

***Kitungati Sub-Location, Kisasi Location, Chuluni Division  
(46 Participants & 2 Non-participants ignored)***

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**Household Demography**

Head of the Household sex (%)

<b>Sex</b>	<b>Participants</b>	<b>Non-participants</b>
Female	50.0	
Male	50.0	
Total	100.0	100.0

Head of the Household age category

<b>Age bracket</b>	<b>Participants</b>	<b>Non-participants</b>
20 ò years	2.2	
20 < years ó 35	10.9	
35 < years ó 55	43.5	
55 < years ó 70	34.8	
70 < years	6.5	
not reported	2.2	
Total	100.00	100.00

Head of Household level of education

<b>Level</b>	<b>Participants</b>	<b>Non-participants</b>
informal	45.7	
primary	39.1	
secondary	8.7	
tertiary	6.5	
not reported	0	
Total	100.0	100.0

Head of household main occupation (%)

<b>Occupation</b>	<b>Participants</b>		<b>Non-participants</b>	
	<b>Main occupation</b>	<b>Secondary occupation</b>	<b>Main occupation</b>	<b>Secondary occupation</b>
subsistence farmer	45.7	41.3		
businessman	19.6	4.3		
regular employment	8.7	8.7		
wage earner	15.2	6.5		
other	8.7	2.2		
not reported	2.2	37.0		
Total	100.0	100.00	100.0	100.0

## Household annual income-% (KShs.)

<b>Income</b>	<b>Participants</b>	<b>Non-participants</b>
10,000 ò income	2.2	
10,000 < income ó 30,000	13.0	
30,000 < income ó 50,000	21.7	
50,000 < income ó 100,000	34.8	
100,000 < income	28.3	
not reported	0	
Total	100.0	100.0

## Household size(%)

<b>Size</b>	<b>Participants</b>	<b>Non-participants</b>
3 ò members	2.2	
3 < members ó 8	45.7	
8 < members ó 12	50.0	
12 < members	2.2	
not reported	0	
Total	100.0	100.0

## Household composition (%)

<b>Composition</b>	<b>Participants</b>	<b>Non-participants</b>
females =males	23.9	
females > males	30.4	
females < males	45.7	
Total	100.0	100.0

## Household income sources (%)

	<b>Participants</b>		<b>Non-participants</b>	
	<b>Main</b>	<b>Secondary</b>	<b>Main</b>	<b>Secondary</b>
crop farming	41.3	32.6		
livestock	2.2	4.3		
business	4.3	10.9		
regular employment	19.6	34.8		
wage earning	26.1	10.9		
other	6.5	0		
pottery	0	2.2		
no response	0	0		
not reported	0	4.3		
Total	100.0	100.00	100.0	100.0

Income sources contribution (%)

(KShs.)	<b>Participants</b>		<b>Non-participants</b>	
	<b>Main (%)</b>	<b>Second (%)</b>	<b>Main (%)</b>	<b>Second (%)</b>
income ó 10,000	8.7	13.0		
10,000 < income ó 30,000	8.7	26.1		
30,000 < income ó 50,000	13.0	21.7		
50,000 < income ó 100,000	47.8	21.7		
10,000 < income	21.7	13.0		
no response	0	0		
not reported	0	4.3		
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

***Household Inventory (Assets)***

Number of houses (%)

Number of houses	Participants	Non-participants
one	2.2	
two or three	56.5	
four or five	41.3	
not reported	0	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

Main house thatch

Thatch type	Participants	Non-participants
iron sheets	87.0	
grass	13.0	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

Main house floor type

	Participants	Non-participants
cemented	47.8	
un-cemented	52.2	
other	0	
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

Main house number of rooms

<i>Number of houses</i>	<i>Participants</i>	<i>Non-participants</i>
one room	26.1	
two or three	47.8	
four or five	17.4	
six and more	6.5	
not reported	2.2	
Total	100.0	100.0

Wall material- main house

Wall material	Participants	Non-participants
brick/mud	45.7	
brick/cement	52.2	
block/cement	0	
poll/mud	2.2	
Total	100.0	100.0

Household with toilets

	Participants	Non-participants
households with toilets	71.7	
households without toilets	28.3	
not reported	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	26.1	50.0	26.1			
one	4.3	0	0			
1 < number ó 5	17.4	32.6	32.6			
5 < number ó 10	28.3	13.0	17.4			
10 < number	23.9	4.3	23.9			
not reported	0	0	0			
Total	100.0	100.0	100.0	100.0	100.0	100.0

Number of donkeys

	Participants	Non-participants
nil	37.0	
0 < donkeys ó 3	60.9	
more than four	2.2	
not reported	0	
Total	100.0	100.0

Number of jembes, spades, mattocks, etc.

	Participants	Non-participants
nil	2.2	
0 < jembes ó 5	28.3	
5 < jembes ó 10	54.3	
10 < jembes	15.2	
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	47.8	60.9	78.3	97.8	41.3	91.3	95.7
0 < numberó 3	52.2	39.1	21.7	2.2	58.7	8.7	4.3
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							
0 < numberó 3							
3< number							
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	17.4	87.0		
5 < acres ó 10	65.2	8.7		
10 < acres	17.4	4.3		
not reported	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	13.0	37.0		
agriculture	82.6	13.0		
livestock grazing	4.3	47.8		
rented out	0	2.2		
not reported	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		
kerosene	0	89.1		
charcoal	0	10.9		
solar	0	0		
gas	0	0		
not reported	0	0		
Total	100.0	100.0	100.0	100.0

***Migration***

Year of migration

	Participants	Non-participants
1990-1992	4.3	
1993-1997	13.0	
1998-2001	2.2	
no response	6.5	
not migrated	73.9	
Total	100.0	100.0

Nature of migration

	Participants	Non-participants
permanent	15.2	
temporary	2.2	
working outside the location	6.5	
no response	4.3	
not migrated	71.7	
Total	100.0	100.0

Place of settlement

	Participants	Non-participants
village	17.4	
town	6.5	
abroad	0	
no response	4.3	
not applicable	71.7	
Total	100.0	100.0

Reasons for migration

	Participants	Non-participants
in search of employment	8.7	
land inadequacy	10.9	
marriage	0	
other	4.3	
no response	4.3	
not migrated	71.7	
Total	100.0	100.0

### **Daily water use**

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

	<b>Cooking</b>		<b>Washing/cleaning</b>		<b>livestock watering</b>		<b>Other uses</b>	
	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS	Before IWSS	After IWSS
20 ò litres	19.6	8.7	30.4	21.7	39.1	13.0	6.5	4.3
20 < litres ó 40	43.5	39.1	39.1	28.3	26.1	10.9	2.2	2.2
40 < litres ó 60	10.9	13.0	10.9	21.7	13.0	10.9	0	4.3
60 < litres ó 80	15.2	19.6	15.2	19.6	6.5	4.3	0	0
80 < litres ó 100	4.3	13.0	4.3	6.5	6.5	10.9	0	0
100 < litres	6.5	6.5	0	2.2	8.7	0	0	0
not reported	0	0	0	0	0	50.0	91.3	89.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Daily water use - litres (Non-participants)

	<b>Cooking</b>	<b>Washing/cleaning</b>	<b>livestock watering</b>	<b>Other uses</b>
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

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

Participants- dry season

<b>Factor/Percentage</b>	<b>Rank 1</b>	<b>Rank 2</b>	<b>Rank 3</b>
distance	37.0	15.2	10.9
quality	15.2	23.9	10.9
quantity	21.7	17.4	8.7
Multiple use	10.9	15.2	4.3
Reliability	13.0	19.6	15.2
No alternative	0	2.2	4.3
not reported	2.2	6.5	45.7
Total	100.0	100.0	100.0



**Participants- wet season**

Factor/Percentage	Rank 1	Rank 2	Rank 3
distance	21.7	8.7	8.7
quality	19.6	32.6	21.7
quantity	23.9	17.4	10.9
Multiple use	15.2	17.4	10.9
Reliability	10.9	13.0	21.7
No alternative	6.5	8.7	4.3
not reported	2.2	2.2	21.7
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			
quality			
quantity			
Multiple use			
Reliability			
No alternative			
not reported			
Total	100.0	100.0	100.0

## Non-participants- wet season

Factor/Percentage	Rank 1	Rank 2	Rank 3
distance			
quality			
quantity			
Multiple use			
Reliability			
No alternative			
not reported			
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	0	0	0
piped			0	0	0	0
springs			0	0	0	0
scoop-hole			91.3	69.6	91.3	73.9
bore-hole			0	0	0	0
rock catchment			0	2.2	0	0
roof catchment			0	0	0	0
sand dam			0	0	0	4.3
wells			8.7	28.3	8.7	21.7
earth dam			0	0	0	0
not reported			0	0	0	0
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		37.0	93.5
2 < depth ó 5		58.7	4.3
5 < depth ó 10		4.3	2.2
10 <depth ó15		0	0
15 <depth		0	0
not applicable		0	0
not reported		0	0
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			39.1	58.7	45.7	54.3
Dirty/coloured/bad smell			0	6.5	2.2	6.5
Salty			54.3	34.8	45.7	37.0
Other			0	0	0	0
not reported			6.5	0	6.5	2.2
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			19.6	15.2	13.0	13.0
40 < quantity ó 60			15.2	15.2	2.2	2.2
60 < quantity ó 80			17.4	15.2	23.9	19.6
80 < quantity ó 100			8.7	8.7	21.7	19.6
100 > quantity			26.1	34.8	39.2	43.5
not reported			13.0	10.9	0	2.2
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			8.7	26.1	10.9	17.4
0.5 < Km ó 2			34.8	26.1	43.5	47.8
2 < Km ó 5			54.3	47.8	45.7	34.8
5 < Km ó 10			2.2	0	0	0
10 < Km ó 15			0	0	0	0
not reported			0	0	0	0
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			17.4	41.3	19.6	34.8
0.5 < hours ó 1			45.7	32.6	43.5	37.0
1 < hours ó 2			30.4	17.4	32.6	19.6
2 < hours ó 5			6.5	8.7	4.3	8.7
10 > hours			0	0	0	0
not reported			0	0	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	Dry season	Wet season
One			28.3	28.3	28.3	32.6
two			65.2	65.2	65.2	63.0
three			4.3	6.5	6.5	4.3
four and five			2.2	0	0	0
more than five			0	0	0	0
not reported			0	0	0	0
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
drinking			2.2	2.2	0	0
washing/cleaning			6.5	8.7	8.7	6.5
cooking			0	0	2.2	0
general			91.3	89.1	89.1	93.5
livestock watering			0	0	0	0
not reported			0	0	0	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	4.3
wife		17.4	8.7
boys		0	0
girls		6.5	0
house-help		2.2	2.2
girls/husband		2.2	0
husband/wife		0	0
wife/boys		17.4	17.4
wife/girls		13.0	17.4
wife/house-help		8.7	2.2
boys/girls		17.4	26.1
boys/house-help		4.3	4.3
girls/house-help		4.3	8.7
husband/house-help		0	2.2
wife/Children		4.3	2.2
wife/D.I.L		0	0
no response		2.2	4.3
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		39.1	34.8
donkey		34.8	32.6
cart/wheel barrow		0	0
motor vehicle		0	2.2
human labour/donkey		8.7	13.0
human labour/cart/wheel barrow		0	2.2
human labour/motor vehicle		0	2.2
donkey/cart/wheelbarrow		13.0	8.7
not reported		4.4	4.3
Total	100.0	100.0	100.0

General Impact of IWSS (Participants)

	increased	decreased	no change
water	60.9	10.9	4.3
distance	13.0	26.1	6.5
disease	58.7	2.2	0
crop farming	47.8	0	0
kitchen gardening	30.4	0	0
vegetable growing	63.0	0	0
livestock watering	37.0	0	0
brick making	32.6	2.2	0
bee keeping	26.1	2.2	4.3
body washing	30.4	0	4.3
clothes washing	28.3	0	4.3
utensil washing	21.7	0	4.3
tree nurseries	37.0	0	4.3
house washing	45.7	2.2	4.3
terracing	4.3	0	4.3

Water rationing (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
yes		34.8	10.9
no		65.2	89.1
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		0	0
Queuing		39.1	10.9
other		0	0
not reported		60.9	89.1
Total	100.0	100.0	100.0

Accessibility of your nearest dam

	Percent
accessible	32.6
not accessible	60.9
other characteristics	6.5
not reported	0
Total	100.0

Satisfied with the sand dam project?

	Percent
Satisfied	54.3
Not satisfied	43.5
not reported	0
Total	100.0

Why satisfied?

	Percent
Plenty of water for domestic use	32.6
Farm productivity has increased	2.2
Increased water for watering animals	6.5
Water helped in construction of houses	0
Reduced distances to water source	2.2
Other reasons	10.9
Not reported	45.7
Total	100.0

If not satisfied, why?

	Percent
No opportunity for multiple use	2.2
The well dries up in the dry season	0
The water is not clean	6.5
The well is too shallow	8.7
Other reasons	28.3
Not reported	54.3
Total	100.0

Shift from the traditional water source?

	Percent
Shifted	45.7
Not shifted	50.0
No response	0
Not reported	4.3
Total	100.0

If not shifted, reason

	Percent
Traditional water source nearer	10.9
No opportunity for multiple use	0
the well dries up in dry season	0
water not clean	4.3
other	34.8
no response	8.7
not reported	41.3
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	19.6	45.7	76.1	84.8	41.3	37.0	6.5	2.2
once	10.9	8.7	0	0	6.5	4.3	28.3	23.9
twice	15.2	2.2	2.2	0	0	4.3	8.7	13.0
thrice	41.3	30.4	8.7	2.2	0	2.2	4.3	8.7
rarely	6.5	6.5	2.2	2.2	45.7	45.7	0	
when dirty	0	0	0	0	0	0	0	
never used to/doesn't	0	0	4.3	0	0	0	6.5	4.3
not applicable/no response	2.2	2.2	2.2	2.2	2.2	2.2	15.2	15.2
not reported	4.3	4.3	4.3	8.7	4.3	4.3	28.3	30.4
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			
once			
twice			
thrice			
rarely			
when dirty			
doesn't			
not applicable			
not reported			
Total	100.0	100.0	100.0



Protection of water points before and after IWSS

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
fencing		28.3	41.3
covering well with lid		4.3	0
locking gate		0	4.3
watchman		0	0
no protection		63.0	54.3
not applicable		4.3	0
local arrangements		0	0
not reported		0	0
Total	100.0	100.0	100.0

**Soil conservation**

Terracing before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil		21.7	21.7
0 < number ó 3		52.2	41.3
3 < number ó 5		13.0	17.4
5 < number ó 10		4.3	13.0
10 < number		0	2.2
no response		6.5	4.3
not reported		2.2	0
Total	100.0	100.0	100.0

Tree planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil		30.4	26.1
0 < number ó 5		17.4	2.2
5 < number ó 10		26.1	15.2
10 < number ó 50		17.4	37.0
50 < number		6.5	13.0
no response		0	4.3
not reported		2.2	2.2
Total	100.0	100.0	100.0

Gabions before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil		82.6	84.8
0 < number ó 5		2.2	4.3
5 < number ó 10		0	2.2
10 < number		0	0
no response		6.5	4.3
not reported		8.7	4.3
Total	100.0	100.0	100.0

Misonzo before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
nil		37.0	52.2
0 < number ó 5		47.8	39.1
5 < number ó 10		0	2.2
10 < number		0	0
no response		10.9	4.3
not reported		4.3	2.2
Total	100.0	100.0	100.0

Grass planting before and after IWSS (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Yes		39.1	41.3
No		39.1	43.5
no response		10.9	8.7
Not reported		10.9	6.5
Total	100.0	100.0	100.0

**Waterborne diseases mitigation measures**

Boiling (%)

	Non-participants	Participants (Before IWSS)	Participants (After IWSS)
Boil drinking water		2.2	60.9
not reported		87.8	39.1
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		4.3	4.3
not reported		95.7	95.7
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		0	2.2
not reported		100.0	97.8
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
not reported		100.0	100.0
Total	100.0	100.0	100.0

Eating well cooked food before and after IWSS (%)

	Before IWSS	After IWSS
well cooked food	0	0
not reported	100.0	100.0
Total	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
not reported		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	95.7	2.2	0

Non-Participants:

	Non-participants			
	Nomination	Election	Selection	Other mode
Yes				

Participants:

By whom	Participants (Dam committee)			
	Nomination	Election	Selection	Other mode
not reported		2.2	95.7	
community		15.2	0	
provincial administration		2.2	0	
political leaders		0	0	
dam members		78.3	2.2	
Other		2.2	2.2	
Total	100.0	100.0	100.0	100.0

Non-participants:

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

Participants: Duration in office- dam committee

	Percent
not reported	0
one month	0
half-year	0
one year	0
two years	0
not stated	67.4
indefinitely	30.4
no response	2.2
Total	100.0

Non-participants: Duration in office- committee

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

Participants: Factored considered when choosing dam committee member

<i>Factor</i>	<i>Considered</i>
honesty	6.5
transparency	2.2
trustworthy	10.9
respectable	10.9
religious	0
social	26.1
ability to lead	10.9
hard working	21.7
faithful	0
active	17.4
commitment	26.1
age/experience	8.1
good in communication	19.6
maturity	6.5
participation	2.7
availability	4.3
wealth	0
other aspect	37.0

Impact of dam committee in regard to:

<i>Factor</i>	<i>Positive</i>	<i>Negative</i>	<i>no impact</i>
age	73.9	8.7	10.9
religion	78.3	2.2	15.2
political party affiliation	80.4	0	15.2
wealth	73.9	4.3	17.4
gender	73.9	4.3	15.2

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

	Non-participants	Participants
yes		84.8
no		15.2
no response		0
not reported		0
Total	100.0	100.0

Linkage between dam and other committees?

	Non-participants	Participants
yes		43.5
no		56.5
not reported		0
Total	100.0	100.0

If yes to linkage, how?

	Non-participants	Participants
considering community committee members in dam committee		0
dam committee members considered in other community committee		2.2
dam committee members opinion sought in development issues		23.9
no response		0
not reported		56.5
Total	100.0	100.0

Participants: Other general benefits derived from IWSS

	Percent
yes	67.4
no	30.4
not reported	2.2
Total	100.0

Non-participants: Member of any community group?

	Percent
no response	
yes	
no	
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	2.2	
community members interact freely while working together	32.6	
women contribute to a fund to uplift their welfare	4.3	
community formed groups for planting vegetables and seedlings for sale	13.0	
formation of groups to help in harvesting/terracing and other undertakings	10.9	
making new friends	4.3	
other	17.4	

Influence of development agenda by community

	Non-participants	Participants
yes	26.1	
no	73.9	
not reported	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	8.7	
before any law/bylaw/rule is passed people community is consulted	0	
done through <i>barazas</i> whereby members air their views freely	8.7	
through consultation with those concerned	0	
involved when discussing development ideas	6.5	
headman (administrators) consults with the people and forwards their views	2.2	
chairpersons of groups, headmen and other leaders consulted through formation of groups	13.0	
any other way	0	

Participants: Impact of increased water after IWSS:

	improved	declined	the same
health	50.0	28.3	19.0
cleanliness	39.1	30.4	28.3
leisure	28.3	17.4	54.3
girl-child school absenteeism	28.3	8.7	52.2
boy-child school absenteeism	26.1	6.5	56.5
girl-child school punctuality	28.3	4.3	56.5
boy-child school punctuality	26.1	4.3	67.4
cooking at the right time	67.4	13.0	13.0

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	41.3	8.7	41.3
pregnancy rates	63.0	13.0	15.2
community cohesiveness	39.1	39.1	15.2
marriage rates	28.3	4.3	67.4

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		41.3
bad		56.5
no response		0
not reported		2.2
Total	100.0	100.0

bad

	Non-participants	Participants
tiring		2.2
compromise other household duties		0
develop irresponsible behaviour-early pregnancies/marriages		2.2
leads to school absenteeism/lateness		2.2
not generally safe		39.1
other reason		13.0

good

	Non-participants	Participants
body exercise and good health		23.9

test of adulthood- could take care of themselves		13.0
other reason		8.7

#### Impact of the project in relation to trek (Participants)

	percent
time	0
absenteeism/lateness in school improved	0
school drop out rates lowered	0
improved security of girls	4.3
increased time for leisure	0
distance to water source reduced	0
other impact	0
no impact	4.3

#### 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	2.2	0	2.2
2 < hours ó 4			4.3	0	2.2	0
4 < hours ó 6			2.2	0	45.7	0
6 < hours ó 8			26.1	23.9	50.0	43.5
8 < hours			65.2	71.7	0	52.2
not reported			2.2	0	2.2	2.2
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)		54.3
husband (elsewhere)		13.0
wife (in the household)		19.6
wife (elsewhere)		0
friends		2.2
local administration (headman/Ass. Chief/Chief)		2.2
none		2.2
religious leaders		0
other		6.5
not reported		0
Total	100.0	100.0

Economic activities (%):

Mentioned	Non-participants	Participant (Before IWSS)	Participant (After IWSS)
agriculture		93.5	89.1
goat/sheep		82.6	71.7
cattle		52.2	45.7
vegetable growing		4.3	65.2
kitchen gardening		4.3	15.2
brick making		13.0	28.3
tree nurseries		0	47.8
bee keeping		28.3	15.2

New crops/activities introduced after IWSS:

New crop/activity	Percent
spinach growing	8.7
vegetable growing	4.3
fish	0
<i>sukuma wiki</i>	50
onions	8.7
tomatoes	23.9
<i>ndania</i>	0
sugar cane	15.2
arrow roots	2.2
fruits	28.3
other crop	6.5

Contribution of the following activities after IWSS (KShs)

Activity	5000 value	500<value≤1000	1000<value≤5000	5000<value≤10000	10,000< value
agriculture	4.3	0	2.2	2.2	0
goats/sheep	0	0	0	2.2	0
cattle	0	0		0	0
vegetable growing	0	2.2	17.4	0	0
kitchen gardening	2.2	0	2.2	0	0
brick making	0	0	8.7	0	2.2
tree nurseries	0	0	2.2	2.2	0
bee keeping	2.2	0	0	0	0
sugar cane	0	0	0	0	0
business	0	0	0	0	0

Indirect benefits:

	mentioned (%)
increased land value	0
increased livestock reproduction rates	4.3
able to pay school fees- increased income	4.3
able to cloth the family- increased income	2.2
increased land productivity- increased water and terracing	4.3
soil fertility- tree planting and terracing	0
reduced cost of buying salt lick for animals	0
vegetables- plenty and cheap	45.7
increased sand for construction	0
other benefit	34.8

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

	Percent
attracted- total	15.2
leased land to cultivate	13.0
paid sand dam fees before leasing the land	0

### Use of time saved from walking long distances:

	Percent
Shamba work	47.8
taking care of livestock	2.2
making bricks	6.5
kitchen gardening	0
tending tree nursery	8.7
business	8.7
leisure	8.7
other activities	21.7

### 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	2.2	0	4.3	0	0	0	4.3
500 < value ó 1,000	8.7	0	0	0	0	0	0
1,000 < value ó 5,000	2.2	2.2	2.2	0	2.2	2.2	0
5,000 < value ó 10,000	0	0	2.2	0	0	0	0
10,000 < value	0	0	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			56.5	41.3			63.0	71.7
5 < shillings ó 10			32.6	47.8			23.9	15.2
10 < shillings ó 15			0	0			0	0
15 < shillings ó 20			0	0			0	0
20 < shillings			2.2	2.2			2.2	2.2

### Controlled measure

Measure	Non-participants	Participants
covering the well with a lid		0
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		19.6
other control/plan (eg. prayers)		

### If not controlled, why?

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

### 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	6.5	4.3	0	0	0	4.3
washing clothes inside the dam/well	6.5	4.3	0	0	0	4.3
watering animals in the dam/well	6.5	4.3	0	0	0	4.3
spraying vegetables/crops chemicals around the dam/well	6.5	0	0	0	0	4.3
defecating/urinating near the dam/well	6.5	4.3	0	0	0	4.3
dropping objects in the source	6.5	4.3	0	0	0	4.3

Non-participants:

Type of pollution	pays fine	report to source 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/source committee members		4.3
chairperson of the dam committee		47.8
provincial administration		32.6
community		6.5
watchman		0
no body/party		2.2
government		4.3
no maintenance required		0
owner		0
Sasol/other NGO		0
other		2.2
not reported		0
Total	100.0	100.0

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

	Non-participants	Participants
dam committee members		19.6
chairperson of the dam committee		71.7
provincial administration		0
community		2.2
politicians		0
no funds needed		0
sasol		0
other		4.3
not reported		2.2
Total	100.0	100.0

Operation and maintenance contribution by households if applicable (KShs)

	Non-participants	Participants
25 ò KShs.		30.4
25 < KShs ó 50		0
50 < KShs ó 75		4.3
75< KShs ó 100		10.9
100 < KShs		2.2
in kind (labour)		0
no funds needed		0
not reported		52.2
Total	100.0	100.0

Frequency of dam/source committee meetings

	Non-participants	Participants
monthly		2.2
once/three months		4.3
never meet		13.0
when there is need		65.2

other		2.2
no committee reported		4.3
not reported		8.7
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		23.9	17.4		6.5	4.3		6.5	4.3
wife		23.9	30.4		54.3	54.3		69.6	65.2
husband/wife		43.5	32.6		28.3	28.3		13.0	19.6
children		0	0		0	0		0	0
father/mother-in-law		0	0		4.3	0		4.3	0
boys		2.2	6.5		2.2	4.3		2.2	0
girls		0	0		0	2.2		2.2	4.3
other		6.5	8.7		2.2	6.5		2.2	6.5

Impact of increased family income to family unit

	Percent
positive	69.6
negative	8.7
the same	21.7
no response	0
not reported	0
Total	100.0

Has increased incomes/opportunities led to conflict at:

	Percent
at family level not reported	4.3
at community level not reported	10.9

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

	Percent
100 ÷ KShs	0
100 < KShs ó 200	2.2
200 < KShs ó 500	4.3
500 < KShs ó 1,000	0
1,000 < KShs	0
not fixed	89.1
not reported	4.3
Total	100.0

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

	Percent
sheep	0
goat	0
cow	0
other	6.5
no response	0



not reported	93.5
Total	100.0

Value household attach to their water source

	Non-participants	Participants
500 ò KShs		10.9
500 < KShs ó 1,000		2.2
1,000 < KShs ó 5,000		21.7
5,000 < KShs ó 10,000		13.0
10,000 < KShs		17.4
not acceptable (invaluable)		32.6
not reported		2.2
Total	100.0	100.0

Willingness to pay for improved water resource

	Non-participants	Participants
500 ò KShs		84.8
500 < KShs ó 1,000		4.3
1,000 < KShs ó 5,000		2.2
5,000 < KShs ó 10,000		0
10,000 < KShs		0
not reported		8.7
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	21.7	
report to provincial administration	30.4	
quit the source	2.2	
report to SASOL	0	
question the dam committee	2.2	
alert other members and ask for a meeting	15.6	
advice the management accordingly	0	
request management to quit office	0	
other	26.7	
not reported	0	
Total	100.0	100.0

Willingness to take up leadership position

	Participants	Non-participants
willing to up leadership position	41.3	
not willing to lead	58.7	
not reported	0	
Total	100.0	100.0

Ownership of water resource (sand dam):

	Non-participants		Participants	
	True	False	True	False
community			45.7	54.3

individual			0	100.0
government			17.4	82.6
schools			2.2	97.8
KANU			0	100.0
SASOL/ NGOs			87.0	13.0
SDP			0	100.0
Christians			0	100.0
<i>Kathambi</i>			0	100.0
other			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		43.5		0		0		4.3
individual		4.3		4.3		0		0
government		4.3		0		4.3		8.7
schools		0		0		4.3		2.2
KANU		0		0		0		0
SASOL/ NGOs		47.8		2.2		4.3		23.9
SDP		0		0		4.3		6.5
Christians		0		0		4.3		0
<i>Kathambi</i>		0		0		4.3		0
other		0		0		0		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			4.3	0
report to dam/source committee chairperson			10.9	8.7
report to other members			13.0	0
report to the head man			34.8	0
report to the provincial administration			0	4.3
report to SASOL/sponsor			0	23.9
report to the police			4.3	0
beat up the person			0	2.2
banish him/her			0	10.9
force him/her to bear the cost			0	17.4
use force to stop him/her			15.2	0
no action			6.5	0
other			10.9	32.6
no response			0	0
Total	100.0	100.0	100.0	100.0

Any other comment

	Non-participants	Participants
more dams needed		50.0
congratulations- SASOL		17.4
sand dams are beneficial- increased incomes		0
satisfied with the location		4.3
sand dam too far, water source near home required		10.9
need IWSS		15.2
water source near home required		0
no comment		0
not reported		2.2
Total	100.00	100.0