Rank 2	Rank 3	Rank 4	Rank 5	Rank 6
distance	36.4	22.7	13.6	9.1	0	0
quality	36.4	18.2	4.5	0	0	0
quantity	0	0	18.2	0	0	0
Multiple use	0	13.6	4.5	0	0	0
Reliability	0	4.5	4.5	0	0	0
No alternative	13.6	13.6	4.5	4.5	0	0
not reported	13.6	27.2	50.2	86.4	100.0	100.0
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	27.3	1.3	13.6	3.2	9.1
piped	0	0	0	0	0.6	0.6
springs	0	4.5	3.9	8.4	3.9	5.2
scoop-hole	31.8	9.1	69.5	24.7	11.7	9.7
roof catchment	0	13.6	0	22.1	0	20.8
sand dam	0	0	0.6	1.9	57.1	20.1
wells	63.7	45.5	20.8	24.7	20.1	26.6
earth dam	4.5	0	1.9	1.3	.06	1.3
bore-hole	0	0	0.6	0.6	1.9	2.6
rock-catchment	0	0	0	1.9	0	0.6
not reported	0	0	1.3	0.6	0.6	3.2
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 ÷ depth	4.5	7.8	70.1
2 < depth ÷ 5	31.8	46.1	13.0
5 < depth ÷ 10	18.2	30.5	1.3
10 < depth ÷ 15	4.5	3.2	0.6
15 < depth	0	3.2	0
not applicable	36.4	5.8	12.3
not reported	4.5	3.2	2.6
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	95.5	86.4	79.3	86.4	84.4	89.5
Dirty/coloured/bad smell	4.5	4.5	7.8	11.0	3.2	7.1
Salty	0	9.1	9.7	1.9	10.4	1.3
Other	0	0	0	0	0	3.5
not reported	0	0	3.2	0.6	1.9	.6
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	22.7	13.6	46.1	19.5	18.8	17.5
40<quantityó60	31.8	18.2	22.1	31.2	29.2	26.0
60<quantityó80	18.2	36.4	12.3	12.3	24.7	16.2
80<quantityó100	9.1	4.5	17.5	30.5	24.7	29.9
100>quantity	9.1	22.7	1.3	5.8	1.9	6.5
not reported	9.1	4.5	0.6	0.6	0.6	3.8
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	40.9	63.6	39.0	71.4	46.8	68.2
0.5 < Km ó 2	50.1	27.4	33.8	20.8	48.7	22.1
2 < Km ó 5	0	4.5	17.5	3.2	3.9	0.6
5 < Km ó 10	4.5	0	7.1	0.6	0.6	0.6
10 < Km ó 15	4.5	0	0.6	0	0	0
15 < Km	0	0	1.9	0	0	0
not reported	0	4.5	0	3.8	0	8.3
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	68.2	81.8	45.5	77.3	72.1	77.3
0.5 < hours ó 1	18.2	13.7	20.1	10.4	21.4	8.4
1 < hours ó 2	9.1	0	14.9	2.6	4.5	0.6
2 < hours ó 5	4.5	0	14.9	1.9	1.9	0.6
5 < hours ó 10	0	0	0	0.6	0	0
10 > hours	0	0	4.5	0	0	0
not reported	0	4.5	0	7.1	0	12.9
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	Dry season	Wet season
One	0	13.6	33.1	10.4	7.8	7.8
two	27.3	13.6	24.7	24.7	35.7	21.4
three	36.4	36.4	18.8	24.0	23.4	26.6
four and five	31.8	27.3	20.1	20.1	27.3	18.8
more than five	4.5	4.5	2.6	5.2	2.6	3.2
not reported	0	4.5	0.6	15.5	3.2	18.2
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	Wet season
washing/cleaning	0	0	0.6	0	00	0.6
drinking	4.5	0	0.6	1.9	1.9	2.6
general	95.5	100.0	96.8	92.2	92.9	90.9
cooking	0	0	0.6	2.6	0	.06
livestock watering	0	0	0.6	0	1.9	0
production	0	0	0	0.6	0	1.3
not reported	0	0	0.6	2.5	3.2	3.8
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	2.6	3.2
wife	50.0	39.0	36.4
boys	0	1.3	1.3
girls	13.6	8.4	12.3

D.I.L	4.5	0	0
house-help	4.5	0	0
husband/wife	0	5.2	2.6
husband/girls	0	2.6	0
husband/house-help	0	1.3	.6
wife/boys	9.1	9.7	7.8
wife/girls	13.6	20.1	21.4
wife/house-help	0	0.6	.6
boys/girls	4.5	2.6	2.6
boys/house-help	0	0	0
girls/house-help	0	0	0.6
wife/Children	0	4.5	3.2
wife/D.I.L	0	0	2.6
D.I.L	0	1.3	3.2
not reported	0	0.6	1.2
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	86.5	92.9	89.6
donkey	4.5	0.6	1.9
cart/wheel barrow	4.5	0.6	0
motor vehicle	0	1.3	0.6
human labour/donkey	4.5	1.9	4.5
human labour/cart/wheel barrow	0	1.3	1.3
donkey/cart/wheelbarrow	0	0.6	1.3
not reported	0	0.6	0.6
Total	100.0	100.0	100.0

General Impact of IWSS (Participants)

	increased	decreased	no change	no response	not reported	Total
water	94.2	1.3	0.6	0.6	3.2	100.0
distance	17.5	44.8	3.9	1.3	32.5	100.0
disease	9.1	2.6	5.8	.6	81.8	100.0
crop farming	16.2	.6	5.8	.6	76.6	100.0
kitchen gardening	22.1	.6	5.2	.6	71.4	100.0
vegetable growing	57.1	1.9	0	0	40.9	100.0
livestock watering	31.2	2.6	0	0.6	65.6	100.0
brick making	27.9	0.6	4.5	0	66.9	100.0
bee keeping	12.3	0.6	5.2	0	81.8	100.0
body washing	44.2	0.6	4.5	0	50.6	100.0
clothes washing	42.9	0	3.9	0	53.2	100.0
utensil washing	37.7	0	3.9	0.6	57.8	100.0
tree nurseries	21.4	0.6	4.5	0	73.4	100.0
house washing	26.6	0.6	0	4.5	68.2	100.0
terracing	7.1	0.6	5.2	0	87.0	100.0
other	3.2	1.3	5.8	0	89.6	100.0

Water rationing (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
yes	36.4	51.3	5.9
no	59.1	45.5	89.6
not reported	4.5	3.2	4.5
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	36.4	37.7	3.3
Queuing	0	11.0	2.6
other	0	2.6	0
not reported	63.6	48.7	94.1
Total	100.0	100.0	100.0

Accessibility of your nearest dam

	Percent
accessible	96.9
not accessible	7.1
other characteristics	0.6
not reported	0.6
Total	100.0

Satisfied with the sand dam project?

	Percent
Satisfied	88.9
Not satisfied	10.5
not reported	0.6
Total	100.0

Why satisfied?

	Percent
Plenty of water for domestic use	61.7
Farm productivity has increased	6.5
Increased water for watering animals	6.5
Water helped in construction of houses	1.3
Reduced distances to water source	5.2
Other reasons	5.8
Not reported	13.0
Total	100.0

If not satisfied, why?

	Percent
No opportunity for multiple use	2.6
The well dries up in the dry season	2.6
The water in the well is not clean	2.6
The well is too shallow	0
Other reasons	3.9
Not reported	88.3
Total	100.0

Shift from the traditional water source?

	Percent
Shifted	64.3
Not shifted	33.1
No response	1.8
Not reported	0.6
Total	100.0

If not shifted, reason

	Percent
Traditional water source nearer	16.2
No opportunity for multiple use	1.9
the well dries up in dry season	5.2
water in the well not clean	1.3
other	2.6
no response	1.3
not reported	71.4
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	10.4	37.0	64.3	83.8	47.4	44.8	6.5	12.3
once	27.3	5.2	3.2	0	1.3	.6	20.8	13.0
twice	25.3	13.0	7.8	3.2	28.6	20.1	3.9	7.1
thrice	28.6	36.4	18.2	2.6	5.2	16.2	3.9	4.5
rarely	0	0	0	0	9.1	6.5	1.9	1.9
when dirty	0	0	0	0	0	.6		
never used to/doesn't	0	0	0	0	0	0	8.4	8.4
not applicable	0	0	0	0	0	0	27.9	25.3
not reported	7.8	13.6	6.5	10.2	8.3	10.9	26.6	27.2
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	31.8	86.5	50.0	0
once	13.6	4.5	0	0
twice	22.7	4.5	40.9	0
thrice	27.3	0	4.5	0
rarely	0	0	0	0
when dirty	0	0	0	4.5
doesn't	0	0	0	4.5
not applicable	0	0	0	86.5
not reported	4.5	4.5	4.5	4.5
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	18.2	22.1	14.9
covering well with lid	18.2	12.3	24.0
watchman	0	1.3	1.3
no protection	54.5	55.8	51.9
not applicable	0	0	1.3
locking gate	4.5	0	
animal separate watering point		0	0.6
local arrangements	4.5	3.2	3.9
not reported	0	5.0	1.8
Total	100.0	100.0	100.0

Soil conservation

Terracing before and after IWSS (%)

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

nil	45.5	37.0	25.3
0 < number ó 3	27.3	26.6	29.2
3 < number ó 5	18.2	18.8	26.6
5 < number ó 10	9.1	7.1	10.4
10 < number	0	3.9	4.5
not reported	0	6.4	3.9
Total	100.0	100.0	100.0

Tree planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil	45.5	43.5	38.3
0 < number ó 5	4.5	13.6	12.3
5 < number ó 10	36.4	14.3	20.8
10 < number ó 50	4.5	18.2	20.1
50 < number	4.5	1.3	1.9
not reported	4.5	9.0	6.5
Total	100.0	100.0	100.0

Gabions before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil	81.8	79.9	84.4
0 < number ó 5	4.5	3.2	0.6
5 < number ó 10	9.1	1.9	.06
10 < number	0	0	1.9
not reported	4.5	14.9	12.3
Total	100.0	100.0	100.0

Misonzo (Ridges) before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil	36.4	39.0	29.2
0 < number ó 5	9.1	29.2	26.0
5 < number ó 10	18.2	19.5	28.6
10 < number	31.8	7.8	11.0
not reported	4.5	4.5	5.2
Total	100.0	100.0	100.0

Grass planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Yes	45.5	47.4	50.6
No	50.0	41.6	37.7
Not reported	4.5	10.9	11.5
Total	100.0	100.0	100.0

Waterborne diseases mitigation measures

Boiling (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Boil drinking water	90.9	53.9	79.9
not reported	9.1	46.1	3.9
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	13.6	2.6	3.3
not reported	86.4	97.4	96.7
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	4.5	1.3	7.1
not reported	95.5	98.7	92.9
Total	100.0	100.0	100.0

Dry stagnant waters before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
Dry stagnant water	0	1.3	0
not reported	100.0	98.7	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	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	1.3	2.6
not reported	100.0	98.7	97.4
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	2.6
not reported	100.0	100.0	97.4
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	5.2
not reported	100.0	100.0	94.8
Total	100.0	100.0	100.0

Other measure before and after IWSS (%)

	Non-participants	Before IWSS	After IWSS
other measure	0	5.8	2.6
not reported	100.0	94.2	98.4
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	5.2	44.2	48.1	0
Other	94.8	55.8	51.9	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	89.0	51.3	47.4	94.8
community	6.5	35.1	28.6	0
provincial administration	0	1.3	7.8	1.3
political leaders	0	0	0.6	0
dam members	0.6	7.8	11.0	0
Other	3.8	4.5	4.5	3.8
Total	100.0	100.0	100.0	100.0

Duration in office- dam committee

	Percent
not reported	0
one month	11.0
half-year	16.9
one year	1.3
two years	1.3
more than two years	0.6
not stated	9.1
indefinitely	49.4

no response	10.4
Total	100.0

Factored considered when choosing dam committee member

<i>Factor</i>	<i>Considered (Mentioned)</i>
honesty	21.4
transparency	11.0
trustworthy	9.7
respectable	13.6
religious	4.5
social	13.0
ability to lead	36.0
hard working	5.4
faithful	7.1
active	13.7
commitment	12.3
age/experience	7.8
good in communication	11
maturity	33.8
participation	21.4
availability	12.3
wealth	12.3
other aspect	9.7

Attitudes towards dam committee in regard to:

<i>Factor</i>	<i>Positive</i>	<i>Negative</i>
corruption	65.6	25.3
composition: age	74.7	16.9
composition: gender	81.2	10.4
composition: religion	83.8	9.1
composition: education	81.8	10.4
composition: political party affiliation	81.2	11.0
composition: wealthy	85.7	7.1
operation	83.1	9.7
accountability	88.3	3.2
transparency	90.3	1.3
commitment	85.7	7.8
nepotism	57.1	35.7
patience	84.4	13.0
greed	69.5	24.0
maturity	84.4	8.4
listening to others needs	89.0	3.9
bossy	53.9	39.6
ready to serve	90.9	32.0
respect/care for people and property	92.2	1.3

Impact of dam committee in regard to:

<i>Factor</i>	<i>Positive</i>	<i>Negative</i>	<i>no impact</i>	<i>indifferent</i>
age	65.6	3.9	21.4	2.6
religion	65.6	0.6	19.5	3.9
political party affiliation	59.7	2.6	18.2	2.6
wealth	62.3	3.2	21.4	1.9
gender	68.2	3.2	14.9	2.6

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

	Non-participants	Participants
yes	49.0	50.6
no	51.0	43.5
no response	0	5.1
not reported	0	0.6
Total	100.0	100.0

Linkage between dam and other committees?

	Participants
yes	28.6
no	63.6

If yes to linkage, how?

	Participants
considering community committee members in dam committee	4.5
dam committee members considered in other community committee	5.2
dam committee members opinion sought in development issues	13.0

Participants: Other general benefits derived from IWSS

	Percent
yes	52.6
no	37.7
not reported	9.7
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	8.4	4.5
community members interact freely while working together	24.7	4.5

women contribute to a fund to uplift their welfare	5.8	0
community formed groups for planting vegetables and seedlings for sale	12.3	4.5
formation of groups to help in harvesting/terracing and other undertakings	13.0	13.6
making new friends	13.6	0
other	13.0	4.5

Influence of development agenda by community

	Participants	Non-participants
yes	43.5	18.2
no	56.5	81.8
not reported	0	0
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	14.9	0
before any law/bylaw/rule is passed people community is consulted	5.2	0
done through <i>barazas</i> whereby members air their views freely	9.7	0
through consultation with those concerned	1.3	0
involved when discussing development ideas	9.7	0
headman (administrators) consults with the people and forwards their views	18.8	0
chairpersons of groups, headmen and other leaders consulted through formation of groups	9.7	18.2
any other way	3.9	0

Participants: Impact of increased water after IWSS:

	improved	declined	the same
health	61.7	10.4	20.1
cleanliness	73.4	2.6	16.9
leisure	56.5	9.7	22.1
girl-child school absenteeism	5.2	22.1	42.9
boy-child school absenteeism	5.2	21.4	36.4
girl-child school punctuality	35.7	2.6	34.4
boy-child school punctuality	35.7	1.9	31.2
cooking at the right time	66.2	2.6	18.8

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

	positive	negative	no effect
health	18.2	9.1	13.6
cleanliness	22.7	0	22.7
leisure	27.3	0	18.2
girl-child school absenteeism	4.5	9.1	22.7
boy-child school absenteeism	4.5	9.1	22.7
girl-child school punctuality	13.6	4.5	22.7
boy-child school punctuality	13.6	4.5	22.7
cooking at the right time	27.3	0	18.2

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

	positive	negative	no impact
health	0	31.8	13.6
cleanliness	0	36.4	13.6
leisure	0	27.3	22.7
girl-child school absenteeism	4.5	0	40.9
boy-child school absenteeism	4.5	0	40.9
girl-child school punctuality	4.5	0	40.9
boy-child school punctuality	4.5	0	40.9
cooking at the right time	0	13.6	31.8

Participants: Increase in water impact

	improved	declined	the same
security	72.7	3.9	13.6
pregnancy rates	36.4	19.5	31.8
community cohesiveness	68.2	7.1	11.7
marriage rates	41.6	16.2	29.2

Non-participants: water availability impact on the following

	positive	negative	no impact
security	31.8	9.1	4.5
pregnancy rates	13.6	18.2	13.6
community cohesiveness	18.2	13.6	9.1
marriage rates	22.7	4.5	18.2

Non-participants: water scarcity impact on the following

	positive	negative	no impact
security	0	36.4	13.6
pregnancy rates	4.5	22.7	22.7
community cohesiveness	13.6	9.1	27.3
marriage rates	4.5	22.7	13.6

Is trekking long distances by girls regarded as good?

	Non-participants	Participants
good	22.7	8.4
bad	77.3	84.4
no response	0	1.8
not reported	0	5.2
Total	100.0	100.0

bad

	Non-participants	Participants
tiring	31.8	37.0
compromise other household duties	13.6	19.5
develop irresponsible behaviour- early pregnancies/marriages	18.2	23.4
leads to school absenteeism/lateness	9.1	10.4
not generally safe	27.3	32.5
other reason	0	7.8

good

	Non-participants	Participants
body exercise and good health	4.5	4.5
test of adulthood- could take care of themselves	4.5	1.3
other reason	4.5	5.2

Impact of the project in relation to trek (Participants)

	percent
time	18.2
absenteeism/lateness in school improved	13.0
school drop out rates lowered	7.8
improved security of girls	20.1
increased time for leisure	7.8
distance to water source reduced	4.5
other impact	14.3
no impact	6.5

participation in social functions/month (before and after IWSS):

religion

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
rarely	4.5	11.7	11.7
never misses	4.5	2.6	5.2
never attends	45.5	11.0	9.1
once	13.6	16.2	4.5
twice	0	20.1	1.3
thrice	0	3.9	16.9
four time and more	31.8	29.2	46.1
no response	0	2.5	3.2

not reported	0	2.6	1.9
Total	100.0	100.0	100.0

market days

	Non-participants	Before IWSS	After IWSS
rarely	9.1	24.7	26.0
never misses	0	5.2	7.1
never attends	54.5	13.0	14.3
once	9.1	14.3	29.2
twice	13.6	18.2	9.1
thrice	0	6.5	0
four time and more	13.6	10.4	4.5
no response	0	4.5	5.1
not reported	0	3.2	4.5
Total	100.0	100.0	100.0

funerals

	Non-participants	Before IWSS	After IWSS
rarely	9.1	10.4	9.1
as they occur	63.6	79.9	71.4
never misses	4.5	0	5.2
never attends	22.7	3.9	5.2
once	0	0	0
twice	0	0	0
thrice	0	0	0
four time and more	0	0	0
no response	0	3.2	6.4
not reported	0	2.6	2.6
Total	100.0	100.0	100.0

mwethya

	Non-participants	Before IWSS	After IWSS
rarely	22.7	42.9	33.8
as they occur	31.8	27.3	43.5
never misses	9.1	3.9	7.1
never attends	36.4	15.6	10.4
no response	0	6.3	2.6
not reported	0	3.9	2.6
Total	100.0	100.0	100.0

parties

	Non-participants	Before IWSS	After IWSS
rarely	36.4	35.1	37.7
as they occur	9.1	31.8	40.3
never misses	0	1.3	1.3
never attends	54.5	19.5	11.7
no response		7.1	4.5
not reported	0	5.2	4.5
Total	100.0	100.0	100.0

harambee

	Non-participants	Before IWSS	After IWSS
rarely	31.8	36.4	32.5

as they occur	18.2	34.4	48.1
never misses	0	3.2	1.3
never attends	50.0	14.3	7.8
no response	0	7.1	5.7
not reported	0	4.5	4.5
Total	100.0	100.0	100.0

visiting friends

	Non-participants	Before IWSS	After IWSS
frequently	18.2	9.1	27.9
when necessary	13.6	15.6	14.9
when need arises	18.2	28.6	16.9
occasionally	31.8	31.8	26.0
never visits	18.2	8.4	7.8
no response	0	0	3.9
not reported	0	5.0	2.6
Total	100.0	100.0	100.0

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	3.9	1.9	1.9	0
2 < hours ó 4	0	0	4.5	4.5	4.5	4.5
4 < hours ó 6	4.5	0	32.5	3.2	4.5	3.2
6 < hours ó 8	50.0	45.5	30.5	45.5	46.1	44.2
8 < hours	45.5	54.5	25.3	40.9	39.0	44.2
not reported	0	0	2.5	3.8	3.8	3.8
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)	45.5	37.0
husband (elsewhere)	0	.6
wife (in the household)	0	9.7
wife (elsewhere)	9.1	3.2
friends	18.2	20.8
local administration (headman/Ass. Chief/Chief)	4.5	7.8
religious leaders	0	0
Political leaders	0	1.3
none	0	9.1
other	4.5	1.9
not reported	18.2	8.3
Total	100.0	100.0

Factor promoting community cooperation: (% age mentioned)

	Non-participants	Participants
Hard work	40.9	13.6
commitment	18.2	9.7

unity	50.0	34.4
listening to people views	4.5	7.1
peace	4.5	5.2
good leadership	4.5	8.4
other	0	16.2

Factor limiting community cooperation: (% age mentioned)

	Non-participants	Participants
political party affiliation	9.1	7.1
gossip	18.2	12.3
lack of respect	9.1	9.1
poverty	9.1	29.2
diseases	4.5	14.3
hatred	18.2	13.0
poor leadership	18.2	17.5
illiteracy/ignorance	36.4	27.3
corruption	13.6	11.7
other	18.2	22.7

Economic activities (%):

Mentioned	Non-participants	Participant (Before IWSS)	Participant (After IWSS)
agriculture	0	88.3	87.7
goat/sheep	13.6	25.3	24.7
cattle	18.2	25.3	21.4
vegetable growing	9.1	20.8	24.0
kitchen gardening	13.6	15.6	17.5
brick making	9.1	12.3	40.3
tree nurseries	9.1	5.8	6.5
bee keeping	4.4	7.8	6.5

New crops/activities introduced after IWSS:

New crop/activity	Percent
spinach growing	20.8
vegetable growing	53.9
fish	3.2
<i>sukuma wiki</i>	31.2
onions	16.9
tomatoes	27.3
<i>ndania</i>	4.5
sugar cane	4.5
arrow roots	1.9
fruits	3.2
other crop	9.1

Contribution of the following activities after IWSS (KShs)

Activity	5000 value	5000<value≤10000	10000<value≤50000	50000<value≤100,000	10,000<value
agriculture	5.8	3.2	9.1	1.3	3.9
goats/sheep	1.9	3.2	.6	.6	0
cattle	1.3	2.6	1.3	.6	
vegetable growing	1.9	2.6	4.5	3.2	2.6
kitchen gardening	1.9	10.4	.6	0	0
brick making	3.9	.6	1.3	0	0
tree nurseries	1.3	1.3	.6	0	0
bee keeping	.6	1.3	.6		
sugar cane	.6	.6	0	0	0
business	1.3	.6	1.3	0	0

Indirect benefits:

	mentioned (%)
increased land value	5.8
increased livestock reproduction rates	10.4
able to pay school fees- increased income	1.3
able to cloth the family- increased income	.6
increased land productivity- increased water and terracing	6.5
soil fertility- tree planting and terracing	5.2
reduced cost of buying salt lick for animals	.6
vegetables- plenty and cheap	33.8
increased sand for construction	11.0
other benefit	11.7

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

	Percent
attracted- total	14.9
leased land to cultivate	14.3
paid sand dam fees before leasing the land	1.9

Whether there are some negative social and economic costs associated with your water resource (IWSS)

	Non-participants	Participants
yes	9.1	7.1
no	90.9	92.9
not reported	0	0
Total	100.0	100.0

Use of time saved from walking long distances:

	Percent
Shamba work	39.6
taking care of livestock	1.9

making bricks	3.9
kitchen gardening	13.6
tending tree nursery	5.8
business	3.9
leisure	4.5
other activities	7.1

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	1.9	1.3	1.9	2.6	1.9	.6	1.9
500 < value ó 1,000	1.3	2.6	.6	3.2	1.9	1.3	3.2
1000 < value ó 5,000	3.9	1.3	7.1	0	1.9	.6	.6
5,000 < value ó 10,000	12.3	1.3	.6	0	0	.6	0
10,000 < value	14.9	0	.6	.6	0	0	0

Time budget in hours

Participants: before and after IWSS

Dry season

	Cultivation		Water fetching		Grazing		Household duties		Other activities	
	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS
2 ò hours	14.3	13.0	35.1	66.9	5.2	4.5	22.1	26.0	11.0	12.3
2 < hours ó 4	33.8	21.4	18.2	7.1	6.5	7.1	33.1	35.7	17.5	21.4
4 < hours ó 6	5.2	13.0	17.5	.6	.6	0	7.8	6.5	6.5	5.8
6 < hours ó 8	.6	3.2	6.5	.6	0	.6	9.7	5.2	9.1	5.2
8 < hours	0	0	0	0	.6	.6	1.3	1.3	4.5	4.5

Wet season

	Cultivation		Water fetching		Grazing		Household duties		Other activities	
	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS
2 ò hours	12.3	12.3	64.3	59.1	4.5	5.8	33.1	30.5	14.3	13.0
2 < hours ó 4	17.5	16.9	4.5	9.1	7.8	7.1	33.1	31.8	18.8	21.4
4 < hours ó 6	13.6	11.7	3.2	2.6	0	0	3.9	3.9	8.4	7.8
6 < hours ó 8	14.3	18.2	1.9	0	0	0	2.6	5.8	4.5	4.5
8 < hours	0	0	0	0	.6	.6	1.9	.6	3.2	3.2

Non-participants:

Dry season

	Cultivation	Water fetching	Grazing	Household duties	Other activities
2 ò hours	13.6	50.0	4.5	31.8	13.6
2 < hours ó 4	31.8	13.6	4.5	22.7	9.1
4 < hours ó 6	13.6	0	0	9.1	4.5
6 < hours ó 8	4.5	0	0	0	9.1
8 < hours	0	0	0	0	4.5

Wet season

	Cultivation	Water fetching	Grazing	Household duties	Other activities
2 ò hours	9.1	36.4	4.5	27.3	22.7
2 < hours ó 4	22.7	9.1	0	18.2	9.1
4 < hours ó 6	27.3	4.5	0	13.6	13.6
6 < hours ó 8	22.7	0	0	0	0
8 < hours	0	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		Before IWSS	After IWSS
5 ò shillings	22.7	29.2	61.7	63.6	67.5	70.1
5 < shillings ó 10	54.5	45.5	16.9	13.6	15.6	6.5
10< shillings ó 15	4.5	3.2	0	0	0	0
15 < shillings ó 20	0	5.8	.6	0	0	0
20 < shillings	0	0	1.3	0	0	1.3

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

	Non-participants	Participants
yes	40.9	42.2
no	59.1	53.2

Controlled measure

Measure	Non-participants	Participants
covering the well with a lid	13.6	7.1
washing of clothes not allowed in the IWSS	0	1.9
only participants are allowed	0	5.8
planting of grass to check erosion	0	3.2
children not allowed to play near the IWSS	22.7	15.6
other control/plan (eg. prayers)	18.2	14.3

If not controlled, why?

Why	Non-participants	Participants
it is a public/natural resource	13.6	4.6
participants are responsible people- respect their efforts	4.5	9.1
other reason	9.1	13.6

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	9.1	3.2	11.0	.6	31.2	26.6
washing clothes inside the dam/well	8.4	3.9	11.0	.6	31.2	26.6
watering animals in the dam/well	7.8	3.9	11.0	.6	29.2	26.6
spraying vegetables/crops chemicals around the dam/well	13.0	3.9	11.7	.6	26.6	26.0
defecating/urinating near the dam/well	14.3	4.5	12.3	.6	25.3	24.7
dropping objects in the source	11.0	3.9	13.6	.6	26.0	25.3

Non-participants:

Type of pollution	pays fine	report to dam committee	report to provincial administration	warning/cautioned	excommunicated
washing inside the dam/well	18.2	0	4.5	22.7	22.7
washing clothes inside the dam/well	18.2	0	4.5	22.7	22.7
watering animals in the dam/well	18.2	0	4.5	22.7	18.2
spraying vegetables/crops chemicals around the dam/well	18.2	0	9.1	18.2	22.7
defecating/urinating near the dam/well	18.2	0	9.1	22.7	22.7
dropping objects in the source	18.2	0	4.5	22.7	22.7

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

	Non-participants	Participants
dam committee members	0	21.4
chairperson of the dam committee	0	16.2
provincial administration	9.1	9.7
community	27.3	20.8
watchman	0	0
no body/party	0	23.4
no maintenance required	18.2	.6
owner	40.9	0
Sasol	0	1.9
other	4.5	1.9

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

	Non-participants	Participants
dam committee members	0	74.0
chairperson of the dam committee	0	14.9
provincial administration	0	1.3
community	9.1	2.6
politicians	0	0
no funds needed	90.9	1.3
no O&P required	0	.6
sasol	0	.6

Operation and maintenance contribution by households if applicable (KShs)

	Non-participants	Participants
25 ò KShs.	9.1	13.6
25 < KShs ó 50	0	.6
50 < KShs ó 75	0	.6
75 < KShs ó 100	0	.6
100 < KShs	0	3.9
in kind (labour)	0	2.6
no funds needed	0	0

Frequency of water source committee (dam committee) meetings

	Non-participants	Participants
monthly	0	7.8
once/three months	0	5.8
semi-annually	0	.6
never meet	0	57.8
when there is need	0	8.4
other	0	5.2
no committee reported	0	0
not reported	100.0	14.2
Total	100.0	100.0

Services/goods considered necessary:

	Non-participants	Participants
Food	95.5	93.5
water	90.9	82.5
shelter	4.5	28.6
clothing	9.1	22.7
clean environment	4.5	6.5
money	45.5	20.1
education	18.2	0
medical services	0	16.2
fuel	27.3	27.9
land	4.5	5.2
livestock	0	0
transport	0	0
other	4.5	6.5

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	63.6	53.2	53.2	50.0	44.8	44.8	59.1	46.8	46.8
wife	27.3	26.0	25.3	45.5	36.4	35.1	36.4	31.2	31.2
husband/wife	9.1	14.9	14.9	4.5	14.3	15.6	4.5	14.3	14.3
children	0	0	0	0	0	.6	0	1.9	1.9
boys	0	1.3	.6	0	0	0	0	.6	.6
girls	0	1.3	1.9	0	1.3	1.3	0	1.9	2.6
father-in-law	0	0	0	0	0	0	0	0	0
mother-in-law	0	0	0	0	.6	.6	0	0	0
other	0	1.2	1.3	0	1.9	1.3	0	1.9	1.9
not reported	0	1.9	.6	0	0	0	0	0	0

Impact of increased family income to family unit

	Percent
positive	67.5
negative	10.4
the same	16.9
not reported	1.9

Has increased incomes/opportunities led to conflict at:

	Percent
at family level not reported	3.9
at community level not reported	6.5

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

	Percent
100 ÷ KShs	9.7
100 < KShs ó 200	36.4
200 < KShs ó 500	29.9
500 < KShs ó 1,000	2.6

1,000 < KShs	1.3
not fixed	9.7
not reported	10.3
Total	100.0

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

	Percent
goat	2.6
sheep	4.5
cow	1.9
not reported	90.9
Total	100.0

Value household attach to their water source

	Non-participants	Participants
500 ò KShs	4.5	1.3
500 < KShs ó 1,000	4.5	3.9
1,000 < KShs ó 5,000	4.5	7.8
5,000 < KShs ó 10,000	4.5	15.6
10,000 < KShs	31.8	20.1
not acceptable (invaluable)	45.5	44.2
not reported	4.5	7.1
Total	100.0	100.0

Willingness to pay for improved water resource

	Non-participants	Participants
500 ò KShs	45.5	42.2
500 < KShs ó 1,000	18.2	12.3
1,000 < KShs ó 5,000	13.6	21.4
5,000 < KShs ó 10,000	13.6	5.8
10,000 < KShs	0	11.7

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

	Participants
report to chair/person	18.8
report to provincial administration	31.8
quit the source	5.8
report to SASOL	2.6
question the dam committee	6.5
alert other members and ask for a meeting	7.1
advice the management accordingly	16.2
request management to quit office	5.2
other	3.2
not reported	2.6
Total	100.0

Willingness to take up leadership position

	Non-participants	Participants
willing to up leadership position	0	76.6

not willing to lead	4.5	17.5
not reported	95.5	5.9
Total	100.0	100.0

Ownership of water resource (sand dam):

	Non-participants		Participants	
	True	False	True	False
community	54.5	40.9	89.0	7.8
individual	50.0	50.0	6.5	90.3
government	13.6	81.8	27.9	68.8
schools	4.5	90.9	20.8	75.3
KANU	0	95.5	12.3	84.4
SASOL/NGOs	0	95.5	51.9	46.1
SDP	0	95.5	0.6	96.1
Christians	0	90.9	13.0	83.1
<i>Kathambi</i>	4.5	86.4	2.6	81.8
other	0	100.0	3.9	25.3

Why own the water resource (sand dam): Reasons

	community participated		it is a natural resource		sponsored		other		no response	
	NP	P	NP	P	NP	P	NP	P	NP	P
community	36.4	74.0	22.7	1.9	0	0	27.3	3.9	4.5	14.3
individual	36.4	59.1	22.7	.6	36.4	7.1	0	5.2	4.5	16.9
government	18.2	10.4	22.7	36.4	13.6	0	31.8	28.6	4.5	16.2
schools	18.2	3.2	22.7	0	9.1	46.8	36.4	22.7	4.5	16.2
KANU	18.2	10.4	22.7	0	9.1	35.1	36.4	30.5	4.5	16.9
SASOL	18.2	27.9	22.7	0	9.1	32.5	36.4	14.9	4.5	15.6
NGOs	18.2	0	22.7	0	9.1	0	36.4	0	4.5	0
SDP	18.2	5.2	22.7	0	9.1	36.4	36.4	26.6	4.5	20.8
Christians	18.2	2.6	22.7	0	9.1	41.6	36.4	27.3	4.5	16.2
<i>Kathambi</i>	18.2	2.6	22.7	0	9.1	30.5	36.4	29.9	4.5	16.2
other	0	2.6	0	7.1	0	5.8	0		100.0	7.8

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	13.6	0	5.8	
report to source/dam committee chairperson	0	0	30.5	6.5
report to other members	4.5	0	9.1	0
report to the head man	0	0	26.6	0
report to the provincial administration	22.7	45.5	0	27.3
report to SASOL	0	0	5.8	14.3
report to the police	22.7	13.6	8.4	11.7
beat up the person	0	4.5	0	22.1
banish him/her	4.5	13.6	0	3.9
use force to stop him/her	18.2	18.2	6.5	7.1
no action	0	0	2.6	0
report to the donor	4.5	4.5	0	0
other	9.1	0	2.6	1.9
no response	0	0	1.9	5.1
Total	100.0	100.0	100.0	100.0

Any other comment

	Non-participants	Participants
more dams needed/dams needed	18.2	20.1
congratulations- SASOL	0	22.7
sand dams are beneficial- increased incomes	0	31.8
satisfied with the location	0	3.9
sand dam too far, water source near home required	0	12.3
need IWSS	45.5	6.5
water source near home required	27.3	0
no comment	0	.6
not reported	9.1	1.9
Total	100.00	100.0