

**Assessment of Community Based Environmental Health Promotion
Program (CBEHPP) achievements and its sustainability in Bugesera
District**

**University of Rwanda College of Medicine and Health Sciences
Environmental health Department**

WaterAid Rwanda

Research Conducted By:

Dr. Ntakirutimana Theoneste

Mr. Gasana seka Heka Franck

Mr. Rubuga Kitema Felix

Acknowledgement

This study was funded by the WaterAid Rwanda under their collaboration with the University of Rwanda, College of Medicine and Health Sciences.

On the technical side, we sincerely wish to thank all WaterAid Rwanda staff members, for the tireless support that has made it possible to have reached this stage. At all stages, we received the needed financial support in due time, the required data and information; and as well as the professional guidance in data collection.

The field work was undertaken in different areas of Bugesera District by a team of field surveyors. We express our gratitude to Environmental Health Officers of Nyamata District hospital for their help in conducting meetings with Community Hygiene Members

Finally, we would not forget to sincerely appreciate and acknowledge Bugesera District officials for always being the biggest fan and compassionate throughout the entire collection of data.

Executive summary

This study was undertaken in order to assess the achievements of CBEHPP in Juru, Mwogo, Gashora, Ntarama, Musenyi, Mayange sectors of Bugesera District. The changes caused by CBEHPP and challenges of CBEHPP implementation in Villages of 6 pilot Sectors were identified. The needed improvement of CBEHPP that can be addressed for its sustainability was also studied.

The Questionnaire, observation checklist as well as the focus group discussion was used in this research. There are seven golden indicators of CBEHPP to be achieved: Increase the number of toilets, Drying-racks, Hand washing facilities, Bath-shelter and Kitchen-garden. Minimization of malnutrition and encouragement of drinking boiled water.

The results revealed that the households that had toilets before implementation of CBEHPP were 1952 and increased to 5511 after the implementation. Drying racks were 5803 and have increased to 13484. The number of children with malnutrition was reduced from 1188 to 240. The number of household with Hand washing facilities raised from 3678 to 9823. It has also been found that the number of households that are drinking boiled water had an increment of 6645 households while bath-shelter and kitchen-garden had increments of 4835 and 5458 respectively.

In many villages, they have created an evening of hygiene session where CHCs members meet and practice lessons learnt from CHCs meeting and those evening sessions influence neighbours to participate and be the members of hygiene clubs which has led to hygiene and sanitation improvement.

After taking lessons in CHCs people have formulated tontines where they help each other to buy mattresses, hygienic materials, payment of community based health insurance, etc. The CHCs have facilitated their members to develop mentally (behaviour was changed) through discussions on topics related to family planning, prevention of HIV/AIDS and Malaria prevention. The findings of this study shows that 62% of CHCs members implemented recommended practices at home. The community hygiene club members affirmed different reasons that hold them back for not implementing the recommended practices. Those reasons are lack of time, negligence and no follow up. Motivations like rewarding the local CHWs and Facilitators may strengthen their participation in CBEHPP. Sustainability of this program can be achieved by managerial intervention of the district officials, creation of social activities such as; tontines, competition between clubs and routine sensitization during Umuganda (community work)

Table of Contents

Acknowledgement	ii
Executive summary.....	iii
Table of Contents.....	iv
List of Figures	vii
List of Tables	viii
List of abbreviations	ix
CHAPTER ONE : INTRODUCTION.....	1
1.1 Background	1
1.2 Problem statement.....	3
1.3 Research objectives	4
1.3.1. General Objective	4
1.3.2 Specific objectives.....	4
CHAPTER TWO: LITERATURE REVIEW	5
2.1. Introduction	5
2. 2 The priorities of the CBEHPP.....	5
2.3 The ‘7 Golden Indicators’ to be achieved by CBEHPP	6
2.4 Community Hygiene Clubs approach	6
2.4.1 Indicators for Community Hygiene Clubs.....	7
2.4.2 Tasks of Community Hygiene Clubs.....	8
2.4.3 Membership in community hygiene clubs.....	9
2.4.4 Community Health Clubs meetings and home visits.....	11
2.5 Intervention of Environmental Health students in implementation of CBEHPP.....	12
2.6 The sustainability of community hygiene clubs.....	13
2.7 The challenges meet by CBEHPP implementation.....	13
2.8 Importance of CBEHPP on water and sanitation	14

CHAPTER THREE RESEARCH DESIGN AND METHODOLOGY	15
3.1 Introduction.	15
3.2. Study area.....	15
3.2.1 Location.....	15
3.2.2 Climate and agriculture	16
3.3 Study design	17
3.4 Study Population	17
3.3.1 Inclusion and exclusion criteria.....	17
3.5 Study sample	18
3.5.1 Sample size.....	18
3.5.1.1 Sample size for Quantitative data.....	18
3.5.1.1 Sample size for qualitative data	18
3.5.1.2 Sampling methods and procedures	18
3.6 Data collection procedures and instruments used.	19
3.6.1 Qualitative Data collection	19
3.6.2 Quantitative Data Collection.	19
3.6.3 Quality Control.....	19
3.6.3.1 Preparations for Data collection	19
3.6.3.2 Training of research assistants.....	20
3.6.3.3 Field editing of data.....	20
3.6.3.5 Quality Assurance.....	20
3.7 Data Analysis.	20
3.8 Ethical considerations.	20
CHAPTER FOUR: RESULTS AND DISCUSSION	22
4.1. Introduction	22
4.2 Participation of head of villages to community hygienic clubs' meeting.....	22

4.2.1 Reasons for not attending the meeting	23
4.3 Active and non-active community hygienic clubs	23
4.4 Changes caused by community hygienic clubs.....	24
4.5 Implementation of recommended practices by CHC members	26
4.6.1 Reasons of not implementing the recommended practices	26
4.6 Challenges of CHC’s approach during implementation	27
4. 7 Training of CHC facilitators (Community Health Workers (CHWs)).....	28
4.8 Picture cards interpretation.....	28
4. 9 CHWs’ suggestion on CHCs improvement for better performance	28
4. 10 Sustainability of CBEHPP	29
CHAPTER FIVE: CONCLUSION.....	31
REFERENCE.....	32
3.9 INFORMED CONSENT.....	42

List of Figures

Figure 2. 1: CHCs members Of Mwogo sector in a meeting.....	8
Figure 2. 2: CHCs members help each other to construct a kitchen garden.	9
Figure 2. 3: Learning how to prepare a balanced diet.....	9
Figure 2. 4: Community education on CHCs activities in Rwintenderi village.....	11
Figure 2. 5: Community hygiene clubs during home visits	12
Figure 2. 6: Environmental health sciences Students construct hand washing facilities.....	13
Figure 3. 1: The map showing the study area	16
Figure 4. 1: Attendance of head of villages to community hygienic clubs' meeting	22
Figure 4. 2: Reasons for not attending the meeting	23
Figure 4. 3: Active and non-active community hygienic clubs	24
Figure 4. 4: Changes caused by community hygienic clubs	25
Figure 4. 5: Implementation of recommended practices by CHC members.....	26
Figure 4. 6: Reasons of not implementing recommended practices	27

List of Tables

Table 4. 1: Training of CHC facilitators (Community Health Workers (CHWs))28

Table 4. 2: Picture cards interpretation28

List of abbreviations

CBEHPP: Community Based Environmental Health Promotion program

CHC: Community Hygiene Club

VLOMM: Village Level in Operation, Maintenance and Management

PHAST: Participatory Hygiene and Sanitation Transformation

AHEAD: Applied Health Education and Development.

MDGs: Millennium Development Goals

HSPI: Hygiene and Sanitation Presidential Initiative

EDPRS: Economic Development and Poverty Reduction Strategy

ARIs: Acute Respiratory Infections

ZOD: Zero Open Defecation

HIV: Human Immunodeficiency Virus

AIDS: Acquired Immune Deficiency Syndrome

STIs: Sexually Transmitted Infections

NGO: Non-Governmental Organization

EHOs: Environmental Health Officers

CHW: Community health workers

WASH: Water, Sanitation and Hygiene

RIWSP: Rwanda Integrated Water Security Program

UNICEF: United Nation International Children's Emergency Fund

MININFRA: Ministry of Infrastructure

CHAPTER ONE : INTRODUCTION

1.1 Background

The Community-Based Environmental Health Promotion Programme (CBEHPP) aims at reducing significantly the national diseases burden empower community to identify their personal hygiene and environmental health-related problems as well as how to solve them. CBEHPP also contributes to the reduction of poverty by reducing unproductive time due to morbidity and the time taken by those caring for the sick (Juliet Waterkeyn & Waterkeyn, 2011). CBEHPP directly uses the Community Health Club (CHC) model commonly known as Community “Hygiene” Clubs in Rwanda (Nash, 2014)

CBEHPP is an adoption of the Community Hygiene Club (CHC) approach that is well proven to empower communities, especially women, to take up the responsibility at the village level in operation, maintenance and management (VLOMM), for rural water facilities like hand-pumps, protected springs and piped supplies, thus enabling their long-term sustainability (Ministry of Health, 2010).

In Africa, the concept of Community Health Clubs (CHCs) was originally started in Zimbabwe in 1995, and by 2001 there were 297 CHCs with over 13,555 members and 81,330 beneficiaries in three districts of Makoni, Gutu, and Tsholotsho by an indigenous NGO called Zimbabwe AHEAD organizations. Within one year, this first CHC programme demonstrated high levels of behaviour change with the most outstanding area in Tsholotsho District showing a 47% average for 17 indicators (Juliet Waterkeyn & Sandy Cairncross, 2005).

CHCs produce high levels of hygiene behaviour change (Nkurunziza, Ugabinema, Muhimpundu, & Dlamini, 2013). Zimbabwe is not the only country to report good case studies of the CHC approach. In West Africa, Community Health Clubs are being used to rebuild society after a devastating civil war. For instance, in Guinea Bissau, CHCs are used in rural villages as an intervention to improve infant mortality while in Uganda (East Africa), CHCs have been used to improve home hygiene (Nkurunziza et al., 2013). Rwanda is categorized in countries with low access to safe water supply, improved sanitation and hygiene; the biggest Rwanda challenge is to ensure that the MDGs (Millennium Development Goals) targets are met using cost effective strategy (Ministry of Health, 2010). It is within that context the government of Rwanda thought about CBEHPP (launched CBEHPP on 17th December 2009 by Ministry of health) as participatory and cheapest approach.

The commitment of Rwandan government to sanitation and hygiene introduced Community-Based Environmental Health Promotion Programme (CBEHPP) in 2009, the President of

Rwanda has also launched the Hygiene and Sanitation Presidential Initiative (HSPI) for domestic sanitation which still keeps on the profile of the CBEHPP in 2010 (Ministry of Health, 2010).

Furthermore in Rwanda through the Ministry of Health was introduced community hygiene clubs into all villages in the country. Countries can be scaled up may well be able to meet the MDG targets, given the power of CHCs to stimulate demand led safe sanitation (Juli Waterkeyn & Muringaniza, 2009).

Before starting of this program in 2009, households that had improved sanitation between 2005 and 2010 were at 56 percent at national level. However data collected in 2011 indicated that the situation had improved from 56 to 74.5 % and that the number of people who treat water at home between 2005 and 2010 which was at 41 percent has increased to 49 percent today, diarrhoea reduced only by one percent from 14 percent to 13 percent, calling for more efforts to address this. CHEPP is believed to be very crucial in fighting diarrhea through the water and sanitation sector. Through safe water diarrhea can reduce by 15 percent, health promotion reduces diarrhea by 35 percent and frequent hand washing with soap is estimated to reduce diarrhea by 47 percent. It is for this reason that hygiene behavior change is considered an indispensable aspect of every water and sanitation programme (Kwihangana, 2014).

Most of the diseases treated at health facilities in Rwanda can be prevented through improved personal, domestic and communal hygiene behaviour. It is important to note that the top ten leading causes of morbidity and mortality in Rwanda are caused by infectious diseases (e.g. malaria, acute respiratory infections, diarrhoea, skin diseases, HIV/AIDS, STIs, tuberculosis, typhus, cholera, meningitis and intestinal parasites). In addition to that 25% of our school children are infested with worms and 44% of pupils suffer from amoebiasis. The major causes of many of these debilitating diseases are from inadequate and unhygienic facilities for excreta disposal, poor management of liquid and solid waste, drinking unsafe water and inadequate practices of hand washing with soap. It is therefore very important that a practical strategy that fully involves the community is put in place to address this national challenge (WaterKeyn, 2011).

The Community Hygiene Club (CHC) promotes behaviour change that improves hygiene and the clubs in each village should become the engine for social interaction and holistic development. This approach facilitate by 60,000 Community Health Workers (CHWs) who supported and mentored by vitally important Environmental Health Officers (EHOs) who are active at Health Centre level. Appropriate visual aids and training materials are going to be

critical towards achieving effective implementation of CBEHPP and ensuring an outcome of sustained hygiene behaviour change (WaterKeyn, 2011).

The CBEHPP model has proved to be an efficient tool to rapidly solve the problems facing the communities in the area of WASH. More importantly; the implementation of CBEHPP through the creation of CHCs unveiled the potentials of the communities to solve their own problems with little assistance. As Rwanda is aspiring to reach 100% coverage in sanitation by 2017, the CBEHPP is a good model can help to achieve that high target (Nkurunziza et al., 2013).

The implementers of the CBEHPP approach, with many achievements and Impact to the communities, included Gatsibo District where RIWSP intervenes, Bugesera District supported by Water Aid and World vision-UBUZIMA, Nyabihu & Burera Districts supported by UNICEF, Rusizi District supported by Africa AHEAD and Rwamagana District supported by Lux Development (Jan Stofkoper, Jose Alberto Tejada-Guibert, Nkuranga, Avrile Pacifique Niyibizi, Madeleine Marara, Ruzibiza, Pascal Gatete, Coenraad Voorhuis, Raymond Venneker, & Logan, 2013).

In Bugesera District, Water aid and World vision-UBUZIMA Projects implemented CBEHPP and a lot has been done after the date it was launched in 2011. Training of trainers for environmental health officers (EHOs) at Health Center and community health workers (CHCs facilitators) both at district and sector level on the Community Based Environmental Health Promotion Program (CBEHPP) was conducted in 2011 to enable them not only to understand the program, methodology and targets but also their role in the implementation of the fore mentioned program. It was followed by training of trainers both at cell and village level through the Community Based Environmental Health Promotion Program (CBEHPP) and finally, the CHC (Community Hygiene Club) executive committee members at village level was trained. CHCs approach was launched by WaterAid and CBEHPP core team in June, 2011 in 6 pilot sectors of Bugesera district.

1.2 Problem statement

It has been found that, more than 45,000 community health officers have been trained since CBEHPP was launched, and Community hygiene clubs are being formed in Rwanda's villages in order to promote sanitation and hygiene at the community level.

The Government of Rwanda, International NGOs and other stakeholders have put in their efforts to improve hygiene and sanitation to fight against poor hygiene related diseases and other preventable diseases. Therefore community based environmental health promotion

program using CHCs Approach was implemented to deal with hygiene and sanitation problems for community health promotion. Despite the fact that community hygiene clubs are now running country wide; in Bugesera District, little is known about achievement and sustainability of CBEHPP approach. Even if there are those efforts made by Rwandan government through NGOs (Water aid and World vision) in Bugesera District still some villages do not have clubs and others formed CHCs are not operating in the ways it was planned. This seems to be a threat to achieve ambition vision 2020 aims to achieve 100% household sanitation and hygiene (Nelson Ekane., 2013). CBEHPP must complement the efforts of MININFRA to provide safe drinking water and sanitation.

This study is designed to assess the achievements and sustainability of community based environmental health promotion program in Bugesera District.

1.3 Research objectives

1.3.1. General Objective

This research was undertaken in order to assess the achievements and sustainability of CBEHPP in Bugesera District

1.3.2 Specific objectives

- To assess the achievements of CBEHPP in Juru, Mwogo, Gashora, Ntarama, Musenyi, Mayange sectors of Bugesera District.
- To assess the challenges in CBEHPP implementation in Villages of 6 pilot sectors Bugesera District.
- To find out the needed improvement of CBEHPP that can be addressed for its sustainability.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

The Government of Rwanda through the Ministry of Health has launched the Community Based Environmental Health Promotion Program (CBEHPP) on 17th December 2009 (Ministry of Health, 2010). The purpose of the program was to reduce by 2012 the prevalence of environmental health related diseases, such as diarrhoea and intestinal worms through promotion of best hygienic practices in community at the time and contribute to poverty reduction (Katabarwa, 2009). The main reason of the program was also to harmonize hygiene promotion efforts and install behaviour change for sustainable hygiene and sanitation that impact in the prevention and control of diarrhoea diseases and intestinal worms (Kwihangana, 2014).

This program strategically adopts and uses the holistic Community Hygiene Clubs methodology as a means of rapidly attaining hygiene behaviour change that is both sustainable and cost effective. Community Hygiene Clubs are based at the village level where CHCs empower communities to identify their personal domestic hygiene and environmental health-related problems including safe drinking water and improved sanitation; thereafter to actively participate in the problem solving process (Kwihangana, 2014). So far, the program has been initiated in nine districts and will be rolled out country wide (Ministry of Health/ Third Health Sector Strategic Plan: July 2012 – June 2018) (Ministry of Health, 2012). That is why we carried out this study/report in order to assess the achievements and sustainability of CBEHPP in Villages of the 6 pilot sectors Bugesera District for planning how this program can be expanded in whole district.

2. 2 The priorities of the CBEHPP

Based on an assessment of the priority environmental health threats to the Rwandan population and internationally recognized effective preventive and promotion healthcare interventions to achieve EDPRS, Vision 2020 and the MDGs; CBEHPP requires the following to be prioritised:

1. Improved household and institutional hygiene practices and sanitation (Safe excreta disposal with zero open defecation (ZOD) and hygienic use of toilets / latrines, Hand-washing with soap and water, Safe drinking water handling, Safe disposal of solid and liquid wastes).
2. Food safety and improved nutrition.

3. Minimise indoor air pollution to reduce Acute Respiratory Infections (e.g. promote fuel-efficient stoves with chimneys).

4. Improved Vector Control.

The CBEHPP seeks to build on the strong foundations and successes of the PHAST (Participatory Hygiene and Sanitation Transformation) experience and will also encompass similar best-practice initiatives currently being undertaken by NGOs (Ministry of Health, 2010).

2.3 The ‘7 Golden Indicators’ to be achieved by CBEHPP

The golden indicators of community based environmental health promotion program are set according to the government priorities targets to be achieved in time. The following are those seven golden indicators:

1. Increased use of hygienic latrines in schools and homes.
2. Increased hand washing with soap at critical times.
3. Improved safe drinking water access and handling in schools and homes.
4. Establishment of CHCs in every village
5. Achieve Zero Open Defecation in all villages
6. Safe disposal of children’s faeces in every household
7. Households with bath shelters, rubbish pits, pot drying racks and clean yards to be increased

The strength of the CHC approach is not only its ability to engender hygiene behaviour change, but it is also able to quantify behaviour change by using community monitoring tools as an integral part of the process of change. The health promotion training focuses on the most common preventable diseases handled by local health centres. These include diarrhoeal, acute respiratory infections (ARIs), skin diseases, eye diseases, intestinal worms, bilharzias and malaria (Ministry of Health, 2010).

2.4 Community Hygiene Clubs approach

Community hygiene clubs (CHCs) are an approach that appeals to an innate need for health knowledge, which are then reinforced by peer pressure to conform to communally accepted standards of hygiene, thereby creating a Culture of Health. The objectives have been set to be accomplished by CHCs: Building capacity of local community to sustain their own hygiene clubs; empowering families to effectively prevent diseases through good hygiene; encouraging all Rwandese to build their own latrines and hand washing facilities; increasing social capital by

enabling a strong social network through Community Hygiene Clubs; to enable existing Community Health Workers to manage their workloads better through Community Hygiene Clubs. To measure behaviour change so there is information on results of the program. To alleviate poverty through organized communities” (UWIZEYE, 2014).

The CHCs approach is an extension of participatory hygiene and sanitation transformation (PHAST), with which it shares a belief in enabling people to improve their own hygiene practices. A mixture of health education and development of mutual support through community mobilization is seen as important in this process. The approach uses participatory methods for health education in the belief that these are the most effective means of ensuring acceptance of new ideas. PHAST tools are used for this (Ministry of Health, 2010).

Each village should have a hygiene club with 50 to 150 members and are charged with monitoring the changes within its village. When a CHC is formed, CHC executive committee (a chairperson and secretary) is elected who keeps a register of attendance of the members. The CHCs are responsible for ensuring that levels of hygiene are monitored together with the community health worker facilitator who visits each household to observe the living conditions. This makes it easy to identify exactly when the agreed behaviour and life style changes were made.

The CHCs in every village are tasked with facilitating household members to have small group discussions on a weekly basis for 2 hours for a period of six months to cover 20 topics related to sanitation and hygiene (Kwihangana, 2014).

The following are 20 topics; introduction of the program, safe water chain (safe water storage and use of water), safe food chain, sanitation ladder and planning, diarrhoea ORS, hand washing, cholera/ typhoid, skin/eye diseases, intestinal parasites, nutrition, hygienic kitchen, ARI (sleeping mats and room ventilation) environment, malaria, infant care, bilharzias, modal home, self monitoring, infant care, good parenting. (Ministry of Health, 2010)

2.4.1 Indicators for Community Hygiene Clubs

The Community Health Club methodology is adopted by CBEHPP in Rwanda; it has parallel indicators as mentioned in seven golden indicators of community based environmental health promotion program. The main indicators are; measuring the increase of hygienic latrines in schools and homes, increased hand washing with soap, access to safe drinking water and handling in schools and home, establish hygiene clubs in all the districts of the country, zero open defecation, safe and proper disposal of children faeces in every household, households with rubbish pits, pot drying racks and clean yards (Kwihangana, 2014). According to

Joseph Katarwa (2014) the head of the Environmental Health Desk at the Ministry of Health, above targets should be achieved all these indicators at least by 80 percent by 2015(Kwihangana, 2014).

2.4.2 Tasks of Community Hygiene Clubs.

The main activity within a CHC is to meet every week to debate on hygiene issues susceptible, to improve family living standards and health, work together to construct a kitchen garden and learn how to prepare a balanced diet. However in addition CHCs can undertake many other activities for self-improvement such as tontine. The CHCs members develop a placard (banner) showing a map of their catchments area; singing, quiz, debates and drama competitions; visits to members' homes to advise /assist; assistance to local schools, health posts; voluntary counselling, support networks; training in domestic skills and crafts; training in literacy and management; home based care for the vulnerable; revolving funds and savings groups; income generating groups and trading; nutrition and cooking classes; sewing, knitting, other home industries; village cleanups and recycling; sanitation improvements, latrine construction and catering for funerals and weddings.



Figure 2. 1: CHCs members Of Mwogo sector in a meeting with banners that they use as teaching tools.

Community hygiene club members of meet and discuss on some recommended practices where they use picture cards as figure figure2.1 illustrates. They share the challenges met during implementation of recommended practices in order to learn together how to overcome those challenges.



Figure 2. 2: CHCs members help each other to construct a kitchen garden.

Vegetables in the Kitchen gardens promote balanced diet hence reducing malnutrition in the community.



Figure 2. 3: Learning how to prepare a balanced diet

Women meet in these fellowships and learn how to prepare a balanced diet food and how to maintain hygiene in their kitchens. This knowledge has greatly improved the malnutrition problems in many families in the community.

2.4.3 Membership in community hygiene clubs.

a. The number of members in a club

In most countries CHC members, number is between 50 and 100 members. The number of members depends on the density of the population, the season when the training takes place, and the charisma and competence of the facilitator. Even if the clubs are small (less than 30 members) it is quite encouraging because they often expand later once people have seen what they are about. When a club becomes bigger than hundred, it may be worth splitting into two clubs to enable easier communication at the sessions (UWIZEYE, 2014).

Example of a Community Hygiene Club (CHC) Membership Card

No.	Topic	Date	Signature	Homework	Signature
1.	Safe water chain			Safe storage and use of water	
2.	Safe food chain			Pot rack; hanging basket, etc.	
3.	Sanitation ladder			Avoid faecal: oral diseases	
4.	Sanitation planning			Improve household latrines	
5.	Diarrhoea ORS			Improve sanitation facilities	
6.	Hand washing			Hand washing facility	
7.	Cholera/ typhoid			Water source cleanup and sanitation	
8.	Skin/eye disease			Bedroom and personal hygiene	
9.	Worms			De-worming	
10.	Nutrition			Nutrition gardens and orchards	
11.	Hygienic kitchen			Fuel efficient stove and ventilation	
12.	ARI			Sleeping mats/room ventilation	
13.	Environment			Garbage pits and faecal-free yard	
14.	Malaria			Drainage and clearing	
15.	Infant care			Infant hygiene and weaning foods	
16.	Bilharzia			Bathing shelter and ZOD	
17.	Drama and songs			Practice health drama and songs	
18.	CHC banner/map			Village map and CHC banner	
19.	Self monitoring			CHC monitoring tools in use	
20.	CHC ExecCom			Constitution and project bank account	

The back-side of this CHC Membership Card has the name and number of each CHC Member, plus Club name, village, etc. Ideally it could also include the member's ID photo (Ministry of Health, 2010).

b. Monitoring with the membership card

Referring to the membership card above, there are 20 separate topics as well as 20 recommended practices. Each time a member attends a session, the membership card is signed by the facilitator of that session. Every three months the CHW or CHC chairperson /secretary must visit all CHC members and check which of the recommended practices have been adopted and sustained in each household. When those practices are observed, the membership card can be signed against the practice observed. When the membership card is completely signed, the member qualifies a certificate (Waterkeyn, 2006).

c. Importance of membership card

The membership card provides a structure to a program as it not only outlines the topics, but also establishes the key recommended practices which are the indicators used for monitoring in the household inventory. If the membership card is not appropriate for the area it can be adapted as required by the program. The content may be varied according to area, depending on the health issues that relate to each context. Topics can be done in any order also depending on the seasonal

priorities (WaterKeyn, 2011). A membership card is issued to each member, listing the topics to be covered and recommended practices. It should be developed in conjunction with the health workers, and programme managers at the training workshop based on formative research within the community (Kamminga and Wegelin-Schuringa, 2003). It has been found that when membership cards are distributed at the first health club meeting, they mobilize others to join, because people are convinced of the seriousness of the programme and want to join so that they too can have a card. The membership card is the key to the structure of the whole project and is essential in a number of ways: It provides a sense of identity, It encourages people to join, It shows the seriousness of the project, It gives members an overview of what they will learn, It provides targets in terms of recommended changes, It enables the facilitator to quantify community attendance,. It allows the community to hold the facilitator accountable, it provides a monitoring tool for programme managers, It is an overt symbol of the Community Health Club, and It prevents gatecrashers from reaping unearned benefits (Biran and Hagard, 2003)

2.4.4 Community Health Clubs meetings and home visits

Attendance means the number of people at each session compared to the total members. Adding the attendance of each session and taking an average of all sessions, is a simple way to monitor a relative success of each community health worker (CHW), and will also enable managers to see which factors are the most cost effective, by dividing the costs by the average attendance. Past experience has shown average attendance is between 30-50% of the members. In each CHC where attendance is compulsory, average attendance can be 80-100% (MoH, 2011).



Figure 2. 4:Community education on CHCs activities in Rwintenderi village Mwogo sector

2.3.4.1 Carrying out home visits or household inventory

After every three months the CHC chair person or secretary must visit all CHC members and check which of the recommended practices have been adopted and sustained in each household. When those practices are observed the membership card can be signed against the practice observed. The EHO must go through the code sheet carefully with the CHCs committee members and explain the values for each observation, using the picture cards provided in the toolkit. The choice of households must be carefully done. Keeping in mind not tell the chosen members that they will be visited or they will clean up their houses and the data will not represent the true picture. Everything must be directly observed. If there is any doubt, (MoH, 2011).



Figure 2. 5: Community hygiene clubs during home visits together with EHOs of Mwogo health center

During home visit CHCs members share experience by looking how other members implement the topics discussed during meetings.

2.5 Intervention of Environmental Health students in implementation of CBEHPP

Through the support from WaterAid, an international charity that transforms life by improving access to safe water, hygiene and sanitation; WaterAid supports the implementation of Community Based Environmental Health Promotion programme in Bugesera District(KHI, 2013). This international charity offers field training fees to students in level five in order to sustain and increase the awareness of community to community hygiene clubs. The activities carried out by those students include: capacity building of community health workers, head education to community hygiene clubs members and carry out different short WASH project interventions and so on



Figure 2. 6: Environmental health sciences Students construct hand washing facilities

Environmental health sciences Students construct hand washing facilities to one clubs member, and on the right, they carry out community health workers capacity building on different topics of CHCs. The short intervention projects that students implement there enhance the capacity of community.

2.6 The sustenance of community hygiene clubs

The community hygiene clubs present many points that ensure their sustainability. The following are those points: The Community hygiene clubs (CHCs) are put up by the communities themselves with support from the ministry of health who developed guidelines on how to establish a hygiene club and distribute them all over the country through the district mayors who later distribute them to the sector, cell and village level. Once the communities understand the concept, they come together at their own will to form a club and later elect their leaders. Each club has between 50 and 100 members and when they go beyond that number they create another club; this number of members is easy to manage and follow by community health workers.

The clubs have mentors at the community level and environmental health officers at the sector level who are the supervisors for the hygiene clubs to ensure they are on track or have challenges which they later address. They also make reports which are sent to the ministry through health center.

2.7 The challenges meet by CBEHPP implementation

Despite the successes of program, there are some challenges which have been registered in a short period of time. Joseph Katarwa, the coordinator of the program realized that there

was lack of sufficient and current baseline data on hygiene practices hence difficult to evaluate the impact. He also cited out the problem of few development partners in health promotion and inadequate funds for the successful implementation of CEBHPP as well as strengthening of the reporting system. This has led to the slow implementation of CEBHPP which is currently at 27 percent (Kwihangana, 2014).

2.8 Importance of CBEHPP on water and sanitation

Use of safe water can reduce diarrhoea by 15%, health promotion reduces diarrhoea by 35%, and frequent hand washing with soap is estimated to reduce diarrhoea by 47% (Curtis & Cairncross, 2003). It is for this reason that in Rwanda, hygiene behaviour change through CBEHPP in CHCs is now considered as a crucial aspect of every water and sanitation programme. Without this vital component of hygiene behaviour change in CBEHPP, Water and Sanitation programmes inevitably fail in their huge potential to improve the health and welfare of the nation, and opportunities and resources are unreasonably wasted (Ministry of Health, 2010).

WaterAid finds solutions on water shortage problem in Bugesera District through different methods like using rain water (rain water harvesting), renovating water pipes, and use of water tanks. Shortage of water has been a concern to residents of Bugesera District especially students in schools. Most of the evenings, students carry jerry cans looking for water in people's homes and in valleys and swamps for their own use as well as for drinking that is why water tanks in school to harvest rain water are concerned. Lack of water may distract concentration of students in their studies. Water Aid also gets water from underground in the valleys of Juru sector. Apart from providing water to the people of Bugesera district, Water Aid Project as implementer of CBEHPP in Bugesera District, builds toilets for Juru Primary School and also for Ruhuha market (Ndaka, 2013)

CHAPTER THREE RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction.

This chapter consists of: the study area, the study design, study population, study sample, sampling strategy, data analysis, problems and limitations of the study as well as ethical consideration.

3.2. Study area

3.2.1 Location

This study was conducted in Bugesera District, Eastern Province particularly in 6 pilot sectors (Juru, Mwogo, Gashora, Ntarama, Musenyi and Mayange sectors) where CBEHPP. The District of Bugesera is one of the seven (7) Districts of the Eastern Province of Rwanda. It is situated to the South West of the Province, between 3005 of longitude and 2009 of latitude south and covering a surface of 1337 Km², It has limits:

- In the North, the District of NYARUGENGE and KICUKIRO of the City of KIGALI.
- Northeast, the District of RWAMAGANA of the Eastern Province.
- Northwest the District of KAMONYI of the province of the South,
- East, the District of NGOMA of the province of the East.
- West, the Districts of RUHANGO and NYANZA, of the province of the South.
- South, Republic of Burundi with which it shares borders.

- The border in the vast lake of Rweru and Lake Cyohoha Sud.

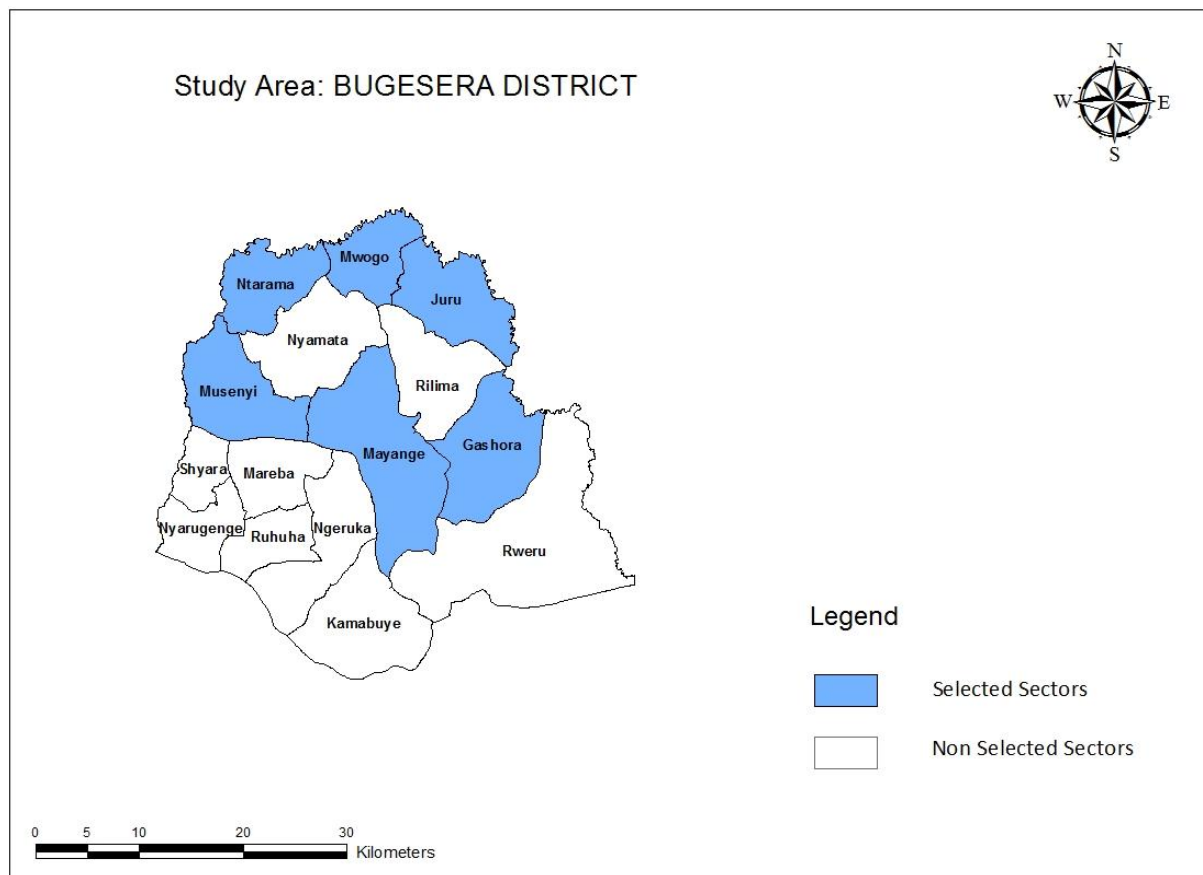


Figure 3. 1: The map showing the study area

3.2.2 Climate and agriculture

Compared to the other regions of the country, Bugesera District is characterized by a hot climate resulting of the absence of mountains, due to relatively low altitude, of the rarity of rains and the periods of drought excessively prolonged. It is a climate typically steppic (SANYU CONSULTANTS & NIPPON KOEI CO., 2006).

The climate of the District is tropical where the temperature is in the order of 20 to 30 Celsius with the maxima of 26 in 29 Celcius. The climate is overnight heavy the day and expenses.

The seasons are marked by an alternation of rains and drought. The time of the year, the length and the intensity of rains and the drought differentiate the appellations of the four seasons:

- The dry season so-called "Urugaryi" goes from January to the mid-March.
- The season of rain called "itumba" short of mid-March to mid-June.
- The season of drought "impeshyi" covers the mid-June to the mid-October
- The season of the rains" umuhindo" starts mid-October and finishes the December.
- The agricultural year begins to the mid-September and expires with the first fifteen of that month of the following year.(SANYU CONSULTANTS & NIPPON KOEI CO., 2006)

The agricultural seasons divided into A and B seasons.

- Season A is the one that goes from Mid September to Mid February it known for less rain but crops grows well and the production is abundant sometime.
- Season B is the one that a huge production come from and Bugesera citizens produce a lot in the season because the rain is abundant during the period.

3.3 Study design

A cross-sectional study design was used to assess contribution of community hygiene clubs in hygiene promotion in Bugesera District (6 pilot sectors). A Cross-sectional study or survey aims at describing and quantifying the distribution of variables in a study population at one point of time(Kothari C.R, 2004). The data was collected both qualitatively and quantitatively once in December 2013

3.4 Study Population

The study population will be comprised of 8223 Environmental Health Club members, 195 Community Health Workers (Facilitators), from all 6 pilot sector(35 Mayange, 35 Gashora, 46 Musenyi, 25 Mwogo, 22 Ntarama, 32 Juru), **195** Head of villages from all 6 pilot sector(35 Mayange,35 Gashora,46 Musenyi,25 Mwogo,22 Ntarama, 32Juru), **225** CHCs representatives from all 6 pilot sector(35 Mayange,35 Gashora,76 Musenyi,25 Mwogo,22 Ntarama,32 Juru), 6 EHOs and **6** Heads of Health Centres from **6** pilot sectors who accepted to participate voluntarily in this cross-sectional study.

3.3.1 Inclusion and exclusion criteria

This study included All Community Health workers engaged in CBEHPP implementation, Head of villages, Community Hygiene club representatives, EHOs and Heads of Health Centers who were present at the time of data collection and it excluded All Community

Health workers not engaged directly in CBEHPP implementation, Head of villages, Community Hygiene club representatives, EHOs and Heads of Health Centers who were sick, during data collection period.

3.5 Study sample

3.5.1 Sample size.

3.5.1.1 Sample size for Quantitative data

The sample size was calculated using Yamane Formula for sample size determination (Bryman, 2001).

$$n = \frac{N}{1 + NE^2}$$

Where: n = sample size

N = population size

E = margin of error * desired

With 95% Confidence level and 5% of margin of error

N is 8223 club members

3.5.1.1 Sample size for qualitative data

The purposive method was used. The aim of this sample is not to be representative of the population. The validity, meaningfulness and insights generated from such study have more to do with the information richness of the cases selected, and the analytical qualities of the researcher than with the sample size. The sample size for qualitative data was 195 Community Health Workers from 195 Head of villages from all 6 pilot, 6 EHOs and 6 Heads of Health Centers from 6 pilot sectors who will accept to participate voluntarily in study. This group of people have been chosen based on their knowledge about CBEHPP implementation leading to the right people for getting accurate information. The compensation of 2000 RWF was given to the participants for their day off for their casual works

3.5.1.2 Sampling methods and procedures

Purposive method of sampling were used, all Community Health Workers involved in CBEHPP implementation were selected in each of 6 pilot sectors, The president of executive committee of each Community Hygiene Club was selected purposively within 6 pilot sectors, all EHOs and Heads of Health Centres within 6 pilot sectors were selected.

3.6 Data collection procedures and instruments used.

3.6.1 Qualitative Data collection

Focus Group Discussion was used:

Questions were designed in English and translated into Kinyarwanda .Two research assistants involved in running a focus group discussion in each of 6 pilot sectors. One of these was to ask the questions and guide the discussion. The other person, who sits off to the side, took notes on the discussion. The number of participants in focus group ranged between 4 to 8. At the start of the session, Facilitators greet all of the participants and make sure that they are comfortably situated. The facilitator then reviewed the objectives of the focus group and stresses the confidentiality of participants' comments before starting. The facilitator ensured that all members of the group participate in the discussion by asking each member to respond to different aspects of the discussion. After the focus group discussion is over, the facilitator thanked the participants for taking the time to participate. The facilitator also explained that the results of the focus group discussion will be written up and shared.

3.6.2 Quantitative Data Collection.

The Questionnaire and Observation checklist was designed in English and translated into local dialect-Kinyarwanda (the most commonly used local language in Rwanda).

This Observational check list was to capture information on the following CBEHPP indicators at households of CHCs representatives:

- Use of hygienic latrines in schools and homes.
- Increased hand-washing with soap at critical times.
- Improved safe drinking water access and handling in schools and homes.
- Establishment of CHCs in every village.
- Households with bath shelters, rubbish pits, pot-drying racks and clean yards.

3.6.3 Quality Control

3.6.3.1 Preparations for Data collection

The Research Team made preliminary visits to 6 pilot sectors where the study has been conducted to introduce the study, explain the study objectives and get acquainted with the ethical procedures of conducting research.

3.6.3.2 Training of research assistants

Four research assistants underwent a 3 days training in data collection. There was role plays on how to use the questionnaire to enable research assistants understand the tool in more detail. On the second day the questionnaire was pre-tested in one of the villages within the pilot sector. Each research assistant pre-tested the questionnaire by inviting 5 participants including community health workers, Head of villages, Heads of Health Centres and President of CHC committee members. There was a debriefing session in the afternoon with emphasis on what should possibly be changed and other challenges met during the pre-test. The Observation checklist was then adjusted in the morning session of the third day and a question and answer session held in the afternoon after which logistical issues was addressed and the team was well prepared and ready for data collection.

3.6.3.3 Field editing of data

Each observation checklist was checked for completeness by the research team at the end of the activity.

3.6.3.5 Quality Assurance

Quality assurance was done using the following criteria;

- The Research assistants were trained on the study objectives, effective use of the data collection tools and good communication skills.
- Data collection tools were pretested to ensure clarity and accuracy in collecting the intended data.
- The Observation checklist was translated to Kinyarwanda to ensure accuracy of data collected in local dialect.
- There was supervision of the Research assistants during data collection and ensured that correct procedures are followed.
- Observational checklist was prepared jointly by the Research Team.

3.7 Data Analysis.

Quantitative data has been analyzed by using the SPSS software and the cross tabulation techniques were used to test some relationship that may exist between variables. Qualitative data was coded and organized into themes where relevant,

3.8 Ethical considerations.

The permission to do this research was granted by the Ethical team from the College of Medicine and Health Sciences and the authorities of Bugesera District. Ethical aspects were

also taken into account to the respondents to whom the purpose and possible benefits of the study were explained; the respondents were assured of the confidentiality of their identity and information they provide during the study. Participation was absolutely voluntary after being informed of the objectives of the study and their clear consent was sought.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1. Introduction

In this chapter the results are presented and discussed in relation to the achievement of community hygiene clubs towards sustainability of CHCs which promote hygiene behaviour change through Community Based Environmental Health Promotion Program (CBEHPP) in six pilot sectors of Bugesera District. It includes change caused by CBEHPP and the challenges met by CHCs members during implementation of recommended practices and contribution of heads of village and CHCs facilitators (community health workers) in order to promote and sustain community hygiene clubs

4.2 Participation of head of villages to community hygienic clubs' meeting

The results were obtained from the head of villages, community hygiene club committees and Community Health Workers in charge of CHCs at village level. It has been found that among 195 heads of villages 90% have attended the community hygienic clubs meeting which had the purpose of enlightening heads of villages about community hygiene clubs and encouraging them to collaborate with CHCs committees as well as members.

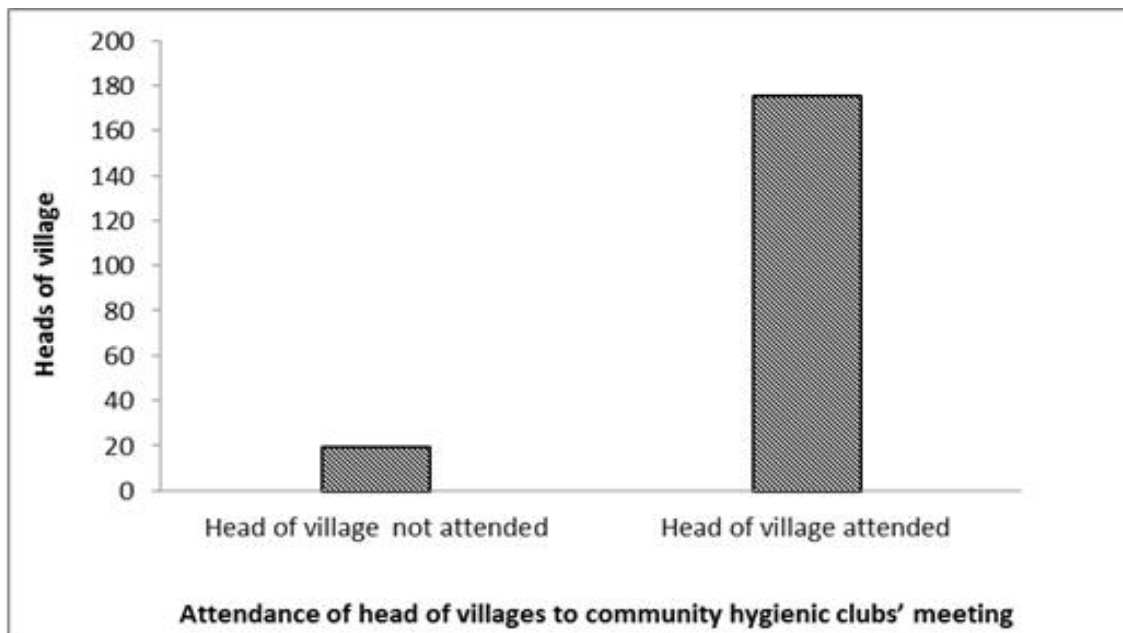


Figure 4. 1: Attendance of head of villages to community hygienic clubs' meeting

The results also revealed that 10% of Heads of villages did not attend the community Hygiene club meetings. The main reasons of not attending are stipulated in figure 4.2

4.2.1 Reasons for not attending the meeting

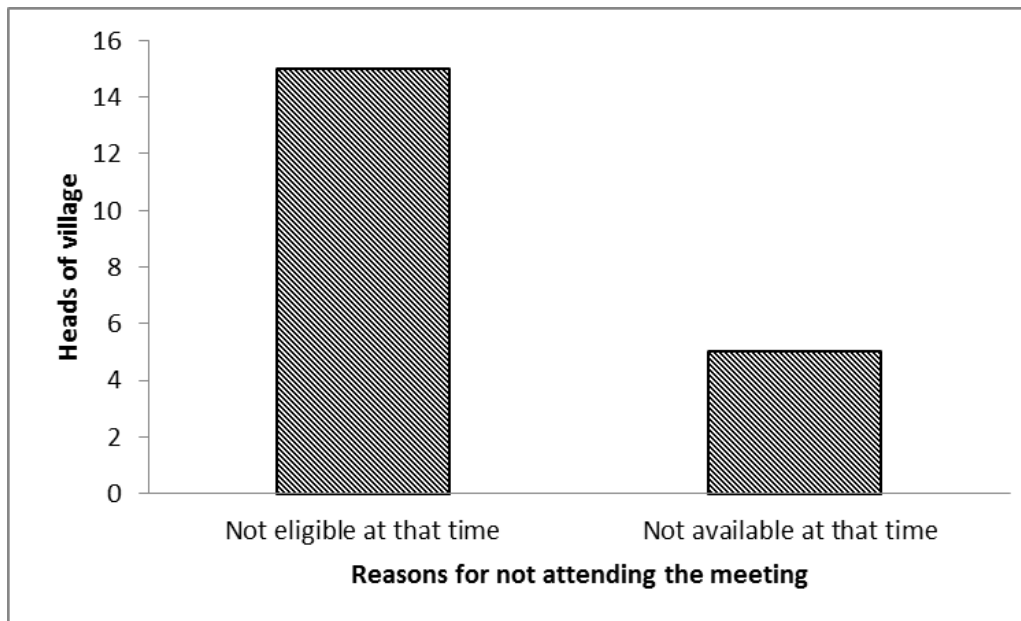


Figure 4. 2:Reasons for not attending the meeting

It has been found that 75% of corresponding to 15 heads of village did not attend due to eligibility problem and 25% of them were not available at that time. The participation of those heads of villages who did not attend will not contribute a lot to CHCs in the development of community through behaviour change (CBEHPP) Due to the lack of Knowledge acquired in the meetings.

4.3 Active and non-active community hygienic clubs

The results of this study revealed that community hygiene clubs started in six pilot sectors in Bugesera District, 82% of them are active. The operation of these hygiene clubs are confirmed by head of villages where 90 % of them have attended the community hygienic clubs meeting which has purpose of enlightening heads of villages about community hygiene clubs and encouraging them to collaborate with CHCs executive committees as well as CHCs members in order to promote hygiene behaviour change in their villages (figure 4.3).

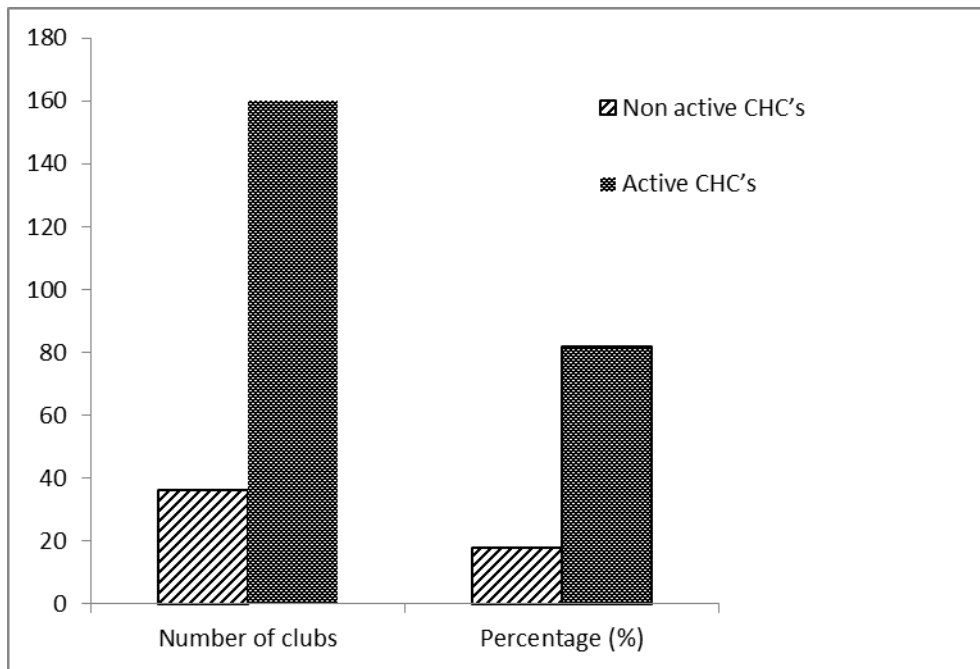


Figure 4.3: Active and non-active community hygienic clubs

As shown in figure 4.3. 160 clubs were active and 35 community hygiene clubs were not active. The facilitators of non-active clubs should have a sense of responsibility to and learn from active clubs.

4.4 Changes caused by community hygienic clubs

The Changes caused by Community Hygienic clubs in six pilot sectors of Bugesera are illustrated in figure 4.4. Each indicator has been at least tripled in numbers. At the beginning; households that had toilets were 1952; at the moment 5511 have toilets. Drying racks were 5803 and have increased to 13484. The number of children with malnutrition was reduced from 1188 to 240. The number of households with Hand washing facilities raised from 3678 to 9823. It has also been found that the number of households that drink boiled water had an increment of 6645 households while bath-shelters and kitchen-gardens had increments of 4835 and 5458 respectively.

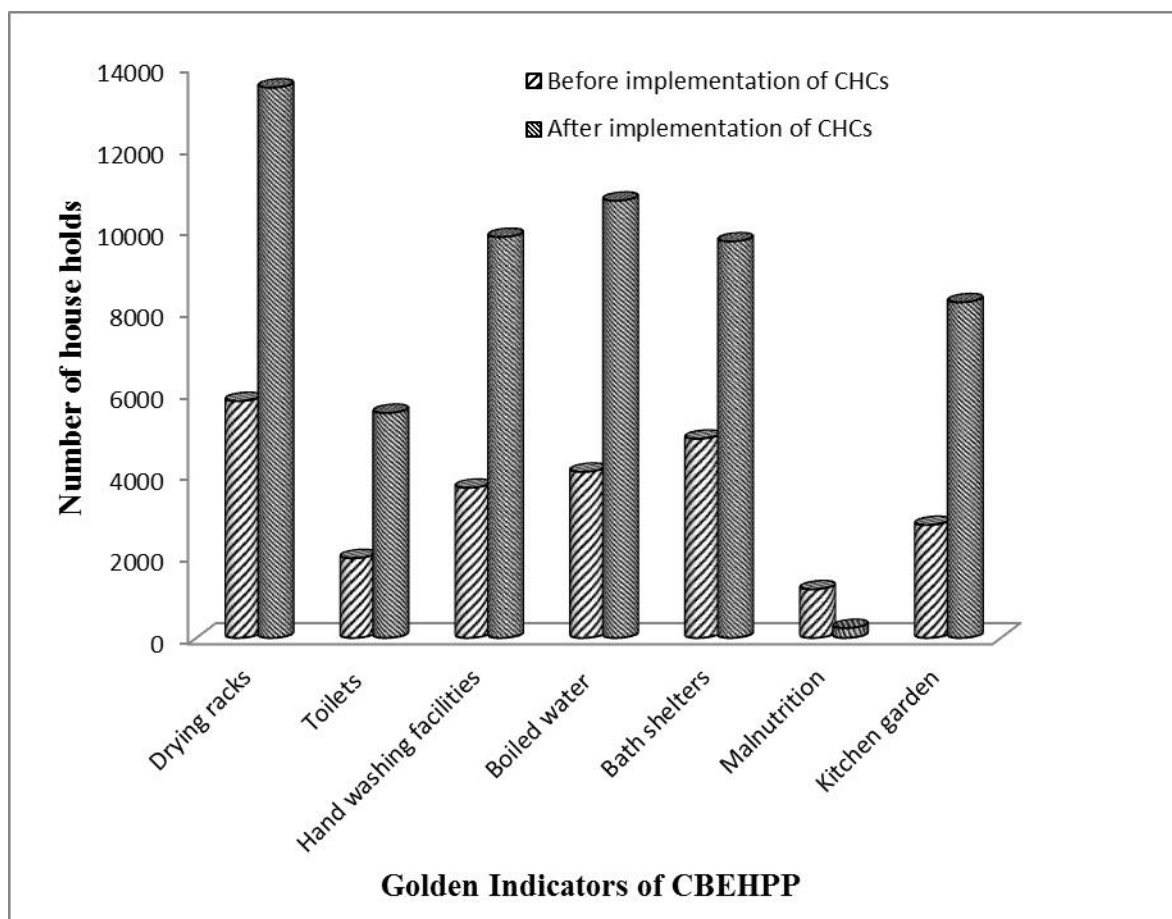


Figure 4. 4: Changes caused by community hygienic clubs

4.4.1 Other changes caused by CBEHPP

After mentioning seven golden indicators of CBEHPP to be achieved, the CHC leaders showed that there are other changes besides those mentioned above. In many villages, they have created an evening of hygiene session/meeting where CHCs members meet and practice lessons learnt and those evening sessions influence neighbours to participate and be the members of CHC. Hygiene and sanitation were increased in household through different ways like formulating tontines where they helped each other to buy mattresses, hygienic materials; payment of community based health insurance, etc. Not only households hygiene improved, personal hygiene also was boosted for instance all people wear shoes and put on washed cloths meanwhile most people (especially CHCs members) are smart. The CHCs have facilitated their members to develop mentally (behaviour was changed) through the discussion on topics related to family planning, prevention of HIV/AIDS and malaria prevention as well as sharing ideas on different skills (build improved cooking stoves; solve poverty related problems, using criticism to learn from mistakes).Fellowship and collaboration among members and others.

4.5 Implementation of recommended practices by CHC members

According to the research made, 62% of CHCs implemented recommended practices at home (figure 4.5). The study revealed that 38% of community hygiene clubs did not implement the recommended practices; this number impedes the fulfilment of CBEHPP indicators. The main reason of not implementing the recommended practices are shown in figure 4.6

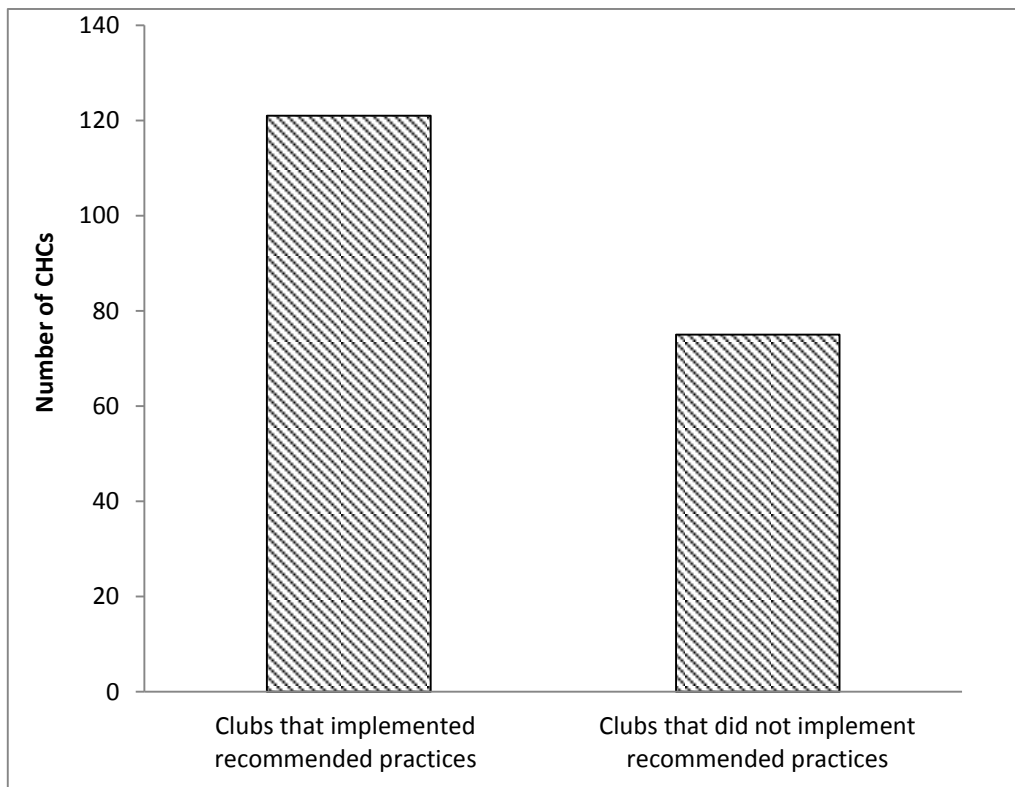


Figure 4. 5: Implementation of recommended practices by CHC members

4.6.1 Reasons of not implementing the recommended practices

The Reasons of not implementing the recommended practices have been studied. The reasons that hold back CHCs members to implement the recommended practices were the lack of time, negligence and no follow up. The results showed that among 75 members 29 (38.7%) had no enough time for implementation. Negligence ranked the first 32 members (42.7%) and the last one was due to the lack of following up the recommended practices that made 18.6% as figure 4.6 shows.

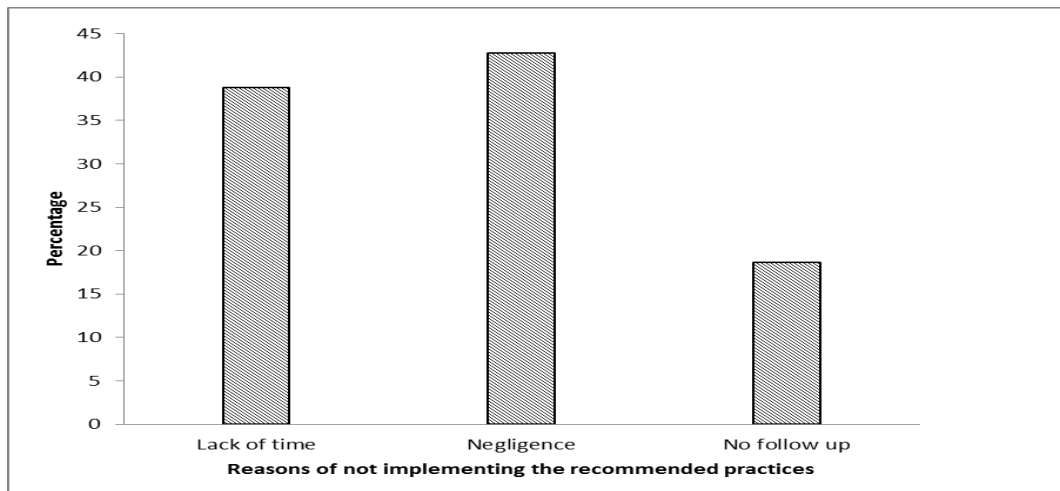


Figure 4. 6: Reasons of not implementing recommended practices

4.6 Challenges of CHC's approach during implementation

Apart from reasons of not implementing CHCs recommended practices as mentioned in figure 4.6, there are other major challenges that affect the accomplishment of their tasks during implementation of community hygienic clubs approach; these include the followings:

1. Lack of transport and communication means: This is when CHC's committee were not provided with transport and so making it to their members so difficult, they have suggested that they should be provided with bicycles to solve the problem. Communication means is also a serious issue for them to communicate to their local leaders and their members where they are complaining that they should be given cell phones to ease their task.
2. Few Materials: CHC's committee during implementation of CHC approach, they met a challenge of few materials used during field visits for example teaching materials, umbrellas, bags, spades and hoes used during community works.
3. Water inaccessibility: During the implementation of CHC's approach lack of water become a challenging issue more especially during dry season, where they use unsafe water for drinking e.g. swamp water and river water which leads to increase of water borne diseases which impede the accomplishment of their tasks.
4. Knowledge of community hygienic clubs committee: low level of knowledge of CHC's committee became also a challenging issue due to few training given about CHC's approach, where some topics from picture cards are difficult to teach.
5. Poor collaboration between village leaders and CHC's committee.

4.7 Training of CHC facilitators (Community Health Workers (CHWs))

A successful CHC training relies upon the development of a shared mission of education and service, as well as innovation and flexibility by the organizations that govern them.

Table 4. 1: Training of CHC facilitators (Community Health Workers (CHWs))

CHC facilitators	Number facilitators	Percentage (%)
Untrained	8	4
Trained	188	96
Total	196	100.0

Table 4.1 revealed that 96% of CHCs facilitators have got training. This indicates that the majority have knowledge on how to facilitate CHCs committees.

4.8 Picture cards interpretation

The results showed that 90% of CHCs facilitators did not have any difficulties in picture cards interpretation which corresponds to the trained CHCs facilitators.

Table 4. 2: Picture cards interpretation

CHW's ability to interpret picture cards	CHCs facilitators (N)	Percentage (%)
CHW with difficulties in picture cards interpretation	20	10
CHWs with no difficulties in picture cards interpretation	176	90
Total	196	100.0

As mentioned in previous table 4.7, 10% of CHCs facilitators have difficulties in picture cards interpretation where 60% of them mentioned that picture card are not comprehensible and 40% said that picture cards are difficult to interpret.

Apart from use of picture cards, it has been found that 5 CHWs have difficulties of skin diseases and 8 CHWs have difficulties in other diseases. Then 13 CHWs didn't get training this means that they do not understand the content of the books and how they can give homework to community hygiene club members.

4.9 CHWs' suggestion on CHCs improvement for better performance

The focus groups were asked to brainstorm ways to overcome barriers to affiliation. They have identified the solutions for overcoming the barriers and improve their performance

- The majority of CHWs 36.7% call for materials to be used during field work such as Boots, umbrella, bags, and rain water harvesting tanks, watering cans, gloves, and

means of transport and personal mobile telephones that should be put in a closed user group (CUG).

- 17.9% of CHCs facilitators propose that there should be study tours to other CHCs and refresher trainings to CHCs committees and heads of village.
- Motivations like rewarding the local leaders, incentive, to be facilitated in carrying out competitions and creating cooperatives.
- 13.7% of CHWs find that T-shirts and club logos are required as identification of community hygiene clubs.
- 11.7% suggested that collaborating with local leaders in giving penalties to those who don't put in practice the hygiene topics learnt, local leaders should commit in solving hygiene problems in the community and engage in community behaviour change to increase club membership

4. 10 Sustainability of CBEHPP

Sustainability could be defined as an ability or capacity of something to be maintained or to sustain itself (Ann Dale et al., 2013).

The CBEHPP brought a sense of sustainability to the efforts. This program gave CHCs members the feeling that they themselves needed to solve their problems, not someone from the outside. The sustainability of this program in Bugesera District can also be achieved by managerial intervention of the district officials, self-creation of social activities such as; tontines, competition between clubs and routine sensitization during community work (Umuganda). Sustainability of this program is significant to ensure its continuance and success without relying on the support of the organisations (WaterAid and World vision). Many activities have been put up to uphold the activities of CHCs. The CHCs have created groups for social activities like tontines where they contribute equally to solve their financial problems; these tontines can help to sustain this program in the future.

The sustainability of this program in Bugesera district can also be achieved by managerial intervention of the district officials, when the district officials are granted authority over the program and the CHCs activities are put under their performance contract, it can lead to success of the CHCs in a long term. Organising and carrying out competitions between community hygiene clubs can promote alliance in the club members which can be dependable for maintenance of the program's success. Routine sensitization during community work by the local leaders is a very important practice to keep CHCs activities go on exclusive of the involvement of the organisations that support the program, the local

leaders should have a sense of duty to mobilise the community on the importance of CHCs on every occasion where there is an opportunity to do so, activities of the CHCs can be done after community work to involve many people.

CHAPTER FIVE: CONCLUSION

The achievements of CBEHPP in Juru, Mwogo, Gashora, Ntarama, Musenyi, Mayange sectors of Bugesera District have been discussed. The challenges of CBEHPP implementation in Villages of the 6 pilot Sectors were identified. The needed improvement of CBEHPP that can be addressed for its sustainability was as also studied. Seven golden indicators of CBEHPP have been achieved significantly. The gap in CBEHPP implementation was caused by not implementing recommended practices due to lack of transport and communication means, few Materials, Limited Knowledge of community hygienic clubs committee, and Poor collaboration between heads of village and CHC's committee were the major challenges. The majority of CHWs call for materials to be used during field work such as Boots, umbrella, bags, and rain water harvesting tanks, watering cans, gloves, means of transport and personal mobile telephones that should be put in a closed user group. They also call for study tours and refresher trainings to CHCs committees and heads of village and to be facilitated in carrying out competitions and creating cooperatives. T-shirts with club logos as identification of each community hygiene clubs are also important to the work of the CHWs.

REFERENCE

- Ann Dale, C. R. C. and S. A. M., Fiona Duguid, S. A. M., Melissa Garcia Lamarca, S. A. M., Peter Hough, S. D., Petronella Tyson, S. A. M., Rebecca Foon, S. M., Yuill Herbert, S. M. (2013). *Co-operatives and Sustainability : An investigation into the relationship* (pp. 1–76).
- Jan Stofkoper, Jose Alberto Tejada-Guibert, E., Nkuranga, Avriile Pacifique Niyibizi, Madeleine Marara, E., Ruzibiza, Pascal Gatete, Coenraad Voorhuis, Raymond Venneker, A., & Logan, W. (2013). *Rwanda Integrated Water Security Program (RIWSP) REVISED Report corresponding to Quarter 1 of FY2 Report Period : October 1 st , 2012 to December 31 st , 2012 Rwanda Integrated Water Security Program (RIWSP)* (pp. 1–46). Kigali : Rwanda.
- Katarwa, J. (2009). *Improving Hygiene Behaviour of Communities throughout Rwanda* Kigali.
- KHI. (2013). *Kigali Health Institute (KHI) ANNUAL REPORT FOR THE YEAR 2012-2013*. Kigali.
- Kothari C.R. (2004). *Research methodology. methods and techniques*. (second edi.). New deli: New age international.
- Kwihangana, S. (2014). *Communities embrace hygiene, improve health and productivity* (p. 4). Kigali.
- Ministry of Health. (2010). *Roadmap for CBEHPP*. Kigali : Rwanda.
- Ministry of Health. (2012). *THIRD HEALTH SECTOR STRATEGIC PLAN JULY 2012 – JUNE 2018*. Kigali: Government of Rwanda.
- Nash, L. (2014). Rwanda Head of Environmental Health interview on impact of CHCs _ Africa Ahead. Retrieved October 17, 2014, from file:///E:/OUT CLASS/CBEHPP/CBEHPP doc/Rwanda Head of Environmental Health interview on impact of CHCs _ Africa Ahead.htm
- Ndaka, O. (2013, January 31). Bugesera Water Aid Project, a solution for the people. *Rwanda Express*. Kigali : Rwanda. Retrieved from <http://www.rwandaexpress.rw/headlines/215/bugesera-water-aid-project-a-solution-for-the-people/>
- Nelson Ekane. (2013). *Sanitation Policy and Practice in Rwanda : Tackling the Disconnect* (pp. 1–4). Stockholm: Sweden.
- Nkurunziza, T., Ugabinema, M. N., Muhimpundu, A. U., & Dlamini, R. (2013). 36th WEDC International Conference: DELIVERING WATER , SANITATION AND HYGIENE SERVICES IN AN UNCERTAIN ENVIRONMENT Increasing access to sanitation and

hygiene through the community hygiene clubs approach in Rwanda (pp. 1–6). Nakuru : Kenya.

SANYU CONSULTANTS, & NIPPON KOEI CO., L. (2006). *Japan International Cooperation Agency Ministry of Agriculture and Animal Resources Republic of Rwanda THE STUDY ON SUSTAINABLE RURAL AND AGRICULTURAL DEVELOPMENT IN BUGESERA DISTRICT , EASTERN PROVINCE IN THE REPUBLIC OF RWANDA PROGRESS REPORT (1)*. Kigali : Rwanda.

UWIZEYE, G. (2014). *THE CONTRIBUTION OF COMMUNITY HYGIENE CLUBS TO SUSTAINABLE CHANGE IN HYGIENE BEHAVIOR Case Study of BUYOGA Sector*. Mount Kenya University.

WaterKeyn, J. (2011). *Manual for training of facilitators and community health workers*. Kigali : Rwanda: WB-WSP/UNICEF RWANDA: Ministry of health.

Waterkeyn, J., & Muringaniza, A. (2009). Scaling up the Community Health Club Model to meet the MDGs for Sanitation in rural and urban areas : Case Studies from Zimbabwe and Uganda. In *International Water Association Conference, Mexico City* (pp. 1–2).

Waterkeyn, J., & Sandy Cairncross. (2005). Creating demand for sanitation and hygiene through Community Health Clubs : A cost-effective intervention in two districts in Zimbabwe. *Social Science & Medicine*, 61(2005), 1958–1970.
doi:10.1016/j.socscimed.2005.04.012

Waterkeyn, J., & Waterkeyn, A. (2011). Intellectual Starvation and the Need to Achieve as Motivation for Hygiene Behaviour Change. In *Sustaining the Blue Planet, Global Water Education Conference*. Bozeman, Montana, USA: Africa AHEAD ASSOCIATION, SOUTH AFRICA.

APPENDIX

I. QUESTIONS RESERVED TO HEADS OF VILLAGES

1. How many households do you have in this village?
 1. Less than 100
 2. Above 100
2. Have you ever attended orientation meeting about *structure and functioning* of CHCs?
 - Yes
 - No
3. If No, explain the reason?
 1. I was not elected.
 2. Other reasons
4. Do you have CHCs in your village?
 1. Yes,
 2. No
5. Did all households participating in CHC?
 1. Yes,
 2. No
6. If No, Explain the reason?
 1. They do not want to participate
 2. They do not know role of CHCs,
 3. Others reasons.
7. If yes, do they operate?
 1. Yes,
 2. No
8. If No, explain the reason why they don't operate?
 1. No importance of them,
 2. They did not start,
 3. Were broken out,
 4. Others reasons.
9. How often do CHC members meet in month?
 1. Every week,
 2. Twice in month,
 3. Other time

10. Have CHCs brought to your people/ community been able to deliver their services successfully?

1. Yes
2. No

11. If Yes explain at least one example of service delivered successfully:
.....

12. In your performance, do you have any activities concerning CHCs?

1. Yes,
2. No

II. QUESTIONS RESERVED FOR CHCs COMMITTEES IN VILLAGES

13. How many members do your CHCs have?

14. How often do you meet?

1. Every week
2. Once per month
3. Twice month
4. Any time

15. Is it easy for you to meet?

1. Yes.
2. No.

16. If No, explain the reason?

17. Is there any other favourable ways to meet with your CHCs members?

1. Yes
2. No

18. If Yes, which one.....

19. Does all CHC members do home works as given?

1. Yes,
2. No

20. If No, explain the reason

1. Lack of time,
2. Poverty,
3. Do not care,
4. No follow up

21. Do you find any other courses that can be added in the courses you teach in CHCs?

1. Yes,

2. No

22. If Yes, which one:

1. Control of violence,

2. Fight against the use of Drug abuse,

3. Other courses

23. Are your tasks of facilitating CHCs performed well?

1. Yes,

2. No

24. If No, what do you prefer as improvement?

III. QUESTIONS RESERVED FOR CHWS/SOCIAL AFFAIRS AT VILLAGE LEVEL.

25. Does head of village assist you in your tasks of helping CHCs?

1. Yes,

2. No

26. If No, what do you think is the cause?

1. They do not care of CHCs,

2. They are busy,

3. Other reasons

27. If yes, what does he help/assist you?

1. Call for a meeting,

2. Chairing meeting,

3. Other support

28. Have you ever been taught on the roles of CHCs?

1. Yes,

2. No

29. Do you have any obstacles that can affect your tasks performance of helping CHCs at village level?

1. Yes,

2. No

30. If yes, list them:

1. Few participants / Low number of attendance,

2. Untrained committee,

- 3. Nonparticipation of committee members,
 - 4. Others
31. How often do you meet in club?
- 1. Every week,
 - 2. Once per month,
 - 3. Twice per month,
 - 4. Other time
32. Are methods used during CHCs training facilitation effective?
- 1. Yes,
 - 2. No
33. If No, are there other methods that can be more helpful?
- 1. Yes,
 - 2. No
34. If Yes, which one:
35. Do you understand well how the picture cards are used during CHCs training?
- 1. Yes,
 - 2. No
36. If No, why:
- 1. It is difficult to use them,
 - 2. No comprehensive,
 - 3. Others
37. Are all sessions easy to teach for you?
- 1. Yes,
 - 2. No
38. If No, tell us which is difficult to teach?
39. If there are any courses which are difficult to teach or pictures difficult to use, what can we do for better performance?
- 1. Change pictures,
 - 2. Refresher trainings,
 - 3. Others.
40. Do you see others activities that CHCs can perform but they do not perform now?
- 1. Yes,
 - 2. No

If Yes, list them.....

41. Which other things can be done for your best performance?

1. Being trained again,
2. Provision of materials,
3. Bonus,
4. Incorporate/having cooperatives,
5. Others

Urutonde rw'ibibazo

I. Ibibazo bigenewe abayobozi b'imidugudu

1. Mufite ingo zingahe muri uyu mudugudu?

1. Muni y'ijana(100), 2.Hejuru y'ijana(100)

2.Ese mwaba mwaritabiriye inama y'umunsi umwe yasobanuraga imiterere n'imikorere ya za club z'suku?

1. Yego 2.Hoya

3. Niba ari hoyo, impamvu ni iyihe?

1. Nari ntaratorwa 2. Izindi mpamvu

4. Mufite club z'isuku mu mudugudu wanyu ?

1. Yego 2.Oya

5. Niba ari yego,Ese zirakora?.

1. Yego , 2. Hoya

6. Niba ari hoyo, kuki zidakora?

1. Nta mumaro wazo tubona
2. Zarasenyutse
3. Zashyizweho ariko Ntizikora
4. Izindi mpamvu

7. Ingo zose zitabira ibikorwa bya club z'isuku?

1. yego 2.Oya

8. Niba ari hoyo,ni iyihe mpamvu.

1. ntibashaka kwitabira ibikorwa bya club z'isuku
2. ntibasobanukiwe umumaro wazo
3. Izindi mpamvu.

9. Abanyamuryango ba club y'isuku bahura ka ngahe mu kwezi?

1. Buri cyumweru, 2.Kabiri mu kwezi, 3. Ikindi gihe kivuge....

10. Ese Club z'isuku mubona hari icyo zagejeje kubaturage muyobora?

1. Yego 2. Oya

11. Niba ari yego ni ibiki?

12. Ese mu mihigo yanyu, hari ibikorwa bijyanye na club z'isuku birimo?

1. Yego 2. Oya

II.Urutonde rw'ibibazo bigenewe Komite za club z'isuku mu mudugudu

13. Club yanyu ifite abanyamuryango bangahe ?.....

14. Muhura ryari/kangahe?

- 1.Buri cyumweru 2. kabiri mu kwezi , 3.Rimwe mu kwezi 4.Ibindi

15. Ese mubona uburyo bwo guhura buboroheye ?

1. Yego 2.Oya

16. Niba ari hoyu, ni ukuberiki?

17. Ese mubona hari ubundi buryo bwabafasha guhura bwaborohera?

- 1.yego 2.Oya

18. Niba ari yego, buvuge.....

19. Ese abanyamuryango ba Club bakora imikoro yose nk'uko bayihawe ?

- 1.yego 2.Oya

20. Niba ari oya biterwa n'iki?

1. Kubura umwanya 2.Ubukene 3.ntago babyitaho 4.Ntagikurikirana

21. Ese mubona hari amasomo yakongerwa muyo mwigisha muri club ?

1. Yego
2. Oya

22. Niba ari yego yatubwire ...

1. Kurwanya ihohoterwa
2. Kurwanya ibiyobyabwenge
3. Ibindi.....

23. Ese mubona umurimo wanyu wo gufasha club ugenda neza?

1. Yego
2. Oya

24. Niba ari oya hakorwa iki kugirango umurimo wanyu ugende neza?.....

III. Urutonde rw'ibibazo bigenewe umufasha myumvire wa Club

25. Ese ubuyobozi bw'umudugugu buragufasha mu gikorwa cyo gufasha club z'isuku?

1. Yego
2. oya

26. Niba ari yego bugufasha gute?

1. guhamagaza inama
2. kuyobora inama
3. Ubundi bufasha

27. Niba ari oya, biterwa n'iki?

1. Ntabwo babyitaho
2. Nta mwanya bafite
3. Izindi mpamvu.

28. Ese wigeze uhugurwa ku mikorere ya club z'isuku?

1. Yego
2. Oya

29. Ese hari mbogamizi zatuma utarangiza neza umurimo wawe wo gufasha club z'isuku mu mudugudu ?

1. Yego
2. Oya

30. Niba ari oya. Ni izihe?

1. Umubare w'abanyamuryango bitabira ni muke
2. Abagize komite ya club ntigahubuwe

3. Abagize komite ya club ntibitabira

4. Izindi mbogamizi.....

31. Abanyamuryango ba club muhura ryari/kangahe?

1. Buri cyumweru 2. kabiri mu kwezi , 3.Rimwe mu kwezi 4.Ibindi ...

32. Ese ubona uburyo mukoresha mwiga aribwo bwiza ?

1. Yego 2. Oya

33. Niba ari oya hari ubundi utekereza bwabafasha kurushaho?

1. Yego 2.Oya

34. Niba ari yego buvuge

35. Ese usobanukiwe neza uko amashusho akoreshwa ndetse n'ubusobanuro bwayo iyo muri kwiga ?

1. Yego 2.Oya

36. Niba ari oya,impamvu ni iyihe?

1. Biragoye kuyakoresha

2. Ntabwo yumvikana

3. Izindi mpamvu.....

37. Ese ubona amasomo yose akorohera kuyigisha

1. Yego 2. Oya

38. Niba ari oya,tubwire agoranye kwigisha

39.Niba hari amasomo agoye kuyigisha cyangwa amashusho agoye kuyakoresha,wumva hari iki cyakorwa kugirango umurimo ugende neza?

1. Guhindura amashusho

2. Hakenewe andi mahugurwa

3. ibindi bivuge.....

40. Ese ubona hari ibindi bintu club z'isuku zakwibandaho bitari mu byo zikora ubungubu ?

1. Yego 2.Oya

Niba ari yego ni ibihe ,bivuge

41. Ni ibihe bintu byakorwa kugirango umusaruro wanyu wiyongere:

1. Amahugurwa menshi
2. Ibikoresho bihagije
3. Insimburamubyizi
4. Gufashwa gushinga koperative
5. Ibindi

3.9 INFORMED CONSENT

Introduction

We, research team from the University of Rwanda, College of Medicine and Health Sciences, represented by (PI) Dr Theoneste Ntakirutimana from Department of Environmental Health Sciences. We are conducting the study to Assess the Community Based Environmental Health Promotion Program (CBEHPP) achievements and its sustainability in Bugesera District .We are conducting this study in collaboration with Water Aid Rwanda project which is working in the District Bugesera which is our sponsor.

You have been selected randomly to be part of this study. We would like to identify what CBEHPP has achieved in 6 piloted sectors of Bugesera District, find out the gaps in CBEHPP implementation ,identify the challenges in CBEHPP implementation and how CBEHPP be improved to be addressed in future for better outcome

Right to participate or withdraw

Participation in this study is voluntary,. If you decide not to be part of this study you will continue to benefit from Water Aid Rwanda project services without any discrimination. When accept to participate, you will be free to withdraw in case you do not feel comfortable or for any other personal reason(s). If agree to participate, you will be requested to sign the consent form which is a proof of your own decision to be part of the study.

Potential Risks and Benefits

There is no risk or harm that could result from the participation in this study. The information collected will be used only for the sake of informing Water Aid project about Community Based Environmental Health Promotion Program (CBEHPP) achievements and its sustainability in Bugesera District. You will not get direct benefit from this study but the information provided is likely to contribute to better implementing CBEHPP.

Confidentiality

Information provided will be stored in computers and accessible only to the research team members and Water Aid project. Your name will never be mentioned in any report, only codes will be used for the purpose of reporting or publications. All information provided will be kept confidential.

Certificate of consent

I have understood the information provided above and have been informed that the participation in this study is voluntary and depends on my own decision. I am informed that I can stop the participation to this study anytime without any impact on access to and use of services provided by Water Aid project.

I agree to take part in this study

Names of the participant:.....
Signature.....

Names of the Research Assistant.....
Signature.....

Any other additional information about the study you can contact the Principal Investigator of the study,

Dr. Theoneste NTAKIRUTIMANA, 0789453462

INYANDIKO YEMEZA

IRIBURIRO

Twebwe, itsinda ry'abashakashatsi rikorera muri Kaminuza y'Urwanda, Colleji y'Ubuzima n'Ubuvuzi, tukaba duhagarariwe muri ubu bushakashatsi na Dr Theoneste Ntakirutimana wo mu gashami k'Ubuzima bw'Ibidukikije. Turakora ubushakashatsi kubyagezweho na porogaramu ya CBEHPP ndetse n'uburyo iyi porogaramu yabaho uburyo burambye mu karere ka Bugesera. Turimo gukora ubu bushakashatsi hamwe n'mushinga wa Water Aid Rwanda akaba ari Umushinga ukorera mu Uturere twinshi tw'Urwanda akaba ari nawo utera inkunga ubu bushakashatsi.

Uri umwe mubatoranyijwe ngo ugire uruhare muri ubu bushakashatsi. Turashaka kumenya ibyo kelebe z'isuku zagezeho kuva zashingwa,imbogamizi kelebe z'isuku zahuye nazo ndetse n'ingamba zakoresha kugirango kelebe z'suku zikomeze kubaho no gukora mu buryo burambye.

Uburenganzira bwo kugira uruhare cg kuva mubushakashatsi.

Kugira uruhare muri ubu bushakashatsi ni ubushatse, urabyemerewe. Niba wumva udashaka kugira uruhare uzakomeza kubona ibyo umushinga wa Water Aid Rwanda waguhaga nta kibazo kibayemo. Niba wiyemeje kugira uruhare, wemerewe kuzavamo igihe cyose uzumva udashaka gukomeza cg se kuzindi mpamvu zawe bwite. Niba wemeye kugira uruhare, turagusaba gusinya uru rupapuro arirwo ruduhamiriza neza ko wemeye kugira uruhare muri ubu bushakashatsi.

Ingaruka n'ibyiza

Nta ngaruka cg ikindi kintu kibi kizaturuka mu kugira uruhare muri ubu bushakashatsi. Amakuru azava muri ubu bushakashatsi azakoresha gusa mukugaragaza ibyo kelebe z'isuku zagezeho kuva zashingwa ndetse n'ingamba zakoresha kugirango kelebe z'suku zikomeze kubaho no gukora mu buryo burambye mu karere ka Bugesera. Nta gihembo uzahita ubona ariko amakuru uzatanga azadufasha kumenya neza ibyo kelebe z'isuku zagezeho kuva zashingwa ,imbogamizi kelebe z'isuku zahuye nazo ndetse n'ingamba zakoresha kugirango kelebe z'suku zikomeze kubaho no gukora mu buryo burambye muri aka karere ka Bugesera utuyemo.

Kugira ibanga

Amakuru uzatanga azabikwa ahantu hizewe neza muri mudasobwa kandi itsinda ry'abashakashatsi hamwe n'umushinga wa Water Aid nibo bonyine bafite uburenganzira bwo kuyareba. Amazina yawe ntago azigera agaragazwa ahantu ahariho hose muri ubu bushakashatsi ahubwo tuzakoresha ibirango/codes gusa. Amakuru yose azatangwa azabikwa mu ibanga.

Kwemera gutanga amakuru

Ndahamya ko numvise neza ibisobanuro byatanzwe haruguru birebarana n'ubu bushakashatsi kandi numvise neza ko kugira uruhare muri ubu bushakashatsi ari ubushake bwanjye. Nasobanuriwe neza ko nshobora kuvamo igihe cyose mbishakiye ntazindi nkurikizi cyangwa ngo mpagarikirwe ibyo umushinga wa water Aid wampaga/wangeneraga

Nemeye kugira uruhare muri ubu bushakashatsi

Amazina y'ubazwa:.....

Umukono.....

Amazina y'umushakashatsi:.....

Umukono.....

Uramutse ukeneye andi makuru arebana n'ubu bushakashatsi wabaza ubuhagarariye kumwirondoro ukurikira,

Dr. Theoneste NTAKIRUTIMANA, 0789453462

CMHS Institutional Review Board

26th February 2015

Ref: CMHS/IRB/C2A/2015

Dr NTAKIRUTIMANA Theoneste
CMHS, UR


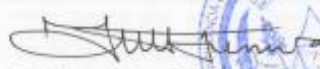
Dear Dr NTAKIRUTIMANA Theoneste

RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled “**Assessment of community based environmental health promotion program (CBEHPP) achievements and its sustainability in Bugesera District.**”

Having reviewed your protocol and been satisfied with your revised version incorporating the comments from the IRB, your study is hereby granted ethical clearance. The ethical clearance is valid for one year starting from the date it is issued and shall be renewed on request. You will be required to submit the progress report and any major changes made in the proposal during the implementation stage. In addition, at the end, the IRB shall need to be given the final report of your study.

We wish you success in this important study.



Professor Kato J. NIUNWA
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:

- Principal College of Medicine and Health Sciences