



# Assessing the Economic Empowerment Impacts of WASH and Water Access Interventions on Women

## Topline Quantitative Results in Rwanda, Swaziland, and Nigeria

### Approach to Study

Three pilot studies were conducted across three projects in sub-Saharan Africa, selected for regional diversity, willingness to participate, and known program outcomes. For each project, sampling was based on a list of communities serviced by improved water access points as provided by the local implementing organization. Communities where the water infrastructure was no longer functioning were not included in the study. In each community a random walk approach was used to select households, which were then screened to confirm use of the improved water access point as their main source of water. The female head of household was interviewed in each household, as she could best speak to water collection habits and other topics of interest. In some communities (particularly in Swaziland and Nigeria) 7-10 years has elapsed since the intervention, so recall was a major concern.

### Summary of Findings by Pathway

#### Pathway One: Health

- Households are healthier: 65%
- Use saved time to sleep more: 23%
- Cleanliness is now easier for women in the household: 92%
- There is a significant relationship between improved health and
  - increased ease of participation in community groups
  - increased ease of household cleanliness
  - being more active in the community since the water point installation
  - new participation in income-generating activities at the 90% confidence level
  - saved time (any amount and 30+ min/day)

#### Pathway Two: Food Security and Nutrition

- Not measured

#### Pathway Three: Education

- Not measured

#### Pathway Four: Time Savings

- Saved time (any amount): 75.9%
- Saved time (30+ min/day): 50.5%
- Of those who saved time, that time is now spent on:
  - Activities that contribute to household income: 38.7%*
  - Domestic chores: 83.3%
  - Caring for children: 37.9%
  - Leisure: 23.7%



Sleeping: 22.8%

Participating in community groups: 18.7%

Travelling: 6.1%

Education: 5.3%

- Time saved (any amount and 30+ min/day) is significantly related to:
  - perceived ease of community participation
  - being more active in the community since the water point installation
  - increased income (any amount)
  - higher self-efficacy and self-confidence scores
- Time saved (30+ min/day) is significantly related to:
  - using that time to participate in income generating activities
  - participation in new income-generating activities

#### **Pathway Five: Income**

- 22.2% of all women reported a new income-generating activity, since installation of water point
- 21.5% of women reported a new financial service (savings account, group savings account, checking account, line of credit, or insurance) in a female household member's name, since installation of water point
- Of women who reported saving time, 38.7% use that saved time for income-generating activities
  - Of women who reported saving time and using that saved time for income generation, 80.5% reported an expansion of current activities
  - Of the women that used saved time on income-generating activities, 91% reported an increase in income from those activities
- New income activity is significantly associated with new financial services in a female household member's name
- There is a significant relationship between earning new income and
  - the woman deciding how her income is allocated
  - joint control of woman's income
- There is a significant relationship between increase in income (any amount) and
  - new female household decision-making
  - new joint household decision-making

#### **Pathway Six: Safety and Security**

- 26.0% reported a decrease in safety issues faced by women while collecting water
- 27.1% reported a decrease in harassment of women while collecting water
- 32.8% reported a decrease in community harassment of women unrelated to water collection
- Decrease in safety issues while collecting water is significantly related to
  - higher self-efficacy scores but not to higher self-confidence scores
- Decrease in harassment while collecting water is significantly related to
  - higher self-efficacy scores but not to higher self-confidence scores
- Decrease in safety/harassment issues while collecting water is significantly related to
  - higher perceived ease of community engagement
  - more community activity since installation of water point
  - increase in household respect for women
  - increase in community respect for women
- Decrease in community harassment not related to water collection is significantly related to
  - increased self-efficacy scores, but not to higher self-confidence

#### **Pathway Seven: Leadership and Skills**



- 4.5% hold new leadership positions since water point installation (type not specified)
- Perceived ease of serving as a leader in a community group since water point
  - A lot easier: 24.1%
  - Somewhat easier: 12.8%
  - About the same: 19%
  - Somewhat harder: 4.1%
  - A lot harder: 7.0%
  - Household doesn't do this activity: 24.3%
- 54.8% perceive that other women in the community have become more active in leadership positions since water point installation
- Attendance in training
  - Received training from WADA partners: 20.9%
  - Received training from other source: 17.1%
  - Received training from any source: 24.5%
- 33.7% say they are more active in the community now than before the water point installation
- Having received training (any type) is significantly related to
  - perceived ease of serving as a leader in community groups
  - perceived ease of community participation
  - being more active in the community since the water point installation
  - new female/joint decision-making in the home
  - increase in household respect for women
  - increase in community respect for women
- There is a significant relationship between perceived ease of serving as a leader since installation of the water point and self-efficacy or confidence scores

#### **Pathway Eight: Shifting Roles and Norms**

- 29.9% reported increased household respect for women
- 31.6% reported increased community respect for women
- 37.1% of women reported that they have taken on new household decision-making responsibilities, either solely or jointly with their spouse
- Increase in community respect for women is significantly related to higher self-efficacy scores, but not higher self-confidence scores
- Increase in household respect for women is significantly related to higher self-efficacy scores, but not higher self-confidence scores

## Demographic Summary<sup>1</sup>

		Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
Age	18 – 24 years	10%	8%	34%
	25 – 34 years	28%	31%	35%
	35 – 44 years	29%	23%	18%
	45 – 54 years	13%	13%	12%
	55 + years	19%	25%	1%
Education	Illiterate or Uneducated	21%	15%	30%
	Primary/Elementary completed	62%	30%	29%
	Secondary or Diploma completed	17%	49%	41%
	University or higher completed	1%	5%	1%
Marital Status	Single	1%	25%	11%
	Married	76%	60%	88%
	Divorced	7%	3%	0%
	Widowed	17%	12%	1%
Head of Household	Me	26%	37%	2%
	My husband	72%	46%	83%
	My husband and I together	0%	5%	3%
	My parents	2%	7%	11%
	Another male relative	0%	3%	1%
	Another female relative	0%	2%	0%
Number of Adults in Household	RANGE	1-11	1-35 <sup>2</sup>	1-18
	AVERAGE NUMBER OF ADULTS	5	6	7
Number of Dependents in Household	RANGE	0-6	0-25	0-11
	AVERAGE NUMBER OF DEPENDENTS	2	4	3
Employment	Housewife, not working outside of home	37%	10%	47%
	Unemployed	11%	35%	6%
	Working full time	26%	21%	20%
	Working part time or temporarily	25%	31%	14%
	Not working (student, disabled, or retired)	1%	4%	12%
Monthly Household Income <b>RWANDA</b>	No Income	1%	-	-
	Under 50,000 RWFs (under 58.50 USD)	71%	-	-
	50,001 - 100,000 RWFs (58.50-117 USD)	18%	-	-
	100,001 - 200,000 RWFs (117-234 USD)	6%	-	-
	200,001 - 400,000 RWFs (234-468 USD)	3%	-	-
	400,001 - 700,000 RWFs (468-819 USD)	1%	-	-
	700,000 RWFs or more (819 USD or more)	0%	-	-

<sup>1</sup> Women were selected for inclusion in this study based on their female head of household status, meaning the woman primarily responsible for the management of the household and knowledgeable about household practices such as collecting/fetching water. Participants confirmed their use of the water point of interest as their main source of water. Recruitment also included quotas to establish an even distribution of water point use representation.

<sup>2</sup> Large household sizes in Swaziland are due to the tradition of adult children remaining in the home

<b>Monthly Household Income</b> <b>SWAZILAND</b>	No Income	-	22%	-
	Under 1000 SZL (under 84 USD)	-	42%	-
	1001-2499 SZL (84.08-209.92 USD)	-	18%	-
	2500-4999 SZL (210-419.92 USD)	-	8%	-
	5000 – 9999 SZL (420-839.92 USD)	-	4%	-
	10000 – 24999 SZL (840-2099.92 USD)	-	1%	-
	25000 – 49999 SZL (2100-4199.92 USD)	-	2%	-
	50 000 SZL or more (4200 USD or more)	-	0%	-
<b>Monthly Household Income</b> <b>NIGERIA</b>	No Income	-	-	16%
	Under NGN 18,000 (under 50.04 USD)	-	-	26%
	NGN18,001 – NGN38,000 (50.04-105.64 USD)	-	-	22%
	NGN38,001 – NGN58,000 (105.64-161.24 USD)	-	-	10%
	NGN58,001 – NGN78,000 (161.24-216.84 USD)	-	-	6%
	NGN78,001 – NGN98,000 (216.84-272.44 USD)	-	-	1%
	NGN98,001 – NGN118,000 (272.44-328.04 USD)	-	-	1%
	NGN118,001 – NGN138,000 (328.04 -383.64 USD)	-	-	0%
	NGN138,001 or more (383.04 USD or more)	-	-	0%
Don't know	-	-	19%	
<b>Top 3 Main Sources of Income</b>	Sale of crops	44%	7%	26%
	Sale of livestock and animal products	17%	11%	31%
	Agricultural waged labor	14%	3%	13%
	Non-agricultural casual labor	16%	11%	15%
	Salaried employment	21%	27%	9%
	Temporary/Contracted employment	16%	6%	8%
	Retirement pension	3%	4%	8%
	Sale of assets	4%	8%	4%
	Remittances from overseas	1%	0%	1%
	Gifts from local family/friends	8%	14%	11%
	Savings	17%	15%	28%
	Formal credits (from banks)	3%	0%	1%
	Informal credits (from shops, friends)	6%	3%	4%
	Sale of food aid (vouchers or parcels)	0%	6%	8%
	Sale of non-food assistance	0%	8%	11%
	Cash from humanitarian organizations	4%	2%	1%
Other	3%	10%	0%	

## Water Access and Behaviors

### 1. Main Source of Water Prior to Intervention

	Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
Pipe-borne inside house	0%	0%	4%
Pipe-borne outside house	3%	7%	18%

Tanker service	5%	11%	6%
River/stream	46%	50%	0%
Bore hole/Tube well	34%	7%	19%
Well	6%	10%	49%
Dug out/pond	6%	9%	2%
Rain water	0%	6%	0%
Another source	0%	0%	1%

A1. BEFORE your household used [WATER SOURCE FROM LIST], what was your main source of water?

## 2. Supplemental water sources used

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
Pipe-borne inside house	0%	1%	2%	7%	4%	8%	+1	+5	+4
Pipe-borne outside house	8%	6%	3%	22%	19%	23%	-2	+19	+4
Tanker service	9%	10%	12%	18%	8%	3%	+1	+6	-5
River/stream	32%	21%	22%	16%	3%	3%	-11	-6	-
Bore hole/Tube well	22%	27%	7%	22%	22%	42%	+5	+15	+20
Well	10%	3%	14%	11%	18%	44%	-7	-3	+26
Dug out/pond	5%	4%	16%	7%	7%	2%	-1	-9	-5
Rain water	76%	61%	60%	42%	47%	19%	-15	-18	-28
Another source	0%	0%	1%	1%	0%	1%	-	-	+1
Did not use other sources	3%	24%	10%	3%	11%	12%	+21	-7	+1

A2. BEFORE your household used [WATER SOURCE FROM LIST], were other sources of water ever used? If so, what were they?

A4. CURRENTLY, as well as [WATER SOURCE FROM LIST] does your household ever use other sources for water? If so, what are they?

## 3. Household member responsibility for collecting/fetching water

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
Myself	79%	82%	90%	92%	41%	42%	+3	+2	+1

My spouse	18%	22%	5%	3%	47%	49%	+4	-2	+2
Other adult female HH members	6%	6%	15%	16%	9%	8%	-	+1	-1
Other adult male HH members	11%	7%	8%	14%	19%	19%	-4	+6	-
Female children in my household	43%	47%	27%	34%	27%	26%	+4	+7	-1
Male children in my household	42%	47%	23%	25%	42%	44%	+5	+2	+2
Other	7%	7%	0%	0%	1%	0%	-	-	-1

A3. BEFORE your household used [WATER SOURCE FROM LIST], who was responsible for collecting/fetching water?

A5. Who CURRENTLY is responsible for collecting/fetching water for your household?

## Pathways to Empowerment

### Pathway One: Health

#### 1.1 Health Level of Household

	Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
A lot healthier	65%	62%	67%
Somewhat healthier	27%	29%	16%
Neither healthier nor unhealthier / about the same	7%	5%	9%
Somewhat unhealthier	1%	3%	8%
A lot unhealthier	0%	1%	1%

B17. SINCE your household started using [WATER SOURCE FROM LIST], would you say that your household is, on the whole...

#### 1.2 Ability of Household Members to Complete Cleaning Tasks After Water Source

	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)	
	Women	Men	Women	Men	Women	Men
<b>Cleaning the house</b>						
A lot easier	79%	53%	65%	42%	56%	70%
Somewhat easier	13%	15%	22%	30%	29%	16%
<b>Doing the laundry</b>						
A lot easier	87%	64%	61%	39%	54%	68%
Somewhat easier	9%	10%	22%	29%	24%	19%
<b>Bathing</b>						

A lot easier	90%	86%	63%	47%	55%	71%
Somewhat easier	6%	7%	20%	29%	26%	16%
<b>Completing other household chores</b>						
A lot easier	81%	67%	61%	36%	43%	49%
Somewhat easier	16%	14%	23%	34%	28%	29%
<b>Caring for children or other family members</b>						
A lot easier	79%	62%	60%	37%	39%	42%
Somewhat easier	13%	13%	24%	30%	32%	35%
<b>Getting along with other family members</b>						
A lot easier	76%	77%	56%	39%	40%	48%
Somewhat easier	14%	10%	22%	30%	34%	34%

B18. SINCE you started using [WATER SOURCE FROM LIST] has there been any change in the ability of your or your FEMALE household members to do the following?

B19. SINCE you started using [WATER SOURCE FROM LIST] has there been any change in the ability of your or your MALE household members to do the following?

### **Pathway Two: Food Security and Nutrition (not covered in quantitative research)**

### **Pathway Three: Education (not covered in quantitative research)**

### **Pathway Four: Time Savings**

#### **4.1 Time Savings**

	<b>Rwanda (n=156)</b>	<b>Swaziland (n=140)</b>	<b>Nigeria (n=151)</b>
Lost 61+ mins	0%	1%	1%
Lost 31-60 mins	0%	5%	0%
Lost 1 - 30 mins	1%	14%	18%
<b>AVERAGE OF TIME LOST<sup>3</sup></b>	<b>30 minutes</b>	<b>34 minutes</b>	<b>14 minutes</b>
Time stayed the same	0%	12%	11%
Saved 1-30 mins	15%	21%	64%
Saved 31-60 mins	12%	18%	7%
Saved 61-90 mins	19%	9%	0%
Saved 91-120 mins	14%	12%	1%
Saved 121-150 mins	10%	2%	0%
Saved 151-180 mins	10%	1%	0%
Saved 181-210 mins	3%	1%	0%
Saved 211-240 mins	6%	2%	0%
Saved 241+ mins	11%	1%	0%

<sup>3</sup> Time lost was typically because respondents were making more trips to get water, or because they were travelling a little farther to use these water points that provided them with cleaner/more reliable water access.



<b>AVERAGE OF TIME SAVED</b>	<b>129 minutes (n=155)</b>	<b>75 minutes (n=95)</b>	<b>16 minutes (n=107)</b>
<b>OVERALL AVERAGE</b>	<b>Saved 128 minutes</b>	<b>Saved 44 minutes</b>	<b>Saved 9 minutes</b>

B7. Based on what you've told me, SINCE your household started using [WATER SOURCE FROM LIST] your household saves [SUBTRACT B6 FROM B3] minutes OR [SUBTRACT B6 FROM B3 THEN DIVIDE BY 60] hours each day by using [WATER SOURCE FROM LIST]. Does this seem about right?

#### 4.2 Use of Additional Time

	<b>Rwanda (n=154)</b>	<b>Swaziland (n=98)</b>	<b>Nigeria (n=107)</b>
Activities that contribute to household income	51%	33%	26%
Domestic chores	81%	79%	91%
Caring for/playing with children or other family members	38%	49%	28%
Sleeping	19%	11%	39%
Leisure (this can include visiting friends/family, going to church, etc)	34%	28%	6%
Education and/or skills building workshops	4%	12%	1%
Travelling/commuting	10%	5%	1%
Participating in community groups	2%	27%	1%
Other	0%	0%	0%

B8. Thinking just about yourself and other women in your household, how is this additional time used? That is, what do the women in your household spend more time doing now than before you used [WATER SOURCE FROM LIST]?

##### 4.2.1 Outcome of Additional Time Spend on Income Generating Activities

Did the additional time spent on income generating activities lead to...	<b>Rwanda (n=66)</b>	<b>Swaziland (n=32)</b>	<b>Nigeria (n=28)</b>
...an increase in the amount of income generated by them?	97%	91%	79%
...any expansion in the types of activities undertaken?	92%	59%	75%

B9/10. [ACTIVITIES THAT CONTRIBUTE TO HOUSEHOLD INCOME] Did the additional time spent on these activities lead to...

#### Pathway Five: Income

##### 5.1 Female Member of Household Participation in Income Earning Activities

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
Cash crop farming or gardening	42%	52%	18%	23%	9%	8%	+10	+5	-1
Cash livestock raising	31%	35%	11%	12%	8%	9%	+4	+1	+1
Wage or salary employment outside of the home	28%	31%	22%	15%	2%	1%	+3	-7	-1

Making/preparing other items for sale at the market	11%	10%	14%	17%	21%	22%	-1	+3	+1
Selling other items at the market or from home	6%	9%	22%	18%	25%	22%	+3	-4	-3
Other	-		1%	1%	-	-		-	
None of the above, female members of the household did not participate in any	25%	17%	37%	37%	53%	54%	-8	-	+1

B12. BEFORE your household used [WATER SOURCE FROM LIST], did FEMALE MEMBERS of your household do any of the following to bring in income for the household?

B14. SINCE your household started using [WATER SOURCE FROM LIST], have FEMALE MEMBERS of your household done any of the following to bring in income?

### 5.2 Household Income Sources <sup>4</sup>

AVERAGE MONTHLY INCOME	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
Cash crop farming or gardening	18,081 RWF n=64	20,721 RWF n=79	1,252 SZL n=17	585 SZL n=22	8600 NGN n=13	9,550 NGN n=12	+15%	-53%	+11
Cash livestock raising	12,465 RWF n=43	14,401 RWF n=48	1,607 SZL n=11	2,043 SZL n=14	31,615 NGN n=13	27,407 NGN n=15	+16%	+27%	-13%
Wage or salary employment outside of the home	29,608 RWF n=43	27,338 RWF n=45	2,286 SZL n=29	3,805 SZL n=20	n=4	n=1	-8%	+66%	-
Making/preparing other items for sale at the market	13,544 RWF n=16	20,333 RWF n=15	512 SZL n=17	632 SZL n=14	8,307 NGN n=30	9,694 NGN n=32	+50%	+23%	+17%
Selling other items at the market	22,556 RWF n=9	88,142 RWF n=14	1,128 SZL n=26	1,667 SZL n=23	5,400 NGN n=35	5,644 NGN n=25	+291%	+48%	+5%

<sup>4</sup> Not all basesizes included below are high enough to analyze. Reported income varied widely and is difficult to understand as some respondents reported multiple income sources and/or started or stopped receiving income from a particular source.

Other	18,960 RWF n=5	6,230 RWF n=5	200 SZL n=1	1,150 SZL n=2	-	-	-67%	+475	
<b>AVERAGE INCOME ALL SOURCES</b>	<b>30,267 RWF</b> n=115	<b>39,756 RWF</b> n=129	<b>2,078 SZL</b> n=70	<b>2,392 SZL</b> n=69	<b>15,379 NGN</b> n=68	<b>17,776 NGN</b> n=58	<b>+31%</b>	<b>+15%</b>	<b>+16%</b>

B13. To the best of your knowledge, BEFORE your household used [WATER SOURCE FROM LIST], how much income was earned from [ACTIVITY FROM B9]?

B15. To the best of your knowledge, SINCE your household started using [WATER SOURCE FROM LIST] how much income does [ACTIVITY FROM B11] bring in?

### 5.3 Treatment of Income from Female Household Members

	Rwanda (n=138)	Swaziland (n=108)	Nigeria (n=81)
The woman that earns the income decides how to allocate it	40%	58%	57%
The income is given to the male head of household and he decides how to	3%	12%	5%
The income becomes part of the household income and decisions are made jointly about how to allocate it	57%	27%	35%

B16. What happens to the income brought in/earned by female household members?

## Pathway Six: Safety and Security

### 6.1 During Water Collection

#### 6.1.1 Female Household Members Experience of Harassment<sup>5</sup>

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
Always	5%	0%	2%	2%	17%	17%	-5	-	-
Often	16%	0%	7%	4%	0%	1%	-16	-3	+1
Sometimes	27%	3%	17%	8%	5%	2%	-24	-9	-3
Seldom	10%	6%	5%	1%	3%	1%	-4	-4	-2
Never	41%	90%	66%	86%	75%	78%	+49	+20	+3

C9. BEFORE your household started using [WATER SOURCE FROM LIST], did women in your household ever get harassed while collecting/fetching water?

C10. SINCE your household started using [WATER SOURCE FROM LIST], do women in your household ever get harassed while collecting/fetching water?

<sup>5</sup> Harassment was defined as verbal or physical safety issues caused by other community members or persons.

### 6.1.2 Female Household Members Experience of Safety Issues<sup>6</sup>

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
Always	5%	1%	2%	7%	17%	17%	-4	+5	-
Often	15%	1%	10%	5%	0%	1%	-16	-5	+1
Sometimes	23%	2%	18%	9%	5%	1%	-21	-9	-4
Seldom	17%	3%	3%	1%	3%	4%	-14	-2	+1
Never	39%	93%	62%	75%	75%	76%	+54	+13	+1

C12. BEFORE your household started using [WATER SOURCE FROM LIST], did women in your household ever experience safety issues while collecting/fetching water?

C13. SINCE your household started using [WATER SOURCE FROM LIST], do women in your household experience safety issues while collecting/fetching water?

## 6.2 In the Community

### 6.2.1 Ability to Interact in Community for Female Household Members after Water Point

	Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
<b>Go to the marketplace</b>			
A lot easier	69%	50%	36%
Somewhat easier	16%	27%	13%
<b>Participate in community groups</b>			
A lot easier	64%	37%	13%
Somewhat easier	11%	26%	6%
<b>Serve as a leader in community groups</b>			
A lot easier	36%	29%	8%
Somewhat easier	8%	27%	4%
<b>Attend trainings or other education</b>			
A lot easier	49%	31%	7%
Somewhat easier	11%	23%	4%

B29. SINCE your household started using [WATER SOURCE FROM LIST] has there been any change in the ability of your or your FEMALE HOUSEHOLD MEMBERS to do the following?

### 6.2.2 Women's Ability to Move Around without Harassment

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			

<sup>6</sup> Safety issues were defined separately as concerns that did not related to other people and tended to include hazards related to water such as snake/crocodiles, falls during water collection, etc.

Very able	26%	58%	30%	53%	56%	68%	+32	+23	+12
Somewhat able	29%	11%	31%	21%	19%	11%	-18	-10	-8
Not very able	18%	9%	29%	11%	9%	5%	-9	-18	-4
Not at all able	24%	20%	8%	14%	16%	14%	-4	+6	-2

B36. Thinking about other women in your community BEFORE you started using [WATER SOURCE FROM LIST], to what extent did they feel able to move around the community without verbal or physical harassment?

B37. Thinking about other women in your community SINCE you started using [WATER SOURCE FROM LIST], are they able to move around without verbal or physical harassment?

### 6.3 Safety and Security in the Household

#### 6.3.1 Resolving of Disagreements

	Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
<b>Keep my opinion to myself</b>			
Always	8%	16%	21%
Often	3%	9%	12%
<b>Discuss the disagreement calmly</b>			
Always	25%	29%	12%
Often	13%	22%	28%
<b>Argue heatedly/shout at each other</b>			
Always	0%	4%	4%
Often	1%	11%	6%
<b>Throw things at each other</b>			
Always	0%	2%	1%
Often	1%	5%	1%
<b>Hit each other</b>			
Always	0%	2%	1%
Often	1%	3%	1%

C7. There are various ways that serious disagreements are dealt with in the household. When you have a serious disagreement with your spouse, or male head of household, how often do you...

#### 6.3.2 Physical Safety in the Household

	Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
Yes	38%	22%	26%
No	62%	78%	74%

C8. In the past six months have you ever felt afraid for the physical safety of yourself or your children within your household?

### Pathway Seven: Leadership and Skills

#### 7.1 Female Household Members Receiving Training

	Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
Nazarene Mission/NCMI/RAIN/Coca-Cola [SWAZILAND ONLY]	-	38%	-
Global Grassroots/NAME OF PROJECT/water point providers [RWANDA ONLY]	21%	-	-
WOFAN/OTHER NAMES OF PROJECT [NIGERIA ONLY]	-	-	4%
Other Trainings	24%	21%	4%

B20. Have you or female members of your household received any training from any of the following providers?

## 7.2 Training Topics

	Rwanda (n=40)	Swaziland (n=66)	Nigeria (n=10)
WASH behavioral trainings (importance of hand washing, cleanliness, etc)	68%	33%	1
Training on water or sanitation infrastructure or maintenance	65%	38%	2
Training on management of water or sanitation infrastructure	50%	11%	0
Leadership trainings	23%	0%	1
Agricultural skills trainings	13%	14%	1
Business skills trainings (ie book or record keeping, entrepreneurship, etc)	18%	6%	3
Household management skills	45%	12%	0
Other income generating skills trainings (basket-weaving, handicrafts, etc)	20%	6%	2
Other skills or trainings	0%	6%	0
Don't know	12%	17%	1

B22. What was the topic (or topics) of this training?

## 7.3 Use of Skills from Training

	Rwanda (n=35)	Swaziland (n=55)	Nigeria (n=9)
Yes, and can give an example	86%	56%	7
Yes, and cannot give an example	3%	25%	1
No	11%	18%	1

B23. Have the women in your household used the skills they learned in these trainings? Can you give me an example of how?

## 7.4 Sharing of Skills from Training

	Rwanda (n=35)	Swaziland (n=55)	Nigeria (n=9)
Yes, and can give an example	83%	56%	7
Yes, and cannot give an example	9%	31%	2
No	9%	0%	0

B24. Have the women in your household taught the skills they learned in these trainings to anyone else? Can you give me an example of how?

## Pathway Eight: Shifting Roles and Normsfalli

### 8.1 Community Level

#### 8.1.1 Level of Community Engagement

	Rwanda	Swaziland	Nigeria
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	(n=156)	(n=153)	(n=160)
I was a more active community member before the water source	15%	12%	8%
I am a more active community member currently	67%	33%	1%
It is about the same	17%	48%	89%

B27. In general, do you think that YOU were a more active member of your community BEFORE your household started using [WATER SOURCE FROM LIST], or now? Or is it about the same?

### 8.1.2 Reasons for Community Engagement

<p><b>Rwanda</b>            Accessibility of water creates time to do other things            I have more time for agriculture/domestic activities            I am a group leader            I have time for community activities</p>
<p><b>Swaziland</b>            Because I was involved in the borehole construction            Because I was part of the project            I now have more time since water is close by            We have water next to us now instead of walking long distance            I can meet with other women and also help at the carepoint            I am able to contribute in my community in helping at the care point            We have enough water for our health, we are able to finish our work in time without being tired</p>
<p><b>Nigeria</b>            Because I can go out to vote and encourage other woman too            It was because of the skill I acquired through WOFAN/I participated in the training on how to trade            They gave a uniform            It was because of the portable water they provided for us</p>

### 8.1.3 Type of Community Engagement

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
Be an active member of a professional association	18%	26%	15%	16%	2%	1%	+8	+1	-1
Be an active member in a religious or community organization	46%	55%	40%	49%	12%	11%	+9	+9	-1
Hold a leadership position in a religious, professional or community organization	28%	28%	12%	11%	4%	5%	-	-1	+1
Give a speech before an organized group including religious or community organization	29%	35%	7%	10%	1%	1%	+6	+3	-

Attend a public meeting on local affairs	80%	87%	20%	29%	0%	1%	+7	+9	+1
Make a financial contribution to a community or charitable organization or to a political campaign	42%	47%	5%	10%	1%	0%	+5	+5	-1
Join with others to draw attention to a political or community issue	70%	71%	4%	5%	0%	0%	+1	+1	-
Vote in a local, provincial, or national election	90%	92%	24%	37%	16%	16%	+2	+13 <sup>7</sup>	-
Contact a government official or representative about an issue or problem	30%	34%	2%	3%	0%	0%	+4	+1	-
Learn more about local community issues	39%	48%	8%	16%	1%	4%	+9	+8	+3
I do/did not do any of the above	3%	2%	26%	16%	66%	66%	-1	-10	-

B25. BEFORE your household started using [WATER SOURCE FROM LIST], which, if any, of the following did you do on a regular basis?  
 B26. SINCE your household started using [WATER SOURCE FROM LIST], which, if any, of the following do you do on a regular basis?

### 8.1.4 Other Women's Community Engagement

Do you think that as a result of the [water source] women have...	Rwanda (n=156)	Swaziland (n=153)	Nigeria (n=160)
...become more active community members?	90%	60%	28%
...become more active in leadership positions?	85%	56%	24%

B30/31. Thinking about other women in your community, do you think that as a result of [WATER SOURCE FROM LIST], they have...

### 8.1.5 Community Respect for Women

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
A lot	23%	77%	30%	44%	67%	74%	+54	+14	+7
Somewhat	19%	15%	37%	37%	15%	11%	-4	-	-4
Not very much	43%	6%	18%	13%	8%	4%	-37	-5	-4
Not at all	13%	1%	6%	2%	9%	10%	-12	-4	+1

<sup>7</sup> 2018 is an election year in Swaziland



Don't know	2%	1%	9%	4%	1%	0%	-1	-5	-1
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B32. In your opinion, BEFORE you started using [WATER SOURCE FROM LIST], how much did other members of your community respect the women in your community?

B33. In your opinion, SINCE you started using [WATER SOURCE FROM LIST], how much do other members of your community respect the women in your community?

## 8.2 Household Level

### 8.2.1 Household Respect for Women

	Country						% Change		
	Rwanda (n=156)		Swaziland (n=153)		Nigeria (n=160)		Rwanda	Swaziland	Nigeria
	Before	After	Before	After	Before	After			
A lot	37%	83%	31%	47%	68%	78%	+46	+16	+10
Somewhat	18%	13%	35%	36%	16%	8%	-5	+1	-8
Not very much	37%	3%	24%	12%	5%	3%	-34	-12	-2
Not at all	6%	0%	3%	2%	11%	11%	-6	-1	-

B34. In your opinion, BEFORE you started using [WATER SOURCE FROM LIST], how much were women in your household respected by male household members?

B35. In your opinion, SINCE you started using [WATER SOURCE FROM LIST], how much are women in your household respected by male household members?

### 8.2.2 Household Decision-Making Responsibilities

	Rwanda (n=156)			Swaziland (n=153)			Nigeria (n=160)		
	Me alone	Me and my spouse together	My spouse alone	Me alone	Me and my spouse together	My spouse alone	Me alone	Me and my spouse together	My spouse alone
<b>Major purchases such as property, appliances, or livestock</b>									
Before	31%	49%	19%	31%	12%	36%	2%	14%	65%
After	33%	58%	9%	39%	16%	26%	10%	19%	56%
<b>Change</b>	+2	+9	-10	+8	+4	-10	+8	+5	-9
<b>Everyday purchases such as groceries</b>									
Before	53%	33%	12%	46%	12%	28%	16%	20%	58%
After	53%	43%	3%	48%	16%	20%	12%	24%	56%
<b>Change</b>	-	+10	-9	+2	+4	-8	-4	+4	-2
<b>Selling assets such as property, appliances or livestock</b>									
Before	27%	51%	19%	35%	10%	31%	4%	9%	63%
After	29%	62%	8%	40%	16%	24%	5%	16%	61%
<b>Change</b>	+2	+11	-11	+5	+6	+7	+1	+7	-2

Children's education									
Before	35%	54%	8%	37%	11%	31%	2%	12%	73%
After	32%	62%	3%	39%	17%	23%	2%	26%	64%
<b>Change</b>	-3	+8	-5	+2	+6	-8	-	+14	-9
Household members' health									
Before	32%	56%	12%	50%	13%	18%	2%	17%	69%
After	30%	64%	5%	50%	16%	18%	4%	29%	58%
<b>Change</b>	-2	+8	-7	-	+3	-	+2	+8	-11

C1. BEFORE your household started using [WATER SOURCE FROM LIST], who in your household was primarily responsible for making decisions about....

C2. SINCE your household started using [WATER SOURCE FROM LIST], who in your household is primarily responsible for making decisions about....

### 8.2.3 Household Ownership of Financial Services

	Rwanda (n=156)			Swaziland (n=153)			Nigeria (n=160)		
	In a female household member's name	In a male household member's name	In two household members' names	In a female household member's name	In a male household member's name	In two household members' names	In a female household member's name	In a male household member's name	In two household members' names
Savings account at a bank									
Before	18%	17%	19%	32%	12%	5%	12%	26%	9%
After	19%	12%	24%	36%	13%	5%	16%	27%	10%
<b>Change</b>	+1	-5	+5	+4	+1	-	+4	+1	+1
Group savings account									
Before	35%	8%	5%	28%	12%	2%	0%	2%	1%
After	41%	10%	8%	42%	9%	6%	1%	1%	1%
<b>Change</b>	+6	+2	+3	+14	-3	+4	+1	-1	-
Checking/current account									
Before	14%	9%	11%	8%	7%	3%	0%	2%	1%
After	13%	8%	13%	9%	8%	3%	1%	2%	1%
<b>Change</b>	-1	-1	+2	+1	+1	-	+1	-	-
Line of credit or loan									
Before	15%	15%	12%	6%	8%	3%	0%	0%	0%
After	18%	15%	12%	8%	5%	2%	0%	0%	0%
<b>Change</b>	+3	-	-	+2	-3	-1	-	-	-
Insurance									

Before	27%	38%	25%	13%	5%	4%	0%	0%	0%
After	33%	39%	29%	22%	7%	7%	0%	0%	1%
<b>Change</b>	+5	+1	+4	+9	+2	+3	-	-	+1

C3. BEFORE your household started using [WATER SOURCE FROM LIST], did your household have any of the following financial services or products? If so, who in the household? YES, IN A FEMALE HOUSEHOLD MEMBER'S NAME

C4. SINCE your household started using [WATER SOURCE FROM LIST], did your household have any of the following financial services or products? If so, who in the household? YES, IN A FEMALE HOUSEHOLD MEMBER'S NAME

### 8.2.4 Household Responsibility for Activities

	Rwanda (n=156)			Swaziland (n=153)			Nigeria (n=160)		
	Me alone	Me and my spouse together	My spouse alone	Me alone	Me and my spouse together	My spouse alone	Me alone	Me and my spouse together	My spouse alone
<b>Caring for children</b>									
Before	54%	40%	0%	52%	14%	24%	66%	22%	7%
After	58%	38%	0%	51%	17%	19%	60%	31%	4%
<b>Change</b>	+4	-2	-	-1	+3	-5	-6	+9	-3
<b>Buying food</b>									
Before	58%	26%	14%	37%	16%	33%	3%	15%	75%
After	54%	37%	7%	41%	16%	25%	2%	29%	63%
<b>Change</b>	-4	+11	-7	+4	-	-8	-1	+14	-12
<b>Cleaning the house</b>									
Before	74%	16%	1%	75%	7%	3%	82%	3%	12%
After	69%	21%	1%	72%	5%	4%	73%	11%	12%
<b>Change</b>	-5	+5	-	-3	-2	+1	-9	+8	-
<b>Playing with children</b>									
Before	56%	33%	1%	57%	12%	7%	26%	40%	22%
After	47%	41%	2%	51%	13%	7%	20%	51%	21%
<b>Change</b>	-9	+8	+1	+6	+1	-	-6	+11	-1
<b>Paying the bills</b>									
Before	27%	21%	45%	31%	15%	35%	3%	14%	76%
After	27%	32%	34%	37%	14%	25%	3%	31%	61%
<b>Change</b>	-	+11	-11	+6	-1	-10	-	+17	-15

C5. BEFORE your household started using [WATER SOURCE FROM LIST], who was primarily responsible for...

C6. SINCE your household started using [WATER SOURCE FROM LIST], who was primarily responsible for...

## 8.2.5 Permission for Free Movement

	Rwanda (n=156)				Swaziland (n=153)				Nigeria (n=160)			
	Yes and need accompaniment	Yes and can go alone	Yes and cannot go	Do not need permission	Yes and need accompaniment	Yes and can go alone	Yes and cannot go	Do not need permission	Yes and need accompaniment	Yes and can go alone	Yes and cannot go	Do not need permission
Local market	2%	31%	0%	67%	8%	14%	2%	71%	31%	46%	1%	22%
Call on friends or family in the neighborhood	4%	47%	0%	48%	8%	13%	1%	74%	28%	45%	2%	25%
A local shrine, church or mosque	3%	28%	0%	69%	8%	13%	4%	69%	19%	18%	1%	26%
A local health center or doctor	12%	26%	0%	62%	12%	15%	1%	65%	36%	33%	1%	18%
Work / paid employment outside the house	1%	21%	0%	72%	6%	12%	1%	62%	16%	12%	2%	29%
Collect/fetch water from a local water point	0%	11%	0%	88%	7%	7%	5%	74%	19%	25%	2%	28%

C15. Do you ever need permission to go to any of the following places? If yes, are you permitted to go on your own, only if someone accompanies you or not at all?

## Confidence and Efficacy Scales<sup>8</sup>

### 1. Self-Efficacy

	Rwanda (n=155)	Swaziland (n=136)	Nigeria (n=158)
<b>I feel I am able to do things as well as most other people</b>			
Strongly agree	79%	51%	71%
Somewhat agree	17%	37%	27%
<b>I feel that I am a person of worth, at least on an equal plane with others</b>			
Strongly agree	72%	42%	56%
Somewhat agree	19%	41%	40%
<b>I am always optimistic about my future</b>			
Strongly agree	85%	42%	50%
Somewhat agree	10%	37%	44%

<sup>8</sup> Scores were assigned by responses to each statement, with “strongly agree” equaling 4 points, “somewhat agree” as 3 points, “somewhat disagree” as 2 points, and “strongly disagree” as 1 point. Scales were created by summing these scores for each individual. A composite score of a higher value indicates higher self-efficacy or self-confidence, and a lower value suggests lower self-efficacy or self-confidence.

<b>It is important for me to do whatever I'm doing as well as I can, even if it isn't popular with people around me</b>			
Strongly agree	85%	51%	51%
Somewhat agree	12%	29%	42%
<b>Average self-efficacy score (of 16)</b>	<b>14.95</b>	<b>13.28</b>	<b>14.15</b>
• Score 4.00-7.00	1%	2%	0%
• Score 8.00-11.00	4%	15%	3%
• Score 12.00-15.00	37%	57%	74%
• Score 16.00	57%	26%	23%

C16. Now we're going to change topics again and I'm going to ask you about your opinion on some statements. For each of the following statements, please tell me whether you agree or disagree, and if that is strongly or somewhat...

## 2. Self-Confidence

	<b>Rwanda (n=140)</b>	<b>Swaziland (n=130)</b>	<b>Nigeria (n=157)</b>
<b>I am confident that I can influence decisions in my household</b>			
Strongly agree	75%	59%	79%
Somewhat agree	15%	29%	21%
<b>I feel that my role the family is valued/respected</b>			
Strongly agree	88%	58%	59%
Somewhat agree	8%	31%	39%
<b>I feel confident expressing my opinion even if my spouse disagrees with me</b>			
Strongly agree	59%	41%	51%
Somewhat agree	15%	37%	42%
<b>I feel that my opinion is listened to by my family</b>			
Strongly agree	79%	52%	54%
Somewhat agree	13%	38%	41%
<b>I feel respected by people in my community</b>			
Strongly agree	56%	33%	49%
Somewhat agree	34%	48%	39%
<b>I am able to express my opinion with people in my community</b>			
Strongly agree	70%	27%	48%
Somewhat agree	21%	48%	36%
<b>I feel like the leaders in my community listen to people like me</b>			
Strongly agree	63%	24%	44%
Somewhat agree	25%	45%	36%
<b>I am able to influence decisions made in my community</b>			
Strongly agree	65%	24%	44%
Somewhat agree	20%	42%	36%
<b>Average self-confidence score (of 32)</b>	<b>28.41</b>	<b>25.74</b>	<b>27.25</b>
• Score 8.00-15.00	4%	2%	0%
• Score 16.00-23.00	8%	30%	16%
• Score 24.00-31.00	64%	55%	68%
• Score 32.00	25%	14%	17%

C17. For each of the following statements, please tell me whether you agree or disagree, and if that is strongly or somewhat...