



**Final Report to:** Procter and Gamble, Children's Safe Drinking Water Program

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**Program Title:** The Gateway Initiative: Sensitizing Children to Promote Healthy Behaviors and Families

**Program Location:** Eastern Democratic Republic of Congo, Chambucha/Hombo, Kalonge, and Bunyakiri Health Zones

**Program Goal:** To decrease incidence of water-borne diseases in households in eastern DRC

**Program Timeline:** September 15, 2007 – September 15, 2008

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## **I. EXECUTIVE SUMMARY**

The Democratic Republic of Congo (DRC) has experienced disastrous civil wars over the past decade, claiming the lives of millions. The effects of the conflict are ongoing and the United Nations estimates that 1,200 people currently die each day in the DRC due to related violence, disease, and malnutrition. Approximately 80% of the population in eastern DRC does not have access to potable water – a situation which has clear consequences for long-term health, particularly for children.

Through the generosity of Procter and Gamble's Children's Safe Drinking Water program, International Medical Corps instituted a water sanitization and hygiene sensitization campaign in three affected health zones in eastern DRC: Chambucha/Hombo, Kalonge, and Bunyakiri. By improving access to safe drinking water, International Medical Corps has reduced the incidence of water-borne illnesses among community members.

Accomplishments include:

- Three-quarters of participants now use the protected water source either by itself or in conjunction with river and rainwater collection;
- After completion of the project, an average of 87% of households could store twenty liters of water or more;
- By the end of the project, 95% of households knew about using products (such as PUR) to sanitize their water;
- Households washing their hands before and after meals increased from an average of 37% to an average of 91%;
- An impressive 85% of households can now name two ways to prevent diarrhea; and
- Incidence of diarrhea fell significantly, from 78% to 13% in Kalonge, 74% to 13% in Chambucha/Hombo, and 56% to 16% in Bunyakiri.

Despite the challenging security situation in eastern DRC, International Medical Corps has successfully demonstrated that positive improvements in health and education can still be achieved. International Medical Corps emphasizes self-reliance as an essential component in building the long-term health of communities. This project is no exception. Local community health workers, teachers, and elders are now equipped to train others to practice good hygiene and properly sanitize their water. Children, the primary gatherers of water for the family, are empowered to directly impact the health of their entire family. The effects of this grant will continue to improve the health of many families for years to come.

## II. BACKGROUND

The Democratic Republic of Congo (DRC) has experienced disastrous civil wars over the past decade. The First and Second Congo Wars have led to the death of an estimated 5.4 million people and the displacement of 3 million more.<sup>1</sup> Although the Congo Wars have claimed more lives than any conflict since the end of World War II, the crisis has received little attention outside of central Africa. The effects of the conflict are ongoing and the United Nations estimates that 1,200 people currently die each day in the DRC due to related violence, disease, and malnutrition.

In late 2006, the DRC held its first democratic election in more than 40 years. Although elections went smoothly, sporadic clashes between fighting forces still occur in the eastern part of the country in North and South Kivu Provinces, where 1,157,000 internally displaced persons live without access to adequate health and other infrastructure systems to meet their needs.<sup>2</sup> Also, more than 300,000 Congolese refugees have recently returned from neighboring countries in search of peace with little food, no housing, limited access to water sources or land, and a weakened political voice, all of which increase their risks for sexual abuse, violence, and disempowerment, particularly among women and children. As a result of ongoing violence, the DRC's Human Development Index declined by more than ten percent in the last ten years and today DRC ranks 168th out of 177 countries.

Internally displaced persons (IDPs) in both provinces face extremely difficult conditions, with minimal access to health care, adequate food or livelihoods opportunities. Despite recent attempts at securing peace, conflict continues to rage in certain parts of North and South Kivu Provinces resulting in an additional 232,000 IDPs fleeing their homes since August 2007 alone.<sup>3</sup> Chambucha/Hombo, Kalonge, and Bunyakiri the three primary health zones in this project, have been the site of fighting and/or massacres in early 2008.

### *Need for Potable Water in Eastern Democratic Republic of Congo*

Approximately 80% of the population in eastern DRC does not have access to potable water. Most households procure their water from nearby water sources (e.g. rivers, springs, and streams), and few employ purification techniques such as boiling, filtering, or household chlorination. The practice of protecting water after it has been collected is also uncommon: water is usually stored in jerry cans that are often kept uncovered.

Limited access to safe drinking water, coupled with poor hygiene and sanitation practices, contributes to the increased incidence of gastrointestinal diseases including worm infestations and diarrhea. These constitute the fourth leading cause of morbidity and mortality in eastern DRC. Children are especially vulnerable. Chambucha/Hombo, Kalonge, and Bunyakiri, the three health zones in this project, do not benefit from any reliable sources of water.

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<sup>1</sup> International Rescue Committee, Report: Mortality in the Democratic Republic of Congo, January 2008.

<sup>2</sup> USAID, Situation Report: Democratic Republic of Congo – Complex Emergency, February 2008.

<sup>3</sup> USAID, Situation Report, February 2008.

### III. PROFILE OF PROGRAM PARTICIPANTS AND LOCATION



The DRC is home to approximately 63 million people and borders the Central African Republic and Sudan to the north, Uganda, Rwanda, Burundi, and Tanzania to the east, Zambia and Angola to the south, and the Republic of the Congo to the west. Although the DRC is a nation endowed with vast potential wealth (diamonds, water, copper, tin, coltan, and timber), the country's formal economy virtually collapsed in the last two decades due to mismanagement and conflict.

Chambucha/Hombo, Kalonge, and Bunyakiri, are three adjacent health zones of eastern DRC, located in North and South Kivu Provinces. International Medical Corps has maintained field offices in Bunyakiri since August 2002, Kalonge since September 2004, and Chambucha/Hombo since September 2005.

### IV. GOALS AND OBJECTIVES

**Goal:** To decrease incidence of water-borne diseases in households in eastern DRC

**Objective:** To improve access to safe drinking water for 750 households (5,250 people) by improving water, sanitation and hygiene practices

**Activities:**

- Conduct education and sensitization sessions for children, teachers, and community leaders on water, sanitation and hygiene practices;
- Train health care workers in the prevention of diarrhea and utilization of PUR purifiers;
- Distribute promotional materials including leaflets, T-shirts, and training materials;
- Conduct public awareness through local media and popular events; and
- Distribute materials to assist in household hygiene and sanitation including soap, jerry cans, buckets, PUR sachets, and supporting supplies.

### V. PROGRAM ACCOMPLISHMENTS

**Overall Strategy**

Community participation in this project was vital to foster a sense of collective ownership. International Medical Corps collaborated with local Water and Sanitation Committees, community leaders, teachers, community health workers, elders, and children – everyone in the local communities. Following the baseline survey, a thorough sensitization plan was developed in conjunction with the community health workers. Fo-

cus group sessions with local leaders and influential members of society were held before the full implementation of the sensitization campaign. Eventually, over 60 community leaders and 60 teachers were identified and involved in project activities, as well as 20 community health workers.

The first month of the project was dedicated to establishing the necessary mechanisms to ensure the campaign's success. During this period, International Medical Corps a) sensitized and mobilized community actors; b) trained the local community health workers to conduct the sensitization activities; c) procured and transported the PUR sachets; and d) conducted a baseline assessment.



**Community leaders participate in demonstrations on the use of PUR water purifiers in one of Hombo's communities.**

International Medical Corps trained local community health workers (*Relais Communiquaires*) to conduct sensitization activities alongside its staff. Sensitization and education sessions included information on a) the benefits of clean water; b) the impact of water-borne illnesses; c) the proper storage of water; d) the importance of hand-washing; and e) the methods to handle and sanitize water in a hygienic manner.



**Out of School Children participate in the demonstration of PUR water purifiers**

As children in the DRC are largely responsible for collecting water, International Medical Corps determined that they were the most effective audience for promoting behavior change related to water usage at the household level. Accordingly, International Medical Corp's sensitization campaign targeted children responsible for collecting water (e.g. those between ages six through 14). Those children targeted included both students and out-of-school youth. Those children not in school were reached by health workers at water sources during times that children were most likely to collect water; approximately 3,000 of these children participated. Six elementary schools were sought (two in each health zone) with the initial target of 1,500 students, yet almost 2,300 students participated in the project.

To obtain the participants for the project, four communities were selected in each of the three targeted health zones, Chambucha/Hombo, Kalonge, and Bunyakiri. Within these twelve communities, 750 households (250 in each health zone) were targeted to participate in project activities.



**Children raise their hands to answer questions about hygiene and sanitation issues at an outdoor question and answer session.**

The following activities were performed during the course of the project:

- Over 6,300 participants educated during 21 sensitization sessions;
- Two education sessions conducted for local health leaders, another six sessions for 10 teachers each, and a Child-to-Child education session was conducted;
- Nine training sessions held on the utilization of PUR sachets;
- 20 community health workers trained in the prevention of diarrhea and utilization of PUR sachets;

- 233,680 PUR sachets and supporting supplies distributed for water purification;
- 120 training manuals distributed on water sanitation and hygiene practices to community leaders and teachers;
- 1,500 leaflets distributed on using PUR sachets and preventing diarrhea;
- 80 T-shirts printed and distributed with messages from community leaders promoting PUR sachets;
- Three radio spots produced and played on a local radio station, DDRRR/Radio Bunyakiri;
- Three football (soccer) matches held for school children in all health zones, with clear themes focusing on safe drinking water;
- Three school quiz competitions (two schools each) focusing on diarrhea prevention;
- Three billboards printed and placed in strategic locations, one in each health zone;
- 12,960 bars of soap distributed to targeted families (one bar per week) to encourage use of soap around the house;
- 750 plastic jerry cans distributed to targeted households to increase water storage capacity; and
- 750 plastic buckets distributed to aid in water gathering and purification.



**Classroom question and answer sessions in an elementary school in Kalonge**

### ***Influencing Behaviors on Water, Sanitation and Hygiene***

After completion of project activities, International Medical Corps staff surveyed the targeted households to record changes in knowledge, attitude, and behaviors towards water sanitation and hygiene practices. Survey participants were asked identical questions to the baseline survey completed before the beginning of the project. Results indicate a generally positive improvement in the sanitation and hygiene practices of most community members.

### ***Water Sources<sup>4</sup>***

Prior to the project, one-fourth of participants reported sole use of a protected water source for domestic activities; afterwards, one-half of participants indicated they used only a protected water source for their domestic needs. Three-quarters of participants now use the protected water source either by itself or in conjunction with river and rain-water collection. In particular, use of the protected water source for drinking rose dramatically, while uses for cooking/bathing/washing increased very slightly.

Originally, most families were evenly divided as to whether water consumed from the river was safe.<sup>5</sup> During the post survey, nine out of every ten families recognized that the water from the river was not safe to consume.

### ***Water Storage***

Initially, an average of 77% of households could store twenty liters or more of water. After completion of the project, an average of 87% of households could store twenty liters or more. Additionally, the type of storage container shifted dramatically, with the majority switching from uncovered and unclean containers to clean and covered.



**Distribution of buckets and jerry cans**

### ***Methods to sanitize water for consumption***

At the beginning of the campaign, two-thirds of participants did not know of any methods to make water safe for consumption.<sup>6</sup> By the end, 95% of households knew about using products (such as PUR) to sanitize their water. Communities not only became aware of sanitization methods, but also significantly increased their willingness and actual use of product for sanitization, totaling close to 100%.

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<sup>4</sup> Choices given were: 1) River, stream, rain only; 2) River, stream, rain, protected water source; 3) Protected water source only; or 4) Other

<sup>5</sup> Choices given were: 1) Yes; 2) No; or 3) Not sure.

<sup>6</sup> Methods listed were: Boiling; Filtering; Use of products; Other means; Nothing.

### *Hygiene practices*

The number of families with access to latrine facilities increased slightly during the course of the project, as did families who used only a latrine for defecation.<sup>7</sup> However, the practice of hand-washing increased enormously from pre-campaign levels. People washing their hands after defecation increased from an average of 22% to an average of 79%. Households washing their hands before and after meals increased from an average of 37% to an average of 91%. Also, hand-washing after cleaning babies or children increased from an average of 13% to an average of 61%. In addition, hand-washing after cleaning around the house increased moderately.



Children are given posters and leaflets written in French and Swahili to take home to their families

### *Knowledge and practices of diarrhea*

Initial survey results indicated that three-quarters of participants knew about diarrhea, rising moderately to nine-tenths. Prior to the campaign, only a little over one-third of households knew how to prevent diarrhea; afterwards, an impressive 85% of households could name two ways to prevent it.

In treating diarrhea, one of every ten families continued to use traditional methods throughout the campaign. Those who visited the health center increased slightly to 90%, and encouragingly, many more people choose to use oral rehydration salts at home.<sup>8</sup>

### *Incidence of diarrhea*

Perhaps the most heartening result of the campaign was a substantial decrease in the incidence of diarrhea among surveyed families. Below are the recorded decreases in diarrhea among village households:

<sup>7</sup> Choices given were: 1) River, field only; 2) Latrine only; or 3) River, field, and latrine.

<sup>8</sup> Use of oral rehydration salts increased from an average of 5% to 43%.

Percentage of households reporting incidence of diarrhea						
	Kalonge		Chambucha/ Hombo		Bunyakiri	
	Initial	Post	Initial	Post	Initial	Post
<b>Last three days</b>	29	0	19	0	18	2
<b>Last one to two weeks</b>	34	11	38	9	24	7
<b>Last two to three months</b>	15	2	17	4	14	7
<b>Other</b>	0	0	3	0	6	0
<b>Total</b>	<b>78%</b>	<b>13%</b>	<b>74%</b>	<b>13%</b>	<b>56%</b>	<b>16%</b>

This considerable decrease in the percentage of reported cases of diarrhea demonstrates the impact that improvements in the knowledge, attitudes, and practices of households concerning water, sanitation and hygiene can have on the health of the communities.

Overall, the majority of households have improved their knowledge about safe water sources, prevention methods, and treatment options. In addition, they have demonstrated a willingness to continue to practice sanitization and hygiene behaviors. Finally, these favorable practices have resulted in fewer instances of diarrhea and thus a healthier, more productive life for community members in eastern Democratic Republic of Congo.



Young children now have knowledge of the PUR water purifier.

## VI. MONITORING AND EVALUATION

International Medical Corps implemented intensive monitoring and evaluation activities to assess the change in knowledge, attitudes, and behaviors towards water sanitation and hygiene practices over the course of the project. International Medical Corps surveyed 203 families (40 in Kalonge, 63 in Chambucha/Hombo, and 100 in Bunyakiri).

Baseline assessment: In the first month, community health workers and International Medical Corps' staff conducted a simple baseline assessment of the knowledge, attitudes, and behaviors (KAB) of water, sanitation and hygiene through a series of household interviews and observations, interviews with children, and focus group discussions with members of Water and Sanitation committees. Questions focused on types of water sources, who collects water for the family, how much water is collected, amount and type of water storage, methods to sanitize water, access to latrine facilities, practice of hand-washing, and knowledge, prevention, and prevalence of diarrhea.

The baseline established that over 96% of the time, children (by themselves or with others) collected water for the household. Also, approximately 50% of households collected 40 liters of water or more per day, with another 25% collecting between 20 and 40 liters per day. Each PUR sachet sanitizes 10 liters of water, requiring between two to four or more sachets per day per household.

Routine monitoring: Community health workers conducted routine monitoring of households and children at water points on a regular basis and recorded basic observation data about the coverage, use, and acceptability of PUR sachets in the target communities. This monitoring data was reviewed twice monthly with International Medical Corps staff and any changes to the sensitization campaign or messages were implemented immediately.

Final evaluation: At the end of the project period, a final evaluation was conducted by repeating the baseline survey to assess the changes in knowledge, attitude, and behaviors of the selected households.

## **VII. CHALLENGES**

Eastern Democratic Republic of Congo continues to experience security challenges due to the ongoing rebel conflicts. The uncertainty created by this volatile situation impedes the flow of humanitarian assistance to North and South Kivu Provinces, and can interrupt the flow of development projects. Earlier in the year, for example, rebel violence broke out in the primary communities targeted by this project and in late March forced a full evacuation of residents and humanitarian operations in Chambucha/Hombo.. Despite these obstacles, International Medical Corps remained operational in these areas and has successfully demonstrated that positive improvements in health and education can still be achieved in these contexts.

## **VIII. CONCLUSION**

Through the generosity of Procter and Gamble's Children's Safe Drinking Water program, International Medical Corps was able to accomplish its goal of reducing the incidence of water-borne diseases for households in these vulnerable communities in eastern DRC. By conducting a sensitization campaign geared towards children and incorporating local health workers and respected community members, International Medical

Corps was able to positively change the water, sanitation and hygiene behaviors of community members – especially children. This, in turn, has improved their access to safe drinking water, and thus reduced the occurrence of diarrhea and other health threats.

International Medical Corps emphasizes self-reliance as essential to improving the long-term health of communities. This project is no exception. Local community health workers, teachers, and elders are now equipped so that they can train others on the importance and practices of good sanitization and hygiene. Children, the primary gatherers of water for the family, are empowered to directly impact the health of their entire family.

In addition, International Medical Corps has collaborated with the local health zone authorities to ensure the availability of PUR sachets on the local market. International Medical Corps has negotiated with the primary supplier, on behalf of the health zone, a low purchase price for PUR sachets. A total of 50,000 PUR sachets were donated to the health zones, who will in turn sell them at a very low price to community members. The health zone will replenish its stock by buying sachets from the revenue generated by the first sale. Community health workers will continue to work in close collaboration with the health facilities to ensure that participants have access to the PUR sachets as often as possible. As a result, PUR will continue to improve the health of many families for years to come.

On behalf of our program participants, volunteers and staff, International Medical Corps thanks Procter and Gamble's Children's Safe Drinking Water program for your support. We look forward to continuing our partnership in the future.



**Thumbs up for making water safe for children!**