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SECOND ROUND

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Rwanda (2010):

TRaC Study Evaluating Use of *Sur'Eau* among Women with Children under the age of five.
Second Round.

PSI Research Division
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Contacts:

Jean Providence Nzabonimpa, MA, MRes
Research Specialist
Population Services International/ Rwanda
P.O. Box 3040 Kigali
Mobile: +250 (0)788307850
Email: jnzabonimpa@psirwanda.org

Andrea Plautz, MPH
Research Capacity Building Advisor
Population Services International / Rwanda
P.O. Box 3040 Kigali
Mobile: +250 (0)788304821
Email: andrea@psirwanda.org

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SUMMARY

BACKGROUND & RESEARCH OBJECTIVES

The purpose of this study is to provide an assessment of the key health behaviors, determinants, and exposure to PSI programming among women with children under five years of age in Rwanda, where PSI is implementing a Social Marketing intervention for Diarrhea Disease Control Plus: Point-of-Use Water Disinfection and Zinc Treatment (POUZN). The study was conducted nationally, and we interviewed 4442 women.

This study is for the second wave of the TRaC survey. It aims to answer three fundamental questions related to monitoring, segmentation and evaluation of the safe water product, *Sur'Eau*:

1. Determine the levels and trends evident in key behavior, risk, OAM constructs, and exposure to PSI/Rwanda *Sur'Eau* program activities.
2. By each risk/behavior combination, determine the opportunity, ability and motivation (OAM) constructs and population characteristics significantly correlated with the use of a water treatment product and/or *Sur'Eau* specifically.
3. The extent to which exposure to PSI/Rwanda *Sur'Eau* program activities lead to changes in OAM, risk, and behavior.

DESCRIPTION OF INTERVENTION

The POUZN Project was managed by Abt Associates and implemented by Population Services International (PSI), a non-profit non-governmental organization (NGO) that specializes in social marketing of AIDS prevention, family planning and maternal and child health products and services. In Rwanda, this program provides water prurification products, i.e. *Sur'Eau*, through the channel of commercial private sector and to a lesser extent, the public sector.

METHODOLOGY

Data from this study are from two rounds of TRaC surveys. TRaC surveys are quantitative studies that provide evidence for programmatic decision-making and measure the impact of various project interventions and activities. Baseline data collection took place in September/October of 2007 and the second round was

completed in March/April 2010. Both studies were nationally representative of women age 15-49 for PSI/Rwanda's safe water program. Data collection focused on gathering information about use of the Sur Eau and other water treatment methods, factors related to caregivers of children under five's opportunity, ability, and motivation (OAM) to adopt safer behaviour, and their exposure to Sur Eau program interventions. A multi-stage cluster sampling strategy was used in both studies.[1]

A total of 4040 and 4442 interviews were completed among women age 15-49, with or without children, in the baseline and follow-up studies, respectively. The sample was drawn from all five Rwandan provinces. Sample size calculations took into consideration the proportion of women with children under the age to ensure sufficient power to limit to the analysis to women with children under five (N=2188 and 2719, respectively). Data analysis consisted of multivariate logistic regression and ANOVAs to monitor trends over time, ascertain which determinants were correlated with key behaviors, and to examine the association between program exposure and changes in behaviors and determinants. A statistical significance threshold of $p<.05$ was used. Socio-demographic characteristics and geographic location were controlled for in the analyses.

MAIN FINDINGS

MONITORING ANALYSIS

A. Behavior/Use

Findings indicate that the share of respondents who reported ever having heard of any water treatment product has declined to 96.5%, down from 98.6 three years ago ($p<.01$). Yet the proportion of respondents reporting ever having heard of *Sur'Eau* significantly increased from 86.8 to 93.6 ($p<.001$). This suggests that more targeted social marketing messages related to *Sur'Eau* have reached the target population over this period of time; while other water treatment methods have lost some momentum, *Sur'Eau* gained momentum.

Ever use of *Sur'Eau* increased among women with children under five from 19.9% in 2007 to 41.5% in 2010, ($p<.001$). While approximately 40% of women had ever used

[1] For more detailed information about study methodology, including samping and data collection, please contact the first author for a copy of the study design document.

Sur'Eau in 2010, about one in five women (17.7%) used it at the time of the 2010 survey. Furthermore, only 5.2% used it correctly.

It is interesting to note that the proportion of women with children under five who reported washing hands before preparing food and after using the toilet increased from 0.2% to 24.0% between the two surveys (p<.001).

Approximately one in five households (19.7%) tested positive for a presence of chlorine in the water at the time of the study. This chlorine test was not conducted in 2007.

B. Determinants (Opportunity, Ability, and Motivation)

Trends between 2007 and 2010 generally indicated a significant increase in *Sur'Eau* brand appeal. Most brand appeal indicators increased to a mean level of between 2 and 2.25 on a scale from one to four. Perceived availability of a water treatment product also significantly increased between the two survey rounds, from 1.81 to 2.33 (p<.001). Findings for the social norms construct were counter-intuitive; while use increased, social norms regarding use of a water treatment product decreased significantly from a mean of 2.95 in 2007 to 2.79 in 2010, (p<.001).

The proportion of respondents reporting knowing the cause of diarrhea also significantly increased over time, from 51.0% in 2007 to 58.8% in 2010. Though the difference was not significant, most respondents (88.6% and 89.1% in 2007 and 2010, respectively) reported children to be the most-at risk group for diarrhea. The fact that chlorine was only present in the water in roughly one in five households (19.7%) in 2010 is a clear indication that the target population is still exposed to the risk of diarrheal disease. The 19.7% presence of chlorine compared to the 17.7% who self-reported using *Sur'Eau* indicates the truthfulness of the respondents in reporting water treatment. Overall, this is quite good.

A decreasing trend in self-efficacy regarding *Sur'Eau* use was noted between 2007 and 2010, with the exception of two indicators. Respondents were more likely to report being able to correctly use *Sur'Eau* in 2010 than in 2007 and more likely to be able to demonstrate to friends and neigbhors how to correctly use it (2.43 versus 3.04 and 2.76 versus 2.94 , respectively, p<.001 for both). Decreasing trends were also observed for beliefs and outcome expectations regarding *Sur'Eau*, although overall levels of these variables remained high at about 3.5 on a scale from one to four.

The mean reported price that women with children under five were willing to pay for *Sur'Eau* in 2010 was 200 FRW.

C. Exposure

While exposure to messages about water treatment was very low (1.0%) approximately two-thirds of respondents in 2010 heard messages about diarrhea in the six months before the survey.

SEGMENTATION ANALYSIS

Segmentation analyses were conducted for both current use and ever use of *Sur'Eau*. The results of segmentation analysis indicate that the probability of **currently** using *Sur'Eau* increased with:

:: Self-efficacy: *Sur'Eau* users were 3.40 times more likely than non-users to report self-efficacy. Means for users and non-users were 3.18 and 2.93, respectively (p<.001).This is one of the key findings.

:: *Sur'Eau* brand appeal: The brand appeal mean was 2.58 for current *Sur'Eau* users and 2.15 among non-users, p<.001.This is another key finding.

:: *Knows a place where to buy Sur'Eau:* Respondents with higher knowledge of a place to buy *Sur'Eau* were more likely to use *Sur'Eau*. OR=2.04, 58.6% of users vs. 48.5% of non-users, p<.001.

:: Availability: *Sur'Eau* users were 1.34 times more likely to perceive *Sur'Eau* to be available than non-users. Means for users and non-users were 2.47 and 2.30, respectively, p<.01.

:: *Knowledge:* The higher the level of knowledge, the more likely a respondent was to be currently using *Sur'Eau* (OR=1.53, p<.001). The respective means were 12.50 for users and 12.45 for non-users (p<.001).

Similar to segmentation results for current use, self-efficacy, brand appeal, and knowledge were significantly associated with ever use of *Sur'Eau* with similar odds ratios.

Additionally, social support was significantly associated with ever use of *Sur'Eau*. Those who ever used were 1.18 times more likely than non-users to cite social support for *Sur'Eau* use, p<05.

For both current and ever use of *Sur'Eau*, findings for social norms were counter-intuitive. Non-users were significantly more likely than users to report higher levels of this construct. The same was true for the belief construct among ever users.

EVALUATION ANALYSIS

This section is based on exposure to programmatic interventions. Exposure is defined as having heard or seen messages about diarrhea in the last six months. Results of evaluation analysis reveal that exposure to messages about diarrhea was associated with:

:: An increase in use of *Sur'Eau*. Individuals exposed to diarrhea messages are more likely to have ever used *Sur'Eau* than unexposed individuals (43.8% versus 36.6) and both groups had higher levels than the 2007 reference group (190%, p<.001). While current use of *Sur'Eau* was not measured in 2007, individuals exposed to diarrhea messages in 2010 were more likely to currently use than unexposed respondents (19.7% vs. 13.9%, p<.001).

:: Availability of *Sur'Eau*: Perceived availability was higher among individuals exposed to program messages than those who were not, and was significantly lower in the reference group (means of 2.39, 2.22 and 1.81, respectively, p<.001).

:: Positive *Sur'Eau* brand appeal: The majority of brand appeal indicators increased between 2007 and 2010 and were significantly higher among exposed individuals in 2010 than unexposed.

:: Increased self-efficacy to correctly use *Sur'Eau*: Respondents exposed to messages about diarrhea were more likely to report being able to correctly use *Sur'Eau* in 2010 than those who were not exposed to diarrhea messages (mean of 3.12 versus 2.90), and 2010 values were higher than the 2007 reference group who had a mean of 2.42 (p<.001).

PROGRAMMATIC RECOMMENDATIONS

:: While use of *Sur'Eau* showed improvement over time, overall use was still low and efforts should be made to increase use among women with children under age five.

:: More specifically, to achieve improvements in *Sur'Eau* use, the results of segmentation analyses indicate that program messages should focus on the following factors associated with use of *Sur'Eau*:

- Improving self-efficacy to use *Sur'Eau*;
- Increasing availability of the *Sur'Eau* product.
- Addressing brand appeal of *Sur'Eau*.

:: Results indicate a positive impact in improving some of key determinants of *Sur'Eau* use, but additional efforts are needed to reinforce these determinants.

Monitoring Table

Trends in use of *Sur'Eau*, OAM determinants of *Sur'Eau* use and trends in program exposure among women with children under five, Rwanda, 2007-2010
Risk: Women with children under five
Behavior: Current use of *Sur'Eau*

INDICATORS	October 2007 (N=2188)	April 2010 (N=2719)	Sig.
BEHAVIOR/USE	%	%	
Ever Heard of Any Clean Water Product	98.6	96.5	***
Ever Heard of Sur Eau	86.8	93.6	***
What have you heard[2]: Cleans water	--	61.5	NC
What have you heard: Protects against diarrhea	--	20.9	NC
What have you heard: Disinfects water	--	64.8	NC
What have you heard: Use for washing dishes	--	5.6	NC
What have you heard: Use for washing fruits and vegetables	--	2.5	NC
What have you heard: Use for preparing food for children	--	1.0	NC
What have you heard: Use for preparing certain medicine for children	--	0.6	NC
Knows where to buy Sur Eau	22.7	53.0	***
Ever Used Sur Eau	19.0	41.5	***
Always Washes Hands before preparing food and after using the toilet	0.2	24.0	***
Currently uses Sur Eau	--	17.7	NC
Correctly Uses Sur Eau[3]	--	2.4	NC
Used Sur Eau in the last month	4.6	--	NC
Perceived Water Quality (1-4 scale where 4 is cleanest)	2.69	2.68	NS
Knows the main cause of diarrhea	51.0	58.8	***
Knows children are most at risk of getting diarrhea	88.6	89.8	NS
Chlorine Present	--	19.7	NC
OPPORTUNITY	Mean	Mean	
Availability	1.81	2.33	***
People find rarely a water treatment product in your community(R)	2.91	2.84	NS
Brand Appeal			
People prefer *Sur'Eau* to other chemical products (eau de javel)	2.87	2.76	*
In this community, many people prefer using *Sur'Eau* to treat water	1.57	2.25	***
People like myself use regularly *Sur'Eau* to treat water at home	1.33	1.98	***
My friends would like me to use *Sur'Eau* to prevent diarrhea among children	1.95	2.23	***
In general, all my friends use *Sur'Eau* prevent diarrhea among children	1.41	2.02	***
Sûr'Eau is the best product to treat water and	3.57	3.21	***

[2] Among those who have ever heard of Sur Eau
[3] Among those currently using Sur Eau

prevent diarrhea among children			
Social Norm	2.94	2.78	***
ABILITY			
Knowledge (0-13)	--	12.4	NC
Social Support	3.78	3.76	NS
Self-Efficacy			
You are capable of using correctly the *Sur'Eau* product	2.43	3.04	***
You are capable of convincing your family to use a water treatment product at home	3.44	3.19	***
You are capable of asking your parents to treat water they drink at home with chemical products	3.51	2.76	***
You are capable to show your friends/neighbors how to use correctly the *Sur'Eau* product	2.76	2.94	***
You are not ashamed to put a product in water in order to make it clean	3.23	3.13	***
You are not ashamed to go purchase a water treatment product in a shop in presence of other people	3.24	3.12	***
You are not afraid that your friends know that you use chemical products to treat water that you drink at home	3.22	3.13	***
You are capable of asking your female friends to use the chemical products to treat water before drinking	3.51	3.06	***
You are capable of using necessary material to treat water with *Sur'Eau*	3.53	2.84	***
MOTIVATION			
Beliefs	3.67	3.43	***
Expected Outcomes Scale 1	3.90	3.49	***
Expected Outcomes Scale 2	3.62	3.45	***
Threats			
Children under 5 are more exposed to diarrheal diseases than every body	--	3.65	NC
Children under 5 are at less risk to contract diarrhea even when they drink dirty water.	--	1.82	NC
Children are more at risk to contract diarrhea than adults	--	3.59	NC
When children under 5 are in good health, their body can resist to diarrhea	--	2.80	NC
You think that your children are exposed to the risk of contracting diarrhea	--	2.80	NC
If I have children under 5, I do not fear that they have diarrhea by drinking diarrhea	--	2.27	NC
Willingness to Pay		FRW	
Mean Price Paid for Sur Eau (N=1080 in 2010)	--	200	NC
Exposure		**%**	
Heard Message about Water Treatment in the last 6 months	--	1.0	NC
Heard Message about Water Treatment in the last 3 months	--	1.0	NC
Heard Message about Diarrhea in the last 6 months	--	64.9	NC

*****p<.001, **p<.01, *p<.05, NS=not significant**
NC=Not comparable
Controls: age, marital status, education, employment, source of drinking water

Segmentation Table A

Percentages or mean scale scores of determinants of *Sur'Eau* use among women with children under the age of five, Rwanda, 2010
Risk: Women with children under five (N=2719)
Behavior: Used *Sur'Eau* at the time of the study

INDICATORS	Users N=477 (17.9%)	Non-users N=2184 (82.1%	OR	Sig.
Behaviors	%	%		
Stores Drinking Water in a separate container	63.8	54.1	2.22	***
Believes that their drinking water is ever contaminated	29.8	44.6	0.50	***
Has Ever heard of Sur Eau	72.7	61.9	2.24	***
Knows Where to Buy Sur Eau	56.8	48.5	2.04	***
Chlorine Present in Drinking water	35.5	16.4	3.25	***
OPPORTUNITY	Mean	Mean		
Availability	2.47	2.30	1.34	**
Brand Appeal	2.58	2.15	2.68	***
Social Norm	2.51	2.64	0.55	***
ABILITY				
Knowledge	12.50	12.45	1.53	***
Self-Efficacy	3.18	2.93	3.40	***
MOTIVATION				
Threat				
You think that your children are exposed to contracting diarrhea	2.68	2.82	0.85	*
POPULATION CHARACTERISTICS	%	%		
North Region (Kigali is Reference)	23.7	19.2	4.17	***
South Region (Kigali is Reference)	28.1	24.9	2.17	*
East Region (Kigali is Reference)	24.8	20.6	3.65	***
West Region (Kigali is Reference)	26.1	22.3	2.96	**
Drinking water comes from a pipe (other source is Reference)	30.6	39.8	0.53	***
Drinking water comes from a well (other source is Reference)	28.4	36.2	0.60	**

Controls: age, marital status, urban, employment status, religion, education
Chi-Square: 817.519, 25 degrees of freedom, p<.001
R^2=.27
Hosmer Lemeshow: 6.88, 8 degrees of freedom, p=.549

Segmentation Table B

Percentages or mean scale scores of determinants of *Sur'Eau* use among women with children under the age of five, Rwanda, 2010
Risk: Women with children under five (N=2761)
Behavior: Ever used Sur Eau

INDICATORS	Users N=1033 (38.8%)	Non-users N=1628 (61.2%)	OR	Sig.
Behaviors	%	%		
Stores Drinking Water in a separate container	61.3	52.4	1.51	**
Believes that their drinking water is ever contaminated	35.0	46.3	0.58	***
Has Ever heard of Sur Eau	68.9	60.6	1.74	***
Chlorine Present in Drinking water	25.5	16.2	2.05	***
OPPORTUNITY	Mean	Mean		
Brand Appeal	2.44	2.13	2.24	***
Social Norm	2.56	2.65	0.70	***
ABILITY				
Knowledge	12.46	12.42	1.26	**
Self-Efficacy	3.22	2.82	3.15	***
MOTIVATION				
Beliefs	2.65	2.79	0.79	***
Social Support	2.32	2.24	1.18	*
Threat				
Children under five are less exposed to get diarrhea even when they drink dirty water.	1.73	1.88	0.82	***
Exposure	1.22	1.14	1.66	***
POPULATION CHARACTERISTICS	%	%		
North Region (Kigali is Reference)	21.4	19.2	1.93	*
South Region (Kigali is Reference)	26.2	25.1	1.24	NS
East Region (Kigali is Reference)	22.8	20.5	2.14	**
West Region (Kigali is Reference)	24.7	21.9	2.31	**
Catholic (Other Religion is Reference)	39.2	42.7	0.78	*
Protestant (Other Religion is Reference)	34.0	34.0	.97	NS
Education (No Education is Reference)	83.8	76.8	1.74	***
Drinking water comes from a pipe (other source is Reference)	36.7	39.1	0.83	NS
Drinking water comes from a well (other source is Reference)	32.3	36.5	0.75	*

Controls: age, marital status, urban, employment status
Chi-Square: 1042.126, 25 degrees of freedom, p<.001
R^2=.32
Hosmer Lemeshow: 8.63, 8 degrees of freedom, p=.374

Evaluation Table

Impact of PSI/Rwanda *Sur'Eau* campaigns on use of *Sur'Eau*, Rwanda, 2010.
Risk: Women with children under five
Behavior: Use of *Sur'Eau*

INDICATORS	2007 Ref. N=2188 44.7%	2010 EXPOSURE		Sig.
		Unexposed N=945 19.3%	Exposed N=1765 36.0%	
BEHAVIOR/USE	%	%	%	
Ever Heard of Any Clean Water Product	98.6[a]	93.4[b]	98.1[a]	***
Ever Heard of Sur Eau	86.8[a]	89.6[b]	95.7[c]	***
Knows where to buy Sur Eau	22.8[a]	43.1[b]	58.0[c]	***
Ever Used Sur Eau	19.0[a]	36.6[b]	43.8[c]	***
Currently uses *Sur'Eau*	--	13.9	19.7	***
Always Washes Hands before preparing food and after using the toilet	0.2[a]	24.5[b]	23.8[b]	***
Knows the main cause of diarrhea	51.0[a]	48.5[a]	64.2[b]	***
OPPORTUNITY	Mean	Mean	Mean	
Availability	1.81[a]	2.22[b]	2.39[c]	***
Brand Appeal				
People prefer *Sur'Eau* to other chemical products (eau de javel)	2.87[a]	2.59[b]	2.85[a]	***
In this community, many people prefer using *Sur'Eau* to treat water	1.57[a]	2.10[b]	2.33[c]	***
People like myself use regularly *Sur'Eau* to treat water at home	1.33[a]	1.84[b]	2.05[c]	***
My friends would like me to use *Sur'Eau* to prevent diarrhea among children	1.95[a]	2.07[b]	2.31[c]	***
In general, all my friends use *Sur'Eau* to prevent diarrhea among children	1.41[a]	1.89[b]	2.09[c]	***
Sûr'Eau is the best product to treat water and prevent diarrhea among children	3.57[a]	3.08[b]	3.28[c]	***
Social Norm	2.94[a]	2.73[b]	2.81[c]	***
ABILITY				
Self-Efficacy				
You are capable of using correctly the *Sur'Eau* product	2.42[a]	2.90[b]	3.12[c]	***
You are capable of convincing your family to use a water treatment product at home	3.44[a]	3.12[b]	3.23[c]	***
You are capable of asking your parents to treat water they drink at home with chemical products	3.50[a]	2.70[b]	2.79[c]	***
You are capable to show your friends/neighbors how to use correctly the *Sur'Eau* product	2.76[a]	2.81[a]	3.00[b]	***
You are not ashamed to put a product in water in order to make to clean	3.23[a]	3.14[a]	3.12[a]	*
You are not ashamed to go purchase a water treatment product in a shop in presence of other people	3.24[a]	3.16[ab]	3.10[b]	**
You are not afraid that your friends know that you use chemical products to treat water that you drink at home	3.22[a]	3.16[ab]	3.12[b]	*

You are capable of asking your female friends to use the chemical products to treat water before drinking	3.51[a]	2.99[b]	3.10[c]	***
You are capable of using necessary material to treat water with *Sur'Eau*	3.53[a]	2.69[b]	2.93[c]	***
MOTIVATION				
Beliefs	3.67[a]	3.41[b]	3.45[b]	***
Outcome Expectations Scale 1	3.90[a]	3.46[b]	3.51[c]	***
Outcome Expectations Scale 2	3.62[a]	3.52[b]	3.42[c]	***

Exposure=heard or saw messages about diarrhea in the last 6 months
Controlled for age, married, employed, education, source of drinking water

Effectiveness Summary

Program impact, Rwanda, 2007-2010

INDICATORS	Monitoring Table	Evaluation Table	Conclusion
BEHAVIOR/USE			
Ever Heard of Any Clean Water Product	**-**	**NS**	**No Impact**
Ever Heard of Sur Eau	**+**	**+**	**+ Impact**
Knows where to buy Sur Eau	**+**	**+**	**+ Impact**
Ever Used Sur Eau	**+**	**+**	**+ Impact**
Always Washes Hands before preparing food and after using the toilet	**+**	**NS**	**No Impact**
Perceived Water Quality (1-4 scale where 4 is cleanest)	**-**	-	**Negative Impact**
Knows the main cause of diarrhea	**+**	**+**	**+ Impact**
Knows children are most at risk of getting diarrhea	NS	**NS**	**No Impact**
OPPORTUNITY			
Availability	+	**+**	**+ Impact**
People find rarely a water treatment product in your community(R)	NS	**NS**	**No Impact**
Brand Appeal			
People prefer *Sur'Eau* to other chemical products (eau de javel)	-	NS	**No Impact**
In this community, many people prefer using *Sur'Eau* to treat water	+	+	**+ Impact**
People like myself use regularly *Sur'Eau* to treat water at home	+	+	**+ Impact**
My friends would like me to use *Sur'Eau* to prevent diarrhea among children	+	+	**+ Impact**
In general, all my friends use *Sur'Eau* prevent diarrhea among children	+	+	**+ Impact**
Sûr Eau is the best product to treat water and prevent diarrhea among children	-	NS	**No Impact**
Social Norm	-	NS	**No Impact**
ABILITY			
Social Support	NS	NS	**No Impact**
Self-Efficacy			
You are capable of using correctly the *Sur'Eau* product	+	+	**+ Impact**
You are capable of convincing your family to use a water treatment product at home	-	NS	**No Impact**

You are capable of asking your parents to treat water they drink at home with chemical products	-	NS	**No Impact**
You are capable to show your friends/neighbors how to use correctly the *Sur'Eau* product	+	+	**+ Impact**
You are not ashamed to put a product in water in order to make it clean	-	NS	**No Impact**
You are not ashamed to go purchase a water treatment product in a shop in presence of other people	-	-	**Negative Impact**
You are not afraid that your friends know that you use chemical products to treat water that you drink at home	-	NS	**No Impact**
You are capable of asking your female friends to use the chemical products to treat water before drinking	-	-	**Negative Impact**
You are capable of using necessary material to treat water with *Sur'Eau*	-	-	**Negative Impact**
MOTIVATION			
Beliefs	-	NS	**No Impact**
Outcome Expectations Scale 1	-	NS	**No Impact**
Outcome Expectations Scale 2	-	-	**Negative Impact**

Demographic Characteristics Table (2010)

Characteristic (N=2719)	%
Region	
North	20.1
South	25.6
East	21.0
West	23.2
Kigali	10.1
Urban residence	12.8
Age (Mean)	30.3
Married	80.3
Religion	
Catholic	41.0
Protestant	34.2
Other	24.8
Educated (Ever been to school)	79.4
Employed	69.4
Source of drinking water	
Gets Drinking Water from Pipe	37.9
Gets Drinking Water from Well	34.8
Gets Drinking Water from Other Source	27.3

Reliability Scales: Rwanda 2007-2010 Monitoring

INDICATORS	Cronbach's alpha
OPPORTUNITY	
Availability	.85
Means of water treatment for drinking are easy to find in our community	
Some people experience difficulties to find means to treat drinking water	
It is difficult for me to find means of water treatment when I need it	
Every time I need to treat water, I find easily a product to do it	
There is an outlet for chemical products nearby my place	
Sur'Eau product is easy to find in your village	
People always have difficulties to find an outlet for *Sûr Eau*	
There is a place nearby your home where you can find *Sûr Eau*	
Social Norm	.87
In your community, women use products to treat water at home	
In your community, people pay attention to the water they drink at home	
In your community, people are concerned with food hygiene	
In your community, women keep water in healthy and covered places	
In your community, people take care of the health of their children	
In your community, people wash well their hands with water and soap before eating	
In your community, people wash well their hands with water and soap after using the toilet	
Women are more motivated than men to use clean water in the household	
ABILITY	
Social Support	.86
Your husband does not like that you use chemical products to treat water that you use at home	
When you talk to your husband about the use of products to treat water, he gets angry	
Your husband thinks that it is not necessary to treat water at home in order to make it clean	
Your husband is opposed to the idea of boiling water to make it clean	
MOTIVATION	
Beliefs	.82
A child who does not have diarrhea will have problems later	
Every child must have diarrhea to grow up well	
Chemical products that people put into water can provoke diseases to children	
Water is a sacred drink to which people should not add chemical products	

Diarrhea allows to clean dirt from the child's stomach	
Expected outcomes scale 1	.92
In general, the use of chemical products allows to treat water	
In general, the use of chemical products to treat water effectively prevents diarrheal diseases	
In general, the use of chemical products to treat water is a reliable means for prevention	
Water treated with *Sur'Eau* is clean water that you can drink without fear	
The use of *Sur'Eau* ensures the health of the family	
Washing one's hands with water and soap children's diapers allows the prevention of diarrhea	
Expected outcomes scale 2	.93
You are afraid of falling sick by putting chemical products in the water you drink	
You are afraid that your child have nausea in drinking water treated with chemical products	
You are afraid that your child vomits by drinking water treated with chemical products	

Reliability Scales: Rwanda 2010 Segmentation

INDICATORS	Cronbach's alpha
OPPORTUNITY	
Availability	.84
Means of water treatment for drinking are easy to find in our community	
Some people experience difficulties to find means to treat drinking water	
It is difficult for me to find means of water treatment when I need it	
Every time I need to treat water, I find easily a product to do it	
There is an outlet for chemical products nearby my place	
Sur'Eau product is easy to find in your village	
People always have difficulties to find an outlet for Sûr'Eau	
There is a place nearby your home where you can find Sûr Eau	
Brand Appeal	.87
People prefer *Sur'Eau* to other chemical products (eau de javel)	
In our community, many people prefer using *Sur'Eau* to treat water	
People like myself use regularly *Sur'Eau* to treat water at home	
My friends would like me to use *Sur'Eau* to prevent diarrhea among children	
In general, all my friends use *Sur'Eau* to prevent diarrhea among children	
Social Norm	.83
In your community, people wash well their hands with water and soap before eating	
In your community, people wash well their hands with water and soap after using the toilet	
Most population in this community wash their hands before eating	
In your community, women wash their hands after changing diapers of their children	
ABILITY	
Self-Efficacy	.89
You are capable of using correctly the *Sur'Eau* product	
You are capable of convincing your family to use a water treatment product at home	
You are capable of convincing your husband to use chemical products to treat water at home	
You are capable of asking your parents to treat with chemical products the water they drink	
You are capable of showing your friends/neighbors how to use correctly the *Sur'Eau* product	
You find the instructions for *Sur'Eau* use easy to apply	
You are not ashamed to put a product in water for purification	
You are capable of asking your friends to use the chemical products to treat water before drinking	

You are capable of using necessary material to treat water with *Sur'Eau*	
MOTIVATION	
Beliefs	.87
In general, water treated with chemical products has an odor that people do not like	
Water treated with chemical products has a taste that people do not like	
Water treated with *Sur'Eau* has a taste that people do not like	
You do not like the taste of water when it's treated with *Sur'Eau*	
Severity	.80
More and more children are contaminated by diarrhea	
Diarrhea is a serious health issue in your community	
In your community, many children died of diarrhea in your community	
In your community, many children are exposed to the risk of diarrhea	
Diarrhea treatment is very expensive for the members of your community	
It is more likely that I have diarrhea than most people	
Outcome Expectations 1	.88
In general, the use of chemical products allows to treat water	
In general, the use of chemical products to treat water effectively prevents diarrheal diseases	
In general, the use of chemical products to treat water is a reliable means for prevention	
Water treated with *Sur'Eau* is clean water that you can drink without fear	
The use of *Sur'Eau* ensures the health of the family	
Washing one's hands with water and soap after children's diapers allows the prevention of diarrhea	
Expected outcomes 2	.90
You are afraid of falling sick by putting chemical products in the water you drink	
You are afraid that your child have nausea in drinking water treated with chemical products	
You are afraid that your child vomits by drinking water treated with chemical products	
Social Support	.91
Your friends encourage you to use means to treat water at home to make it clean	
Your neighbors encourage you to use means to treat water at home to make it clean	
You often discuss with your neighbors/friends to use chemicals products to treat dirty water	
You encourage your friends to use chemical products to treat water before drinking	
You often help your friends/neighbors to treat water	