

## CASE STUDY

### PROMOTING HYGEINE AND SANITATION IN SCHOOLS

#### WATER SUPPLY AND SANITATION FOR LOW INCOME COMMUNITIES -2 INDONESIA

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#### INTRODUCTION

This project is a component of the Second Phase of Indonesia's Water Supply and Sanitation for Low Income Communities (WSSLIC-2). As the project does not begin until late 2000, the health education component described here is only the proposed design. The WSP-East Asia and the Pacific contracted Community OutReach Initiatives (CORI), a local Indonesian non-profit health development agency, to develop a project design would improve the desired behavior change. CORI has had much experience utilizing elementary schools and students as a basis for community health education programs in Indonesia. In this design the PHAST concept was integrated into a school - based community education program design.

#### Project Objective:

Improve the health status, productivity and quality of life in poor communities in the under-served rural and peri-urban villages in the project provinces by improving the health and hygiene/sanitation behavior of the community using the elementary schools.

#### Project Justification

Hygiene and sanitation promotion (HSP) is an accepted essential component of any water supply and sanitation (WSS) program. Often the "hardware" of WSS programs (construction and operation of the water system) is given priority to the detriment of the community education effort (which is seen as "software"). But it has been well documented that the material product is soon at risk of becoming a disappointment to the community when water quality is found to be again compromised and hopes of surmounting the water-borne disease burden are dashed. Community behavior change is needed to ensure maintenance of the originally developed water system integrity and enduring quality to the user end point (the home). In addition to the required basic monitoring and system maintenance, basic personal behavior changes are demanded. These behavior changes fall into the three areas of personal, domestic and environmental hygiene. Typical changes desired include hand washing at appropriate times (after defecation and infant soiling, before food preparation and food consumption), proper water and food storage, and proper waste disposal.

## **IMPLEMENTATION STRATEGY**

The project would develop a school hygiene and sanitation promotion (HSP) program that interlocks directly with the PHAST (*Participatory Hygiene and Sanitation Transformation*) process undertaken by the community during the planning stages of the water and sanitation project. The integration of the PHAST concept into the formal school curriculum will provide a mechanism for students to conduct community HSP activities. With its institutionalization the school health teachers in the fourth and fifth grades will continue this program yearly. Participation in the school HSP program will be required in order to receive funding for a water-sanitation system.

The project would provide for activities that ensure the spread of the school health and sanitation promotion program to the community at large. Students would complete homework assignments that require interacting with and sharing their hygiene and sanitation experience with parents and their neighbors. With project funds the school Parent-Teachers Association (PTA) would assist in the community outreach effort by assisting students and the community to implement activities like a drama and contests (drawing, quizzes). Local health center staff will be involved in the water-monitoring program including replenishment of the kits.

Along with hygiene and sanitation interventions, this project will offer a range of other health improvement options to the community. Once again these will be conducted through the school as a continuation of the school HSP program. Fourth and fifth grade students will each be required to enroll at least two children under three years of age and be responsible for their attendance at the monthly *Posyandu*. As part of the Village Action Plan (VAP) the community can elect for certain maternal and child health topics to be taught in the school (nutrition, immunizations, diarrheal disease management, worm infestation, malaria, dengue, acute respiratory illness, and tuberculosis). Through homework assignments information on these topics will be shared with the parents and neighbors in the same model as the HSP component. The project will also support the semi-annual school de-worming program in the project schools.

The school health teacher along with the fourth and fifth grade elementary school teachers will implement the program after instruction by project field staff. The Ministry of Education will thus work hand-in-hand with the Ministry of Health, which is the prime counterpart.

## **EXPECTED OUTPUTS**

### **Hygiene education**

- 1) Develop participatory hygiene and sanitation education and promotion techniques for elementary schools
- 2) Affect sustained improvements in personal, domestic, and community hygiene and sanitation practices
- 3) Develop appropriate communications support materials and participatory training tools
- 4) Strengthen initiatives to support the government health and water borne disease package (*Posyandu* activities, worming)
- 5) Strengthen health impact monitoring

### **Materials**

1. School HSP curriculum approved by central Ministry of Education
2. PHAST teachers guidebook annotated for elementary school teachers
3. PHAST workbook for students
4. Teacher's child health guidebook
5. Child health workbook for students
6. Laboratory kits (WMQ and fecal strep tests) for schools

### **Trained Personnel**

1. Two master trainers in school health program for each district
2. Community Health Facilitators trained in school health program for training of teachers
3. Ministry of Education sub-district staff trained as teacher trainers.
4. School teachers trained in delivery of school child health program
  - a. 2,500 UKS teachers
  - b. 2,500 4<sup>th</sup> grade teachers
  - c. 2,500 5<sup>th</sup> grade teachers
5. Estimated 375,000 school children and their families will receive HSP and child health program. At least two children under three (750,000) and an average of three families per student enrolled will be impacted.

### **Infrastructure/facilities**

1. Upgraded sanitation and water facilities in 2,500 schools
2. Parent teachers organization involved in community HSP
3. Improved community participation in *Posyandu* services
4. Ministry of health staff (provincial → sub-district levels) trained in school HSP program

### **Evaluation**

Project assessment indicators for behavior change will be developed before the project begins. Community health status indicators will include *Posyandu* attendance and implementation, nutritional status of children, diarrheal disease incidence and morbidity, acute respiratory infection (ARI) morbidity, and malaria incidence and prevention. Evaluation and modification of the teaching modules will occur yearly for the first two years.

### **STAKEHOLDER INVOLVEMENT**

The school HSP program in each village will follow the PHAST process that the villagers will be conducting in parallel. Input by the stakeholders will be provided through the school teacher who is on the village implementation team. At the end of the PHAST process it is expected that the villagers will better understand the health problems that exist in their community. At this time they elect which supplementary child health topics they desire to be covered by the school health teacher (nutrition, immunizations, diarrheal disease management, acute respiratory illness, malaria, tuberculosis, intestinal parasites).

Both the Ministry of Health and the Department of National Education have been supportive of this concept (utilizing elementary school students for community outreach) for several years because of a similar program conducted by CORI in five provinces. The School *Posyandu* Program has demonstrated great effectiveness at increasing community participation in the *Posyandu* immunization and growth-monitoring program. The addition of participatory hygiene and sanitation education to the program is an innovation in this project.

Parent-teachers associations (PTAs) will be involved in the process of facilitating the community outreach aspect of the program. There will be funding for each school and PTA to undertake community outreach activities like poster and drama competitions.

There is much community and stakeholder involvement in this program. During the school HSP and child health courses, each student will possess a workbook in which they are to complete active assignments at home involving their parents and neighbors. In

the supplementary child health curriculum the students traditionally conduct mini-surveys on growth-monitoring attendance, immunization coverage, use of oral rehydration solution for diarrhea management, and home strategies for prevention of malaria. In addition, each student will “adopt” and be responsible for two children under three years of age (siblings or neighbors) urging their mothers to bring them to the monthly *Posyandu*. Other community outreach activities will include community mapping, household hygiene surveys, and water quality monitoring

## **FINANCIAL ASPECTS**

The cost for the overall program will come from the World Bank loan and AusAID grants. The project will pay for the training of NGO field health facilitators and teachers. In addition, the expenses for the monitoring of the program have been budgeted. School materials (teacher guidebooks, student workbooks, and laboratory supplies) will be handled by the project funds. The project funds will also be used to support the school de-worming program. The village will be required to contribute 20% of the cost of building and installing the water and sanitation systems that they decide upon.

The Department of National Education has committed to budgeting for the future to take over the cost of printing the school materials after the end of project. They are very interested in expanding and replicating the concept to non-project provinces if this approach is successful.

## **RESULTS AND IMPACT**

As this project is not scheduled to begin until September 2000, there are not yet any results to discuss. Results of evaluations of the School *Posyandu* Program using the child health curriculum (no HSP) have been very encouraging. During the past five years this program has been running it has consistently demonstrated a doubling in *Posyandu* attendance, growth monitoring and immunization coverage in the very first year.

### **Acknowledgement:**

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Box: The problem of sanitation

Source: WSSCC Working Group on Promotion of Sanitation

Every year, 2.2 million people die of diarrhoea that could have been prevented by good sanitation: millions more suffer the nutritional, educational, and economic loss through diarrhoeal disease that improvements in sanitation, especially human excreta management, can prevent. Human excreta are responsible for the transmission of diarrhoea, schistosomiasis, cholera, typhoid, and other infectious diseases affecting thousands of millions. Overall, WHO estimates that nearly 3.4 million people die annually from water related diseases, and that a staggering 1.5 thousand million suffer, at any one time, from parasitic worm infections stemming from human excreta and solid wastes in the environment. Heavy investments have been made in water supply since 1980, but the resulting health benefits have been severely limited by poor progress in other areas, especially the management of human excreta. In addition to this toll of sickness and disease, the lack of good excreta management is a major environmental threat to the world's water resources, and a fundamental stumbling block in the advancement of human dignity.

Like all complex problems, poor sanitation can be analysed on many interrelated levels. The Collaborative Council Working Group on Promotion of Sanitation led by the World Health Organization from 1993 to 1997 has identified problems, barriers, and themes that appear to operate on three levels.

### **Level 1 - The basic problem: sanitation isn't happening**

Despite years of rhetoric, good intentions, and hard work, we are, in fact, making little progress in improving sanitary conditions for much of the world's population. This is astonishing, given the human capacity to solve problems, the fundamental nature of this basic need, and the enormous suffering caused by our failure to meet it. Yet those of us working in sanitation agree that, with some notable exceptions, we are either losing ground or barely holding the line in our ability to dispose of our wastes in a healthy and ecologically sound, and safe, manner.

### **Level 2 - Barriers to progress: why improvements in sanitation aren't happening**

Given the magnitude and importance of the problem, why is there so little progress? The barriers to progress found by the Working Group were varied and complex, but could generally be grouped into the following linked and overlapping categories.

- Lack of political will.
- Low prestige and recognition.
- Poor policy at all levels.
- Poor institutional framework.
- Inadequate and poorly used resources.
- Inappropriate approaches.
- Failure to admit disadvantages of conventional excreta management systems.
- Neglect of consumer preferences.
- Ineffective promotion and low public awareness.
- Women and children last.

### **Level 3 - Cross-cutting themes: demand and taboo**

If more people expressed a desire for improvements in sanitation loudly enough, many of the problems would resolve themselves. This seeming lack of demand is often considered a constraint. People may want sanitation very badly, yet be powerless to express that desire in financial or political terms. Some may want a safe excreta management facilities, but not at the available price. Others may not want the available "improvements" at any price. We need to examine critically the factors that limit demand, especially those with economic or political roots. Where sanitation is poor, we need to understand why the effective demand is low and to determine whether it is most amenable to political, financial, technical or information change. Cultural taboo and beliefs. In most cultures, the handling of excreta is considered as taboo, and viewed as a disgusting or a dangerous nuisance not to be discussed openly or seriously or both. No one wants to be associated with excreta; even those who reduce its offensive

characteristics for others are stigmatized by association. Problems cannot be solved if people do not want to talk about them and do not want to be associated with their solution. In many contexts, taboos, including modern technological ones, block the safe recovery of valuable agricultural resources from human wastes. The excreta taboo lies behind many of the barriers to progress in this area. To counter this, sanitation promotion and hygiene education should link the value of excreta (faeces and urine) with ecology. They should promote an understanding of the essential roles it plays in the life cycle of plants and animals, as well as the damaging effect that it can have on health and environment when improperly handled, discharged or reused.

What is needed to turn this sector around is no less than a revolution in thought and action. The sector simply cannot continue as in the past. It is necessary to define principles, make priorities, create strategies and search for new technological, financial and institutional solutions. Advocacy and mobilization of new partners will be large parts of this revolution.

An approach to the sanitation challenge should not be only human-centred, but also ecologically sustainable. It is concerned with equity, the protection of the environment, and the health of both the user and the general public. Its goal is to create socially, economically, and ecologically sustainable systems. To reach this goal, three key principles have been identified as critical to designing successful sanitation systems for the future:

**Equity**, within the sanitation sector, means that all segments of society have access to safe appropriate sanitation systems adapted to their needs and means. Currently, inequities are found at many levels, between rich and poor, men and women, and urban and rural.

**Health promotion and protection from disease**, within the sanitation sector, means that systems are capable of preventing people from contracting excreta-related diseases as well as interrupting the cycle of disease transmission.

**Protection of the environment**, within the sanitation sector, means that future sanitation systems must neither pollute ecosystems nor deplete scarce resources.

Programmes that fulfil all these principles simultaneously should lead to long-term sustainability.

The unprecedented sanitation challenge requires that new strategies and methods to improve sanitation be applied to ensure equitable access for everyone, that human health be protected, and that environmental resources be protected and conserved, while moving towards the goal of achieving sustainability. This requires:

### **More openness**

- to learning from personal experiences and those of others;
- to new and innovative approaches;
- to applying a mix of technologies and systems;
- to considering the impact of a sanitation system on equity and the environment;
- to consider the alternatives if a proposed sanitation system cannot be implemented completely; and
- to be aware of changing situations/crises.

### **Change in attitudes**

- towards conservation and protection of resources,
- towards participatory approaches; and
- towards accepting waste as a resource.

This means adopting two operational strategies:

- flexibility in developing and applying sanitation systems, incorporating respect for community values, perceptions, and practices; and
- considering sanitation on its own merits and not as a sub-set of another sector.

The time has come to cease perceiving sanitation as an afterthought of water systems. To handle the magnitude of existing and future sanitation requirements, the sector should be restructured so that sanitation, as an essential public service, can be given appropriate consideration.

For implementation of sanitation programmes the following recommendations are made:

- Develop mechanisms to ensure that sanitation systems help prevent environmental pollution and degradation.
- Provide impetus for innovative research and development for a range of systems applicable to differing cultural and environmental conditions.
- Treat sanitation as a major field of endeavour in its own right, with sufficient levels of investment to revitalize training programmes and professional standing.
- Create a demand for systems that move increasingly towards reuse and recycling of human excreta.
- Encourage a review of sanitation policies within government, nongovernment, private, and sector donors.
- Involve people for whom the systems are being built in the design process.