



International Rescue Committee Burundi Program

| | |
|--|--|
| Organization: International Rescue Committee | Date: April 30, 2004 |
| IRC Headquarters (USA) 122 East 42 nd Street (12 th floor) New York, NY 10168-1289 Contact Person: John Keys Vice-President, International Programs Email: jkeys@their.org Tel: (212) 551-3121 Fax: (212) 551-3185 | IRC Burundi B.P. 1540, Bujumbura. Contact Person: Jan Coffey Country Director, IRC Burundi Email: jcoffey@their.org Tel: (257) 218 240/41 Fax: (257) 218 239 |

- FINAL REPORT -

| | |
|----------------------|--|
| Program Title: | Emergency Public Health Program in Burundi |
| OFDA Grant No.: | HDA-G-00-03-00027-00/Burundi |
| Country/Region: | Burundi, Great Lakes Region, Africa |
| Disaster/Hazard: | Complex Emergency - Civil Strife |
| Budget Total: | \$ 999,995 |
| Duration of Program: | December 1, 2002 through January 31, 2004 |

TABLE OF CONTENTS

- I. [Executive Summary](#)
- II. [Program Overview](#)
 - A. [Program Description](#)
 - B. [Program Beneficiaries](#)
- III. [Program Performance by Objective](#)
 - A. [Objective 1: Safe Water Supply](#)
 - B. [Objective 2: Environmental Sanitation](#)
 - C. [Objective 3: Health and Hygiene Promotion](#)
 - D. [Objective 4: Support to Local Administrative Structures](#)
 - E. [Objective 5: Emergency Response](#)
- IV. [Resource Use / Expenditures](#)
- V. [Conclusion](#)

I. EXECUTIVE SUMMARY

Despite delays in implementation in the early months of the program, due to persistent insecurity and an uncertain funding situation, IRC Burundi was able to accelerate implementation in the second half of the program. A two-month, no-cost extension enabled IRC to complete all project activities by the end of January 2004. All original program objectives were met, and some initial targets in water system rehabilitation and latrine construction were exceeded.

The program budget of \$999,995 was obligated in three segments (\$200,000 in December 2002, \$300,000 in April 2003 and \$499,995 in July 2003.) Throughout the first half of the program period, there existed a degree of uncertainty regarding funding levels, due to competing demands for OFDA funds in Iraq. Based on guidance from OFDA, IRC proceeded with caution in the implementation schedule, which made it difficult to plan/commit for major expenditures for the infrastructure activities until well into the program life.

Insecurity caused by fighting between government troops and rebel forces was a major obstacle throughout the program period, and completely stalled activities at certain points in time. As a precautionary measure, IRC suspended program activities for a two-week period during the presidential transition of May 1, 2003. Heavy fighting in Bujumbura and kidnapping of NGO workers (including one driver from IRC) in Makamba Province prompted IRC to again suspend operations for a three-week period in July 2003. Fighting between government forces and FNL rebels in Bujumbura Rural Province continued throughout the year, with periodic spikes of violence that displaced tens of thousands of people and prevented humanitarian assistance from reaching affected populations. The signing of a cease fire accord in November 2003 and a power sharing agreement in December 2003 between the government and the CNDD-FDD rebel group resulted in a dramatic improvement in the security situation in Makamba Province.

The following major results were achieved during the 14-month program period:

Makamba Province

Water systems rehabilitated/extended: **4** (original target 3)
Water source catchments constructed: **4** (original target 0)
Family latrine slabs ('sanplats') distributed: **1,284** (original target 1,211)
School latrines constructed: **7** blocks of 4/6-door latrines in 6 schools (original target 6 blocks)
Public latrines constructed: **2** blocks of 6/8-door latrines in Mvugo IDP site (original target 2 blocks)
Hygiene Promoters/Community Health Workers trained: **55** (original target 75)
School Hygiene Clubs created and trained: **6 clubs**/435 students (original target 6 clubs)
Water Point Management Committees created and trained: **40** (original target 30)
Emergency response provided: cholera epidemic response, NFI distribution

Bujumbura Rural Province

Water systems rehabilitated/extended: **3** (original target 3)
Water source catchments constructed: **10** (original target 10)
Family latrine slabs ('sanplats') distributed: **2,050** (original target 2,050)
School latrines constructed: **4** blocks of 6-door latrines in 4 primary schools (original target 4 blocks)
Hygiene Promoters/Community Health Workers trained: **233** (original target 261)
School Hygiene Clubs created and trained: **15 clubs**/900 students (original target 4 clubs)
Water Point Management Committees created and trained: **21** (original target 30)
Emergency response provided: emergency water supply, temporary latrines, shelter, NFI distribution

II. PROGRAM OVERVIEW

A. PROGRAM DESCRIPTION

Program Goal

To decrease morbidity from diarrheal diseases among conflict-affected communities in Makamba and Bujumbura Rural Provinces, and the municipality of Bujumbura, to improve the capacity of Burundian communities and administrative structures to respond to their own public health needs.

Objective One – Safe Water Supply

To make available at least 15 liters of safe water per person per day to 61,133 members of conflict-affected communities in Makamba and Bujumbura Rural Provinces, and the municipality of Bujumbura.

Objective 2 – Environmental Sanitation

To provide environmental sanitation facilities at a ratio of no more than 20 persons per family latrine or 50 persons per communal latrine for 61,133 members of conflict-affected communities in Makamba and Bujumbura Rural Provinces, and the municipality of Bujumbura.

Objective 3 – Health and Hygiene Promotion

To increase knowledge and observation of basic public health protocols among 61,133 members of conflict-affected communities in new sites in Makamba and Bujumbura Rural Provinces, and the municipality of Bujumbura (and an additional 59,864 people in existing sites.)

Objective 4 – Support to Local Administrative Structures

To strengthen the capacity of local administrative structures to promote public health and hygiene and to maintain water supply and environmental sanitation facilities in Makamba and Bujumbura Rural Provinces, and the municipality of Bujumbura.

Objective 5 – Emergency Response

To maintain the capacity to respond to new population displacements, water- and sanitation-related epidemics, drought, and forced resettlement, through meeting emergency water, sanitation, and basic shelter needs of communities affected by these events.

B. PROFILE OF TARGET POPULATION

The target group of beneficiaries of this project were internally displaced, repatriates /returnees and conflict-affected persons in Makamba and Bujumbura Rural Provinces, and the municipality of Bujumbura. Beneficiaries of Objectives 1, 2 & 3 overlapped: those served by the provision of safe water and sanitation facilities made up sub-sets of those targeted by health and hygiene promotion activities. Beneficiaries of Objective 5 may have been among those already covered by the other objectives, depending on location.

The table below illustrates the actual number of beneficiaries found at the end of the project period, based on post-intervention surveys:

| <i>Province</i> | <i>Objective One</i> | <i>Objective Two</i> | <i>Objective Three</i> | <i>Objective Four</i> | <i>Objective Five</i> | <i>Total</i> |
|------------------------|----------------------|----------------------|------------------------|-----------------------|-----------------------|----------------|
| Bujumbura Rural | 9,440 | 24,616 | 111,234 | 50 | 28,500 | 173,840 |
| Makamba | 13,392 | 21,750 | 22,767 | 50 | 1,500 | 59,459 |
| Countrywide | - | - | - | - | 25,000 | 25,000 |

| | | | | | | |
|--------------|---------------|---------------|----------------|------------|---------------|----------------|
| Total | 22,832 | 46,366 | 134,001 | 100 | 55,000 | 258,299 |
|--------------|---------------|---------------|----------------|------------|---------------|----------------|

Population figures in both Bujumbura Rural and Makamba Provinces fluctuated wildly throughout 2003. In Bujumbura Rural Province, frequent – and often intense – episodes of fighting between the FNL rebel group (the only rebel group refusing to participate in cease fire talks) and the government armed forces, resulted in the displacement of tens of thousands of people at any given time. The nature of displacement in Bujumbura Rural is quite particular. The number of ‘permanent’/established IDP camps is relatively few. The vast majority of people are displaced only temporarily, for days or weeks at a time, sheltering in host families in nearby *collines*, their lives becoming a practically uninterrupted series of movements from place to place. As a result, it is very difficult to assess the ‘real’ number of people that benefited from IRC’s interventions, especially under Objective 1, water supply. The figures listed in the table above are based on the ‘permanent’ resident population of the intervention sites; the actual population figures are often much higher since these sites regularly host people temporarily displaced by fighting. Furthermore, it is likely that additional people in nearby areas also benefited from the spring catchments and water supply systems rehabilitated by IRC.

In Makamba Province, throughout most of 2003, the IDP population was much more ‘settled’, in established camps. However, in the final months of the year, as a result of the cease fire accord signed between the CNDD-FDD rebel group and the government, the security situation improved dramatically and many IDPs began to leave the camps and return to their homes of origin. Since the homes of origin of most IDPs in Makamba Province are located close to the IDP camps, these populations will continue to benefit from the water systems that were rehabilitated by IRC.

III. PROGRAM PERFORMANCE BY OBJECTIVE

A. Objective One – Safe Water Supply

Total number of targeted and reached beneficiaries:

In Bujumbura Rural, the total number of beneficiaries fell from the originally estimated 42,300 to an actual 9,440 persons. (Original estimates were obtained from local administrative authorities, and were most likely greatly exaggerated.) The ‘real’ number of people benefiting from the water system rehab in Bujumbura Rural is probably much greater than the number of ‘permanent’ residents, 9,440 people, as explained above.

In Makamba, the actual beneficiaries of the water supply objective decreased slightly from the originally estimated 18,833 to an actual 15,777. Again, original estimates obtained from local authorities were probably strategically inflated, and the actual number of IDPs in the camps by the end of the project had begun to drop. However, in addition to the 15,777 IDPs who were still found in the camps at the end of the project period, there are an unknown number of additional people benefiting from the water supply interventions in their homes of origin located nearby the camps.

Results measured against indicators:

- 7 water systems rehabilitated / extended (4 in Makamba; 3 in Bujumbura Rural); original target was 6.
- 14 springs capped / protected (4 in Makamba; 10 in Bujumbura Rural); original target was 10.
- 5 water distribution networks constructed to serve 5 primary schools (in Makamba); original target was 4.
- 9,440 conflict-affected persons have access to an average of 70 liters of safe water per person per day in Bujumbura Rural and 15,777 people have access to an average of 29 l/p/d in Makamba; original target was 61,333 persons have access to 15 liters of safe water per person per day.
- Water supplied contains no more than zero (0) fecal coliforms per 100ml at the point of delivery; original target was water supplied contains no more than 10 FC/100ml.

- Water supplied contains no more than 1,000mg per liter of total dissolved solids; same as original target.

Refer to Annex 1.1 – Safe Water Supply, for details of interventions and results.

Description of assessments and surveillance data used to measure results:

IRC Field Coordinators in each province and the IRC Environmental Health Technical Coordinator verified completion of works through project records and on-site monitoring. Field staff conducted water coverage surveys and performed water testing to ensure adequate quantity and quality of water in rehabilitated systems.

Discrepancies between expected and actual results:

In Makamba Province, IRC had originally proposed to rehabilitate three water systems (Rimbo, Kiyange and Gatwe.) All three systems were completed (refer to Annex 1.1 for details.) Due to cost-savings incurred in the rehabilitation of the three systems, IRC was able to rehabilitate one additional water system in Muresi (Makamba Commune), which included the catchment and protection of one spring, construction of one 10m³ reservoir, laying of 800 meters of new pipe line, construction of 4 new tap stands, and construction of a water distribution network to serve the Muresi Primary School.

In Bujumbura Rural, IRC had originally proposed to cap/protect 10 springs in Mubimbi Commune. However, in order to provide a more equitable allocation of interventions across communes, and to provide IRC with alternative sites, in case Mubimbi Commune was inaccessible due to fighting, IRC decided to do 5 spring catchments/protection in Mubimbi (Nyangoyi, Kabuhe, Buhonga, Nyamangana, and Nyankata) and 5 spring catchments/protection in Isale Commune (Kanyengwa, Renga, Masarara, Mukobere and Keza.) Also, IRC selected Buhonga spring to replace a spring initially chosen by authorities in Nyamagana, but which was later rejected by the population for having water that brings 'bad luck and disease'. IRC had originally proposed to rehabilitate three water systems in Bujumbura Rural (Martyazo in Mubimbi Commune, Nyarukere in Isale Commune and Kinuke in Kanyosha Commune.) IRC abandoned rehabilitation activities on the Kinuke water system because the source was inaccessible due to regular insecurity, and instead rehabilitated the Mubone water system, in the same commune of Kanyosha.

Adjustments made for the objective:

The objective was not modified compared to the original proposal.

Successes achieved/ Success stories:

In Makamba, the IRC team exceeded original targets by rehabilitating one additional water system, for a total of four systems.

Despite continued insecurity, the IRC Bujumbura Rural team was able to complete all activities, including the catchment and protection of 10 springs, the rehabilitation of the Mubone and Cufe/Martyazo water systems and the extension of the Nyaukere water system.

Constraints encountered:

The IRC Makamba team encountered two problems of a non-technical nature on the Gatwe water system. First, the local administration allows private connections to the main water pipeline and the use of 220-liter storage drums for shopkeepers, which causes significant losses of water along the system's length. Second, the military constructed a private connection to a supply tank in a nearby camp, where taps remain permanently open, resulting in large quantities of wasted water. IRC-trained community mobilizers campaigned in communities to impart the importance of discontinuing private connections to main water pipelines in order to ensure water flow and structural integrity of the piping network.

In Makamba, the IRC team also faced difficulties related to insecurity, which made project sites inaccessible for certain periods of time. Clashes between CNDD-FDD rebels and government armed forces continued throughout the first three quarters of the year. All IRC field offices were closed for two weeks in late April/early May, as a precautionary measure in anticipation of the presidential transition on May 1. The IRC Makamba field office closed for three weeks in July, as a result of the kidnapping of three NGO workers in Makamba, including one driver from IRC.

The IRC team in Bujumbura Rural experienced delays throughout the project period due to persistent insecurity across much of the Province. Fighting between FNL rebels and government armed forces was regular and severe. During the third quarter, four project sites in Mubimbi Commune were rendered inaccessible due to fighting between CNDD-FDD and FNL rebel groups.

Lessons-learned; Recommendations for improving program design:

To minimize the risk of inefficient daily laborers, who may be less motivated for financial reasons, IRC will encourage field offices to employ subcontractors in certain project sites in 2004. The use of subcontractors will provide IRC with a more accountable structure during project implementation.

Recognizing that some of the logistical deficiencies encountered were of an internal nature, IRC recruited a short-term expatriate Logistics Advisor in January 2004, to provide additional support and guidance on standard IRC policies and procedures and to oversee structural changes in the Logistics Department.

Cost effectiveness:

IRC garnered savings (actual rehabilitation costs came in lower than those anticipated) that enabled additional extension of the Nyarukere and Cufe/Martyazo water systems in Bujumbura Rural. In Makamba, cost-savings enabled the rehabilitation of an additional water system, in Muresi.

B. Objective 2 – Environmental Sanitation

Total number of targeted and reached beneficiaries:

| Province | # Beneficiaries Targeted | # Beneficiaries Reached | | |
|-----------------|--------------------------|-------------------------|-----------------|-------------------|
| | | Total | Family Latrines | Communal Latrines |
| Bujumbura Rural | 42,300 | 24,616 | 19,848 | 4,768 |
| Makamba | 18,833 | 21,750 | 15,777 | 5,973 |
| Total | 61,133 | 46,366 | 35,625 | 10,741 |

Results measured against indicators:

- IRC constructed and distributed 3,334 family latrine platforms (2,050 in Bujumbura Rural and 1,284 in Makamba); original target was 3,261 family latrines to be constructed and distributed.
- IRC constructed 13 blocks of permanent communal latrines (4 in Bujumbura Rural and 9 Makamba); original target was 12 blocks.
- No modified family latrines were constructed in Makamba; original target was 163.
- IRC provided family latrine platforms at a ratio of 10 persons/latrine in Bujumbura Rural and 12 persons/latrine in Makamba; original target was a ratio of no more than 20 persons/latrine.
- IRC provided communal latrines at a ratio of 79 users/latrine in Bujumbura Rural and 107 users/latrine in Makamba; original target was a ratio of no more than 50 users/latrine.

Refer to Annex 2.1 - Family Latrines and Annex 2.2 - Communal Latrines for details of interventions and results.

Description of assessments and surveillance data used to measure results:

IRC conducted latrine coverage surveys, monitored project records and made on-site visits to measure progress and completion of sanitation interventions.

Discrepancies between expected and actual results:

IRC constructed and distributed 2,050 family latrine platforms (sanplats) in Bujumbura Rural (2,050 proposed) and 1,284 in Makamba (1,211 proposed) for a total of 3,334 sanplats (3,261 proposed).

Originally, IRC Makamba had proposed to construct 163 'modified family latrines' in the lower part of Mvugo IDP site (situated on the lake shore.) However, following the on-site pre-intervention survey, the Makamba team determined that the high water table and lack of space would make it impossible to build family latrines there. Instead, after consultation with the IDP community in Mvugo, IRC decided to construct two blocks of permanent communal latrines (one 8-door and one 6-door) higher up the hill, which could be accessed by the IDPs living in the lower part of Mvugo, and to distribute family latrine platforms only in the upper part of Mvugo site.

In Makamba Province, IRC was able to construct 9 blocks of communal latrines (7 blocks in 6 primary schools, and 2 blocks in the Mvugo IDP site); the original target was 8 blocks. IRC did not construct latrines in Gatwe Primary School, as originally planned, because DGHHER agreed to empty the existing latrines. Instead, IRC constructed latrines in Muresi Primary School. The resulting ratio of users/latrine in the schools met the original target of not more than 50 users/latrine. However, the resulting ratio for the communal latrines in Mvugo IDP site was 278 users/latrine, which skewed the overall average of latrine coverage (107 users per latrine, overall average.)

In Bujumbura Rural Province, IRC constructed and distributed 2,050 family latrine platforms (sanplats), thereby achieving the original target of 2,050. The resulting ratio was an average of 10 users/latrine, which exceeded the target ratio of 20 users/latrine. The Bujumbura Rural team also constructed 4 communal latrine blocks of 6-doors each in 4 primary schools (3 in Rushubi, 1 in Martyazo), as per the original target. The resulting ratio was 79 users/latrine, not reaching the target ratio of 50 users/latrine. (Schools in Bujumbura Rural are extremely overcrowded, rendering the target ratio of 50 users/latrine somewhat unrealistic.)

Adjustments made for the objective:

The objective was not modified compared to the original proposal.

Successes achieved/ Success stories:

The Makamba team was able to construct and distribute 1,284 family latrine platforms, exceeding the original target of 1,211, and was able to construct 9 blocks of permanent communal latrines, exceeding the original target of 8 blocks. In Bujumbura Rural, the IRC team was able to achieve the target results, despite persistent insecurity and difficult access to many intervention sites.

Constraints encountered:

IRC encountered difficulties in emptying certain latrines with a sludge pump because the pits were filled with foreign matter, such as banana leaves. IRC organized the manual emptying of the latrines with hand buckets.

Insecurity posed problems for implementation in both Makamba and Bujumbura Rural Provinces.

Lessons-learned; Recommendations for improving program design:

After many years of distributing cement sanitation platforms to families in 'chronic' IDP settings in Burundi, IRC is unable to show empirical data indicating that a positive impact on the health status of target communities was achieved as a result. IRC is unable to determine if concrete sanplats are more effective in stemming diarrhoeal diseases than the 'traditional' latrines (a simple hole in the ground) favoured by most rural communities. Furthermore, fabrication and distribution of concrete sanplats is logistically difficult and costly. Therefore, IRC has taken a strategic decision to discontinue the fabrication and distribution of family sanplats in 2004 and will focus instead on encouraging families to use their traditional latrines in an effective way, and to follow good hygiene practices. IRC will also conduct a comparative study of communities that received cement sanplats in 2003, and those that use only traditional latrines.

Throughout previous years, IRC has constructed hundreds of emptiable latrines around the country, but in only a few cases has IRC seen full latrines being emptied by local authorities/ communities. In 2004, IRC will push provincial and communal authorities to develop appropriate and sustainable strategies to manage latrine emptying and waste disposal. IRC will provide technical assistance and limited material support to local authorities to implement agreed-upon strategies. IRC will then construct emptiable communal latrines in schools and other public facilities where local administrators are implementing aforementioned strategies.

Cost effectiveness:

All construction targets were achieved (slightly exceeded in some cases) within the original budget.

C. Objective 3 – Health and Hygiene Promotion

Total number of targeted and reached beneficiaries:

| Province | Beneficiaries | | # of HHPs/CHWs | |
|-----------------|----------------|----------------|----------------|------------|
| | Target | Reached | Target | Trained |
| Bujumbura Rural | 93,000 | 111,234 | 261 | 233 |
| Makamba | 27,997 | 22,767 | 75 | 55 |
| <i>Total</i> | <i>120,997</i> | <i>134,001</i> | <i>336</i> | <i>288</i> |

Results measured against indicators:

- IRC trained 233 Community Health Workers in Bujumbura Rural Province at a ratio of 1 CHW per 499 persons. In Makamba Province, IRC trained 55 CHWs, for a ratio of 1 CHW per 414 persons. The original target was 1 CHW per 500 persons trained and working among target communities.
- In target communities in Bujumbura Rural Province, on average 80% of post-intervention survey respondents demonstrated knowledge of good hygiene (overall a 45% increase in knowledge level.) In target communities in Makamba Province, on average 55% of survey respondents demonstrated knowledge of good hygiene (overall a 22% increase in knowledge level.) The original target was 75% improvement in knowledge.
- In target communities in Bujumbura Rural Province, on average 76% of survey respondents demonstrated practice of good hygiene (overall a 22% improvement in practice.) In target communities in Makamba Province, on average 79% of survey respondents demonstrated practice of good hygiene (overall a 14% improvement in practice.) The original target was 75% improvement in practice.
- IRC established and trained 21 Water Point Management Committees in Bujumbura Rural Province (original target was 30) and 40 WPMCs in Makamba Province (original target was 30.)
- IRC established and trained 15 School Hygiene Clubs in Bujumbura Rural Province (original target was 4 clubs), and 6 School Hygiene Clubs in Makamba Province (original target was 6 clubs).

Refer to: **Annex 3.1 – Training/Outputs of CHWs**
 Annex 3.2 – Effects/Knowledge of Good Hygiene
 Annex 3.3 – Effects/Practice of Good Hygiene
 Annex 3.4 – Water Point Management Committees
 Annex 3.5 – School Hygiene Clubs

Description of assessments and surveillance data used to measure results:

IRC conducted pre- and post-test surveys with Community Health Workers, members of Water Point Management Committees, and teachers and student members of School Hygiene Clubs. IRC verified monitoring reports of health workers collected by provincial Health Promotion Technicians (Ministry of Public Health officials). IRC staff conducted on-site visits to monitor health worker outreach, to verify School Hygiene Club activities, and to verify whether Water Point Management Committees remained operational throughout the project duration.

Discrepancies between expected and actual results:

In Bujumbura Rural Province, IRC had estimated in the original proposal that 188 Health and Hygiene Promoters (HHPs) and Community Health Workers (CHWs) from old sites where IRC had worked in previous years would be re-trained, and that 73 new HHPs/CHWs would be trained in the new intervention sites. Following the detailed pre-intervention assessment and surveys, the IRC Bujumbura Rural team identified 165 HHPs/CHWs from old sites and 68 HHPs/CHWs from new sites to be trained. These health workers were selected following a test to ensure that they met the minimum requirements of the Ministry of Public Health (notably, literacy requirements). Those health workers that did not meet the literacy requirements were invited to serve on the Coordination Committee. Even though the actual number of CHWs trained was lower than the original estimate, the resulting ratio was sufficient (1 CHW per 499 persons.)

In Makamba Province, IRC had originally planned to train 75 HHPs/CHWs. However, not all the HHPs trained by IRC in previous years met the literacy requirement established by the MoPH. Therefore, IRC selected to train a total of 55 who did meet the requirements. The number 55 was also determined to be sufficient to achieve the target ratio of at least 1 CHW per 500 persons (actual ratio achieved was 1 CHW per 414 persons.)

The final number of Water Point Management Committees formed and trained in Bujumbura Rural and Makamba was a function of the total number of water points constructed (21 in Bujumbura Rural, 40 in Makamba.) Each Committee was comprised of 5 members (3 men and 2 women) and received training in the importance of potable water, sources of water, protection of potable water, collection and management of water users' fees and the planning of committee activities. In addition, each Committee received a set of tools to effect basic maintenance and repair of the water points.

School Hygiene Clubs were formed in each of the primary schools where IRC constructed latrines. In the case of Bujumbura Rural Province, the IRC team formed and trained School Hygiene Clubs in additional schools, even though IRC did not build latrines there. Each Club was comprised of teachers and students and received training in basic hygiene education and mobilization techniques. Club members were responsible for transmitting hygiene promotion messages to students and maintaining the school environment in a hygienic state.

Adjustments made for the objective:

The objective was not modified compared to the original proposal.

Successes achieved/ Success stories:

In Makamba Province, IRC trained 55 health workers, in conjunction with Provincial Health Office staff, who participated as trainers. The training curriculum focused on water borne diseases, hygiene practices and techniques in effective communication of public health messages. IRC-trained health workers conducted a total of 8 public education campaigns, 1,000 household visits, and 16 focus groups discussions. Refer to Annexes 3.2 and 3.3 for interesting results of the Knowledge, Attitudes and Practices (KAP) surveys conducted at the beginning and end of the project. For the categories of Water Use, Latrine Use, Hand washing, Diarrhea and Habitat, there was an overall improvement among survey respondents in both knowledge and practice.

In Bujumbura Rural Province, IRC trained 233 health workers, using the same training curriculum as in Makamba. These health workers conducted a total of 156 public education campaigns, 156 household visits, and 134 focus groups discussions. The focus group discussions allowed a forum to share feedback on risky health and hygiene practices, identified in the pre-intervention surveys. After the first campaign of waste disposal, and the organization of children to clean their respective communities, IRC staff observed a significant reduction in excreta on the roadsides in target areas. Refer to Annexes 3.2 and 3.3 for details of the KAP survey results. Overall, the survey respondents in Bujumbura Rural ranked higher than their counterparts in Makamba Province for improvement in good hygiene knowledge and practice.

In addition, the IRC Bujumbura Rural team participated actively in initiatives to prevent sexual violence against women. IRC organized a drawing competition at Kivoga School on the theme of fighting gender-based violence, and during a nationwide 16-day awareness campaign, IRC organized activities for children, in collaboration with the GoB and UNIFEM. IRC staff also referred victims of sexual violence to medical and legal service providers. The high credibility of IRC-trained health workers in their respective communities resulted in many abused women coming forward to report incidents and to seek assistance.

IRC organized inter-scholastic competitions between members of School Hygiene Clubs to encourage student participation and to promote good hygiene practices.

Constraints encountered:

Meetings scheduled with health workers, and the launching of public outreach campaigns, were often cancelled because participants were unable to travel through insecure areas or because IRC temporarily discontinued field visits during periods of increased hostilities. A nationwide teachers' strike closed all public schools from December 2003 through mid-March 2004, which delayed the progress of activities with School Hygiene Clubs and prevented IRC from conducting the post-intervention KAP survey in many schools.

Lessons-learned; Recommendations for improving program design:

IRC piloted a new initiative in Bururi Province (under an ECHO grant) to provide assistance to the Provincial Health Bureau in creating a database of existing health extension workers, trained by the MoPH, IRC and other NGOs. The database assists health agencies in identifying existing trained personnel, thereby building on existing capacities and minimizing redundancy in trainings. Technical assistance provided by IRC included training on basic computer skills (Word, Excel) and the establishment of the database program. With OFDA funding in 2004, IRC will work with Provincial Health Bureau's in Bujumbura Rural and Makamba Provinces to launch a similar database.

Many health workers have been trained by IRC and other NGOs in Bujumbura Rural and Makamba Provinces, and these workers know the basic content of hygiene messages. However, the teaching methods of these community health workers – and their mobilization techniques – need improvement. Therefore, IRC has decided not to train new health workers in 2004, but to provide to existing health workers more 'on-the-

job' support and interactive teaching skills through 'training of trainers' modules. The hope is that through more effective and entertaining techniques of transmitting messages, the health workers will have a greater influence on improving good hygiene knowledge and behavior among their communities.

In 2004, IRC will use radio to disseminate hygiene promotion messages, taking into account that Burundi is a very oral culture. The use of radio as a broadcast medium has three significant benefits: (1) radio messages engage the audience in a captivating manner; (2) dissemination of messages on national radio guarantees nationwide coverage (hence, the number of direct beneficiaries for Objective 3 will increase exponentially); (3) the approach is cost-effective in terms of cost per beneficiary.

Cost effectiveness:

All activities were conducted within the original budget. The Bujumbura Rural team was able to create and train 15 School Hygiene Clubs, instead of the originally planned 4 Clubs, while still staying within the total budget envelope.

D. Objective 4 – Support to Local Administrative Structures

Total number of targeted and reached beneficiaries:

This objective targeted an unspecified number of individuals working at different levels of the local administration in Bujumbura Rural and Makamba Provinces. IRC has estimated that 50 people in each province benefited from activities under this objective.

Results measured against indicators:

- IRC facilitated many meetings throughout the year in each province of intervention to support the work of sectoral administrative authorities (water/sanitation, health, education). The original target of 4 workshops per province was far exceeded.
- IRC provided appropriate material support to sectoral administrative authorities in each province of intervention (e.g. tool kits to repair rehabilitated water systems, motorcycles to improve MoPH's monitoring of community health workers.)
- IRC improved coordination between humanitarian agencies and sectoral administrative authorities in each province through the following activities:
 - serving as the 'Point Focal' in Makamba Province, the NGO responsible for facilitating coordination of all humanitarian actors, in collaboration with the provincial government;
 - the preparation and submission of technical dossiers detailing water and sanitation interventions;
 - training for community and administrative bodies responsible for the maintenance of water and sanitation structures;
 - facilitation of workshops at the provincial level to discuss challenges and strategies to improving maintenance of water and sanitation structures;
 - facilitation of a workshop with NGOs and MoPH to standardize health worker training modules;
 - technical assistance to provincial authorities in the development of provincial contingency plans;
 - participation in various coordination meetings – UN Contact Group, provincial Focal Point forums, sectoral emergency response meetings.

Description of assessments and surveillance data used to measure results:

IRC staff monitored training attendance sheets and written evaluation tests and the distribution of supplies to local authorities. Specifically, the Environmental Health Technical Coordinator oversaw and validated technical dossiers and the respective Field Coordinators oversaw assistance in the development of provincial

contingency plans and participation in coordination meetings, including the preparation and distribution of meeting minutes.

Discrepancies between expected and actual results:

IRC surpassed results anticipated in the project proposal by facilitating more than four workshops/trainings with administrative authorities.

Adjustments made for the objective:

The objective was not modified compared to the original proposal.

Successes achieved/ Success stories:

In Makamba Province, staff sought to promote the sustainability of rehabilitated water systems through two mechanisms. First, IRC facilitated plenary sessions to discuss challenges that Water Point Management Committees face in effective management of water systems and viable solutions thereof. IRC encouraged the following key stakeholders to participate – local and provincial authorities, including advisors to the Governor, administrators and heads of zones, the coordinators of the Communal Water Boards for Makamba, Bururi and Rutana Provinces, and DGHER representatives. IRC continues to provide training and contribute tool kits to WPMCs to assist in maintenance. In the same vein of promoting sustainability of rehabilitated water systems, IRC submitted to the Provincial Coordinator of the Communal Water Boards dossiers containing data on water quality and quantity, calculations of water loss along the networks, and detailed technical maps of each network which IRC rehabilitated.

IRC organized a workshop with members of the Provincial Health Office, including Health Promotion Technicians and NGOs intervening in the health sector in Makamba, to clarify stakeholders' respective roles and responsibilities. As a follow-up on a discussion of material assistance, IRC donated motorbikes to 6 of the 11 Health Promotion Technicians to facilitate on-site supervision of community-based health workers.

In Bujumbura Rural Province, IRC focused capacity-building efforts on strengthening the Communal Water Boards and reinforcing the MoPH's ability to coordinate NGO activities in the health sector. For the former initiative, IRC facilitated meetings with DGHER, UNICEF and NGOs intervening in the water sector to assist CWBs in attaining non-profit status. In recognizing the inherent bureaucratic delays in applying for non-profit status, and the significant costs involved, IRC instead limited its support to Communal Water Boards by providing training and tool kits. For the latter activity, IRC facilitated a workshop with the MoPH and NGOs intervening in the health sector to standardize health worker training modules.

Constraints encountered:

It is often difficult to plan on fixed schedules with local authorities, as meetings are often broken with little or no notice. Also, the level of engagement and motivation of individual government workers varies widely, so capacity building plans must be constantly revised to meet the specific circumstances.

Lessons-learned; Recommendations for improving program design:

In 2004, IRC plans to take a step further its relationship with *Regideso* (the parastatal agency responsible for urban water supply) by implementing a joint-venture to rehabilitate the Rumonge town water system, under a formal '*protocol d'accord*'. Collaboration with DGHER (the government agency responsible for rural water supply) will also be strengthened, through verification of technical dossiers on all water system interventions.

Cost effectiveness:

All activities were completed as per the original budget estimates.

E. Objective 5 – Emergency Response

Total number of targeted and reached beneficiaries:

IRC's emergency response activities benefited an estimated 55,000 people (1,500 in Makamba Province, 28,500 in Bujumbura Rural/Mairie, and 25,000 in Bururi Province.) The original target for the emergency response objective was 20,000 people.

Results measured against indicators:

- IRC supplied at least 15 liters of safe water per person per day to populations affected by newly-arising emergencies (displacement in Bujumbura and cholera in Rumonge) within two days of these populations becoming accessible to humanitarian assistance.
- IRC constructed temporary public latrines to populations affected by newly-arising emergencies (displacement in Bujumbura) within two days of these populations becoming accessible to humanitarian assistance.
- IRC provided plastic sheeting and other non-food items (NFIs) to populations affected by newly-arising emergencies (displacement in Bujumbura, destruction of homes and schools in Makamba) within seven days of these populations becoming accessible to humanitarian assistance.
- IRC took action to ensure an adequate response to other needs of populations affected by newly-arising emergencies, either through a direct intervention of IRC or facilitation of intervention by another partner. IRC conducted initial assessments and participated in coordination meetings, as needed. IRC managed the UNICEF emergency stock and distribution of NFIs in Makamba Province, and the OFDA contingency stock and distribution of emergency wat/san supplies in Bujumbura.

Description of assessments and surveillance data used to measure results:

IRC conducted rapid population assessments to verify target quantities of water and latrine coverage. The Environmental Health Technical Coordinator and the respective Field Coordinators conducted on-site verification of emergency response activities, and in the case of water trucking, monitored water trucks' log sheets. The Country Director approved all releases from the IRC emergency/contingency stock of supplies in Bujumbura (items purchased under previous OFDA and ECHO grants.)

Discrepancies between expected and actual results:

IRC achieved results in accordance with the original proposal.

Adjustments made for the objective:

The objective was not modified compared to the original proposal.

Successes achieved/ Success stories:

Thanks to a sufficient quantity of emergency supplies contained in the OFDA contingency stock in Bujumbura and the UNICEF stock of NFIs in Makamba, IRC was able to respond quickly and appropriately to the emergency water, sanitation and shelter needs of people affected by newly-arising emergencies. Below is a summary of emergency responses / achievements, by Province.

Makamba Province

IRC was the driving force behind the creation of the Provincial Contingency Plan, in collaboration with the provincial government, other NGOs and UN agencies.

IRC managed the UNICEF stock and distribution of NFIs in Makamba Province. During this project period, IRC provided the following emergency assistance, benefiting an estimated 1,500 people:

- Connection of the MSF France Cholera Treatment Center to the local water supply system, following an outbreak of cholera in Nyanza Lac Commune in January 2003.
- Distribution of school supplies to Mutwasi Primary School (for 37 children) and Ruyensi Primary School (for 136 children), in Mabanda Commune, to ease the burden faced when increasing numbers of children repatriated from refugee camps in Tanzania and enrolled in these schools.
- Distribution of uniforms and stationery to 120 repatriated unaccompanied children.
- Distribution of plastic sheeting to repair the roofs of Kiderege Primary School (152 students) and Mugumure Primary School (236 students), in Nyanza Lac Commune.
- Distribution of school supplies to 64 children and NFIs to 57 households, after fighting between FDD rebels and armed forces destroyed IDP homes near Mbizi school, Kayogo Commune.
- Distribution of NFIs to 8 families whose homes were destroyed in an accidental fire in Kige IDP site, Mabanda Commune.
- Distribution of plastic sheeting to 24 families in Vugizo Commune, whose houses were destroyed in a hailstorm.

Bujumbura Rural Province and Bujumbura Mairie

IRC responded to several emergencies and provided emergency water supply to several areas throughout the year, benefiting an estimated 28,500 people:

- Trucking of water to fill a 20m³ tank in Gatumba zone and a 15m³ bladder in Kavumu six days per week, from mid-2003 to date.¹ These areas have large numbers of IDPs with no access to safe water.
- During heavy fighting and displacement in Bujumbura in July 2003, IRC installed a 5m³ bladder at the *Musee Vivant* to provide potable water to an estimated 2,000 displaced persons for one week.
- During the same period of fighting in July, IRC installed a 5m³ bladder and filled a second 10m³ bladder provided by UNICEF to assist approximately 5,000 displaced people at the *Monument d'unité nationale* for almost one month. IRC also assisted UNICEF in the distribution of NFIs to the temporarily displaced people at this site.
- IRC conducted emergency needs assessments in Kanyosha Commune and intervened with emergency sanitation provision (construction of temporary latrines) in several temporary IDP sites that emerged around the capital city during heavy fighting in July.
- IRC conducted an emergency needs assessment of displaced populations in April 2003, in collaboration with UNICEF and CRS, and distributed NFIs to 292 households in Musumba Commune and 255 households in mpinga Commune (jerry cans, kitchen sets, blankets and soap.)
- Distribution of plastic sheeting (105 pieces), wooden poles (740) and nails (173 kg) to rebuild temporary structures when schools were damaged in Rubirizi, Nyarukere, Mubere and Kirombwe in Isale and Kanyosha Communes.
- Provision of water (21m³ reservoir filled every day for three days, for a total of 63m³ of water provided) when 6,000 young people gathered in Bujumbura to participate in the Great Lakes forum on the Arusha Peace Accords in August 2003.

Bururi Province

IRC responded to three cholera epidemics in Rumonge Town during this project period (February 2003, April 2003 and January 2004.) In all three cases, IRC installed and supplied water bladders at the Rumonge hospital and in the most affected neighbourhoods of Iteba, Swahili and Kanyenkoko.² IRC's emergency response also included the distribution of soap, water purification tablets, jerry cans and disinfectant to the hospital. IRC also assisted in spraying disinfectant in affected neighbourhoods and schools. An IRC field assistant worked alongside the MoPH's Health Promotion Technicians to facilitate community education

¹ IRC temporarily ceased operations in Kavumu from June 24 to August 7, after vandals destroyed the IRC water bladder.

² After a bladder was stolen in the Swahili neighborhood in February 2004, IRC relocated the replacement bladder to the Iteba neighbourhood.

campaigns and distributions of emergency items. IRC's intervention benefited an estimated 25,000 people in Rumonge Town.

Constraints encountered:

Insecurity and difficult access to affected populations posed the greatest challenge to IRC's emergency response.

IRC was unable to identify and hire a qualified national staff Emergency Team Leader, following several failed recruitment attempts throughout the year. IRC will continue the search to identify someone to fill this post. In the meantime, emergency response activities are managed by the expatriate Environmental Health Technical Coordinator.

IRC was disappointed by cases of vandalism/theft of water bladders in Kavumu in Bujumbura and Swahili in Rumonge, and frustrated by a lackluster response from local authorities. IRC continues to insist that local authorities assume full responsibility for the care and protection of emergency supplies provided by IRC. IRC has also appealed to Provincial Governors to ensure local authorities' responsibility.

Lessons-learned; Recommendations for improving program design:

IRC has provided emergency response to cholera outbreaks in Rumonge every year since 1999, with installation of water bladders, water trucking, chlorination and distribution of other relief supplies. In 2004, IRC will address the root of the problem by rehabilitating/extending the existing municipal water system, increasing access to sanitation facilities, and conducting intensive hygiene promotion campaigns under a grant agreement with ECHO. Similarly, IRC hopes that environmental health interventions proposed under the scope of this project will help to reduce the risk of a recurring cholera outbreak in Nyanza Lac Commune, Makamba Province.

Cost effectiveness:

All activities were carried out within the original budget.

IV. RESOURCE USE / EXPENDITURES

Please refer to the financial report, submitted under separate cover.

Please find attached to this report the following:

- Financial Annex 1: Assets Purchased with OFDA Funds
- Financial Annex 2: Contingency Stock Purchased with OFDA Funds
- Financial Annex 3: Vehicle and Machine Spare Parts Purchased with OFDA Funds
- Financial Annex 4: Sale of Vehicles Purchased with OFDA Funds

IRC requested and received OFDA's approval to sell several old non-serviceable vehicles and a non-functional photocopier (purchased in 1997 under OFDA grant no. AOT-G-00-97-00247), and to use the proceeds as 'additional program income' to the grant HAD-G-00-03-00027. Also, IRC obtained OFDA's permission to credit the proceeds obtained from an insurance claim, following a serious accident with one of the IRC vehicles purchased under the same previous OFDA grant. The additional program income was used to contribute to running costs of vehicles and equipment. The table below details the items sold and the amount of income received.

Proceeds from sale of OFDA assets:

| Item | IRC Asset # | Registration # | Date of Sale | Amount | |
|------------------------------------|--------------------|-----------------------|---------------------|---------------|-------------------------|
| | | | | FBU | USD |
| Land Rover 4x4 | B5360 | IT8140 | Oct 2003 | 1,500,000.00 | 1,409.31 |
| Dyna Truck | B5061 | IT7930 | Oct 2003 | 2,462,024.00 | 2,313.74 |
| Dyna Truck | B5059 | IT7939 | Oct 2003 | 1,035,000.00 | 972.42 |
| Photocopier | B5089 | | May 2003 | 300,000.00 | 282.92 |
| Land Rover - insurance proceeds | B5360 | IT8140 | April 2003 | | 11,090.95 |
| Total Income: | | | | | <u>16,069.34</u> |

The original budget total was \$999,995. The additional program income earned through the sale of assets and proceeds from insurance was \$16,070. Therefore, the grand total budget of the project became \$1,016,064.

The original project duration was one year, from December 1, 2002 to November 30, 2003. Delays in implementation due to persistent insecurity prompted IRC to request a two-month, no-cost extension, which was subsequently approved by OFDA. The extension through January 31, 2004 enabled IRC to complete all activities. The total budget amount was sufficient to cover all costs during the extension period. The total budget of \$1,016,064 was fully spent by the end of the project.

V. CONCLUSION

Persistent insecurity posed the greatest challenge to program implementation. Not only did security impede IRC's access to project sites, it also caused delays in scheduling meetings with beneficiary groups and communal authorities, and in conducting public outreach activities. Bujumbura Rural Province remained volatile throughout the project duration, particularly in Rushubi, Martyazo and Kavumu sites. In Makamba Province, the security situation was problematic for the first three quarters of the project, particularly in sites in Nyanza Lac Commune, but improved dramatically at the end of 2003 with the signing of a cease fire accord between the government and the CNDD-FDD rebel group.

The persistent insecurity had devastating effects on the civilian populations in both Provinces. Thanks to a sufficient stock of emergency supplies (purchased under previous OFDA grants) and funds made available under this grant, IRC was able to respond quickly and effectively to the emergency water and sanitation needs of affected populations.

Despite delays in program implementation in the early months, due to persistent insecurity and an uncertain funding situation, IRC Burundi was able to accelerate implementation in the later months of the project. A two-month, no-cost extension enabled IRC to complete all project activities by the end of January 2004. All original program objectives were met, and some initial targets in water system rehabilitation and latrine construction were exceeded.

IRC wishes to express appreciation to OFDA for the continued support of our program in Burundi.

Annex 1.1 Safe Water Supply – Bujumbura Rural Province

| Water Supply Facility | Activities Completed | Site | Direct Benef ¹ | Water Quality | | | Water Flow Rate | | | Water Availability | | |
|--|--|--|---------------------------|-------------------------|------------------------|-----------------------|---------------------|--------------------|--------------------|------------------------|-------------------------------|---|
| | | | | Target | Pre-Test | Post-Test | Target | Pre-Test | Post-Test | Target | Pre-Test ² | Post-Test |
| COMMUNE MUBIMBI | | | | | | | | | | | | |
| Water supply system of Cufe (Martyazo) | Water system rehabilitated, including spring catchment, 6 km extension, and construction of 6 tapstands and 3 reservoirs | Cufe site, Martyazo zone, Kigunga & Gisagara sectors | 798 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 liters/second | 1.56 liters/second | 1.64 liters/second | = 15 liters/person/day | 84 l/p/d (non-potable) | 89 l/p/d (potable); 26 l/p/d collected by benef. |
| Source Nyangovy 2 | Spring capped / protected; tapstand and washing basin constructed | Zone Martyazo, sector Kigunga, colline Magarure | 354 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | 0.25 l/s | 0.28 l/s | = 15 l/p/d | 30 l/p/d | 34 l/p/d; 13 l/p/d collected |
| Source Kabuhe | Spring capped / protected; tapstand and washing basin constructed | Zone Martyazo, sector Kigunga, colline Magarure | 630 | <10 FC/100ml; <5 NTU | 60 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | 0.18 l/s | 0.21 l/s | = 15 l/p/d | 12 l/p/d | 14 l/p/d; 9 l/p/d collected |
| Source Buhonga | Spring capped / protected; tapstand and washing basin constructed | Zone Martyazo, sector Kigunga, colline Kinyinya | 738 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | 1.44 l/s | 1.8 l/s | = 15 l/p/d | 84 l/p/d | 105 l/p/d; 21 l/p/d collected |

¹ The number of direct beneficiaries listed here is the 'permanent' resident population of these sites; the actual population figures fluctuate wildly and are often much higher since these sites regularly host people temporarily displaced due to ongoing fighting in Bujumbura Rural Province. Additional people in nearby areas may also benefit from these water systems.

² The Pre-Test figures for Water Availability were obtained by calculating the potential output of water from the source (flow rate X 3600 seconds X 12 hours divided by the population.) However, at the time of pre-intervention, the source was unprotected and therefore the potable water availability to beneficiaries was zero (0).

| Water Supply Facility | Activities Completed | Site | Direct Benef's ¹ | Water Quality | | | Water Flow Rate | | | Water Availability | | |
|------------------------------|---|--|-----------------------------|----------------------|--------------------|----------------------|-----------------|-----------|-----------|--------------------|-----------------------|-------------------------------|
| | | | | Target | Pre-Test | Post-Test | Target | Pre-Test | Post-Test | Target | Pre-Test ² | Post-Test |
| Source Nyamagana (Murengeza) | Spring capped / protected; tapstand and washing basin constructed | Zone Martyazo, sector Butega, colline Butega | 404 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | > 1.5 l/s | 1.67 l/s | = 15 l/p/d | 160 l/p/d | 179 l/p/d; 17 l/p/d collected |
| Source Nyankata | Spring capped / protected; tapstand and washing basin constructed | Zone Martyazo, sector Butega, colline Butega | 294 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | > 1.5 l/s | 1.52 l/s | = 15 l/p/d | 220 l/p/d | 223 l/p/d; 14 l/p/d collected |
| COMMUNE ISALE | | | | | | | | | | | | |
| Source Kanyengwa | Spring capped / protected; tapstand and washing basin constructed | Zone Rushubi, sector Rushubi, colline Rushubi | 1,080 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | <10 FC/100ml; <5 NTU | 0.125 l/s | 0.1 l/s | 0.11 l/s | = 15 l/p/d | 4 l/p/d | 4 l/p/d; 3 l/p/d collected |
| Source Renga | Spring capped / protected; tapstand and washing basin constructed | Zone Rushubi, sector Rushubi, colline Rushubi | 336 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | <10 FC/100ml; <5 NTU | 0.125 l/s | 0.09 l/s | 0.12 l/s | = 15 l/p/d | 12 l/p/d | 15 l/p/d; 9 l/p/d collected |
| Source Masarara | Spring capped / protected; tapstand and washing basin constructed | Zone Rushubi, sector Bibare, colline Bibare | 270 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | <10 FC/100ml; <5 NTU | 0.125 l/s | 0.27 l/s | 0.3 l/s | = 15 l/p/d | 42 l/p/d | 46 l/p/d; 19 l/p/d collected |
| Source Mukobere | Spring capped / protected; tapstand and washing basin constructed | Zone Rushubi, sector Caranka, colline Burarana 1 | 360 | <10 FC/100ml; <5 NTU | 3 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | 0.8 l/s | 0.8 l/s | = 15 l/p/d | 96 l/p/d | 96 l/p/d; 30 l/p/d collected |

| Water Supply Facility | Activities Completed | Site | Direct Benef's ¹ | Water Quality | | | Water Flow Rate | | | Water Availability | | |
|----------------------------------|---|--|-----------------------------|-------------------------|-----------------------|-----------------------|-----------------|-----------|-----------|--------------------|-----------------------|----------------------------------|
| | | | | Target | Pre-Test | Post-Test | Target | Pre-Test | Post-Test | Target | Pre-Test ² | Post-Test |
| Source Keza | Spring capped / protected; tapstand and washing basin constructed | Zone Rushubi, sector Caranka, colline Burarana 1 | 348 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | 0.625 l/s | 0.7 l/s | = 15 l/p/d | 77 l/p/d | 87 l/p/d ; 23 l/p/d collected |
| Water supply system of Nyarukere | Water system rehabilitated, including spring catchment, pipe extension, and construction of 2 tapstands and 1 reservoir | Zone Kibuye, sector Nyarukere, colline Gatsi | 1,524 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | 0.3 l/s | 0.3 l/s | = 15 l/p/d | 8 l/p/d | 8.5 l/p/d ; 7 l/p/d collected |
| COMMUNE KANYOSHA | | | | | | | | | | | | |
| Water supply system of Mubone | Water system rehabilitated, pipes and fittings, and construction of 3 tapstands and 1 reservoir 10m3 | Zone Ruyaga, sector Buziga, collines Mubone, Nkambasi & Buziga | 2,304 | <10 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0 FC/100ml; <5 NTU | 0.125 l/s | 0.1 l/s | 0.25 l/s | = 15 l/p/d | 4 l/p/d | 10 l/p/d ; 7 l/p/d collected |

Totals / Averages : Bujumbura Rural Province

| | | | | | | | | | | | | |
|-------------------|--|----------|---------------|-------------------------|--|------------------------|-----------|---------------------|---------------------|------------|-----------------------------------|--|
| Totals / Averages | 3 water systems rehabilitated and extended; 11 tapstands and 5 reservoirs constructed; 10 springs capped / protected and washing basins constructed (100% complete.) | 13 sites | 9,440 persons | <10 FC/100ml; <5 NTU | 0 FC/100ml (except 60 FC/100ml at Kabuhe source); < 5 NTU | 0 FC/100ml ; <5 NTU | 0.125 l/s | 0.67 l/s average | 0.75 l/s average | = 15 l/p/d | 64 l/p/d average (non-potable) | 70 l/p/d average (potable) 15 l/p/d average collected |
|-------------------|--|----------|---------------|-------------------------|--|------------------------|-----------|---------------------|---------------------|------------|-----------------------------------|--|

Annex 1.1 Safe Water Supply - Makamba Province

| Water Supply Facility | Activities Completed | Site | Direct Benef ³ | Water Quality | | | Water Flow Rate | | | Water Availability | | |
|--------------------------------|---|------------------|--------------------------------------|-------------------------|-------------|-------------|-----------------|----------|-----------|--------------------|--------------------------------|-----------|
| | | | | Target | Pre-Test | Post-Test | Target | Pre-Test | Post-Test | Target | Pre-Test ⁴ | Post-Test |
| NYANZA-LAC COMMUNE | | | | | | | | | | | | |
| Water supply system of Rimbo | Spring catchment and protection; rehab of existing 25m ³ reservoir, construction of new 30m ³ reservoir, laying 7 km pipeline extension; construction of 10 tapstands, 3 washing basins, and water distribution network to Rimbo School. | Rimbo IDP site | 3,646 (Oct 03) 1,360 (Dec 03) | <10 FC/100ml; <5 NTU | 0 FC/100 ml | 0 FC/100 ml | 0.125 l/s | 0.5 l/s | 0.95 l/s | = 15 l/p/d | 8.8 l/p/d (non-potable) | 30 l/p/d |
| KIBAGO COMMUNE | | | | | | | | | | | | |
| Water supply system of Kiyange | Rehab of existing spring catchment and one new spring catchment; rehab of 10 reservoirs 20m ³ ; rehab of 21 existing tapstands; construction of 6 new tapstands; construction of 2 washing basins and water distribution network to 3 Primary Schools (Masawe, Kiyange 1 & 2.) | Kiyange IDP Site | 7,326 (Oct 03) 800 (Dec 03) | <10 FC/100ml; <5 NTU | 0 FC/100 ml | 0 FC/100 ml | 0.125 l/s | 0.6 l/s | 0.8 l/s | = 15 l/p/d | 6.4 l/p/d (non-potable) | 67 l/p/d |

³ Population figures fluctuated wildly in Makamba Province in 2003; IDP camps were crowded early in the year due to insecurity but by the end of the year, following the cease fire agreement between CNDD rebels and Government forces, many IDPs started to leave the camps to return to their homes of origin. Since the homes of origin of most IDPs in Makamba are located close to the IDP camps, these populations will continue to benefit from the water systems even after they leave the camps.

⁴ The Pre-Test figures for Water Availability were obtained by calculating the potential output of water from the source (flow rate X 3600 seconds X 12 hours divided by the population.) However, at the time of pre-intervention, the system was non-functional and therefore the potable water availability to beneficiaries was zero (0).

| KAYOGORO COMMUNE | | | | | | | | | | | | |
|-------------------------------|---|-----------------|-----------------------------------|-------------------------|-------------|-------------|-----------|------------------------------|------------------------------|------------|--------------------------|-----------|
| Water supply system of Gatwe | Spring catchment and protection; construction of one 40m3 water tank and 5 tapstands | Gatwe IDP Site | 11,172 (Oct 03) 9,732 (Dec 03) | <10 FC/100ml; <5 NTU | 0 FC/100 ml | 0 FC/100 ml | 0.125 l/s | 0.25 l/s (flow to catchment) | 0.42 l/s (flow to catchment) | = 15 l/p/d | 5.9 l/p/d (non-potable) | 7.8 l/p/d |
| MAKAMBA COMMUNE | | | | | | | | | | | | |
| Water supply system of Muresi | Spring catchment and protection; construction of one 10m3 water tank; laying of 800m pipe line; construction of 3 tapstands and one water distribution network to Muresi PS | Muresi IDP Site | 1,500 (Dec 03) | <10 FC/100ml; <5 NTU | 0 FC/100 ml | 0 FC/100 ml | 0.125 l/s | 0.2 l/s | 0.35 l/s | = 15 l/p/d | 5.76 l/p/d (non-potable) | 10 l/p/d |

Totals / Averages : Makamba Province

| | | | | | | | | | | | | |
|--------------------------|--|----------------|--|---------------------------------------|----------------------------------|----------------------------------|------------------|-----------------|-----------------|-------------------|--------------------------------|-----------------------------|
| <i>Totals / Averages</i> | <i>4 water systems rehabilitated and extended; 40 tapstands, 5 washing basins and 3 reservoirs constructed; distribution networks to 5 Primary Schools (+100% complete.)</i> | <i>4 sites</i> | <i>23,644 persons (Mid 03) 13,392 (Dec 03)</i> | <i><10 FC/100ml; <5 NTU</i> | <i>0 FC/100ml < 5 NTU</i> | <i>0 FC/100ml; <5 NTU</i> | <i>0.125 l/s</i> | <i>0.39 l/s</i> | <i>0.63 l/s</i> | <i>= 15 l/p/d</i> | <i>6.7 l/p/d (non-potable)</i> | <i>28.7 l/p/d (potable)</i> |
|--------------------------|--|----------------|--|---------------------------------------|----------------------------------|----------------------------------|------------------|-----------------|-----------------|-------------------|--------------------------------|-----------------------------|

Annex 2.1 - Family Latrines (Sanplats) – Bujumbura Rural Province

| Site | Beneficiaries | | Targets | | Pre-intervention | | Post-intervention | |
|--------------------------|-------------------------|-----------------------|-----------------------------------|-----------------------|---|----------------------|-----------------------------------|----------------------|
| | | | | | Existing Latrines | Users/latrine | Latrines Distributed | Users/latrine |
| COMMUNE MUBIMBI | | | | | | | | |
| Martyazo | 791 households | 4,746 persons | 500 latrines distributed | = 20 pers./lat. | 73 households have unhygienic & overcrowded latrines | 65 pers/lat | 500 | 9 pers/lat |
| COMMUNE ISALE | | | | | | | | |
| Rushubi | 916 HH | 5,496 persons | 750 latrines distributed | = 20 pers./lat. | 15 households have unhygienic & overcrowded latrines | 366 pers/lat | 750 | 7 pers/lat |
| COMMUNE KANYOSHA | | | | | | | | |
| Kavumu | 1,601 HH | 9,606 persons | 800 latrines distributed | = 20 pers/lat | 123 households have unhygienic & overcrowded latrines | 78 pers/lat | 800 | 12 pers/lat |
| TOTALS / AVERAGES | | | | | | | | |
| <i>Totals / Averages</i> | <i>3,308 households</i> | <i>19,848 persons</i> | <i>2,050 latrines distributed</i> | <i>= 20 pers./lat</i> | <i>211 of 3,308 households have unhygienic and overcrowded latrines</i> | <i>170 pers/lat</i> | <i>2,050 latrines distributed</i> | <i>10 pers/lat</i> |

Annex 2.1 Family Latrines (Sanplats) - Makamba Province

| Site | Beneficiaries | | Targets | | Pre - intervention | | Post - intervention | |
|-----------------------------|-----------------------------|--|--------------------------------|---------------------------|---|---------------------------|---|----------------------------|
| | | | | | Existing Latrines | Users/ latrine | Latrines Distributed | Users / latrine |
| NYANZA - LAC COMMUNE | | | | | | | | |
| Rimbo | 269 households | 1,360 persons (Dec 03) | 280 latrines distributed | = 20 pers./lat | 78 households have unhygienic & overcrowded latrines | 46.7 pers/lat | 280 | 5 pers/lat |
| Mvugo | 675 households | 3,885 persons (Dec 03) | 310 latrines distributed | = 20 pers./lat | 129 households have unhygienic & overcrowded latrines | 22.9 pers/lat | 310 | 12 pers/lat |
| KIBAGO COMMUNE | | | | | | | | |
| Kiyange | 150 households | 800 persons (Dec 03) | 235 latrines distributed | = 20 pers./lat | 80 households have unhygienic & overcrowded latrines | 34 pers/lat | 228 | 3 pers/lat |
| KAYOGORO COMMUNE | | | | | | | | |
| Gatwe | 1,670 households | 9,732 persons (Dec 03) | 386 latrines distributed | = 20 pers./lat | 932 households have unhygienic & overcrowded latrines | 11.9 pers/lat | 466 | 20 pers/lat |
| TOTALS/AVERAGES | | | | | | | | |
| <i>Totals/ Averages</i> | <i>2,764 households</i> | <i>15,777 persons (Dec 03)</i> | <i>1,211 latrines</i> | <i>= 20 pers./lat</i> | <i>73 households have unhygienic & overcrowded latrines</i> | <i>40 pers/lat</i> | <i>1,284 latrines distributed</i> | <i>12 pers/lat</i> |

Annex 2.2 Communal Latrines – Bujumbura Rural Province

| Site | Targets | | Activities Completed | Pre-intervention | | | Post-intervention | | |
|--------------------------|------------------------|-----------------|---|--------------------------------------|---|---|--|--|---|
| | | | | No. of Users | No. of latrines | Users/latrine | No. of Users | No. of latrines | Users/latrine |
| COMMUNE MUBIMBI | | | | | | | | | |
| Martyazo Primary School | 1 block of 6 latrines | = 50 users/lat | Construction of one block of 6 latrines (brick-lined, emptiable design) | 1,054 1,042 pupils 12 teachers | 0 | 0 | 1,054 | 1 block of 6 latrines | 88 pers/lat |
| COMMUNE ISALE | | | | | | | | | |
| Rushubi 1 Primary School | 1 block of 6 latrines | = 50 users/lat | Construction of one block of 6 latrines (brick-lined, emptiable design) | 1,279 1,263 pupils 16 teachers | 1 block of 6 latrines nearly full | 106 pers/lat | 1,279 | 2 blocks of 6 latrines (one nearly full) | 53 pers/lat if old block of latrines is emptied |
| Rushubi 2 Primary School | 1 block of 6 latrines | = 50 users/lat | Construction of one block of 6 latrines (brick-lined, emptiable design) | 1,358 1,344 pupils 14 teachers | 0 | 0 | 1,358 | 1 block of 6 latrines | 113 pers/lat |
| Rushubi 3 Primary School | 1 block of 6 latrines | = 50 users/lat | Construction of one block of 6 latrines (brick-lined, emptiable design) | 1,077 1,063 pupils 14 teachers | 0 | 0 | 1,077 | 1 block of 6 latrines | 90 pers/lat |
| TOTALS / AVERAGES | | | | | | | | | |
| Totals / averages | 4 blocks of 6 latrines | = 50 users/lat. | 4 blocks of 6 emptiable latrines constructed (100% completed) | 4,768 persons | 1 of 4 sites has existing latrines, which are nearly full | 1 of 4 sites has existing latrines with a ratio of 106 pers/lat | 4,768 (4,712 pupils 56 teachers) | 5 blocks of 6 latrines (one nearly full) | 79 pers/lat (if old block of latrines is emptied) |

Note: The schools operate on a double-shift system, so 1/2 the total school population is present at any given time; the ratio of users/latrine is therefore based on 1/2 of the total school population.

Annex 2.2 - Communal Latrines - Makamba Province

| <i>Site</i> | <i>Targets</i> | | <i>Activities Completed</i> | <i>Pre-intervention</i> | | | <i>Post-intervention</i> | | |
|----------------------------------|--------------------------------------|------------------------|---|-------------------------|---|---|--------------------------|------------------------|-----------------------|
| | | | | <i>No. of Users</i> | <i>No. of latrines</i> | <i>Users/ latrine</i> | <i>No. of Users</i> | <i>No. of latrines</i> | <i>Users/ latrine</i> |
| <i>COMMUNE KIBAGO</i> | | | | | | | | | |
| Kiyange I Primary School | 2 blocks of 6 latrines | = 50 users/lat | Construction of two blocks of 6 latrines (brick-lined, emptiable design) | 540 | 2 blocks of 4 latrines (nearly full) | 68 / lat | 540 | 12 latrines | 41 pers/lat |
| Kiyange II Primary School | 1 block of 4 latrines | = 50 users/lat | Construction of one block of 4 latrines (brick-lined, emptiable design) | 137 | 0 | 0 | 226 | 4 latrines | 57 pers/lat |
| Masawe Primary School | 1 block of 4 latrines | = 50 users/lat | Construction of one block of 4 latrines (brick-lined, emptiable design) | 112 | 0 | 0 | 146 | 4 latrines | 37 pers/lat |
| Kigara Primary School | 1 block of 6 latrines | = 50 users/lat | Construction of one block of 6 latrines (brick-lined, emptiable design) | 270 | 0 | 0 | 263 | 6 latrines | 44 pers/lat |
| <i>COMMUNE NYANZA LAC</i> | | | | | | | | | |
| Rimbo Primary School | 1 block of 6 latrines | = 50 users/lat | Construction of one block of 6 latrines (brick-lined, emptiable design) | 343 | 1 block of 6 latrines (nearly full) | 57 / lat | 304 | 6 latrines | 51 pers/lat |
| Mvugo IDP Site | 1 block of 8 latrines | = 50 users/lat | Construction of one block of 8 latrines (brick-lined, emptiable design) | 2,965 | 2 block of 4 latrines (nearly full) | 247/ lat | 3,885 | 14 latrines | 278 pers/lat |
| <i>COMMUNE MAKAMBA</i> | | | | | | | | | |
| Muresi Primary School | Not in original proposal | = 50 users/lat | Construction of one block of 6 latrines (brick-lined, emptiable design) | 375 | 1 block of 4 latrines | 94 / lat | 609 | 10 latrines | 61 pers /lat |
| <i>TOTALS / AVERAGES</i> | | | | | | | | | |
| <i>Totals / averages</i> | <i>8 blocks of communal latrines</i> | <i>= 50 users/lat.</i> | <i>8 blocks of emptiable communal latrines constructed (100% completed)</i> | <i>4,742 persons</i> | <i>41 of 8 sites has existing latrines, which are nearly full</i> | <i>4 of 8 sites has existing latrines</i> | <i>5,973</i> | <i>56 latrines</i> | <i>107 pers/lat</i> |

Annex 3.1 Training/Outputs – HHPs/CHWs – Bujumbura Rural Province

| Site | Beneficiaries | | No. of HHPs/CHWs Trained | | No. of hygiene campaigns | No. of home visits conducted | No. of focus group discussion | Ratio | |
|---|------------------------|--------------------------|--------------------------|-----------------|--------------------------|------------------------------|-------------------------------|-----------------------|------------------------|
| | Persons | Households | Target | Result | | | | Target | Result |
| NEW SITES (BY COMMUNE) | | | | | | | | | |
| Isale (8 sites) | 5,496 | 916 | 17 | 17 | 3 /site | 3 /site | 2 /site | 1 CHW/500 pers | 1 CHW/323 pers |
| Kanyosha (9 sites) | 17,220 | 2,870 | 39 | 36 | 3 / site | 3 /site | 2 / site | 1 CHW/500 pers | 1 CHW/478 pers |
| Mubimbi (5 sites) | 5,382 | 897 | 17 | 15 | 3 / site | 3 / site | 2 / site | 1 CHW/500 pers | 1 CHW/358 pers |
| <i>Totals / Averages</i> | <i>28,098</i> | <i>4,683</i> | <i>73</i> | <i>68</i> | <i>66</i> | <i>66</i> | <i>44</i> | <i>1 CHW/500 pers</i> | <i>1 CHW/413 pers</i> |
| OLD SITES (BY COMMUNE) | | | | | | | | | |
| Bujumbura Mairie (12 sites) | 22,170 | 3,695 | 47 | 47 | 2 / site | 2 / site | 2 / site | 1 CHW/500 pers | 1 CHW/472 pers |
| Nyabiraba (15 sites) | 15,468 | 2,578 | 46 | 40 | 2 /site | 2 /site | 2 / site | 1 CHW/500 pers | 1 CHW/387 pers |
| Kanyosha (17 sites) | 38,046 | 6,341 | 71 | 59 | 2 /site | 2 / site | 2 /site | 1 CHW/500 pers | 1 CHW/644 pers |
| Mutimbuzi (1 site) | 7,452 | 1,242 | 24 | 19 | 2 /site | 2 / site | 2 /site | 1 CHW/500 pers | 1 CHW/392 pers |
| <i>Totals / Averages</i> | <i>83,136</i> | <i>13,856</i> | <i>188</i> | <i>165</i> | <i>90</i> | <i>90</i> | <i>90</i> | <i>1 CHW/500 pers</i> | <i>1 CHW/ 504 pers</i> |
| | | | | | | | | | |
| <i>Grand Total /Averages (67 sites)</i> | <i>111,234 persons</i> | <i>18,539 households</i> | <i>261 CHWs</i> | <i>223 CHWs</i> | <i>156 campaigns</i> | <i>156 home visits</i> | <i>134 focus group</i> | <i>1 CHW/500 pers</i> | <i>1 CHW/499 pers</i> |

Table 3.1 – Training/Outputs – HHPs/CHWs – Makamba Province

| Site | Beneficiaries | | No. of HHPs/CHWs Trained | | No. of hygiene campaigns | No. of home visits conducted | No. of focus group discussion | Ratio | |
|---------------------------|---------------|--------------|--------------------------|-----------|--------------------------|------------------------------|-------------------------------|--------------------------|---------------------------|
| | Persons | Households | Target | Result | | | | Target | Result |
| COMMUNE KIBAGO | | | | | | | | | |
| Kiyange | 800 | 150 | 6 | 6 | 1 | 184 | 1 | 1 CHW/500 persons | 1 CHW/ 133 persons |
| Jimbi | 1330 | 210 | 20 | 11 | 1 | 176 | 1 | 1 CHW/500 persons | 1 CHW/ 121 persons |
| COMMUNE KAYOGORO | | | | | | | | | |
| Gatwe | 9732 | 1670 | 12 | 12 | 1 | 240 | 1 | 1 CHW/500 persons | 1 CHW/811 persons |
| COMMUNE NYANZA LAC | | | | | | | | | |
| Rimbo | 1360 | 260 | 7 | 7 | 1 | 72 | 4 | 1 CHW/500 persons | 1 CHW/ 194 persons |
| Mvugo | 3885 | 675 | 6 | 7 | 1 | 264 | 6 | 1 CHW/500 persons | 1 CHW/ 555 persons |
| COMMUNE MABANDA | | | | | | | | | |
| Gahama | 2040 | 410 | 8 | 4 | 1 | 0 | 1 | 1 CHW/500 persons | 1 CHW/510 persons |
| Mushara | 2140 | 370 | 10 | 5 | 1 | 0 | 1 | 1 CHW/500 persons | 1 CHW/ 428 persons |
| Mutwazi I | 1480 | 240 | 6 | 3 | 1 | 64 | 1 | 1 CHW/500 persons | 1 CHW/493 persons |
| TOTALS / AVERAGES | | | | | | | | | |
| Totals / Averages | 22,767 | 3,985 | 75 | 55 | 8 | 1000 | 16 | 1 CHW/500 persons | 1 CHW/ 414 persons |

Table 3.2 Effects: Knowledge of Good Hygiene – Bujumbura Rural Province

| Site | Target | Water Use ⁵ | | | Latrine Use ⁶ | | | Hand washing ⁷ | | | Diarrhea ⁸ | | | Overall Change/ Site |
|--------------------------|------------|------------------------|------------|------------|--------------------------|------------|------------|---------------------------|------------|------------|-----------------------|------------|------------|----------------------|
| | | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | |
| Rushubi | 75% | 30% | 76% | 46% | 30% | 83% | 53% | 58% | 88% | 30% | 39% | 79% | 40% | 42% |
| Martyazo | 75 % | 30% | 87% | 47% | 26% | 89% | 63% | 25% | 92% | 67% | 29% | 89% | 70% | 62% |
| Coga-Sororezo | 75% | 25% | 68% | 43% | 31% | 58% | 27% | 58% | 84% | 26% | 35% | 62% | 27% | 31% |
| Totals / Averages | 75% | 28% | 77% | 45% | 29% | 77% | 48% | 47% | 88% | 41% | 34% | 77% | 46% | 45% |

Note: Percentages are based on IRC's March 2003 and January 2004 Knowledge, Attitudes and Practices (KAP) survey.

⁵ The figure for Water Use indicates the percentage of people surveyed who “know how potable water can be contaminated.”

⁶ The figure for Latrine Use represents the percentage of people surveyed who “know the benefits of having a latrine.”

⁷ The figure for Hand washing represents the percentage of people surveyed who “know when it is necessary to wash [their] hands.”

⁸ The figure for Diarrhea indicates the percentage of people surveyed who “know what causes diarrhea.”

Table 3.2 Effects: Knowledge of Good Hygiene – Makamba Province

| Site | Target | Water Use ⁹ | | | Latrine Use ¹⁰ | | | Hand washing ¹¹ | | | Diarrhea ¹² | | | Malaria ¹³ | | | Overall Change/Site |
|---------------------------|------------|------------------------|------------|------------|---------------------------|------------|------------|----------------------------|------------|------------|------------------------|------------|------------|-----------------------|------------|------------|---------------------|
| | | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | |
| KIBAGO COMMUNE | | | | | | | | | | | | | | | | | |
| Kiyange | 75% | 47% | 90% | 43% | 13% | 40% | 27% | 53% | 100% | 47% | 7% | 50% | 43% | 50% | 75% | 25% | 37% |
| Jimbi | 75% | 57% | 71% | 14% | 24% | 0% | -24% | 57% | 48% | -9% | 29% | 19% | -10% | 60% | 57% | -2% | -6% |
| KAYOGORO COMMUNE | | | | | | | | | | | | | | | | | |
| Gatwe | 75% | 47% | 75% | 28% | 0% | 10% | 10% | 41% | 90% | 49% | 2% | 10% | 8% | 49% | 50% | 1% | 19% |
| NYANZA LAC COMMUNE | | | | | | | | | | | | | | | | | |
| Rimbo | 75% | 44% | 90% | 46% | 4% | 0% | -4% | 8% | 100% | 92% | 2% | 45% | 43% | 50% | 70% | 20% | 39% |
| Mvugo | 75% | 51% | 95% | 44% | 11% | 20% | 9% | 49% | 90% | 41% | 6% | 35% | 29% | 49% | 75% | 26% | 30% |
| Gahama | 75% | 47% | 95% | 48% | 0% | 80% | 80% | 22% | 100% | 78% | 9% | 35% | 26% | 59% | 90% | 31% | 53% |
| Mushara | 75% | 50% | 64% | 14% | 27% | 3% | -24% | 41% | 27% | -14% | 11% | 16% | 5% | 61% | 62% | 1% | -4% |
| Mutwazi I | 75% | 48% | 69% | 21% | 8% | 38% | 30% | 54% | 42% | -12% | 6% | 23% | 17% | 60% | 65% | 5% | 12% |
| Totals / Averages | 75% | 49% | 81% | 32% | 11% | 24% | 13% | 41% | 75% | 34% | 9% | 29% | 20% | 55% | 68% | 13% | 22% |

⁹ The figure for Water Use indicates the percentage of people surveyed who “know how potable water can be contaminated.”

¹⁰ The figure for Latrine Use represents the percentage of people surveyed who “know the benefits of having a latrine.”

¹¹ The figure for Hand washing represents the percentage of people surveyed who “know when it is necessary to wash [their] hands.”

¹² The figure for Diarrhea indicates the percentage of people surveyed who “know what causes diarrhea.”

¹³ The figure for Malaria indicates the percentage of people surveyed who “know what causes malaria.”

Table 3.3 Effects: Practice of Good Hygiene – Bujumbura Rural Province

| Site | Target | Water Use ¹⁴ | | | Latrine Use ¹⁵ | | | Handwashing ¹⁶ | | | Diarrohea ¹⁷ | | | Habitat ¹⁸ | | | |
|---------------------|--------|-------------------------|------|--------|---------------------------|------|--------|---------------------------|------|--------|-------------------------|------|--------|-----------------------|------|--------|-----|
| | | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | |
| Rushubi | 75% | 5% | 54% | 49% | 71% | 89% | 18% | 60% | 79% | 19% | 78% | 88% | 10% | 79% | 92% | 13% | 22% |
| Martyazo | 75% | 3% | 38% | 35% | 66% | 91% | 25% | 48% | 67% | 19% | 44% | 86% | 42% | 76% | 91% | 15% | 27% |
| Coga-Sororezo | 75% | 11% | 23% | 12% | 73% | 99% | 27% | 58% | 84% | 26% | 54% | 65% | 11% | 80% | 98% | 18% | 19% |
| Totals/ Averages | 75% | 6% | 38% | 32% | 70% | 93% | 23% | 55% | 77% | 21% | 59% | 80% | 21% | 78% | 94% | 15% | 22% |

Note: Percentages are based on IRC's March 2003 and January 2004 Knowledge, Attitudes and Practices (KAP) survey.

¹⁴ Figures represent the percentage of people surveyed who reported treating water correctly.

¹⁵ Figures represent the percentage of people surveyed who did not have feces on or around their latrines.

¹⁶ Figures represent the percentage of people surveyed who reported "washing [their] hands at the right time."

¹⁷ Figures represent the percentage of people surveyed who lived in a household where no one had had diarrhea within the past seven days, to their knowledge.

¹⁸ Figures represent the percentage of households that, according to surveyor observation, had no standing water outside the house.

Table 3.3 Effects: Practice of Good Hygiene – Makamba Province

| Site | Target | Water Use | | | Latrine Use | | | Hand washing | | | Diarrhoea | | | Malaria | | | Habitat | | | Overall Change / Site |
|---------------------------|------------|------------|------------|-----------|-------------|------------|------------|--------------|------------|------------|-------------|-------------|-----------|------------|------------|------------|------------|------------|------------|-----------------------|
| | | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | |
| KIBAGO COMMUNE | | | | | | | | | | | | | | | | | | | | |
| Kiyange | 75% | 59% | 100% | 41% | 62% | 85% | 23% | 60% | 100% | 40% | 100% | 100% | 0% | 0% | 80% | 80% | 64% | 94% | 30% | 36% |
| Jimbi | 75% | 50% | 60% | 6% | 79% | 85% | 8% | 67% | 48% | -19% | 100% | 100% | 0% | 14% | 24% | 10% | 83% | 96% | 13% | 3% |
| KAYOGORO COMMUNE | | | | | | | | | | | | | | | | | | | | |
| Gatwe | 75% | 55% | 50% | -5% | 53% | 65% | 12% | 41% | 90% | 49% | 100% | 100% | 0% | 3% | 0% | -3% | 65% | 74% | 9% | 10% |
| NYANZA LAC COMMUNE | | | | | | | | | | | | | | | | | | | | |
| Rimbo | 75% | 44% | 40% | -4% | 56% | 85% | 29% | 31% | 90% | 59% | 100% | 100% | 0% | 12% | 30% | 18% | 68% | 91% | 23% | 20% |
| Mvugo | 75% | 96% | 60% | -36% | 61% | 94% | 33% | 42% | 90% | 48% | 100% | 100% | 0% | 4% | 40% | 36% | 68% | 90% | 22% | 15% |
| MABANDA COMMUNE | | | | | | | | | | | | | | | | | | | | |
| Gahama | 75% | 48% | 70% | 22% | 39% | 60% | 21% | 27% | 100% | 73% | 100% | 100% | 0% | 12% | 80% | 68% | 56% | 71% | 15% | 31% |
| Mushara | 75% | 51% | 70% | 196% | 31% | 70% | 39% | 32% | 27% | -5% | 100% | 100% | 0% | 30% | 14% | -16% | 62% | 81% | 19% | 8% |
| Mutwazi I | 75% | 52% | 60% | 8% | 92% | 83% | -9% | 50% | 42% | -8% | 100% | 100% | 0% | 8% | 29% | 21% | 88% | 62% | -26% | -2% |
| Totals/Averages | | | | | | | | | | | | | | | | | | | | |
| Totals / Averages | 75% | 57% | 64% | 7% | 59% | 78% | 19% | 44% | 73% | 29% | 100% | 100% | 0% | 10% | 37% | 27% | 69% | 82% | 13% | 14% |

Table 3.4 Water Point Management Committees – Bujumbura Rural Province

| Site | No of water points | No of WPM Cs | Source of Potable Water | | | 10 commandments of good hygiene | | | Reimbursement of hydraulic infrastructure | | | Collaboration with local administrative authority | | | Collection and management of water fees | | | Water point maintenance | | |
|---------------------------|--------------------|--------------|--------------------------------------|------------|------------|---------------------------------|------------|------------|--|------------|------------|---|------------|-----------|---|------------|------------|-------------------------|------------|------------|
| | | | Protection of tapsstands and sources | | | | | | Committee composition and community activities | | | Improve operational capabilities | | | | | | | | |
| | | | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change |
| Rushubi | 9 | 9 | 47% | 79% | 32% | 21% | 57% | 36% | 12% | 53% | 41% | 52% | 65% | 13% | 41% | 67% | 26% | 7% | 43% | 36% |
| Martyazo | 9 | 9 | 43% | 72% | 29% | 19% | 52% | 33% | 13% | 51% | 38% | 51% | 62% | 11% | 40% | 59% | 19% | 12% | 47% | 35% |
| Mubone | 3 | 3 | 38% | 57% | 19% | 27% | 61% | 34% | 11% | 55% | 44% | 47% | 51% | 4% | 48% | 61% | 13% | 9% | 45% | 36% |
| Total/ Average | 21 | 21 | 43% | 69% | 27% | 22% | 57% | 34% | 12% | 53% | 53% | 50% | 59% | 9% | 43% | 62% | 18% | 9% | 45% | 36% |

Note: 5 members per Water Point Management Committee (2 women and 3 men); 2 training sessions per water system and spring protection were conducted.

Table 3.4 Water Point Management Committees – Makamba Province

| | | | Average Test Scores ¹⁹ | | | | | | Water Point Maintenance (Good/Average/Bad) | |
|--------------------------|------------------------|------------------|-----------------------------------|------------|------------|-------------------|------------|-----------|--|-------------|
| | | | Pre-intervention | | | Post-intervention | | | Pre | Post |
| Site | No of water points | No of WPMCs | Pre-test | Post-test | Change | Pre-test | Post-test | Change | Pre | Post |
| Rimbo | 11 | 44 | 28% | 77% | 49% | 78% | 85% | 7% | bad | good |
| Kiyange | 21 | 84 | 40% | 80% | 40% | 80% | 83% | 3% | average | good |
| Gatwe | 5 | 20 | 38% | 75% | 37% | 78% | 88% | 10% | average | good |
| Muresi | 3 | 12 | 45% | 75% | 30% | 77% | 79% | 2% | bad | good |
| <i>Totals / Averages</i> | <i>40 water points</i> | <i>160 WPMCs</i> | <i>38%</i> | <i>77%</i> | <i>39%</i> | <i>78%</i> | <i>84%</i> | <i>6%</i> | <i>bad-average</i> | <i>good</i> |

¹⁹ Tests covered the importance of potable water, sources of water, protection of potable water, collection and management of user fees, and planning of WPMC activities.

Table 3.5 School Hygiene Clubs – Bujumbura Rural Province

| Site and students in school | No. of students in school | No. of teachers Trained | No. of Students in SHC | Diarrhoea | | | Handwashing | | | Safe Water Use | | | School Environment Hygiene (Good/Average/Bad) | | |
|-----------------------------|---------------------------|-------------------------|------------------------|------------|------------|------------|-------------|------------|------------|----------------|------------|------------|--|-------------|-------------|
| | | | | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change |
| Rushubi | 3714 | 6 | 180 | 26% | 79% | 53% | 37% | 86% | 49% | 12% | 85% | 73% | Bad | Good | Good |
| Martyazo | 1054 | 2 | 60 | 38% | 83% | 45% | 21% | 78% | 57% | 24% | 89% | 65% | Bad | Average | Average |
| Coga-Sororezo | 2440 | 2 | 120 | 22% | 87% | 65% | 15% | 89% | 74% | 18% | 91% | 73% | Bad | Good | Good |
| Totals/averages | 7208 | 10 | 360 | 29% | 83% | 54% | 24 | 84% | 60% | 18% | 88% | 70% | Bad | Good | Good |

Table 3.5 School Hygiene Clubs – Makamba Province

| Location of School Hygiene Club | No. of Teachers Trained | No. of Students in SHC | Diarrhea | | | Hand washing | | | Safe Water Use | | | Malaria | | | School Environment Hygiene (Good/Average/Bad) | | |
|---------------------------------|-------------------------|------------------------|----------|------|--------|--------------|------|--------|----------------|------|--------|---------|------|--------|---|------|--------|
| | | | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change | Pre | Post | Change |
| COMMUNE KIBAGO | | | | | | | | | | | | | | | | | |
| EP Kiyange I | 3 | 34 | 59% | Y% | ? xy | 87% | Y% | ? xy | 86% | Y% | ? xy | 72% | Y% | ? xy | 40% | Y% | ?xy |
| EP Kiyange II | 2 | 52 | 31% | Y% | ? xy | 68% | Y% | ? xy | 57% | Y% | ? xy | 65% | Y% | ? xy | 30% | Y% | ?xy |
| EP Masaswe | 2 | 50 | 42% | Y% | ? xy | 70% | Y% | ? xy | 83% | Y% | ? xy | 70% | Y% | ? xy | 30% | Y% | ?xy |
| EP Kigara | 3 | 48 | 51% | | | 69% | | | 63% | | | 69% | | | 35% | | |
| COMMUNE NYANZA LAC | | | | | | | | | | | | | | | | | |
| EP Rimbo | 3 | 81 | 58% | Y% | ? xy | 74% | Y% | ? xy | 67% | Y% | ? xy | 79% | Y% | ? xy | 50% | Y% | ? xy |
| COMMUNE KAYOGORO | | | | | | | | | | | | | | | | | |
| EP Gatwe | 3 | 180 | 58% | Y% | ? xy | 72% | Y% | ? xy | 74% | Y% | ? xy | 58% | Y% | ? xy | 30% | Y% | ?xy |
| TOTALS/AVERAGES | | | | | | | | | | | | | | | | | |
| Totals / Averages | 16 | 435 | 54% | Y% | ? xy | 74% | Y% | ? xy | 73% | Y% | ? xy | 68% | Y% | ? xy | 35.8% | Y% | ?xy |

* No post-test survey was possible due to the nationwide teachers' strike that closed all public primary schools in Burundi from Dec 2003 through mid-March 2004.