



**Activity Report 132**

Developing a Hygiene Promotion  
Program: Summary of Assistance  
to SANRU III in the Democratic  
Republic of Congo

Fred Rosensweig, Ian Moise

July 2004

Prepared under EHP Project 26568/CESH.DRC.SANRU.REPORTS

Environmental Health Project  
Contract HRN-I-00-99-00011-00  
is sponsored by the  
Office of Health, Infectious Diseases and Nutrition  
Bureau for Global Health  
U.S. Agency for International Development  
Washington, DC 20523



# Contents

About the Authors.....	v
Acknowledgments.....	vii
Acronyms.....	ix
Executive Summary.....	xi
Results.....	xii
Lessons Learned.....	xiii
Recommendations.....	xiii
1. Introduction.....	1
1.1. Overview.....	1
1.2. Background.....	1
1.3. Hygiene Improvement Framework.....	2
1.4. Hygiene in the DRC.....	4
1.5. EHP Technical Assistance.....	5
1.6. Organization of the Report.....	6
2. Description of Activities.....	7
2.1. Training of WS&S Coordinators.....	7
2.2. Hygiene Promotion.....	10
3. Results.....	21
3.1. Training of WS&S Coordinators.....	21
3.2. Hygiene Promotion.....	22
3.3. Application of the C-IMCI Approach in Urban Health Zones.....	28
4. Lessons Learned.....	31
5. Recommendations.....	35
5.1. Recommendations for SANRU.....	35
5.2. Recommendations for USAID.....	36
Key Products.....	37



# About the Authors

Fred Rosensweig is an institutional development specialist for the Environmental Health Project (EHP) and a senior consultant for Training Resources Group, a member firm of the EHP consortium. His expertise includes the organization of the water supply and sanitation sector, program design, policy analysis and implementation, design of institutional strengthening programs, the development of strategies to promote stakeholder involvement, and the design and implementation of capacity-building programs. In addition to numerous field assignments, he has managed scores of activities for WASH and EHP over the past 20 years and served as the activity manager for this activity in the DRC. In addition to experience in the water supply and sanitation sector, he also has significant experience in the area of local government and decentralization. He has worked on these issues in over 25 countries in Latin America, the Middle East, Africa and Eastern Europe. He has had a long association with EHP in a variety of roles. He speaks French and Spanish.

Ian Moise is a water, sanitation, hygiene, and behavior change consultant for the Environmental Health Project (EHP) and Associates in Rural Development (ARD), a member of the EHP consortium. His background and expertise include program design, training, facilitation, public health, psychology, and the environment. In addition to his two years of work with EHP, he also spent six years with the United States Peace Corps. He has worked in seven countries in Africa and the Middle East. He speaks French, Bemba (Zambian national language), and Lingala (Congolese national language). Ian was the lead consultant on this activity and carried out seven visits over a two-year period.



# Acknowledgments

The activity discussed in this report would not have been possible without the efforts of a number of people.

SANRU has been an excellent and highly capable partner. Paulin Kalonji, the WS&S Coordinator, has served as our primary point person throughout this activity. His conscientiousness, openness to new ideas, and overall competence have been tremendous assets. Felix Minuku, Technical Director, has been supportive throughout. Dr. Jean-Pierre Wantalabala Ilunga, C-IMCI Coordinator, has played a key role in the training, evaluation, and especially in institutionalizing the C-IMCI approach within SANRU. Dr. Albert Kalonji, the former C-IMCI coordinator, provided much insight in the early stages of development of the hygiene promotion program. Frank Baer, who initially approached EHP about providing technical assistance, has been instrumental in conceptualizing EHP technical assistance, reviewing products, and providing guidance to SANRU staff.

The School of Public Health of the University of Kinshasa has been a key partner. Dr. Mbela Kiyombo in particular was the principal investigator for the formative research and the baseline. He also participated in the training of zonal C-IMCI teams.

USAID/Kinshasa has been very supportive of this activity. Tenley Mogk and Emile Bongo have provided excellent support from the mission throughout.

Finally, the four EHP consultants were highly professional and skillful. Graeme Frelick and Rachid Ben Amor did an excellent job in developing a training plan, helping to review course materials, and conducting two training of trainers workshops to develop the national water supply and sanitation training team. Lynne Cogswell visited the DRC twice to work with the School of Public Health to design the formative research for the hygiene promotion component and then to analyze the results and develop a behavior change community strategy.

Without the contributions of all these people, as well as the many Congolese we have worked with at the health zone and health area levels, this activity would not have been successful.



# Acronyms

ACF	Action Contre la Faim
C-IMCI	Community-Based Integrated Management of Child Illnesses
DRC	Democratic Republic of Congo
ECC	Eglise du Christ au Congo
EHP	Environmental Health Project
G/HIDN	Global Bureau, Health, Infectious Disease, and Nutrition
HIF	Hygiene Improvement Framework
IRC	International Rescue Committee
I.M.A.	Interchurch Medical Assistance
ISP	Integrated Strategic Plan
MOH	Ministry of Health
NGO	nongovernmental organization
PHC	primary health care
PMURR	Programme Minimum d'Urgence de Réhabilitation et de Réconstruction
PVO	private voluntary organization
SANRU	Projet de Soins de Santé Primaires en Milieu Rural
SPH	School of Public Health (of University of Kinshasa)
TOT	training of trainers
USAID	U.S. Agency for International Development
WS&S	water supply and sanitation



# Executive Summary

SANRU III is a five-year \$25 million rural primary health project in the Democratic Republic of Congo (DRC) funded by the U.S. Agency for International Development (USAID). The project began in 2001 and will run until 2006. The purpose of SANRU III is to strengthen the capacity of target health zones in primary health care intervention and health zone support systems.

SANRU III currently operates in 56 of the 306 health zones in the DRC, with a population of approximately 8,000,000 people. Each zone has a population of approximately 100,000–150,000 comprised of as many as 200 villages, 20 health centers, and one reference health facility. Each zone is managed by a chief medical officer and other zonal level staff, including a water supply and sanitation (WS&S) coordinator.

In late 2001, SANRU approached EHP with a request to reconstitute the national training team and devise a plan for developing a new cadre of zonal coordinators. In the course of working with SANRU, it became clear that the hygiene promotion aspect of the WS&S component had not yet been developed. Given the importance of hygiene behavior change in maximizing the health benefits of WS&S, EHP offered to provide additional assistance. USAID and SANRU agreed and requested that the hygiene behavior change strategy be integrated into the framework of the *Community-based Integrated Management of Child Illnesses (C-IMCI)* in order to ensure the consistency of approaches across health zones. The overall goals were to reduce environmental risk factors and improve behaviors that are most closely correlated with the incidence of diarrheal disease.

The objectives of EHP technical assistance were the following:

## Training of Zonal WS&S Coordinators

- Develop a plan for training zonal WS&S coordinators
- Assist SANRU in developing four courses for training the zonal coordinators
- Conduct a training-of-trainers program to develop a national training team for WS&S

## Development and Implementation of Hygiene Promotion Component

- Develop a strategy for hygiene behavior change based on formative research and focused on a limited number of key behaviors and messages
- Develop and test behavior change communication materials

- Implement the strategy in ten pilot health zones
- Provide a baseline for measuring changes in the target hygiene behaviors
- Evaluate the hygiene behavior change program in the ten pilot zones and make recommendations for scale-up

EHP assistance was entirely based on short-term consultancies from February 2002 to May 2004.

## Results

The following are the key results achieved as of May 2004.

### Training of WS&S Coordinators

- The national training team for WS&S has been reconstituted with 14 active members.
- Fifty-three zonal WS&S coordinators are functioning in USAID-assisted zones and 19 in World Bank-assisted zones. In the USAID zones, all 53 coordinators have been trained in the first course on spring capping and community participation, 33 in the second course on sanitation, and 26 in the third course on wells and handpumps.

### Hygiene Promotion

- SANRU has developed a sound conceptual framework for hygiene based on the Hygiene Improvement Framework and C-IMCI.
- The infrastructure for behavior change communication is in place in ten zones. This includes creation of zonal C-IMCI teams, health area teams, institutional and community relays, and behavior change communication materials.
- SANRU has embraced the C-IMCI strategy and is committed to its implementation.
- Two national level training teams have been created for training other zonal C-IMCI teams.
- The strategy has generally worked well at the community level, although specific areas for improvement have been identified.
- The School of Public Health has established a baseline against which changes in behavior can be measured.
- Linkages with the WS&S infrastructure activities have been established.

# Lessons Learned

- The Hygiene Improvement Framework proved to be a useful conceptual framework for designing and implementing EHP assistance to SANRU.
- Hygiene can be successfully integrated into a primary health care project.
- Scale-up is easier when there is a capable and motivated local organization with an extensive reach in the country.
- Capacity building is key to developing the programmatic infrastructure for an activity intended to be scaled up.
- Attention to the quality of training is fundamental to its eventual impact.
- Hygiene behavior change was most successful when integrated with improving water points and sanitation facilities at the village level.
- The concept of tapping into existing community structures rather than creating new ones has proven to be practical and realistic in the DRC context.

# Recommendations

This report provides recommendations for SANRU and USAID, including:

## SANRU

- Organize a third TOT for the national WS&S training team. Seven of the members only participated in a one-week TOT and would benefit from additional training.
- Respect the selection criteria for the zonal WS&S coordinators.
- Solidify the results in the ten pilot zones for the hygiene component. Each zone should develop its own strategy for scaling up the hygiene promotion activity to other health areas.
- Promote the sequence of programmatic activities that has worked well. This sequence includes improving the water point, implementing the C-IMCI strategy with hygiene as the lead intervention, and introducing the Clean Village Program.
- Fine tune the hygiene promotion approach based on the experience in the pilot zones.
- Increase the personnel at each level. The zonal C-IMCI teams and health area teams should each add a person. More institutional relays should be identified and

trained so there is at least one in each village. Finally, SANRU should identify an assistant to the C-IMCI coordinator in Kinshasa to enable more monitoring and supervision.

- Scale up to 12 new zones as planned.
- Completely revamp the monitoring system to emphasize both routine supervision visits and simplified quantitative data collection.
- Contract with the SPH to conduct a post intervention KAP survey in June 2005. This survey should be repeated in the same health areas that were used in the baseline study in order to accurately assess the impact of the interventions.

## USAID

- Consider ongoing assistance to SANRU III from a centrally funded project such as EHP. From EHP's perspective, assistance to SANRU has been a rewarding and successful experience. The implementation of hygiene promotion in the pilot zones has generated enthusiasm among national and zonal partners. However, the work is not done. SANRU would benefit from ongoing assistance in the next several years as the hygiene promotion activity is replicated in other zones and potentially scaled up widely.

# 1. Introduction

## 1.1. Overview

This report summarizes EHP assistance to SANRU III from 2002-2004. EHP assisted SANRU in two areas: in developing a training program for zonal water supply and sanitation coordinators, and, in the primary area, designing and implementing a hygiene promotion component. Both activities were designed to be carried out in all the zones where SANRU works.

EHP's contribution has come entirely in the form of short-term technical assistance, beginning in February 2002. This report summarizes the activities in both areas, presents the results, discusses lessons learned, and suggests recommendations for the future.

## 1.2. Background

SANRU III is a five-year \$25 million rural primary health project in the Democratic Republic of Congo (DRC) funded by the U.S. Agency for International Development (USAID). The project began in 2001 and will run until 2006. SANRU I and SANRU II were bilateral projects that provided assistance to ten of Congo's 306 health zones from 1981–1991. SANRU became known as the key national health project in the Congo and significantly increased access to primary health care. The focus of SANRU assistance was to strengthen the capacity of health zones to provide health services. Because of the upheaval in the Congo that began in 1991, SANRU was forced to close. In 2001, however, as the political conditions improved, USAID responded favorably to a proposal from the Interchurch Medical Assistance (I.M.A.) and the Church of Christ of Congo (ECC) to renew the SANRU project. I.M.A. is a U.S. PVO with an established reputation in procurement and logistics of medical supplies. ECC is a Congolese umbrella PVO with 62 protestant members and was responsible for implementing SANRU I and SANRU II.

The purpose of SANRU III is to strengthen the capacity of target health zones in primary health care intervention and health zone support systems. Priority interventions include immunization and diarrheal disease case management, HIV/AIDS, malaria, nutrition, family planning, emerging diseases such as tuberculosis, and water supply and sanitation. Support systems include planning and management, training and supervision, supply lines and cost recovery, infrastructure, and surveillance.

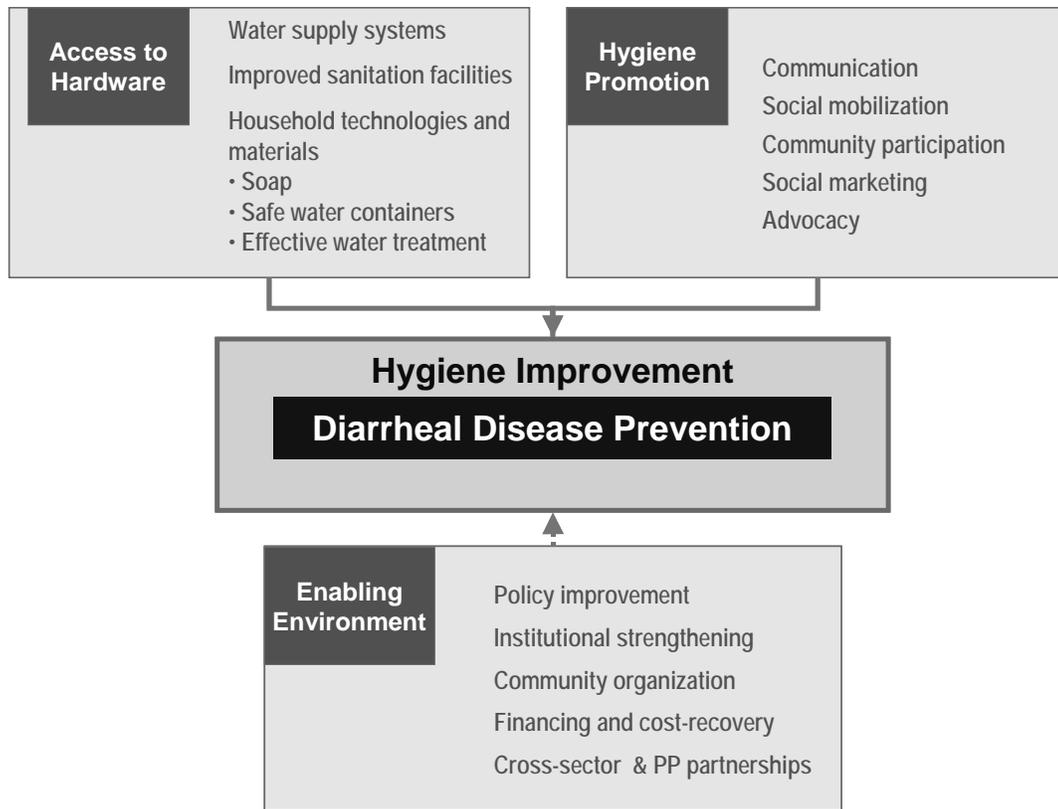
SANRU III currently operates in 56 of the 500 plus health zones in the DRC, with a target population of approximately 8,000,000 people. Each zone has a population of approximately 100,000–150,000 comprised of as many as 200 villages, 20 health centers, and one reference health facility. Each zone is managed by a chief medical officer and other zonal level staff, including a water supply and sanitation (WS&S) coordinator. SANRU's WS&S targets include the training of zonal WS&S coordinators in all 56 zones, 1,500 improved water sources (primarily springs), 500 wells and pumps, and 1,500 clean villages. The Clean Village Program is a campaign that rewards villages that have 90% of households that use a hygienic latrine, 90% that consume water from an improved water point, and 90% that have a safe way to dispose of household waste.

In 2002, SANRU requested EHP assistance in training zonal WS&S coordinators. In the mid-1980s, EHP's predecessor project, WASH, had assisted SANRU in implementing a very successful activity in training a cadre of zonal WS&S coordinators. This assistance consisted of developing a national training team for WS&S, developing four courses for the national training team to use to train zonal WS&S coordinators, and delivering the courses to the zonal coordinators. In late 2001, SANRU approached EHP with a request to reconstitute the national training team and to create a plan for developing a new cadre of zonal coordinators. The details of the assistance that EHP provided will be discussed in Chapter 2.

In the course of reconstituting the national training team, it became clear that the hygiene promotion aspect of the WS&S component had not yet been developed. Given the importance of hygiene behavior change in maximizing the health benefits of WS&S, EHP offered to provide additional assistance. USAID and SANRU agreed and requested that the hygiene behavior change strategy be integrated into the *Community-Integrated Management of Child Illnesses (C-IMCI)* framework in order to ensure consistency of approaches across health zones. The overall goals were to reduce environmental risk factors and improve behaviors that are most closely correlated with the incidence of diarrheal disease. The hygiene behavior change component quickly became a significant activity, gathered momentum and began to have a large impact.

### 1.3. Hygiene Improvement Framework

EHP structured its assistance to SANRU in terms of the Hygiene Improvement Framework (HIF) depicted on the next page.



This framework suggests that an effort to reduce diarrheal diseases must include the three strategies of any successful program to fight disease: providing access to necessary hardware or technology, promoting healthy behaviors, and providing support for long-term sustainability. These three strategies—in the form of improving access to water and sanitation hardware, promoting hygiene, and strengthening the enabling environment—make up the core of the Environmental Health Project’s Hygiene Improvement Framework. As documented in numerous programs around the world, the Framework has had a measurable impact on reducing the key indicators of diarrheal disease.

The HIF proved to be a useful tool in framing EHP’s assistance to SANRU. SANRU III includes a component for increasing **access to hardware** through the targets for improved water supply and sanitation systems. EHP’s initial assistance to SANRU addressed one key aspect of the **enabling environment**—the development of a qualified pool of zonal WS&S coordinators—and SANRU also addresses another aspect of the enabling environment by strengthening community development committees. And EHP offered to address the missing component: **hygiene promotion**.

## 1.4. Hygiene in the DRC

Historically, hygiene activities in the DRC have been marginalized in the Ministry of Health. In the past, they were part of the Directorate of Epidemiology and managed by regional directors of hygiene. In principle, hygiene supervisors operated under these regional directors and oversaw all hygiene activities in the region. Some regions also had a hygiene chief and some limited staff (e.g., sanitary police). Administratively, these regions never corresponded to the health zones.

Hygiene activities have historically focused on inspection and covered a wide range of areas, including environmental sanitation, border controls, food sanitation, hotels, hospitals, and industry. Community structures, such as development committees, health committees, and water committees were also used to promote hygiene, albeit not in a focused manner. Most nurses in health centers had a basic understanding of hygiene but did not do much outreach to the community.

In addition, there are several NGOs that have focused on hygiene. OXFAM has produced a booklet of 15 key messages, including hygiene for use in schools. The Belgian Red Cross has developed hygiene education materials for use at hospitals and health centers. The IRC and ACF have developed hygiene behavior change materials for the EHP urban environmental health activity (which focused on market latrines).

In September 2001, the Ministry of Health shifted the responsibility for hygiene from the Directorate of Epidemiology to the Directorate of Primary Health Care, which put the chief medical officers of the health zones in charge of hygiene. In effect, this shift placed the hygiene supervisor at the same level as the water and sanitation coordinator (CEA). Aside from issuing a general mandate for integration, very little was actually done, except for a cursory training in a few zones that apparently consisted of a district officer announcing the new arrangement. In addition, nothing was said about what would happen to structures that had existed under the hygiene supervisors, such as the regional hygiene chiefs and sanitary police.

In the fall of 2001, the Directorate of Hygiene was created, with the mandate of developing a national hygiene program and integrating hygiene into the health zone structure. But this new directorate, consisting primarily of two staff, has limited capacity and to date has had limited impact.

The MOH “community development” concept is to work through “relais communautaires” (community relays). This approach, similar to what has been done in the past with community health workers, involves identifying a community-level volunteer who is then used as a channel to link health center activities to the community. This model has not worked very well in the Congo for two principle reasons: First, these volunteers often have other responsibilities that they cannot neglect unless they are paid for what they do. Second, as these volunteers inevitably become the focal point for every new project in the community, their job quickly becomes undoable.

## 1.5. EHP Technical Assistance

EHP provided assistance in two areas: training of zonal WS&S coordinators and developing and implementing a hygiene promotion component.

The objectives of EHP technical assistance were as follows:

### *Training of Zonal WS&S Coordinators*

- Develop a plan for training zonal WS&S coordinators
- Assist SANRU in developing four courses for training the zonal coordinators
- Conduct a training-of-trainers program to develop a national training team for WS&S

### *Development and Implementation of Hygiene Promotion Component*

- Develop a strategy for hygiene behavior change based on formative research and focused on a limited number of key behaviors and messages
- Develop and test behavior change communication materials
- Implement the strategy in ten pilot health zones
- Provide a baseline for measuring changes in the target hygiene behaviors
- Evaluate the hygiene behavior change program in the ten pilot zones and make recommendations for scale-up

EHP assistance was entirely based on short-term consultancies. The aim was to maintain continuity and not introduce new consultants who would have to go through a learning period. EHP used the same two consultants—Graeme Frelick and Rachid Ben Amor—for three visits under the training activity, and two other consultants—Lynne Cogswell and Ian Moise—for all visits under the hygiene promotion activity. Beginning in January 2003, Mr. Moise became the lead consultant for the hygiene promotion activity.

SANRU designated one staff person, Paulin Kalonji, who served as the primary point of contact. As the hygiene promotion activity expanded, other SANRU staff members played key roles in guiding the work of the EHP consultants. Throughout the activities, EHP and SANRU staff worked in close partnership; EHP provided key inputs, and SANRU staff was responsible for implementation, monitoring, and follow-up.

## 1.6. Organization of the Report

This report has four remaining chapters. Chapter 2 provides an overview of the activities. Chapter 3 summarizes the results of both activities. Chapter 4 discusses the key lessons learned, especially those with application in other countries. Chapter 5 provides recommendations for SANRU and for USAID.

## 2. Description of Activities

This chapter describes the two areas of activities of EHP assistance: training of WS&S coordinators and development and implementation of a hygiene promotion component. Table 4 at the end of this chapter provides an overview of EHP activities, consultants involved, and dates.

### 2.1. Training of WS&S Coordinators

In the mid 1980s, the WASH Project assisted SANRU in developing and implementing a plan for training zonal WS&S coordinators. The plan included the training of a twelve-member national training team for WS&S, the development of course materials for training zonal coordinators, and a detailed schedule of courses. The national training team consisted of individuals working for a variety of organizations who were available to provide training when called upon. By 1991, when the DRC began ten years of disruption, 91 coordinators were working in the SANRU-assisted zones. Over the next ten years, only 22 of the 91 coordinators and six members of the national training team remained. When SANRU III began, the project requested EHP assistance in reconstituting the national training team and rebuilding the cadre of zonal WS&S coordinators. In 2001, 41 new coordinators were hired. When they were added to the existing 22 coordinators, all 63 zones had a WS&S coordinator. The number later dropped to 56 when SANRU stopped assisting certain zones.

EHP assistance to SANRU III is described below.

#### 2.1.1. Development of the Training Plan

In February 2002, EHP assisted SANRU in developing a plan for training the WS&S coordinators. The EHP consultant organized a needs assessment workshop, with 12 WS&S coordinators, several other zonal health staff, and five individuals from the Primary Health Care Directorate in the MOH. The workshop focused not only on the training needs of the new WS&S coordinators, but also on other factors that affect performance, such as clear job expectations, access to supplies and equipment, and adequate incentives.

Based on the results of this workshop, EHP and SANRU developed a detailed program of four courses for the WS&S coordinators and a training calendar. The plan for training all the coordinators in all four courses was seen as a three-year effort. The overall objectives for the entire program of four courses were as follows:

- Involve the community in all phases of a WS&S activity
- Convey hygiene messages using communication skills to change behavior
- Use management skills to achieve objectives
- Protect a spring with the participation of the community
- Use simple techniques to analyze the quality of improved water sources
- Construct a rainwater harvesting system
- Work with the community to construct or rehabilitate a well and install a handpump
- Carry out a VIP latrine program using locally available materials

The plan identified the following four courses to achieve these goals:

1. Introduction to the role of the WS&S coordinator: community participation and improving water sources
2. Latrine construction and hygiene promotion
3. Rainwater Harvesting
4. Handpumps and well rehabilitation

The first course was originally conceived to last three weeks and the other three two weeks each, but the first course was eventually shortened to two weeks after the pilot was completed. The plan also involved developing the training materials for each of the above courses.

EHP also made a series of recommendations to address other factors (outside of training) critical to the performance of the coordinators. These included clarifying the role of the coordinator and developing a policy for financing WS&S activities when they do not generate revenue as other zonal health activities do (e.g., sale of medicine).

### 2.1.2. Development of Training Materials

The EHP consultant developed an outline of the four courses with a team of trainers from SANRU during the first consultancy, and the SANRU team designed the first two courses after the consultant left. In March, the team and the consultant conducted extensive virtual consultations on the designs, supplemented by a staff member from EHP with expertise in hygiene education. Most of the work on the first course was completed in time for the first training of trainers (TOT). The SANRU team continued to refine the designs for the first and second course after the first TOT.

### 2.1.3. Training of Trainers

The training plan called for the design and delivery of two training-of-trainers workshops to reconstitute the national training team for WS&S.

#### TOT 1 – April 2002

Twelve people participated in this two-week workshop; six were from the national training team from the 1980s, and six were new. The participants worked for a variety of organizations such as the National Sanitation Program, National Rural Water Supply Service, Ministry of Health, SANRU III, and there were also independent consultants.

The overall purpose of the workshop was to develop training skills to revitalize the WS&S zonal coordinators. The specific workshop objectives were:

- Adopt the appropriate training style based on the needs of the learner
- Lead an interactive presentation using examples
- Use facilitation skills needed for an interactive presentation, brainstorming, and group report-outs
- Use a range of training techniques, such as small groups, role playing, case studies, and field visits
- Lead a training session based on the experiential learning model
- Use visual aids
- Review the design and materials for the first WS&S training course
- Prepare a plan for the delivery of the first course

By the end of this workshop, the EHP training team believed that only seven participants had the right mix of training skills and subject matter expertise to be effective trainers, five from the original national training team and two new members. As a result, EHP recommended a second TOT to expand the skills of the seven trainers and increase the pool of trainers for the future.

#### TOT 2 – May 2003

Fourteen people participated in the second TOT, including six from the previous workshop. This workshop was both a refresher for those that had participated in the first TOT in April 2002 and a more intensive version of that workshop for the new participants. The EHP training team believed that five of the eight new participants

could begin to train immediately, and the others could also begin but would need closer supervision.

This workshop also resulted in a series of recommendations for the WS&S coordinator training program. These included specific revisions in the training courses, stricter adherence to the selection criteria for WS&S coordinators, and a better way for the coordinators to report their activities. EHP also recommended that SANRU establish standards for effective training and strengthen its ability to provide organizational and logistic support for workshops.

## 2.2. Hygiene Promotion

In the course of the first training activity described above, EHP realized that the hygiene promotion component of SANRU III had not yet been developed. Much more attention had been given to the construction of improved water supply systems and to community participation in constructing and managing the water points. The SANRU III project design included the Clean Village Program, a potential entry point for hygiene, but this had not yet been developed either. Because of the critical importance of hygiene behavior change in maximizing health benefits, EHP suggested to SANRU and to USAID that EHP assist in developing this component. SANRU and USAID/Kinshasa agreed to this suggestion, and the Office of Health, Infectious Diseases and Nutrition, Bureau for Global Health of USAID approved the use of core funds to support the activity.

### 2.2.1. Hygiene Promotion Plan

In June 2002, the lead EHP consultant and the SANRU WS&S Coordinator developed a plan for integrating hygiene promotion into SANRU's water and sanitation activities. The team assessed existing hygiene activities, determined how hygiene promotion could best be integrated, and developed a two-year action plan. The USAID mission asked the EHP team to use the C-IMCI framework as a way to integrate hygiene into a broader primary health care structure, but the team discovered that the C-IMCI framework was not sufficiently well defined to be used as a mechanism for hygiene behavior change. Therefore, the team also worked to define the C-IMCI framework so that it could serve as a basis for hygiene behavior change.

The objectives of the hygiene promotion plan were:

- Develop and test a strategy of hygiene behavior change focusing on a limited number of key behaviors and messages
- Build the capacity at the zonal level for implementing a community-based hygiene behavior change strategy
- Develop materials and tools to promote hygiene behavior change

- Develop and incorporate hygiene behavior change into current SANRU programs
- Capture the lessons learned from this effort to support the Ministry of Health
- Provide the foundation for measuring changes in hygiene behavior

The plan recommended that the focus be on the three clusters of key hygiene behaviors—handwashing, safe disposal of human feces, and storage and transport of water—that are highly correlated with diarrheal disease. The plan also suggested that the effort start with five health areas in ten pilot health zones or an initial target population of approximately 375,000. The team identified 11 activities that would take place over a two-year period.

All of the activities took place more or less in the sequence proposed in the plan, although a few activities were revised. The rest of Section 2.2 describes the activities that actually occurred. The reason there are only six activities described (instead of the 11 in the plan) is that a number of them were combined and one activity—assistance to the Hygiene Directorate in the Ministry of Health—turned into assistance to the Directorate of Primary Health Care in integrating hygiene into its activities and was addressed throughout rather than being a discrete activity.

## 2.2.2. Development of the Hygiene Promotion Strategy

Developing the hygiene promotion strategy involved an EHP behavior change consultant, the SANRU WS&S Coordinator, and the School of Public Health of the University of Kinshasa. It consisted of three distinct phases:

### ***Formative Research***

In September 2003, the EHP behavior change consultant worked with the School of Public Health (SPH) and the SANRU WS&S Coordinator to design the formative research. Together they determined the research objectives, selected the audience, and developed criteria for site selection. The primary objectives of the research were to: determine the level of awareness, knowledge, and attitudes in the three key hygiene behaviors; determine the actual and desired behaviors; identify factors that explained the observed behaviors; and identify sources of information and channels of communication. The primary audiences to be sampled were caregivers of children under five and health center nurses. Two health zones, Kangu in Bas Congo and Kabando-Diando in Katanga, were selected for the formative research. Health areas and villages were randomly selected. Using research protocols, the SPH carried out the formative research in November 2003, using observations, in-depth interviews, and focus groups.

### ***Behavior Analysis and Strategy Development***

The analysis focused on the key behaviors practiced by caregivers, which are summarized in Table 1. The team also analyzed key behaviors practiced by health center personnel and identified the key sources of information for caregivers.

From the results, the team identified caregivers and health center personnel as the primary target audiences and also tentatively identified communication agents as health center nurses and non-health personnel such as priests or teachers

The key behaviors to promote were identified as follows:

#### *For Caregivers*

- Wash hands of child (before eating) with soap and air dry.
- Store drinking water out of the reach of children.
- Dispose of child's feces immediately after defecation in the latrine.

#### *For Health Center Personnel*

- Wash your hands before and after taking care of patients.
- Store sufficient drinking water and water for washing.
- Use a clean latrine.

Table 1: Analysis of Behaviors among Caregivers

<b>Ideal Behavior</b>	<b>Actual Behavior</b>	<b>Feasible Behavior</b>	<b>Obstacles</b>	<b>Motivators</b>
<p><b>BEHAVIOR 1: HANDWASHING</b></p> <p>Should wash the hands of the children at all critical moments using all proper steps.</p>	<p>Do not wash the hands of their children.</p>	<p>Wash the hands of their children with soap before they eat.</p>	<p>Belief that they can do nothing for the health of their children - "in God's Hands."</p> <p>Lack of knowledge on all critical times to wash.</p> <p>Lack of knowledge of all the steps.</p> <p>Lack of sufficient quantity of clean water.</p>	<p>Awareness of the importance of washing.</p> <p>Availability of soap.</p> <p>Basic knowledge in place on which to build.</p> <p>Strong desire to keep their children healthy.</p> <p>Wash their own hands fairly often.</p>
<p><b>BEHAVIOR 2: STORAGE OF WATER</b></p> <p>Should limit access of drinking water to adults only and provide children with drinking water. Use two different containers to pour water and to drink water.</p>	<p>Allow access to all, even children, and use the same container to pour, dip, and drink water.</p>	<p>Give drinking water to their children.</p> <p>Store in covered container.</p>	<p>Misconception of a proper/clean water source (developed source).</p> <p>Insufficient drinking water.</p> <p>Belief that "fast-flowing" water is safe to drink.</p>	<p>Responsibility for health of family.</p> <p>Understand importance of "clean" drinking water.</p>
<p><b>BEHAVIOR 3: DISPOSAL OF FECES</b></p> <p>At all moments, encourage child to use latrine or use a pot for their feces.</p>	<p>Leave feces on the ground near the house and in many cases for pigs to eat.</p>	<p>Immediately dispose of their children's feces in the latrine.</p>	<p>Belief that pigs are OK for such disposal.</p> <p>Dislike of use of latrines in general.</p>	<p>Availability of latrines.</p> <p>Knowledge of link between feces and diseases.</p>

### ***Testing and Development of Communication Materials***

The team then identified the communication materials to be developed. These included brochures, posters, and pamphlets for health center personnel, and brochures, posters, and flipcharts for caregivers. In January and February 2003, SANRU contracted with a local artist and a printing company to produce the materials. These were then pre-tested twice, revised, and printed in sufficient quantity for the pilot zones.

### **2.2.3. Training of C-IMCI Teams in Pilot Health Zones**

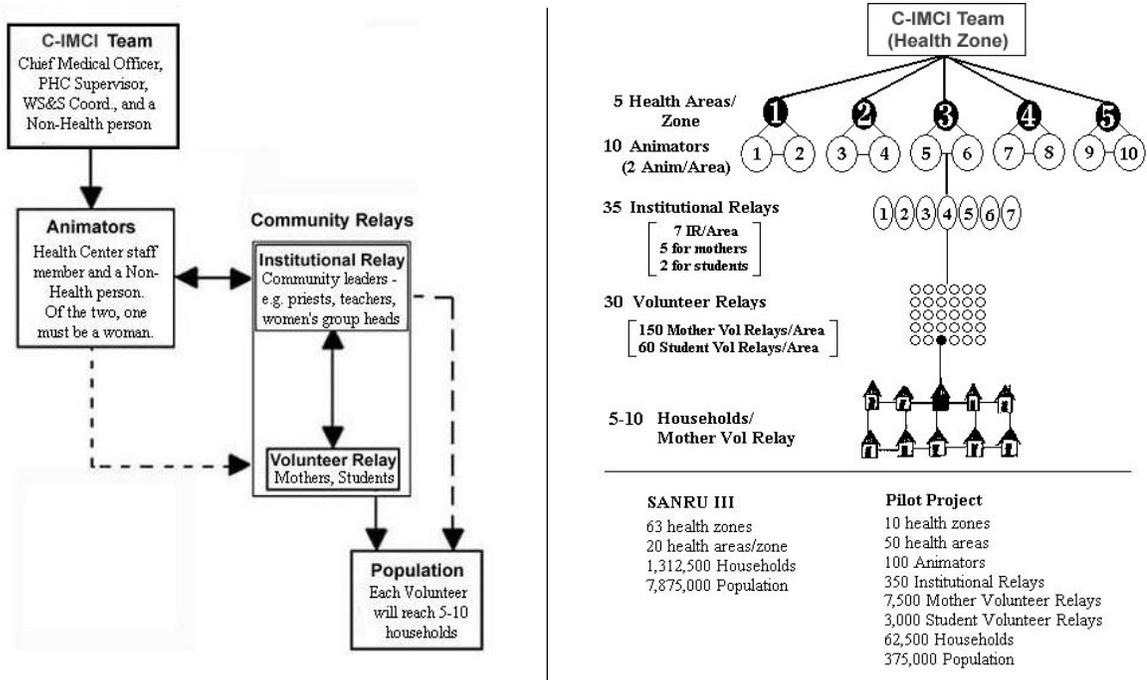
In order to fully understand the training, it is necessary to be familiar with the implementation strategy for the behavior change communication program. Figure 1 depicts the strategy. At the zonal level, a C-IMCI team consisting of the chief medical officer, primary health care (PHC) supervisor, WS&S coordinator, and a non-health person is trained. This team is responsible in turn for training a two-person health area team (consisting of a health center staff member and a non-health person such as a teacher) and for ongoing monitoring and supervision. The health area team (referred to as animators in Figure 1) is responsible for training and monitoring both institutional relays (e.g., priests, teachers, village chiefs, and influential leaders of local groups) and volunteer relays such as mothers and students. Both the institutional and volunteer relays are responsible for conveying key hygiene messages to the population, principally mothers. The right side of Figure 1 shows the number of C-IMCI actors and the target population.

In order for this communication infrastructure to work, training was needed at all levels. EHP and SANRU first developed an eight-day course, complete with a facilitator's guide and a participant manual, to train the zonal C-IMCI teams. The objectives of this course were:

1. Define the conceptual framework for C-IMCI.
2. Describe the C-IMCI approach to be implemented in the ten pilot zones.
3. Use facilitation skills to conduct interactive presentation, brainstorming, and large- group discussions.
4. Use a range of training techniques such as small groups, case studies, role plays, and field visits.
5. Conduct two practice training sessions based on the experiential learning model.
6. Develop a plan to apply what was learned in the workshop including the training of health areas teams.
7. Identify the selection criteria for the animators.

8. Define the roles and responsibilities of the zonal C-IMCI team, animators, and community relays.
9. Explain the hygiene behavior change strategy in the context of C-IMCI.
10. Show the C-IMCI teams how to use the training course materials developed to train the health area animators.
11. Discuss how to identify the institutional relays.
12. Discuss the importance of monitoring.

Figure 1. C-IMCI Strategy for Ten Pilot Zones



The lead EHP consultant and SANRU WS&S Coordinator delivered this course twice: from March 25–April 5, 2003, for six zonal teams or 24 participants, and from April 17–28, 2003, for four zonal teams and 16 participants.

The training team also developed a five-day course (again with a detailed facilitator’s guide and a participant manual) for the zonal teams to use in training health area teams. This course was essentially the same as the zonal training minus the training skills component (since the health area teams would not be doing formal workshops but rather shorter sessions with the institutional and volunteer relays). The course also focused on the actual tasks the health area teams would have to do after the training. In the months immediately following the zonal trainings, the zonal C-IMCI teams delivered these courses.

## 2.2.4. Monitoring and Evaluation

The monitoring and evaluation system for this pilot approach addressed two outcomes: the effectiveness of the communication strategy itself and the actual behavior change impact.

To monitor the effectiveness of the strategy to deliver hygiene messages at the community level, a number of quantitative data collection tools were developed for use at the zonal, animator, and relay levels. Introducing these tools was integrated into the training design for the zonal C-IMCI teams.

The second part of this strategy-level monitoring was a six-month evaluation. The purpose of this evaluation was to take lessons learned from the pilot activity and improve the hygiene communication strategy before the activity was scaled up to other health zones. The results of this evaluation are reported in Chapter 3.

For monitoring and evaluating the behavior change impact of the approach, EHP and SANRU contracted with the SPH to provide a quantitative baseline that could be used to measure actual behavior change over time. The specific objectives of the baseline study were the following:

- Observe the household hygiene conditions in three of the ten pilot zones—Kangu, Vanga, and Tshikaji.
- Determine the extent of knowledge, attitudes, and practices in hygiene at the household level.
- Measure the actual level of behavior in the selected zones.
- Provide a baseline.

The zones were selected based on ease of access, security, and the presence of sanitation facilities. Four health areas were randomly selected within each zone. In

each health zone, ten households were sampled in the intervention areas and 70 in the control areas. In all three zones, 839 households were surveyed.

Tables 2 and 3 show the findings in two critical behaviors: disposal of children's feces and handwashing.

Table 2: Disposal of Children's Feces

<b>Behaviors</b>	<b>Frequency</b>	<b>Percentage</b>
Disposed immediately after defecation	561	72
Disposed of later	198	25.4
Not disposed of at all	20	2.6
<b>Total</b>	<b>839</b>	<b>100</b>

Table 3: Times When Mothers Wash Their Hands

<b>Moments</b>	<b>Yes</b>		<b>No</b>	
	<b>N</b>	<b>%</b>	<b>n</b>	<b>%</b>
Before eating	762	90.8	77	92
After defecating	208	24.8	631	75.2
After eating	438	52.2	401	47.8
After having played	52	6.2	787	93.8
Upon waking in the morning	152	18.1	687	81.9
When the hands are dirty	3	0.4	836	99.6
After returning from the fields	219	26.1	620	73.9
Before bedtime	13	2.4	52.6	97.6
After greeting people	47	5.6	792	94.4

The baseline survey suggested the following conclusions:

- Knowledge of fecal disposal, handwashing, and safe water storage by mothers is weak.
- Access to a safe water system is 30% in the surveyed zones.
- Hygienic handwashing occurs in 31.9% of households.
- Latrines are used but are not maintained. Only 25% of households dispose of children feces in a latrine.

- Hygiene conditions in the health centers are not adequate.
- 72% of health center nurses use soap, and 81% use clean water, but knowledge of when and how to wash hands is weak.

### 2.2.5. Integration of Hygiene Promotion with WS&S Efforts

Since SANRU III includes support for improved water points, community participation, and attention on sanitation through the Clean Village Program, EHP and SANRU wanted to ensure that all these elements were integrated. While integration was a theme throughout, the lead EHP consultant made a trip in August 2003 to enhance the strategy for integration. The consultant and SANRU colleagues:

- Agreed that the hygiene promotion activities would be done in the same communities where there was already an improved water point or where one was planned.
- Developed a guide for the Clean Village Program that would promote the construction of latrines where hygiene promotion activities were planned.
- Revised the training courses for the WS&S coordinators discussed in Section 2.1 to include the C-IMCI approach and the specifics of the hygiene promotion strategy.
- Developed a flipchart for WS&S coordinators to help them promote the link between water supply and sanitation infrastructure and hygiene behavior change when working with communities. This tool would be integrated in the training for coordinators.

### 2.2.6. Evaluation of Ten Pilot Zones

In March 2004, a four-person team carried out an evaluation of the hygiene promotion activity in the ten pilot zones. The team consisted of the lead EHP consultant, the SANRU WS&S coordinator, the SANRU C-IMCI coordinator, and one person from the SPH.

The team developed an interview protocol to determine the following:

- Effectiveness of the implementation strategy including the training, the zonal teams, the health area teams, and the institutional and volunteer relays
- Effectiveness of the messages and communication materials
- Adequacy of supervision by SANRU, zonal C-IMCI teams, and health area teams
- Success in establishing linkages to the infrastructure component.

The team divided into two sub-teams and together visited seven of the ten pilot zones. Within each zone, the sub-teams assessed hygiene activities in two health areas. The results of the evaluation will be discussed in Chapter 3.

## 2.2.7. Scale-up Training

From the beginning of this activity, the aim has been to work at scale. Because SANRU currently works in 56 USAID-assisted health zones and 19 World Bank-assisted zones, there is potential to reach a large population. In the USAID-assisted zones alone, the target population is 8 million people. This activity began in ten pilot zones. SANRU has already trained teams in the 19 zones assisted by the World Bank. The next step in scaling up was to extend the activity to 12 additional USAID-assisted health zones. In order to do this, EHP and SANRU trained two teams that would then assist SANRU in training zonal C-IMCI teams in 12 new zones. Each training team included a chief medical officer from a pilot zone, an outside health person from a pilot zone, a Ministry of Health representative, and a member of the National Water and Sanitation Training Team. Since all the members of these teams were already skilled in the C-IMCI program and in hygiene, the focus of their training was on further developing their training skills and in planning for the upcoming workshops.

Table 4: List of EHP Consultancies

<b>Activity</b>	<b>Team</b>	<b>Date</b>
Development of training plan for WS&S coordinators	Graeme Frelick Itoko Iluki, Paulin Kalonji	February 2002
Training of trainers	Graeme Frelick, Rachid Ben Amor	April 2002
Development of hygiene promotion plan	Ian Moise Paulin Kalonji	June 2002
Development of hygiene promotion strategy	Lynne Cogswell Paulin Kalonji Dr. Mbela Kiyombo, SPH	September 2002– January 2003
Development of training design and materials Training of C-IMCI zonal teams	Ian Moise Paulin Kalonji	January-April 2003
Second training of trainers	Graeme Frelick Rachid Ben Amor	May 2003
Baseline survey	School of Public Health team	June 2003
Integration of hygiene promotion with WS&S activities	Ian Moise Paulin Kalonji	August 2003
Evaluation of pilot zones	Ian Moise Paulin Kalonji Dr. J.P. Wan'tabala Ilunga Jean Diwete	March 2004
Scale-up training	Ian Moise Paulin Kalonji Dr. J.P. Wan'tabala Ilunga	May 2004

## 3. Results

The results described in this chapter are based on the evaluation of the pilot zones described in Section 2.2.6 and observations from SANRU and EHP. The results are divided into those related to the training of the zonal WS&S coordinators and those related to the development of the hygiene promotion program.

### 3.1. Training of WS&S Coordinators

#### 3.1.1. National WS&S Training Team

As of April 2004, the national training team has 14 active members. While some of the trainers could benefit from further refresher training, SANRU has been satisfied in general with the performance of the national training team in developing the capacity of the zonal WS&S coordinators. SANRU has also used some of the national training team members in other training activities. For example, some national training team members have been used in the training of the C-IMCI zonal teams. Other organizations such as the National Rural Water Service have also expressed interest in contracting with members of the national training team.

#### 3.1.2. Training of WS&S Zonal Coordinators

Fifty-three zonal WS&S coordinators are functioning in USAID-assisted zones and 19 in the World Bank-assisted zones. In the USAID-assisted zones, which have been the focus of the EHP activity, all 53 coordinators have been trained in the first course on spring capping and community participation, 33 have been trained in the second course on sanitation and latrines, and 26 in the third course on rehabilitation of existing wells and handpumps. The third course is only relevant to zones where wells and handpumps are used. SANRU's training calendar includes plans to deliver these courses to those that have not yet taken the courses on latrines and wells/handpumps as well as the fourth course on rainwater harvesting.

Table 5 shows the impact of the training on the number of water points and number of clean villages. There are no data yet for latrines since the second course on latrines has only recently been delivered.

Table 5: Impact of Training

Indicator	2001	2002	2003	April 2004
No. of springs capped	224	318	557	550
No. of wells with handpumps	0	24	49	17
No. of clean villages	0	0	10	150
Population served by SANRU	56,000	77,500	433,148	1,511,013

Source: Data provided by SANRU

In general, the coordinators are now better integrated into the zonal health teams than in the past, although in some zones work remains to be done. This is due in part to establishing C-IMCI teams in the pilot zones, since these teams generally include the WS&S coordinators. By becoming an essential member of the C-IMCI team and by elevating hygiene in importance, the coordinators have become better integrated into the zonal health teams. As the C-IMCI approach is extended to other zones, this integration is expected to improve further.

### 3.1.3. Training Materials

Three courses for training zonal coordinators have been tested and revised:

- Spring capping and community participation
- Sanitation and latrine construction
- Well rehabilitation and handpump installation and maintenance

The fourth course on rainwater harvesting has not yet been used.

## 3.2. Hygiene Promotion

The hygiene promotion activity has resulted in two overarching achievements that are critical to the scale-up of hygiene promotion activities in other zones.

### ***Conceptual Framework for Hygiene Improvement***

The Hygiene Improvement Framework is accepted as a very useful structure. The recognition that hygiene improvement requires access to hardware, an enabling environment, and hygiene promotion has played an important role in linking the hygiene activities to other SANRU-assisted efforts in improving water supply systems and sanitation services.

In addition the use of the C-IMCI framework has proven to be a valuable strategy in the DRC for integrating hygiene into a broader primary health care agenda. The C-IMCI framework allows for hygiene to be integrated with a range of key family and community practices, with the result that hygiene is not seen simply as an ancillary

task for the WS&S coordinators, but rather as an essential focus of the zonal health teams.

### ***Development of Infrastructure for Behavior Change Communication***

In the ten pilot zones, the infrastructure for behavior change communication has been developed. This infrastructure includes:

- Development of a zonal C-IMCI team that includes the chief medical officer, the WS&S coordinator, the primary health care supervisor, and a community leader outside the health team. These teams have been trained in the overall C-IMCI approach and hygiene behavior change as well as in the skills required to implement the approach in health areas and communities.
- Development of health area teams that include a health center staff member and a community leader outside the health cadre, one of which must be a woman. The health area teams in the pilot zones have also been trained in the C-IMCI approach and in hygiene behavior change.
- Identification and training of institutional and volunteer relays that are responsible for conveying key messages in the pilot health areas.
- Development of hygiene behavior change materials for use at the health center and community levels.

Although the evaluation identified areas for strengthening this infrastructure, there is widespread agreement between SANRU and the health zones that this infrastructure is effective and appropriate to the DRC context.

### **3.2.1. Capacity-Building**

#### ***Training***

Ten zonal C-IMCI teams and 45 health area teams have been trained in the pilot zones. However, the zonal teams have not all been stable; four of ten chief medical officers trained have returned to school for further study, but since they did not participate in the training, their replacements have not yet fully embraced the approach.

The approach to training the zonal health teams and health area teams has been tested and proven successful. The eight-day workshop to introduce the C-IMCI framework and the hygiene promotion approach to the zonal C-IMCI teams and build their training skills has worked very well. These teams have, in turn, been successful in training the health area teams. Of the seven pilot zones in the evaluation, all seven zonal C-IMCI teams and all 14 health area teams reported that the training was excellent, evaluating them as “effective,” “practical,” and “motivating.” In addition, the two training courses for training zonal and health area teams are well documented

and can be used easily by qualified trainers. These materials have already been adapted for use in the 19 PMURR zones, which decided to lead with malaria instead of hygiene.

Two national level training teams have been established that can train zonal C-IMCI teams. These teams draw from the National WS&S Training Team, SANRU, MOH employees who have been trained, and the most qualified zonal health staff who have been through the C-IMCI TOT for zonal teams.

### ***Institutionalization***

SANRU has fully embraced the C-IMCI strategy, including the hygiene promotion component. Over the past two years, senior SANRU staff have been directly involved in shaping the approach and in providing the needed support to implement it. SANRU has covered all in-country costs of implementing the strategy, including staff and local consultant time, workshop costs, reproduction of communication materials, and most importantly, making the C-IMCI approach a cornerstone of its approach to building health zone capacity.

This approach has generated much interest among different development partners, a number of whom have requested information on the strategy. The MOH in Togo and Cameroon requested copies of the training documentation after they were presented at a Francophone conference on C-IMCI. In addition, several Kinshasa-based partners (e.g., CRS and IRC) have called on SANRU for advice during implementation of their interventions using the framework. In addition 19 health zones, funded by the World Bank, but managed by SANRU, have already utilized the strategy, leading with malaria.

This activity has generated interest in the MOH. SANRU's intention was to pilot this strategy in ten zones with the aim of evaluating the results and then presenting them to the MOH. In the course of the past 18 months, the strategy has been presented in various forums, including a national health conference organized by SANRU in August 2003. While the MOH has begun to use the language of the C-IMCI strategy, some people are interested in testing a different C-IMCI strategy called the Ouenze Approach, but as of now this approach is not being used in the health zones. SANRU is currently the only organization implementing a C-IMCI program.

Under the Ouenze approach, community relays are broad-based community health workers. They are to be trained in 15 family health practices, given the key messages associated with each practice, and asked to carry out household visits. During these visits, they are to identify cases, treat minor illnesses, and refer major ones to the health facilities. Each relay is responsible for 30 households. In contrast, under SANRU's C-IMCI approach there are two community relays instead of just one, each relay is responsible for ten households, relays are not responsible for case identification and treatment, and relays must be able to read and write.

## 3.2.2. Implementation of the BCC Strategy

### ***Institutional and Volunteer Relays***

In every village visited during the evaluation, the volunteer relays had transmitted the messages to households as well as to public places, such as markets, water points, and schools.

The system of volunteer and institutional relays has generally worked well. The intent was to tap into existing community structures rather than create new ones and to avoid the traditional problem of overloading community health workers by distributing the workload among a number of local players. The evaluation team found that the health area team and relays worked well as a team and that the volunteer relays in particular were very engaged. One issue that has been noted, however, was the tendency to select primarily teachers and priests as institutional relays and rarely village leaders or other influential community members. This selection bias overloaded some institutional relays because their coverage areas included distant villages with no churches and schools.

The evaluation team noted that volunteer relays could use a more complete understanding of the key messages and additional training in how to negotiate behaviors with households.

During the evaluation, a recurring theme was motivation for the institutional and volunteer relays. Since it is unrealistic to find resources for financial motivation, other forms of motivation will be necessary. One potentially effective source of motivation, suggested by interviewees, was to provide practical work tools such as evaluation notebooks, guides for carrying out work, badges, and perhaps transport (e.g., bicycles). Another was to have a better monitoring system with more regular visits.

### ***Communication of Messages***

Behavior change communication materials have been developed. These materials consist of brochures, posters, and flipcharts. The brochures were initially developed with three key messages in the same brochure, but after their initial use, they were revised to leaflets with only one message per leaflet. Posters have proven to be the most effective material for public places, such as the clinic and markets, and leaflets the most effective at the household level.

In the evaluation, there was virtually unanimous sentiment that only one message be transmitted at a time. The general opinion was that each message should be transmitted and repeated for four weeks before transmitting a new message. This task is easier when the materials convey only one message at a time. Volunteer relays and mothers receiving the messages reported that only after repetition of the message does behavior begin to change.

### 3.2.3. Monitoring and Evaluation

#### ***Supervision***

The weakest aspect of the overall C-IMCI approach is monitoring and supervision. SANRU has not been able to effectively monitor the performance of the C-IMCI teams at the zonal levels. The zonal C-IMCI teams have not effectively monitored the health area teams, and the health area teams have not adequately monitored the institutional and volunteer relays. The original idea was for SANRU to use its regional polio coordinators to monitor the zonal teams, but they were not sufficiently trained in the approach and have not provided the needed supervision. Some of the difficulties that have arisen in the implementation of the approach might have been resolved had there been more effective supervision.

While a monitoring system was put in place with quantitative tools designed for each level (C-IMCI teams, animators, and institutional relays), it encountered two principal problems. First, implementation of the monitoring system was hampered by the complexity of the monitoring tools, the lack of training in how to use them, and a lack of materials (e.g., often there were no photocopiers to duplicate monitoring sheets). Second, the monitoring approach itself was conceived as a top-down quantitative one that lacked a bottom-up (i.e., community-based) qualitative side. The system did not adequately recognize that success in the community is dependent on social visits and strong relationships. Thus, inadequate attention was given to developing a community-based system for data collection and a regular system of follow-up. As the approach is scaled up to other zones, the development of an effective system for monitoring and supervision is essential.

#### ***Baseline and Mini-KPC Survey***

The baseline developed by the SPH will provide a useful basis in the future for measuring hygiene behavior change. While time did not allow for a complete post-intervention survey to measure actual behavior changes, SANRU did commission the School of Public Health to do a mini KPC survey in order to have preliminary results that could be used by the evaluation team. This survey was conducted in three zones, two of which were in the baseline. Independent samples were drawn from the zones during each survey. Table 6 presents results that are therefore indicative of overall progress in the zones where interventions are supported by SANRU. The best time for a complete post-intervention survey would be in June of 2004 or 2005 in order to not have issues of seasonality affect the results, but the EHP contract end date in June 2004 made this timing unworkable.

Table 6: Comparison between Baseline and Follow-up Survey

<b>Indicators</b>	<b>1<sup>st</sup> survey</b>	<b>2<sup>nd</sup> survey</b>
Percentage of households where only adults have access to water stored in the house	69.6	88.6
Percentage of households that have latrines	73.8	85.7
Percentage of households that have access to non-hygienic latrines	90.6	68
Proportion of households that get water from an improved water supply	30.1	50.1
Percentage of households that wash their hands correctly and air dry them	31.3	33.3
Percentage of households that air dry their hands	65.6	83.5
<b>Percentage of households that dispose of children's feces immediately in a latrine</b>	<b>72.0</b>	<b>91.2</b>
Percentage of households that dispose of children's feces but not immediately after defecation	25.4	8.8
Percentage of mothers that defecate in the bush	11.4	2.4
Percentage of households that use a dirty latrine	21.2	10.6
<b>Percentage of mothers that wash their children's hands at three critical times</b>	<b>----</b>	<b>18.9</b>
Percentage of households that use a water storage container that is not covered	16.3	9.4
Percentage of nurses that wash their hands with clean water	81.8	100
Proportion of health centers that have latrines with covers	0	95.4
Proportion of households that have a place to wash their hands	0	98.4
Sample size (households)	840	630

Source: Survey on household hygiene by School of Public Health, March 2004

### 3.2.4. Links to Infrastructure Development

As discussed in Section 2.2.5., the hygiene promotion strategy called for linkage to the infrastructure activities.

The importance of having access to clean water was paramount to selecting health areas for the hygiene promotion intervention. Selection criteria included either the existence of an improved water point or a concurrent project to improve a water point. The evaluation revealed that C-IMCI teams that followed this selection

criterion had more success than those that did not. Those that did not ended up having to replace inappropriate health areas with ones that fit the criterion. This selection criterion had the additional benefit of identifying communities that exhibited a predisposed motivation for community-based development.

The Clean Village Program provided a means to promote infrastructure associated with behaviors related to environmental sanitation. In health areas where the hygiene promotion worked best, the Clean Village Program actually became a “next step” in the process. The result was a development model that first identified motivated villages/health areas through water source improvement projects, then introduced the hygiene behavior change communication strategy, and finally culminated with a Clean Village statute which, when attained, afforded the community a micro-credit of \$500-\$1,000 for a development project.

Inclusion of zonal WS&S coordinators on the C-IMCI team proved to be an important part in linking this hygiene promotion program with infrastructure development. Not only do they spend a lot of time in the field, but they are also in charge of the infrastructure development component. In zones where the CEA was competent, the hygiene promotion activities worked better.

### 3.3. Application of the C-IMCI Approach in Urban Health Zones

Because of the success of the hygiene promotion activity, USAID/DRC submitted a proposal to the Making Cities Work Partnership Fund managed by the Urban Programs Office in the Bureau of Economic Growth, Agriculture, and Trade to adapt the approach to urban health zones. The proposal was accepted, and the initial one year activity to work in three health zones (one funded under PMURR) began in September 2003. The activity calls for the identification of a high impact environmental health activity in at least one urban location per zone during the first year of the activity. The goal is to develop a model that can be expanded into other urban health zones during the implementation of USAID/DRC’s Integrated Strategic Plan (ISP) for FY 2004–2008. USAID/DRC intends to request a second year of funding in 2004 from MCW to work in two additional cities. The first two years will serve as a transition before full implementation of the new ISP.

The three health zones that were selected are Kabondo (Kisangani), Dibinidi (Mbuji-Mayi), and Bukama (Bukama, funded by the World Bank). In each city, activities have been selected to address environmental health problems that have an impact on child mortality, that are supported by the community and local government, and that are feasible to implement. The activities are supposed to result in concrete improvements. Examples include market latrines that reduce diarrheal disease and clearing of drainage canals that aim at reducing mosquito breeding sites and therefore malaria prevalence.

By April 2004, coordinators for each city were selected and trained, kickoff workshops involving all key local stakeholders were held, memoranda of understanding were signed in each city, projects were selected, and project proposals were submitted to SANRU for funding. Project implementation is expected in May-July 2004, and a project evaluation is scheduled for August.

EHP worked with SANRU in the planning and training phases of this urban activity. Although this activity is only in its first year, it represents a promising offshoot of the rural activity.



## 4. Lessons Learned

As a global project, one of EHP's mandates is to draw lessons learned for use in other countries. The DRC activity offers a particularly interesting context because of the potential to implement the activity at scale. Lessons learned must always be viewed in context before determining their applicability elsewhere. In the DRC, the important contextual factors to keep in mind when considering the lessons learned are the availability of a strong local partner in SANRU, the infrastructure poor-environment in the DRC, and the sheer size of the country. The lessons presented in this chapter are those considered to be the most important for hygiene promotion in other countries.

***Lesson 1: The Hygiene Improvement Framework proved to be a useful conceptual framework for designing and implementing EHP assistance to SANRU.***

From the beginning of EHP's involvement, the HIF was used as a conceptual framework. During the development of the training materials and the revitalization of the national training team, the HIF served as a way to integrate the various courses and approach the implementation of water, sanitation, and hygiene activities. When the hygiene promotion component was planned, the HIF provided a clear rationale why hygiene was important and an important entry point into a primary health care project. The HIF was also used in the training of the C-IMCI teams as a way to integrate water, sanitation, and hygiene into the zonal primary health care program. The HIF proved to be an easily understood and convincing framework for both the training and hygiene promotion activities.

***Lesson 2: Hygiene can be successfully integrated into a primary health care project.***

C-IMCI has provided the framework for SANRU III to promote and extend primary health care to rural communities. Linking hygiene promotion to C-IMCI was a major factor in hygiene promotion gaining acceptance in this integrated PHC project. While in the past SANRU always had a WS&S component, it was not well integrated into the other primary health care interventions. Using the C-IMCI framework got the attention of the project's key technical and zonal level health staff and of USAID. In addition incorporating hygiene behaviors actively into C-IMCI meant that a wider audience was reached than when using facility-based channels.

Another factor in integrating hygiene successfully was the decision to train a zonal C-IMCI team that included the chief medical officer. The result was a high level of support from key zonal level staff.

***Lesson 3: Scale-up is easier when there is a capable and motivated local organization with an extensive reach in the country.***

While scale-up has not yet occurred in the DRC, the stage is set to extend the activity to additional health zones. There is no question that one of the key factors is the presence of SANRU. In effect, SANRU is the largest primary health care organization in the DRC and reaches more people than any other. In addition, SANRU staff are very capable and motivated. Once this activity got the attention of key SANRU staff, it became a high priority, and staff routinely allocated the resources necessary for its success. EHP's role was one of providing technical assistance and serving as a catalyst, but the majority of the work was carried out by SANRU. In addition to SANRU, the School of Public Health in the University of Kinshasa also played a key role in the formative research, the strategy development, and the baseline data collection. Working with SANRU and SPH as true partners has resulted in a high degree of local ownership.

***Lesson 4: Capacity-building is key to developing the programmatic infrastructure for an activity intended to be scaled up.***

Capacity-building has been an implementation theme throughout this activity. However, it is important to note that capacity-building included much more than training. Though training at all levels was the way the activity was launched in the pilot zones and in the health areas, in this project capacity-building also included working with SANRU to internalize the C-IMCI approach as a way of integrating hygiene and other key family practices, building support for the program widely within and outside of SANRU, developing program and training guides (e.g., a Clean Village Guide and training guides), relying on local trainers, developing monitoring tools, and developing zonal teams.

***Lesson 5: Attention to the quality of training is fundamental to its eventual impact.***

This is not a new lesson, but it is included to reinforce the importance of paying attention to the training process as well as the content. The training of trainers for the national WS&S training team was conducted by highly skilled trainers. The TOTs were designed to improve participants' training skills more than they were to improve their technical skills. Training specialists reviewed the course materials so they would be sound both in training methodology as well as content. Similarly the hygiene training designed for the zonal C-IMCI teams and the health area teams was effective both in terms of training process and technical content. Throughout this activity, high standards of training have been maintained, which has contributed to training that has had a large impact.

***Lesson 6: Hygiene behavior change was most successful when integrated with improvement of water points and sanitation facilities at the village level.***

The evaluation team noted that the hygiene promotion strategy works best when the following three sequential steps are followed. First, villages are selected that already have demonstrated motivation through their participation in a water improvement project. Second, the hygiene messages are introduced. Third, the Clean Village Program, which includes an improved water point, sanitation facilities, and a place to safely dispose of garbage, then provides a means to improve infrastructure associated with behaviors related to environmental sanitation. In effect the motivation to participate in the Clean Village Program comes both from the hygiene behavior change messages and the \$500–\$1,000 micro-credit that the village can use for economic purposes. This sequence of program elements works smoothly and appears to have the greatest impact.

***Lesson 7: The concept of tapping into existing community structures has proven to be practical and realistic in the DRC context.***

Rather than creating new committees and new structures or training village health workers, the approach instead relied on existing structures to convey key messages. These included priests, teachers, village chiefs, and other community leaders, all of whom can play a strong role in reinforcing key messages and enabling change.

The hygiene promotion program included developing communication materials and training “institutional relays”—priests and teachers—on how to use these materials in the course of their everyday work. In addition, the program identified and trained “volunteer relays,” usually mothers who would convey the messages to other mothers.

The decision to use existing structures resulted from extensive discussions with the communities themselves and with zonal and health areas staff that work directly with communities. The use of existing structures has helped to thoroughly ground the hygiene behavior change activities in the community and develop local ownership of the program.



# 5. Recommendations

## 5.1. Recommendations for SANRU

### *Training of WS&S Coordinators*

- Organize a third TOT for the national WS&S training team. Seven of the members only participated in a one-week TOT and would benefit from additional training skills.
- Respect the selection criteria for the zonal WS&S coordinators. The quality of the coordinators varies greatly, often because they were not well selected in the first place. Because of the increased importance of the position and the coordinator's role in the hygiene promotion program, SANRU should work with the MOH to implement a more effective recruitment and selection process.

### *Hygiene Promotion*

- Solidify the results in the ten pilot zones. In the past 18 months, hygiene promotion activities have been implemented in five health areas in each zone. Since each health zone has approximately 20 health areas, each zone should develop its own strategy for scaling up the hygiene promotion activity to other health areas. These strategies should follow the selection criteria and select new health areas based on identifying motivated communities. In addition, chief medical officers that have been appointed since the training of the zonal C-IMCI teams should participate in the next round of training. SANRU should also summarize the revisions to the hygiene promotion strategy based on the lessons learned and share them, along with revised materials, with the ten pilot zones.
- Promote the sequence of programmatic activities that has worked well. This sequence includes improving the water point, implementing the C-IMCI strategy with hygiene as the lead intervention, and introducing the Clean Village Program.
- Fine tune the hygiene promotion approach based on the experience in the pilot zones. This includes:
  - introducing one message at a time
  - staying with each message for one month
  - integrating the lessons from the evaluation into the facilitator and participant guide for training

- Increase the personnel at each level. The zonal C-IMCI teams should add a fifth person that is outside the health sector. At the health area level, another person should be added to the health area team and more institutional relays should be identified and trained so there is at least one in each village. Finally, SANRU should identify an assistant to the C-IMCI coordinator in Kinshasa to enable more monitoring and supervision.
- Scale up to 12 new zones as planned. The first step is the continued development of the national C-IMCI training teams begun in May 2004. The second step will be to organize four zonal level C-IMCI workshops (one for every three zones) to create zonal teams.
- Completely revamp the monitoring system to emphasize both routine supervision visits and simplified quantitative data collection.
- Contract with the SPH to conduct a post intervention KAP survey in June 2005. This survey should be repeated in the same health areas that were used in the baseline study in order to accurately assess the impact of the interventions.
- Develop a scale-up strategy for the 34 zones of SANRU that do not currently use the C-IMCI approach.
- Continue to coordinate with the MOH and other implementing partners that are carrying out water, sanitation, and hygiene activities. SANRU should disseminate the evaluation report on the pilot zones to other partners as a way to continue to build support for the approach.

## 5.2. Recommendations for USAID

- Support the expansion of the SANRU C-IMCI strategy to the additional 12 zones and in the future to the other 34 zones. While the ten pilot zones have provided an excellent start, the additional zones will provide a bigger experience base on which to eventually scale up to even more zones.
- Consider ongoing assistance to SANRU III from a centrally funded project such as EHP. From EHP's perspective, assistance to SANRU has been a rewarding and successful experience. The implementation of hygiene promotion in the pilot zones has generated enthusiasm among national and zonal partners. However, the work is not done. SANRU would benefit from ongoing assistance in the next several years as the hygiene promotion activity is replicated in other zones and potentially scaled up widely.

# Key Products

*C-IMCI Project (Community – Integrated Management of Childhood Illnesses):  
Training Module (to train C-IMCI teams), Facilitator Guide and Participant  
Manual, Ian Moise and Paulin Kalonji. May 2004*

*C-IMCI Project (Community – Integrated Management of Childhood Illnesses):  
Training Module (to train Animators), Facilitator Guide and Participant Manual,  
Ian Moise and Paulin Kalonji. May 2004.*

*Clean Village and Model Health Center Guide, Ian Moise and Paulin Kalonji.  
September 2003*

*Clean Village Film – Kinzau, Health Zone of Nselo. Created by Ian Moise, Thomas  
Lelo, and Paulin Klonji. August 2003.*

*Evaluation of the C-IMCI/Hygiene pilot project, Ian Moise, Paulin Kalonji,  
Wantabala Iluna, and Jean Diwete. May 2004.*

*Guide for Institutional Relays, Ian Moise and Pauline Kalonji. May 2004*

*Identification of actual and desired hygiene behaviors in households and health  
centers in the health zones of Kangu and Kabondo, Dianda, Kiyombo Mbela et al.  
February 2002.*

*Improving Hygiene in Rural DRC : Developing a Behavior Change Strategy. KAP  
baseline study of environmental and personal hygiene at the household and health  
center level in SANRU's pilot C-IMCI health zones, Kiyombo Mbela et al. July  
2003*

*Making Cities Work: Training Module (to train the Urban Hygiene Coordinators),  
Facilitator Guide and Participant Manual, Ian Moise and Paulin Kalonji.  
November 2003*

*Plan to Integrate Hygiene Improvement into the Water and Sanitation Component of  
SANRU III, Ian Moise. September 2002*