Indonesia National Program for Community Water Supply and Sanitation Services

Improving Hygiene & Sanitation Behavior and Services

Technical Guidance to the World Bank/Indonesia and Government of Indonesia’s Ministry of Health team in the preparation of hygiene and sanitation promotion components for the proposed National Program for Community Water Supply and Sanitation Services Project

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EXECUTIVE SUMMARY

This report is the main output from a consultancy to provide technical guidance to the World Bank Indonesia and Government of Indonesia’s Ministry of Health team in the preparation of hygiene and sanitation promotion components for the proposed National Program for Community Water Supply and Sanitation Services (NPCWSSS)\(^1\).

In Indonesia, the water supply and environmental sanitation (WSES) sector has been split into ‘community-based’ and ‘institutional-managed’ services, rather than rural and urban services. This division is important, as it means that the proposed NPCWSSS will be designed for the implementation of community-managed sub-projects in both rural and peri-urban areas. However, as the vast majority of community-managed sub-projects are found in rural villages, and the needs of rural and peri-urban sub-projects are often quite different, this report and its proposed component design concentrate largely on the challenges of rural service provision.

Despite ongoing activity in policy development in the water sector in Indonesia, efforts to create an enabling framework for sanitation service delivery have been limited, and have had relatively little impact on the sector to date. Government of Indonesia policy treats domestic sanitation (i.e. toilets and septic tanks) as primarily a private responsibility, with households and commercial establishments expected to make private investments in on-site sanitation improvements in order to conform to public health regulations.

Lessons learned

An important factor in the cost-effectiveness of hygiene interventions is the presence (or absence) of adequate water supply and sanitation facilities. Most Indonesians use water for anal cleansing after defecation, and several Indonesian sanitation programs have identified distant or rationed water supply as a major barrier to toilet use, handwashing, and general hygiene. Likewise, hygiene improvement is more difficult in communities with low sanitation coverage, due to the environmental pollution, fecal contamination, and inappropriate hygiene habits associated with widespread open defecation.

Anecdotal evidence collected during this study suggests that the sanitation and hygiene improvement approaches used in Indonesia are inadequate at reaching the poorest households in the poorest communities. Households in this critical group, which suffer most from the high costs and ill effects of inadequate water supply and sanitation, rarely have toilets; rarely obtain subsidized facilities from sanitation projects; and rarely borrow from revolving sanitation funds.

Water supply development requires a high level of technical knowledge, thus must involve external institutions with strong engineering skills and experience, even when implementation is participatory and community-driven. Water supply programs also need to establish relatively complex systems for the management of shared infrastructure, thus must engage with local leaders, develop community level institutions, and build financial and operational capacity. In contrast, sanitation and hygiene interventions need to operate at a lower level, and in a different way: working with individual mothers and children;

\(^1\) Since renamed PKS-KASIH (Partnership for Life, Water and Sanitation in Green Indonesia)
with poor households and neighborhoods; and with local health and hygiene service providers. Inevitably, sanitation and hygiene promotion require very different skills and institutional arrangements to those needed for water supply development.

**WSLIC-2 Project**

The World Bank supported Second Water & Sanitation for Low Income Communities Project (WSLIC-2) is recognized as one of the more successful community-driven development projects in Indonesia. The WSLIC-2 project attempts to develop integrated water supply, sanitation and hygiene improvement action plans in each sub-project community, but sanitation and hygiene development remains a weakness.

Revolving sanitation funds are the mainstay of the WSLIC-2 sanitation program. While these have worked well in some areas and communities, their overall impact on low-income beneficiaries and sanitation coverage has been limited. Few of the sanitation loans have been repaid, and demand for the loans is relatively low. *After three years of the WSLIC-2 project, 1.6 million people have access to improved water supply, but only 140,000 people have benefited from improved sanitation.*

Assuming that the WSLIC-2 project reaches its target of completing sub-projects in 2,500 communities, and manages to double the number of toilets constructed in each community, the average annual increase in access to improved sanitation will be about 220,000 people. This represents only 0.2% of the rural population of Indonesia. *At this rate, it will take about 170 years for Indonesia to reach the Millennium Development Goal of halving the (rural) population without access to improved sanitation.*

In WSLIC-2, several important and well-planned elements of the ‘improving health behavior and services’ component, including the mass media and social marketing campaigns, have not been implemented. The reasons for the failure of these sub-components are complex, but the sub-components had little direct bearing on the main performance indicators (number of water supply facilities constructed; population benefiting from water supply facilities; number of school and household toilets constructed; number of people trained) and it proved difficult to recruit suitably qualified and motivated staff to implement these specialist activities. Inevitably, given time and resource constraints, these activities received less interest and attention than the construction of water supply and sanitation facilities.

The community institutions formed under WSLIC-2 seem designed to meet the demands of water supply development rather than those of sanitation and hygiene promotion, as most project-initiated institutions operate at the community level and focus largely on the management of communal water supply systems. This bias is natural, given that water supply development consumes about 90% of project time and resources, and is also visible in institutional arrangements across the sector. The WSLIC-2 staff involved in sanitation and hygiene promotion spend the majority of their time working on water supply implementation, thus have little specific responsibility or accountability for sanitation and hygiene improvement. *At present, there is no accountability for sanitation and hygiene interventions at any level within Indonesia: there is no separate national level body responsible for sanitation and hygiene improvement; and no sanitation or hygiene units at province or district level.*
**Recommendations**

The NPCWSSS ‘improving sanitation and hygiene behavior and services’ component needs to be different from previous Indonesian water supply and sanitation interventions in two important ways: firstly, for the sanitation and hygiene component to have any national impact on rural access to improved sanitation, or on hygiene behavior and public health, it must operate at a far larger scale than existing interventions; and, secondly, it must adopt a more programmatic approach, with financing and management by sustainable local institutions, in order to provide the long-term institutional support and monitoring required for effective sanitation and hygiene improvement.

There is increasing global support for sanitation and hygiene marketing as a possible solution to the large-scale and cost-effective provision of sanitation and hygiene services. The argument is that most progress in increasing access to sanitation has been achieved by private suppliers supplying individual households, and that marketing has been more successful than anything else in promoting the adoption of sanitary toilets and making sustainable changes to people’s hygiene behavior. However, there are concerns about the ability of the marketing approach to reach the poorest households. In contrast, intensive, participatory approaches like Community-Led Total Sanitation (CLTS) are good at reaching the poorest households, but are relatively difficult and expensive to scale up, and hence likely to be less cost-effective in reaching large, diverse populations.

One solution is to combine both ‘sanitation marketing’ and ‘total sanitation’ elements into the sanitation and hygiene promotion component. The early promise of CLTS in Indonesia suggests that this approach, when adapted and used within a carefully structured and targeted program, will provide an effective way of reaching the poorest households in remote, rural communities. The rest of the population will be served by a large-scale marketing program designed to develop appropriate products and services; build local sanitation businesses and supply chains; and promote sanitation and hygiene improvements.

The proposed program strategy will use provincial sanitation awareness and hygiene promotion campaigns, modeled on the campaigns planned by the Indonesia Sanitation Sector Development Program (ISSDP), and targeted at the market segments identified by the initial consumer research in each province. Beneath these provincial campaigns, there will be a two-pronged strategy: the marketing component will work outwards from the rural centers and main roads, building supply chains and local capacity; meanwhile the ‘total sanitation’ component will start in the most remote, unserved, rural communities and work inwards towards the expanding supply chains. In the long-term, it is hoped that the reach and effectiveness of market supply will enable the ‘total sanitation’ component to be phased out completely.

**Proposed program sub-components**

One of the major challenges of the consultancy has been the costing of the sanitation and hygiene improvement component, as there have been no previous large-scale implementations of either ‘total sanitation’ or ‘sanitation marketing’ programs in Indonesia. The proposed sub-component costs are based on preliminary cost estimates, which should be improved and updated during program preparation. Given this proviso, it
is proposed that the component for sanitation and hygiene improvement comprises the following sub-components:

<table>
<thead>
<tr>
<th>Sub-component</th>
<th>Amount</th>
</tr>
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<tbody>
<tr>
<td>1. Total sanitation program</td>
<td>US$ 35.0 million</td>
</tr>
<tr>
<td>2. Sanitation and hygiene marketing program</td>
<td>US$ 19.0 million</td>
</tr>
<tr>
<td>3. School hygiene and sanitation program</td>
<td>US$ 6.0 million</td>
</tr>
<tr>
<td>4. Development of provincial sanitation and hygiene units</td>
<td>US$ 5.0 million</td>
</tr>
</tbody>
</table>

**Total component cost** US$ 65.0 million

The proposed ‘total sanitation’ program is designed to cover 17,500 communities over five years, with the potential to reach 30 million poor, rural inhabitants, of whom about 24 million are thought to have no access to improved sanitation. Assuming that the total sanitation program manages to provide improved sanitation access to only 50% of this target population, it will still increase rural sanitation coverage by 10%.

The three elements of the proposed sanitation and hygiene marketing program are:
- Sanitation market, consumer and supplier research studies (US$ 0.25 million)
- Sanitation awareness and hygiene promotion campaigns (US$10 million)
- Sanitation supply chain and business development programs (US$8.75 million)

The proposed school hygiene and sanitation program includes two main activities:
- School sanitation and hygiene facility program (US$ 4.5 million)
- District workshops on school hygiene and sanitation (US$ 1.5 million)

The proposed sub-component for the development of provincial sanitation and hygiene units aims to establish a sustainable network of ‘provincial sanitation and hygiene units’ tasked to:
- Conduct baseline surveys
- Monitor and evaluate program performance
- Monitor and evaluate program impact
- Provide institutional support to community programs

**Next steps**

This report is based on a three-week mission to Indonesia, supplemented by secondary data from previous sector studies and evaluations. While every effort has been made to provide a comprehensive assessment of community-based sanitation and hygiene services in Indonesia, and to make realistic proposals for sanitation and hygiene improvement under a new national program, time and resource constraints have resulted in some inevitable shortcomings and omissions.

In particular, three areas require more thorough examination during the detailed program preparation:
- Evaluation of CLTS in Indonesia
- Program implementation in peri-urban areas
• Institutional arrangements for sanitation and hygiene improvement
# TABLE OF CONTENTS

1 Introduction ................................................................................ 1

2 Background ................................................................................ 4

2.1 Poverty in Indonesia ........................................................................ 4

2.2 Baseline sanitation data ............................................................. 4

2.3 National policy for water supply and environmental sanitation ........ 5

2.4 Indonesia Sanitation Sector Development Program ......................... 6

2.5 Financing of software and capacity building activities ..................... 7

2.6 Impact of 2004 Tsunami ............................................................... 7

3 International lessons learned .......................................................... 7

3.1 Health improvement ........................................................................ 7

3.2 Cost-effectiveness of hygiene promotion .......................................... 9

3.3 CLTS in South Asia .......................................................................... 10

3.4 Sanitation marketing ......................................................................... 12

3.5 Sanitation business and supply chain development in Vietnam ............ 14

4 Lessons learned from indonesia ....................................................... 15

4.1 Targeting and equity ...................................................................... 15

4.2 Capacity building for sanitation and hygiene improvement ............... 16

4.3 Limited knowledge about low-cost sanitation technologies ............... 17

4.4 School sanitation and hygiene facilities .......................................... 17

4.5 Sanitation development using revolving credit .................................... 18

4.6 Inadequate institutional arrangements ............................................. 20

4.7 Critical constraints to sanitation behavior change ............................... 21

4.8 Community-Led Total Sanitation in Indonesia .................................... 22

4.9 Sanitation development in peri-urban areas ..................................... 23

5 Findings ....................................................................................... 25
Indonesia NPCWSSS: Improving hygiene and sanitation

5.1 Scale of activities ................................................................. 25
5.2 Program sustainability and effective use ................................ 26
5.3 Performance monitoring ....................................................... 27

6 Recommendations ................................................................. 28
6.1 Combined marketing and total sanitation approach ............... 28
6.2 Phased approach in the total sanitation program ................... 29
6.3 Baseline sanitation data ....................................................... 31
6.4 Program finance ................................................................. 32

7 Proposed sanitation and hygiene improvement component 32
7.1 Total sanitation program (US$35 million) ............................... 33
7.2 Sanitation and hygiene marketing (US$19 million) ................. 35
7.3 School hygiene and sanitation improvement (US$6 million) .... 38
7.4 Development of provincial sanitation and hygiene units (US$5 million) ... 39
7.5 Component cost estimates ................................................... 42

8 Next steps ................................................................................ 46
8.1 Evaluation of CLTS in Indonesia ............................................. 46
8.2 Program implementation in peri-urban areas ........................... 47
8.3 Institutional arrangements for sanitation and hygiene improvement ...... 47

ANNEX 1 Consultant’s Terms Of Reference ................................. 52
ANNEX 2 List Of Attendees At Mini-Workshop ............................ 57
ANNEX 3 ISSDP ........................................................................ 55
ANNEX 4 Community-Led Total Sanitation ................................. 61
ANNEX 5 JMP data on rural sanitation coverage ........................... 64
1 INTRODUCTION

This report is the main output from a consultancy to provide technical guidance to the World Bank Indonesia and Government of Indonesia’s Ministry of Health team in the preparation of hygiene and sanitation promotion components for the proposed National Program for Community Water Supply and Sanitation Services (NPCWSSS)\(^2\).

This technical assistance was carried out by the Sanitation, Hygiene and Wastewater Support Service of the World Bank’s Energy and Water Department with funding from the Bank Netherlands Water Partnership (BNWP). The consultancy was carried out in advance of the main project preparation because of the additional work and consultation needed to improve and develop the sanitation and hygiene component.

The terms of reference\(^3\) for this consultancy required the following specific tasks and outputs:

- Design of the ‘improving sanitation and hygiene behavior and services’ component of the proposed NPCWSSS;
- Design of the sanitation and hygiene aspects of the related capacity building component of the proposed NPCWSSS;
- Relevant written sections of the Project Appraisal Document (PAD) clarifying roles, responsibilities, costs, timelines and performance indicators; and
- Evidence of stakeholder consultation and consensus on the project approaches and component design recommended by the consultancy.

The consultancy involved eighteen days in Indonesia, with nine days used for field visits to existing sanitation programs and pilot projects in South Sumatra and NTB\(^4\), plus discussions with key stakeholders in Jakarta, and secondary research based on materials provided by the Water and Sanitation Program - East Asia and Pacific (WSP-EAP). The consultancy concluded with a mini-workshop in Jakarta hosted by the Ministry of Health’s Directorate General for Communicable Disease Control (DepKes), at which the preliminary findings of the consultancy were presented and discussed with representatives from the key government and donor agencies\(^5\).

The findings from the fieldwork, consultations and secondary research have been combined with the feedback from the mini-workshop to produce this report, which is the main output from the technical assistance consultancy.

Definitions

In order to ensure a common understanding of the concepts and terms used in the report, the following definitions are provided:

**CLTS:** Community-Led Total Sanitation is the original variant of the ‘total sanitation approach’, a process to inspire and empower rural communities to stop open defecation and start using sanitary toilets, without offering external subsidies for the purchase of hardware such as toilets

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\(^2\) Since renamed PKS-KASHI (Partnership for Life, Water and Sanitation in Green Indonesia)

\(^3\) The full terms of reference are included in Annex 1

\(^4\) Nusa Tenggara Barat (Lombok and Sumbawa)

\(^5\) Full list of workshop attendees attached in Annex 2
pans and pipes. CLTS uses a participatory analysis of community sanitation to stimulate a collective sense of disgust and shame among community members as they confront the crude facts about mass open defecation. This analysis triggers the realization among community members that they each need to change their habits and behavior. The CLTS facilitator should never lecture or advise on sanitation habits, and should not provide external solutions, such as toilet designs, in the first instance. The goal of the facilitator is to help community members to see for themselves that open defecation causes ill health and an unpleasant environment, and thus inspire and empower them to find locally appropriate sanitation solutions.

**Community-Based Water Supply and Sanitation Services:** are managed and controlled by communities or community-based organizations without the need for formal legalization, and are distinct from services managed by legally registered institutions e.g. services managed by public sector utilities and private sector providers (in both the formal and informal sectors). In Indonesia, the community – institutional separation has replaced the rural – urban divide, with separate government policies and programs established for community-based management and institutionally-based management of water supply and sanitation services.

**Hygiene promotion:** a planned approach to prevent diarrheal disease through the widespread adoption of safe hygiene practices, e.g. campaigns to encourage regular handwashing at appropriate times. Note: hygiene promotion is usually a much broader intervention than sanitation promotion, which focuses solely on the safe management and disposal of excreta.

**Informed choice:** demand-based programming places the community in the role of decision-maker in the selection, financing, and management of their water supply and sanitation system. In order to effectively implement a demand-responsive approach, the government should play a role as facilitator to provide informed choices to the community regarding the development and construction of sound infrastructure and services, taking into account local financial, technical, environmental, social, and institutional factors. Informed choices are provided in participatory sessions, covering technology and service options based on willingness to pay, to provide insight on the service provision schedule and know-how, management of funds and responsibilities, and management of services.

**PHAST:** Participatory Hygiene and Sanitation Transformation (PHAST) is a methodology for community hygiene behavior change and improved management of community water supply and sanitation facilities. PHAST uses trained facilitators to initiate and oversee a series of participatory activities that assist community groups to identify health and hygiene problems, analyze disease transmission routes, identify barriers to disease, plan interventions to construct facilities and change behaviors, and monitor their progress. PHAST is different from CLTS in that PHAST uses a set series of activities to initiate changes in management and behavior relating to water supply, sanitation and hygiene, whereas CLTS is a less rigid methodology with the sole objective of stopping open defecation through the introduction of low-cost sanitary toilets.

**Poverty:** the poor are defined as those below the national poverty lines devised by the Indonesian Central Bureau of Statistics (BPS). The BPS poverty lines are based on food consumption packages that satisfy a daily requirement of 2100 calories per day, plus allowances for non-food necessities. Note: the composition and value of the packages are based on the relative prices in each province, and are calculated separately for the urban and rural areas, thus the ‘official’ poverty line.

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6 Kar (2005) *Subsidy or self-respect? Community led total sanitation. An update on recent developments*

7 Ibid.

poverty lines are not consistent across provinces, or between rural and urban areas\(^9\). In 2004, the BPS set the National Poverty Line at Rp 143,455 (US$14) per month in urban areas, and Rp 108,275 (US$11) per month in rural areas\(^{10}\).

**Program software:** activities that support and promote the provision of program services and facilities, e.g. media campaigns, capacity building activities, community hygiene promotion sessions and so on. Note: program software must be differentiated from program hardware (infrastructure) which includes tangible program products and facilities, e.g. toilets, soakaways, handwashing facilities and so on.

**Rural:** that which is not urban. In Indonesia, urban areas are defined using complex criteria that include population density (more than 5,000 per square km), the proportion of the population engaged in non-agricultural occupations (less than 25%), and the number of ‘urban’ facilities available.

**Sanitation:** interventions for the safe management and disposal of excreta\(^{11}\), with the principal safety mechanism being the separation of excreta from human contact. The term *improved sanitation* is used in this report to denote private facilities that provide safe management and disposal of excreta. Following the definition adopted by the WHO-UNICEF Joint Monitoring Program (JMP), the following are considered ‘improved sanitation facilities’: sewer connections, septic tank connections, pour-flush latrines, ventilated improved pit (VIP) latrines and simple pit latrines. Note: this definition means that public or shared latrines; open pit latrines; and bucket latrines are not considered to be ‘improved sanitation facilities’.

**Sanitation marketing:** consists of activities to reach customers and persuade them to buy and use sanitation products or services. Sanitation marketing is based on a voluntary exchange between consumer and producer, from which both parties gain, and involves the development of sanitation products and services that people want, at prices they can afford; and the promotion of these sanitation products and services to the target population (using advertising, mass media, word of mouth, demonstration toilets, special offers, vouchers, competitions, prizes, door-to-door sales, credit from local traders, mutual-help schemes and so on).

**Sanitation promotion:** encourages the safe management and disposal of excreta through the widespread adoption of safe sanitation facilities and practices, e.g. programs promoting the construction and universal use of improved sanitation facilities (see ‘sanitation’ definition above).

**Total sanitation approach:** a community-wide approach whose main aim is universal toilet use (total sanitation) in each community covered. The total sanitation approach focuses on stopping open defecation on a community-by-community basis through recognizing the problems caused to all by open defecation within and around the community, and ensuring that every household uses either their own low-cost toilet, or a shared toilet situated close to their home. However, the total sanitation approach is a broader variant of CLTS that may involve financial incentives (e.g. post-construction subsidies provided by the Total Sanitation Campaign in India); the promotion of broader environmental sanitation objectives such as drainage and solid waste management; and the promotion of hygiene improvement activities such as handwashing.

\(^{9}\) Fuwa (2002) *Evolution of rural poverty in Indonesia, the Philippines and Thailand*  
\(^{10}\) Maksum (2004) *Development of poverty statistics in Indonesia: Some Notes on BPS contributions to poverty alleviation*  
\(^{11}\) WHO (2005)
2 BACKGROUND

2.1 Poverty in Indonesia

Between 1976 and 1996, the rate of poverty consistently declined from 40 percent to just over 11 percent and the population under the poverty line reduced from 54 million to 22 million. There is little doubt that incidence of poverty decreased dramatically in the 20 years prior to the 1997 financial crisis, coinciding with Indonesia’s 7 percent per annum GDP growth trend. However, the economic crisis that hit Indonesia in 1997 led to a dramatic increase in the number of the poor. According to official estimates, the incidence of poverty from February 1996 to December 1998 rose nearly 50 percent.

Following the stabilization of the economy, the poverty rate in August 1999 returned to around the pre-crisis level of February 1996. Based on the 2004 National Poverty line, about 36 million people (17% total population) currently remain below the poverty line.

There is considerable regional variation in depth and incidence of poverty. In 1999, the three most populated provinces (West, Central and East Java) comprised about 50% of the total population, but contained 60 percent of the total poor population. However, the incidence of poverty was far greater in other provinces, with the highest incidence found in Irian Jaya (55%), East Nusa Tenggara (47%) and Maluku (46%). Regarding the depth of poverty, the percentage of “chronically poor” was higher in rural Indonesia (12%) than in urban areas (9%). Similarly, the percentage of “transitorily poor” was higher in rural (13%) than in urban areas (12%).

Based on SUSENAS survey data, profiles of the poor in Indonesia can be summarized as follows (when compared to the national average):

- Poor households tend to have larger family sizes.
- A lower proportion of the poor (especially poor women) have secondary education (or above).
- Most births among the poor are attended by traditional health workers (or not at all).
- Heads of poor households are more likely to work in the informal or agricultural sectors.

2.2 Baseline sanitation data

Access to sanitation in rural areas of Indonesia is reported to be 52 percent, but the real figure is likely to be much lower as the official data do not indicate whether sanitation facilities are in use, or meet minimum standards of hygiene.

The impact of inadequate water supply and sanitation services is evident: 11% of Indonesian children have diarrhea in any 2 week period and 8% have acute respiratory infections; 216,000 children under five die each year, of which about 40,000 die from diarrhea and a similar number from respiratory infections.\(^{12}\) Infant mortality has been reduced to 35 per 1,000 live births\(^{13}\), but remains at 121 per 1,000 in low-income areas.

\(^{12}\) Curtis (2004) *Handwashing, hygiene and health: proposals for strengthening WSLIC-2s health component and a national handwash campaign*

\(^{13}\) Indonesia Demographic and Health Survey (2002)
Of the four most important causes of under-5 mortality in Indonesia\textsuperscript{14}, two (diarrhea and typhoid) are fecal borne illnesses directly linked to inadequate water supply and sanitation. Furthermore, the incidence of typhoid is the highest in the region and is disproportionate for countries achieving a GDP per capita above US$700.

In 2001, economic losses due to inadequate sanitation were estimated at 2.4\% of GDP\textsuperscript{15}, equivalent to about US$6.8 billion per year, or roughly US$150 per household per year. This situation presents a significant challenge to which the Indonesia government is responding through their commitment to the Millennium Development Goals (MDGs).

The GOI statistics on access to sanitation differ markedly from those reported by the WHO-UNICEF Joint Monitoring Program. Most sector stakeholders seem to agree that the government figures for sanitation coverage are over-estimates, but the downward revision of these figures will be a politically difficult step to take. Nevertheless, this access data provides the baseline for all national investment plans and strategies, including measurement of progress towards the MDGs, thus it is vitally important that new baseline sanitation data is collected, and that broad consensus is reached on the use of these revised access figures for planning and monitoring purposes.

### 2.3 National policy for water supply and environmental sanitation

In 1998, the Government of Indonesia (GOI) embarked on an initiative to develop a national policy for the development of community-based water supply and environmental sanitation through the \textit{Water and Sanitation Policy Formulation and Action Planning} (WASPOLA) project\textsuperscript{16}. The new community-based policy was approved in 2003 and a national level inter-ministerial working group, funded by the GOI, has been set up to guide the policy implementation process.

The comprehensive, community-based policy has been endorsed by the relevant ministries, as well as by several district governments, and a process is now underway to have it issued as a Presidential Decree. The second phase of WASPOLA (2004-08) aims to scale up implementation of the community-based water supply and environmental sanitation policy and expand current policy reforms to cover institutionally–managed services, e.g. services managed by public sector utilities and private sector providers (in both the formal and informal sectors). However, the national strategy and investment plan for translating the policies into practice and scaling up sector reform remain unclear.

The decision to split the water supply and environmental sanitation (WSES) sector into community-based and institutional-managed services, rather than rural and urban services, is important, as it means that the proposed Indonesia National Program for Community Water Supply and Sanitation Services (NPCWSSS) will be designed for the implementation of community-managed sub-projects in both rural and peri-urban areas. However, as the vast majority of community-managed sub-projects are found in rural

\footnotesize{14 MoH (2001) \textit{Rencana Strategi Nasional}  
\footnotesize{16 Government of Indonesia partnership with the Water and Sanitation Program – East Asia and the Pacific}
villages, and the needs of rural and peri-urban sub-projects are generally very different, this report and its proposed component design concentrate largely on the rural challenge.

The new sector policy provides direction for sector reform, by radically changing policy goals from achieving ‘coverage targets’ measured in terms of the construction of facilities, to the twin goals of *sustainability* and *effective use* of WSES services. Most of the directives are general in nature, including policies on: water as an economic and social good; informed choice as the basis for a demand-responsive approach; environmentally-based development; poverty focus; active role of women in decision-making; accountability in the development process; and the government’s role as facilitator. However, the hygiene education policy is the only section that explicitly addresses sanitation and hygiene improvements:

> “Sustained WSES management requires WSES development to be comprehensive and capable of stimulating change for better community hygiene behavior to improve quality of life. Initiatives to change behavior should emphasize comprehensive proper hygiene and healthy living education as a compulsory and principal component of future WSES development; development planning should not focus solely on the physical construction of infrastructure.” p.14 Government of Indonesia (2003) *National Policy: Development of community-based water supply and environmental sanitation*

Despite the ongoing activity in policy development in the water sector in Indonesia, efforts to create an enabling framework for sanitation service delivery have been limited, and have had little impact on the sector to date. GOI policy treats basic sanitation (i.e. toilets and septic tanks) as primarily a private responsibility and, therefore, public finance of sanitation remains limited, and households and commercial establishments are expected to make private investments in on-site sanitation improvements in order to conform to public health regulations.

### 2.4 Indonesia Sanitation Sector Development Program

The Indonesia Sanitation Sector Development Program (ISSDP) has been established recently to tackle some of the weaknesses in the sanitation sector. ISSDP aims to develop an effective enabling and investment framework for sanitation; to stimulate sanitation demand through a targeted public awareness and marketing campaign; and to build local government capacity for sanitation planning, implementation and management. Whilst most ISSDP activities have an urban orientation, epitomized by its proposed city sanitation pilot projects, much of the sanitation sector work will be relevant for the NPCWSSS.

In particular, the ‘sanitation awareness raising and hygiene promotion’ ISSDP component should provide direct inputs and learning for the marketing campaigns envisaged for the NPCWSSS. ISSDP is contracting out this component to private sector consultants, thus has developed an extensive and well thought-out terms of reference (see Annex 3). The key elements of this sanitation awareness raising and hygiene promotion component include: consumer and market research; hygiene behavior studies; identification of vulnerable population groups and market segmentation; design of national sanitation awareness and hygiene promotion campaigns; development and implementation of
targeted campaigns for poor households and children; and a full impact monitoring program for all sub-components.

2.5 Financing of software and capacity building activities

The Government of Indonesia’s external debt burden is extremely high. Economic growth resulted in a higher nominal GDP in 2004 (US$258 billion), but the ratio of external debt to GDP has decreased only slightly, from 57% (in 2003) to 53%\(^{17}\). As a result of this heavy debt burden, GOI is reluctant to borrow funds for anything other than essential investments, and has a bias towards programs that produce tangible outputs. This reluctance has translated into an unofficial government policy to restrict non-hardware components in infrastructure loan programs to less than 10% of the total investment\(^{18}\). This is problematic in community-driven development programs, especially given the move for sanitation and hygiene interventions to invest more in software activities and capacity building.

The WSLIC-2 project incorporated a ‘community and local institutions capacity building’ component that covered facilitation, training, participatory identification and preparation of community-level projects, development and production of promotional materials, institutional strengthening of district and local agencies, and public information activities. This component alone accounts for 32% of WSLIC-2 external project costs (US$34.2 million), which illustrates the severe constraint that a 10% cap on non-hardware costs would impose on the proposed NPCWSSS.

2.6 Impact of 2004 Tsunami

The NPCWSSS is likely to operate in Sumatra, and may cover other areas affected by the 2004 tsunami. However, for the purposes of this report, it has been assumed that the urgent infrastructure needs of the affected population will be met by the planned reconstruction activities. In this regard, the international community signaled its firm commitment to assist countries affected by the 2004 tsunami at the summit held in Jakarta on January 6th, 2005 and donors have since pledged US$1.6 billion in additional assistance for reconstruction and recovery efforts in the Aceh region. Additional private sources (NGOs, corporate and private contributions) have also pledged significant assistance, reflecting the unprecedented response to this tragedy\(^{19}\).

3 INTERNATIONAL LESSONS LEARNED

3.1 Health improvement

Investments in sanitation and hygiene improvement can have two to three times more impact on health outcomes than investments in water supply. Recent research indicates that:

- handwashing with soap can reduce diarrhea risk by 42-47\%\(^{20}\)
- safe excreta disposal can reduce diarrhea risk by 30-35\%

\(^{17}\) The World Bank (2005a) *Indonesia: Economic and social update*

\(^{18}\) According to senior BAPPENAS staff (when discussing the costs of the proposed NPCWSSS).

\(^{19}\) The World Bank (2005a) *Indonesia: Economic and social update*

• clean water supply can reduce diarrhea risk by 15-20%\textsuperscript{21}

These findings suggest that large-scale water supply and sanitation programs should invest more heavily in sanitation and hygiene interventions to obtain more cost-effective improvements in public health and well-being. Studies into the cost-effectiveness of sanitation and hygiene interventions\textsuperscript{22} also suggest that hygiene interventions, such as handwashing campaigns, are significantly more cost-effective when water supply and sanitation facilities are present. Therefore, it is important to combine both hardware and software interventions, and to sequence these interventions for maximum benefits.

Another key lesson learned from past projects is that conventional hygiene promotion interventions have been too formal, too negative and too reliant on teacher-to-pupil educational approaches. There have been lots of training courses, lots of lecture-style sessions on the causes of health problems, and lots of negative messages about ‘what people do wrong’ and ‘what they must do’ to improve their health.

In many cases, people are already well aware of the need for basic hygiene, such as handwashing, but lack the facilities or incentives to change their hygiene behavior. For sanitation and hygiene promotion to result in sustainable health improvements, interventions need to be more positive and more practical: promotional efforts need to focus on positive messages that suggest how families can improve their lives and their health; and on practical steps that communities and households can take to improve environmental sanitation and change hygiene behavior.

In the quest for higher coverage, conventional sanitation programs tend to concentrate on those who can afford the toilets being promoted, those who have land available to build these toilets, and those who respond to promotional efforts. Providing services to the poorest can be difficult and expensive, thus programs usually focus on those they can reach through incremental improvements in sanitation coverage. Unfortunately, this approach often leaves coverage of the poorest and most marginalized, that is, those most affected by inadequate sanitation, until long after everyone else has been served.

The main difference in the total sanitation approach, when compared with conventional policies, is that it targets the entire community (rather than just those households without sanitation that respond to promotional efforts): under the total sanitation approach, every household in the community must stop open defecation and use a sanitary toilet. Even the poorest and most vulnerable households in the community must be reached, which means that the local government, the community leaders, and even those households that already have toilets, must pull together to provide the poorest households with access to sanitary toilets and safe excreta disposal systems.

\textsuperscript{22} Varley (1996) Child survival and environmental health interventions: a cost effectiveness analysis Washington DC: Environmental Health Project
3.2 Cost-effectiveness of hygiene promotion

Demand-responsive programs ask communities whether they want improved facilities or services; what level of service they want; and, most importantly, whether they are prepared to contribute towards, or pay for, the construction, operation and maintenance of facilities or services demanded. A local institution, generally a community association or an individual household, chooses from a menu of service options, with user mobilization and up-front contributions towards service costs (either in cash or in kind) signaling their commitment and involvement.

Hygiene promotion activities are rarely demand responsive. Some programs attempt to tailor hygiene promotion to specific community priorities and behaviors, but few programs are effective in ensuring that the community or household feel a need for the hygiene intervention, or are committed to supporting activities and promoting behavior change. Sadly, even communities that express demand for water supply and sanitation facilities, and make financial contributions towards construction, sometimes lose interest once external contributions are complete, so it should be no surprise that communities with no investment or commitment to hygiene improvement show little concern, interest or involvement when promotional efforts are ineffective and progress is poor.

As a result, the cost effectiveness of conventional hygiene interventions tends to be very low. In most programs, the same lengthy schedule of promotional activities is carried out in every community regardless of their interest or involvement, and regardless of the results. This ‘universal’ approach reflects the importance and priority now given to the integration of hygiene improvement into water supply and sanitation programs. However, whilst well meaning, this universal approach can lead to ineffectual activities, demoralized project staff and wasted investments.

Another important factor in the cost-effectiveness of hygiene interventions is the presence (or absence) of adequate water supply and sanitation facilities. Most Indonesians use water for anal cleansing after defecation, thus distant or rationed water supply is regularly identified as a major barrier to toilet use, handwashing, and general hygiene. Similarly, hygiene improvement is more difficult in communities with low sanitation coverage, due to the environmental pollution, fecal contamination and bad hygiene habits associated with widespread open defecation.

Economic analysis of hygiene interventions confirms that these interventions are highly cost-effective for controlling childhood diarrhea, but the analysis also highlights the sensitivity of cost-benefit ratios to the presence or absence of adequate water supply and sanitation facilities. This research, which was based on a review of 65 studies

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Indonesia NPCWSSS: Improving hygiene and sanitation

worldwide\textsuperscript{25}, suggests that hygiene interventions are only half as cost-effective where water supply and sanitation hardware is either inadequate or unavailable\textsuperscript{26}.

Given the importance of cost-effectiveness in large-scale sanitation and hygiene interventions, these findings question the wisdom of investing in hygiene promotion before adequate water supply and sanitation facilities are available. This should not be read as a call for less hygiene promotion, but as a powerful argument for the careful sequencing and triggering of more cost-effective interventions.

3.3 CLTS in South Asia

Over the last few years, non-governmental organizations (NGOs) in Bangladesh\textsuperscript{27} have been pioneering a new approach to sanitation development. It is known as Community-Led Total Sanitation\textsuperscript{28} and has several fundamental differences from conventional approaches (see Annex 4 for more detail), including:

- Focus on stopping open defecation (rather than building toilets)
- Need for collective action (to stop open defecation within the community)
- No toilet subsidy (households must finance their own toilets)
- Promotion of low-cost homemade toilets constructed using local materials (rather than standard toilet designs imposed by outsiders)

The primary aim of the CLTS approach is to stop open defecation within the project community\textsuperscript{29}. This illustrates two major differences between CLTS and conventional approaches to sanitation development: firstly, its main aim is behavior change (stopping open defecation) rather than toilet construction; and, secondly, it requires that every member of the community has access to a sanitary toilet, as even the poorest and most vulnerable individuals must be reached in order to put a total stop to open defecation.

CLTS uses participatory activities to highlight sanitation problems within the community, playing on the universal feelings of shame and disgust associated with excreta to trigger the collective (and individual) action necessary to stop open defecation. One of its strengths is that those who already have toilets, often the richer, more hygiene-aware and more influential households, are motivated to try and change the behavior and habits of those without toilets, as the CLTS approach emphasizes that everyone in the community risks excreta-related disease whilst even a few people continue to defecate in the open.

CLTS does not involve any subsidy for toilet construction, or any imposed, external designs. Instead, people are encouraged to find low-cost sanitation solutions, and to use local materials and familiar building techniques wherever possible. Inevitably, this approach leads to the construction of some very simple and homemade toilets. However, the important issue is that households make their own decision to stop open defecation


\textsuperscript{26} Cost per death averted is more than twice as high when no water supply or sanitation facilities exist

\textsuperscript{27} Notably WaterAid Bangladesh and VERC

\textsuperscript{28} Kar (2003)

\textsuperscript{29} Open defecation defined as defecation that takes place outside a sanitary toilet (note: in many parts of Indonesia, people practice open defecation into water bodies such as rivers and ponds)
and construct a toilet, as most low-cost facilities can be easily improved and upgraded at a later date.

The findings from a review of seven ‘total sanitation’ programs implemented in Bangladesh and India\textsuperscript{30} confirm that the total sanitation approach is a powerful trigger for stopping open defecation; for empowering local communities; and for increasing local awareness of sanitation problems. Nevertheless, the total sanitation approach also requires effective household-level hygiene promotion, as well as sustainable institutional support mechanisms, in order to achieve sustainable behavior change and long-term health improvements.

One of the more controversial aspects of community-led total sanitation (CLTS) is that, unlike conventional sanitation programs, no hardware subsidy is provided for the construction of household toilets. Inevitably, this raises the question of whether poor households can afford to construct household toilets that provide safe excreta disposal without financial assistance. The evidence from sanitation programs in Bangladesh, one of the poorest countries in the world, suggests than poor households can. In the last few years, a number of CLTS programs in Bangladesh have supported thousands of very poor households to construct very low cost toilets without any form of hardware subsidy.

The ‘total sanitation approach’ was implemented slightly differently under the three successful government programs examined in India. The major difference was the use of hardware subsidies, which ranged from US$4 to US$11 per household. In one of the more successful cases, the relatively small hardware subsidy was provided in the form of post-construction incentives that were only paid to the user once every household in the community had constructed a sanitary toilet. As a result of this initiative, the Government of India has since adopted the post-construction financial incentive policy in its US$800 million Total Sanitation Campaign.

Without an up-front hardware subsidy, poor households are motivated to come up with a toilet design with the lowest possible cost, often using locally available materials and their own labor. As a result, the average cost of a household toilet in three different total sanitation programs in Bangladesh\textsuperscript{31} was estimated at US$2 – US$7, all of which was paid by the users. These toilets are usually basic pit latrines, built using bamboo, mud, local matting screens, plastic toilet pans (if available) and materials left over from other house building or repair activities.

Despite concerns from some sector stakeholders, the toilets constructed under CLTS qualify as ‘improved sanitation’. The WHO-UNICEF Joint Monitoring Program definition, which is also used for the MDGs, considers “simple pit latrines” as improved sanitation, providing that “they are private and … separate human excreta from human contact”. While the limited technical input and experience involved in many CLTS-inspired toilet designs raises questions about their sustainability, the vast majority of the toilets meet the basic requirement of separating human excreta from human contact. More

\textsuperscript{30} Robinson (2005) \textit{Scaling up rural sanitation in South Asia: Lessons learned from Bangladesh, India and Pakistan}
\textsuperscript{31} Ibid.
importantly, the households have taken the important first step of deciding to stop open
defecation; build themselves a toilet; and defecate in a fixed place. The simple toilet
designs may not last long, but can be improved upon through the sort of regular repair
and maintenance that many rural households make to their homes.

The CLTS process has also encouraged innovation in low-cost toilet design. VERC, one
of the NGOs that started the CLTS movement (see Annex 4) has produced a catalogue
detailing about forty different sanitary toilet designs produced by Bangladeshi villagers,
one of which costs more than US$20 to construct.

Firsthand experience of the remarkable impact of this new approach in Bangladesh has
been sufficient to change the views of senior Indian politicians, many of whom were
previously adamant that hardware subsidies were essential to sanitation promotion among
the poor. The US$800 million Total Sanitation Campaign in India used exposure visits to
Bangladeshi communities with successful ‘total sanitation’ projects to overcome strong
political resistance to reducing hardware subsidies in the national rural sanitation
program. The Indian politicians returned from Bangladesh convinced that they could
adapt the successful approaches they’d seen to the Indian context, and have since agreed
to spend the majority of the funds previously allocated to hardware subsidies on the
software activities required for effective sanitation and hygiene promotion.

One of the key constraints identified in the review of total sanitation programs in South
Asia was the lack of regular monitoring and post-construction support. Community after
community noted that interest and motivation had been high while the NGO or program
officers were working in the village, but that toilet usage and hygiene improvements
dropped off once the sanitation sub-project was finished. The CLTS model focuses
heavily on the initial ‘ignition process’, thus must be linked to a long-term institutional
support mechanism to ensure sustainable sanitation and hygiene improvements.

3.4 Sanitation marketing

There is increasing global interest in sanitation and hygiene marketing for large-scale and
cost-effective provision of sanitation and hygiene services. The argument is that most
progress in increasing access to sanitation has been achieved by the market, i.e. private
suppliers supplying individual households, and that marketing has been more successful
than anything else in promoting the adoption of sanitary toilets and making sustainable
changes to people’s hygiene behavior.

A well-designed marketing program involves a number of sequenced steps:
1. Win consensus (on policy and approach)
2. Learn about the market (understand both demand and supply)
3. Overcome barriers and promote demand (advocacy, advertising, demonstrations)
4. Develop the right products (design for specific market segments, to target prices)
5. Develop a thriving industry (capacity building, credit, business development)
6. Regulate waste handling and disposal (toilet pit replacement and emptying)

32 Robinson (2005)
power for rural sanitation: Making sanitation attractive and accessible for the rural poor
Large-scale sanitation marketing programs are currently being developed in a number of African countries (Ethiopia, Kenya, Tanzania, Uganda), and national handwashing campaigns (based on a marketing approach) have been successfully implemented in Ghana, Senegal and Peru. The early indicators are that the potent combination of innovative approaches to hygiene improvement and consumer-oriented marketing expertise could be the start of an exciting new field in public health.

One of the strengths of the marketing approach is its ability to attract private finance to sanitation and hygiene improvement initiatives. Because both the public and private sectors have an interest in promoting handwashing with soap, national handwashing programs usually take the form of public-private partnerships (PPP). While the public sector can be wary of working with private industry, and vice versa, both sectors stand to gain from cooperation. Private industry stands to gain from both market expansion and high profile contributions to national social development goals, while the public sector gains access to the unrivalled understanding of consumers, and how to reach them, held by industry.

Well-designed sanitation and hygiene programs allow for market segmentation, using consumer and market research to identify the different approaches, products and services needed to improve sanitation and hygiene behavior among the diverse groups and populations targeted by the interventions. The marketing approach relies on media campaigns (radio, TV, newspapers, billboards, traditional media), local promotional efforts, and direct marketing by suppliers (masons, retailers, manufacturers) to reach consumers and persuade them to buy and use a product or service. The key principle is of voluntary exchange between a consumer and a private supplier, but public channels, such as government extension workers and community volunteers, are involved in the process, notably in local promotional activities.

However, large scale sanitation and hygiene marketing is a new field, thus much remains unknown and untested. In particular, there are questions over the ability of the marketing approach to reach poor and remote rural households, or communities not well integrated into the market economy.

In Indonesia, there is a clear divide between households ‘close to the market’, who tend to construct toilets using market-bought products and services, and those ‘away from the market’, who generally have no toilet or, in rare cases, build a homemade toilet using local materials. A very simplistic classification is possible in most communities, with non-poor and urbanizing households in the market segment, and poor, subsistence households in the non-market segment. In addition, the closer the community is to the nearest road and market town, the more likely it is to be market-oriented; and the more remote and inaccessible the community, the larger the non-market segment is likely to be.

Private suppliers need to cover their costs and support their families, and are under no obligation to meet the needs of the poor. In general, more prosperous households demand

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34 The World Bank (2005) *The handwashing handbook: A guide for developing a hygiene promotion program to increase handwashing with soap*
more expensive services and offer greater returns to private suppliers, so there is a risk that private products and services are targeted largely at non-poor, market-oriented households. It is also possible that marketing messages fail to reach those with lesser access to local media or markets, e.g. poor women living in remote, rural communities.

Sanitation and hygiene marketing have many strengths: they ensure that people choose to receive what they want are willing to pay for; they are financially sustainable; and, they are cost-effective and can be taken to scale. Sanitation and hygiene marketing are likely to be the most effective means of generating rapid increases in sanitation coverage, and improvements in hygiene behavior, in non-poor and peri-urban households. But marketing needs to be supplemented by more direct interventions, such as CLTS and supply chain development, to reach the poorest households in poor, rural communities.

3.5 Sanitation business and supply chain development in Vietnam

During 2003-04, International Development Enterprises (IDE) implemented a project for ‘small-scale private sector development and marketing for sanitation in rural areas’, which targeted 54,000 households in the central coast region of Vietnam. Unlike conventional sanitation programs, the approach developed by IDE was fully market-driven, offering customers no hardware subsidies, and instead stimulating weak rural sanitation markets and helping these markets become viable.

IDE’s initial market assessment identified two major demand constraints: a lack of reliable product information, and a lack of desirable production options and suppliers. When asked whether they were willing to invest in a toilet, fully 77 percent of respondents said that they had ‘other spending priorities’ such as a television or a karaoke set. As a result, most local masons view the sanitation business as a semi-profitable seasonal business rather than a regular source of income, and few were prepared to undertake product experimentation or invest in advertising their services.

IDE developed the sanitation market in the project areas through a series of activities:

- Identifying a range of locally appropriate sanitation options (product development)
- Increasing the availability of competent service providers (capacity building)
- Stimulating demand for sanitation improvements (marketing campaign)
- Mobilizing communities for behavior change (hygiene promotion, village contests)
- Building local sanitation networks (promotional village meetings)

As a result of the IDE intervention, the number of toilets constructed in the project area increased from an average of about 1,500 per year to more than 6,000 toilets in 2004. Sanitation coverage doubled, going from 16% to 33% in only fourteen months.

Remarkably, this large increase in sanitation coverage was achieved without any hardware subsidies. The IDE project invested US$336,000 in market research, product development, promotion and capacity building activities to develop the local sanitation market.

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35 Cairncross (2004)
36 Frias & Mukherjee (2005) Harnessing market power for rural sanitation: Making sanitation attractive and accessible for the rural poor
37 US$142,000 for marketing and promotional activities; US$194,000 for project management and support
market, which represents about US$40 of software expenditure per toilet constructed. However, the approach leveraged US$66 per household in private expenditures on sanitation facilities and, now that the sanitation market and its suppliers are established, should continue to produce benefits for many years.

4 LESSONS LEARNED FROM INDONESIA

The World Bank supported Second Water & Sanitation for Low Income Communities Project (WSLIC-2) is recognized as one of the more successful community-driven development projects in Indonesia. Continuing on from the WSLIC-1 project (1994-99), WSLIC-2 (2003-2007) operates in seven provinces and aims to provide water supply, improved health and hygiene behavior, and community development, to about 2,500 communities. However, sanitation and hygiene development remains a weakness.

4.1 Targeting and equity

Targeting is an important issue. The target population for WSLIC-2 was:

“households in low income rural communities. Although all households in low income rural communities could benefit from the availability of water, the immediate target population of the project are the poorest rural households and the women and children at risk of the priority diseases”. p.9 World Bank (2000) WSLIC-2 Project Appraisal Document

The sanitation and hygiene improvement approaches used in Indonesia appear inadequate at reaching the poorest households in the poorest communities. Households in this critical group, which suffer most from the high costs and ill effects of inadequate water supply and sanitation, rarely have toilets; rarely obtain subsidized facilities from sanitation projects; and rarely borrow from revolving sanitation funds.

Results from social mappings conducted in WSLIC-2 communities in Sumatra and NTB\(^{38}\), during which participants use their own definitions to class each household in the community as ‘rich’, ‘middle’ or ‘poor’, reveal that access to improved sanitation is close to zero among ‘poor’ households. Poor households make up 30-70% of the population in these WSLIC-2 project communities but, in almost every case, sanitation coverage remains close to zero among the poor even after project interventions are complete.

The reasons for WSLIC-2’s sanitation and hygiene interventions failing to reach its ‘immediate target population’ require further research. In addition to the institutional constraints and shortcomings of the sanitation and hygiene component, two issues stand out: the lack of awareness about low cost sanitation options; and the ‘social distance’ between community leaders and poor households.

Despite efforts by WSLIC-2 to develop ‘sanitation ladders’ illustrating a wide range of low cost sanitation options, there remains a lack of understanding among project staff and communities about the minimum requirements of a sanitary toilet for safe excreta disposal. In most of the communities visited, project staff and beneficiary households suggested that the minimum cost of a sanitary toilet is Rp 500,000 – 1,000,000 ($50-100).

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\(^{38}\) Nusa Tenggara Barat (Lombok and Sumbawa)
The toilet designs envisaged for this cost had solid (often brick-built) enclosures and wooden doors; pour-flush toilet pans; and some form of solid-lined tank for the safe storage and disposal of the toilet wastes. The focus on this type of toilet design has contributed to the ineffective targeting of the WSLIC-2 project, as many poor households feel that this type of toilet is unaffordable without some form of subsidy, thus rarely demand sanitation loans or build toilets.

Another important factor is the control of project interventions by community institutions. Most projects aim to establish a representative community committee or association to make community decisions and allocate project benefits. Project efforts to ensure representivity in these community institutions have met with limited success, with few active women working in project institutions, and anecdotal evidence that local politics plays a strong part in the election of office holders. In addition, the community institutions formed under WSLIC-2 are more appropriate for water supply management than for the promotion of household sanitation and hygiene improvements.

Hardware subsidies or loans are usually rationed because of the limited funds available, thus community institutions are asked to allocate these benefits. Anecdotal evidence from WSLIC-2 suggests that these community institutions often allocate the benefits to households that have a good relationship with the community leadership, rather than to the poorest rural households or the “women and children at risk of priority diseases”. Improving the targeting and equity of sanitation and hygiene interventions will require different institutions from those used for water supply management, specific targeting criteria, and a greatly improved awareness of appropriate and low cost sanitation options.

4.2 Capacity building for sanitation and hygiene improvement

The WSLIC-2 project invested heavily in training and capacity building, notably in the training of community facilitators, project consultants and local health service providers in the use of the PHAST (Participatory Hygiene and Sanitation Transformation) methodology. The PHAST methodology was to be used in both the school sanitation sub-component, to develop PHAST materials for school health teachers and students, and in the participatory identification and preparation of community-level projects for sanitation, health and hygiene improvement.

Anecdotal evidence from WSLIC-2 supervision missions and recent rapid appraisals suggest that few of these software investments have translated into useful outputs. The PHAST methodology was supposed to enable communities to identify their sanitation and hygiene problems and devise local solutions to these problems. However, it appears that very few of the ‘immediate target population’, i.e. the poorest rural households, have received PHAST training, or are aware of the sanitation and hygiene improvement messages and behavior changes promoted by the project.

Furthermore, this process had no clear guidelines; was not monitored in any way; and the project allocated it little time or resources. The most common interventions were the

39 As detailed in the WSLIC-2 supervision aide-mémoires
construction of a limited number of household toilets (using loans from a revolving fund established by the project) and the provision of a few containers for solid waste disposal.

WSLIC-2 tried to make project activities entirely participatory and community-driven, including the identification of key hygiene behavior changes and the design of hygiene improvement activities. However, the lack of a clear hygiene improvement strategy, and the limited health and hygiene experience of the community facilitators, meant that few of these participatory processes translated into concrete actions or improvements. In many cases, the community facilitators were not sure which promotional messages they were supposed to be passing on to the community, thus focused on activities with clear outputs and reporting needs (e.g. the establishment of the revolving sanitation credit).

In summary, the WSLIC-2 project has built lots of PHAST capacity, which should improve local understanding and awareness of sanitation and hygiene issues, and may have long-term benefits, but there has been no coherent strategy or implementation plan for sanitation and hygiene improvement. As a result, much of the PHAST capacity remains unused.

4.3 Limited knowledge about low-cost sanitation technologies

Evaluations of previous sanitation and hygiene interventions, and the rapid appraisals conducted during this technical assistance, make clear that most sector professionals in Indonesia have a limited knowledge of low-cost sanitation options, and very few are familiar with the operation and maintenance requirements of simple pit latrines.

Toilets constructed under GOI sanitation programs, including the WSLIC-2 project, tend to use a common design: a solid walled and roofed toilet enclosure, a pour-flush toilet pan (ceramic, cement or plastic) and an offset, solid-lined pit with some form of vent pipe. This reflects a standard toilet design loosely based on a septic tank, which would be more appropriate in a more developed or urban setting. Moreover, unlike a septic tank, this toilet design has no effluent overflow and no base slab, thus assumes that liquid wastes are able to percolate into the soil at the base of the pit. While infiltration rates vary greatly from place to place, there is a high risk that the soil pores at the base of the pit become clogged when covered with sludge, thus preventing infiltration and allowing the liquid wastes in the pit to become stagnant and odorous. In rural Indonesia, this design is overly expensive (due to the solid enclosure and solid-lined pit), with pits that do not drain well (due to the limited sidewall porosity) and are likely to smell bad (due to the vent pipe).

4.4 School sanitation and hygiene facilities

The WSLIC-2 school health and sanitation program was one of the main sub-components in the health and sanitation improvement component, but has had a limited impact on child hygiene behavior despite significant investments in school facilities, and ongoing attempts to increase the toilet-to-student ratio and improve student hygiene behavior.

40 The WSLIC-2 project allows Rp 15 million (US$ 1,500) per community for institutional sanitation facilities, with primary schools as a first priority.
Where schoolchildren have easy access to clean toilets and places to wash their hands, and good hygiene is promoted, schools provide an excellent place for the formation and institutionalization of good hygiene habits. Schoolchildren also make excellent change agents within the community and, more importantly, within their own household.

However, schools rarely utilize sanitation program funding effectively. In many communities, neither the schoolteachers nor the students make any formal commitment to use or maintain the sanitation facilities, and there is rarely any accountability for expenditures, or for the sustainability of services. Despite programs to improve school sanitation, few Indonesian schools have a reliable water supply for their pour-flush toilets, and the toilets provided are rarely sufficient for the number of boys and girls in the school. As a result, school toilets are often either dirty and abandoned, or locked to prevent them being messed up.

Where school toilets are not well maintained, there is a risk that students take home the message that toilets are smelly and disgusting; and where school toilets are locked, children are unlikely to develop the good hygiene habits, or pass on the intended hygiene messages, thus the investments are wasted.

4.5 Sanitation development using revolving credit

In addition to its health and hygiene promotion activities, WSLIC-2 provides revolving funds to finance the development of household sanitation. Within the Rp 250 million credit (approx. US$ 25,000\(^{41}\)) allocated in each community action plan, about 10% (US$ 2,500) is available for the household sanitation revolving fund.

Typically, individual households borrow between Rp 130,000 – 900,000 (US$ 13-90) towards the cost of their toilet, and are expected to repay the loan within one or two years. The intention was that the revolving fund would continue to act as a credit facility until everyone in the community had built a household toilet, after which the fund could be invested in a facility or project chosen by the community.

While the WSLIC-2 project is now promoting a range of low-cost toilet designs, the majority of those already constructed adopted the relatively expensive design described above and the loan provided from the WSLIC-2 revolving credit was insufficient to cover the total cost of the toilet. The average WSLIC-2 sanitation loan is about Rp 500,000 (US$50) and the typical cost of the toilets constructed ranged from Rp 1 million to Rp 2.5 million (US$100-$250).

In some areas, following problems in ensuring that the loans were used for sanitation development, the project officers and communities decided to issue sanitation materials in lieu of a cash loan, using the same repayment conditions as before. For instance, in Pandan village (Muara Enim District, South Sumatra) the village implementation committee provided the following package in lieu of a Rp 500,000 (US$50) loan:
- Ceramic pour-flush toilet pan (Rp 75,000)
- 3 sacks of cement (Rp 105,000)

\(^{41}\) Exchange rate US$1 = Indonesia Rupiah 10,050 (October 2005)
- 500 bricks (Rp 175,000)
- Steel reinforcement (Rp 65,000)
- 1 x 4m plastic pipe (Rp 40,000)
- 1 x t-pipe for ventilation (Rp 40,000)

While the revolving funds have worked well in some areas and communities, their overall impact on low-income beneficiaries and sanitation coverage has been limited. According to the latest WSLIC-2 progress reports, the revolving funds have provided 23,560 household loans in about 860 communities. This represents 27 loans for household toilets in each community, which is equivalent to an 11% increase in sanitation coverage within the project communities covered to date.

Unfortunately, there is little rollover of credit funds as very few of the sanitation loans are being repaid. In practice, the loans are often treated as large hardware subsidies, with little effort from community leaders to recover the loans. Anecdotal evidence from recent rapid appraisals also suggests that most of the sanitation loans are given to non-poor households, many of whom have already been assisted by previous sanitation projects. After three years of the WSLIC-2 project, 1.6 million people have access to improved water supply, but only 140,000 people have benefited from improved sanitation.

In recognition of the financing and targeting issues, the WSLIC-2 project guidelines have recently been revised to increase the total funds available for household sanitation and to reduce the amount loaned to individual households. The new policy allows up to 125 households in each community to borrow Rp 200,000 (US$ 20) at the outset, thus giving 1.7 million people the means to construct sanitation facilities over the five-year life of the project, even if none of the sanitation loans are repaid.

However, demand for the WSLIC-2 sanitation loans has been relatively low, even when larger amounts were offered, and many communities have been unable to utilize all of the money available for their revolving credit. Therefore, without radical changes in approach, it seems unlikely that the project will be able to raise the number of toilets constructed in each community by 500%.

Assuming that WSLIC-2 reaches its target of completing sub-projects in 2,500 communities, and manages to double the number of toilets constructed in each community, the average annual increase in access to improved sanitation will be about 220,000 people. This represents only 0.2% of the rural population of Indonesia. At this rate, it will take about 170 years for Indonesia to reach the Millennium Development Goal of halving the (rural) population without access to improved sanitation.

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42 Based on: (7.6 people x 125 households x 1,600 new communities) + 180,000 beneficiaries = 1.7 million
43 Project rules dictate that the revolving credit amount is determined by the number of households without toilets that are willing to take loans at the start of sub-project implementation.
4.6 Inadequate institutional arrangements

Investments for water supply development and for sanitation and hygiene improvement are often combined into a single program, which makes it difficult to locate a suitable institutional home, or develop effective institutional arrangements.

WSLIC-2 is recognized as one of the most effective community-driven development projects in Indonesia. However, despite a well-planned approach, the sanitation and hygiene component has been buried by the demands of the water supply development components. Many of the more innovative activities never happened, while the bulk of the sanitation and hygiene promotion expenditure went into revolving credit funds that have neither reached the target population nor been repaid.

In WSLIC-2, several important and well-planned elements of the ‘improving health behavior and services’ component, including the mass media and social marketing campaigns, have not been implemented. The reasons for the failure of these sub-components are complex, but none of them had a direct bearing on the main program performance indicators (number of water supply facilities constructed; population benefiting from water supply facilities; number of school and household toilets constructed; number of people trained) and it proved difficult to recruit suitably qualified and motivated staff to implement these specialist activities. Inevitably, under the normal time and resource constraints, these activities received less interest and attention than the implementation of the water supply and sanitation facilities.

Water supply development requires a high level of technical knowledge, thus must involve institutions with strong engineering skills and experience, even when implementation is participatory and community-driven. Water supply programs also need to establish relatively complex systems for the management of shared infrastructure, thus must engage with local leaders, develop community level institutions, and build financial and operational capacity.

In contrast, sanitation and hygiene interventions operate at a lower level and in a different way, working with individual mothers and children, with poor households and neighborhoods, and with local health and hygiene service providers. Inevitably, sanitation and hygiene promotion require very different skills and institutional arrangements to those needed for water supply development.

However, in most programs, there are few institutions and resources allocated exclusively to sanitation and hygiene improvement. In the WSLIC-2 project, one member of the community facilitation team is theoretically responsible for ‘health activities’, but in practice the team operates as a single unit that works together on all aspects of the project. Similarly, whilst district ‘health and community development’ consultants have broad responsibility for hygiene promotion, their duties do not extend to management of specific sanitation or hygiene activities or teams. Most project staff are responsible for activities under several different project components, including water supply development (which consumes 90% of project time and resources), thus there is little specific responsibility or accountability for sanitation and hygiene improvement.
At present, there is no accountability for sanitation and hygiene interventions in Indonesia, at any level: there is no national level body responsible for sanitation and hygiene improvement; and no sanitation or hygiene units at either province or district level. The WSLIC-2 project recently appointed provincial ‘participatory community health development’ consultants in an attempt to improve the development and implementation of its health communication strategies and hygiene activities, but these temporary appointments have had little impact on performance to date, and will not improve long-term accountability.

4.7 Critical constraints to sanitation behavior change

Another critical constraint to sanitation development and hygiene behavior change in Indonesia concerns the habit of defecation in water bodies:

“Almost all people wash their clothes, take a bath and defecate at the river even though they have a well. Only a few households have family toilet, because they feel that toilets are too expensive. Moreover, defecation in the river is perceived does not create a bad smell, like [defecation] in a poorly ventilated toilet. It is also interesting that the people in Muara Enim defecate in the morning as they are afraid to go to the river at night.” P.29 Baseline Impact Survey for WSLIC-2 Project (University of Indonesia, 2003)

When found close to the village, rivers provide convenient and accepted places for defecation. Many Indonesian villagers have grown up with the morning ritual of walking to the river to wash and defecate, with some even reporting that they find it difficult to defecate without the feel of running water on their skin. Most users believe the river to be a clean and effective sanitation solution because, unlike open defecation on the ground (where the feces remain visible and exposed for some time), defecation into the river leaves little obvious trace or smell. The fact that people also clean their clothes, their bodies, and even their teeth, in the same river water at the same time, and that many upstream communities also defecate in the river, does not seem to worry the users.

There are also other constraints. Some of the communities living close to large rivers face annual flooding during the rainy season, which questions the sustainability of the simple pit latrines promoted by most sanitation programs. Unsurprisingly, it is not easy to convince rural households using nearby rivers for washing and defecation that the construction of a potentially smelly and expensive toilet is going to improve their lives. Sanitation and hygiene interventions need to address this critical constraint by promoting appropriate toilets and by convincing communities (and their leaders) of the health and environmental problems caused by defecation in water bodies, and by using, or cleaning their teeth in, water that contains fecal contamination.

Given the well-documented difficulty of catalyzing change in the sanitation behavior of communities using rivers for open defecation, and the public health hazard and externalities imposed on communities downstream, this may be an issue that requires national or local legislation.
4.8 Community-Led Total Sanitation in Indonesia

Community-Led Total Sanitation (CLTS) was introduced to Indonesia in May 2005, through a series of pilot projects funded by the Water and Sanitation Policy Formulation and Action Planning (WASPOLA) project\(^44\). The WASPOLA CLTS pilot projects were implemented by the Ministry of Health (MoH) through the World Bank-supported WSLIC-2 project and the recently launched ADB-supported Community Water, Sanitation and Hygiene project. Between May and July 2005, about 200 facilitators attended CLTS training courses organized by the Water and Sanitation Program, during which the CLTS process was initiated in twenty-four rural communities.

There has not yet been time to conduct a detailed evaluation of the CLTS pilots. However, within five months of the first pilot starting, the Ministry of Health reports very positive results, with dramatic changes in sanitation coverage and a lot of interest in the new approach from local governments and health service providers. Despite concerns that the CLTS approach would be difficult to replicate outside South Asia, rapid appraisals conducted by the author in September 2005 confirm that sanitation coverage in four of the CLTS pilot communities\(^45\) had already increased by 20-98%.

Not all of these new toilets were yet in use, and none of the communities had managed to stop open defecation completely, but even the worst performing community had managed a 20% increase in sanitation coverage in only a few months. In one of the pilot communities (Desa Mamak, Sumbawa, NTB), every single household had built a new toilet. Unfortunately, most of these new toilets had been built in anticipation of a forthcoming WSLIC-2 water supply scheme, and less than 50% were actually in use because the scheme was not yet complete and there is no water available within the village.

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\(^{44}\) Government of Indonesia partnership with the Water and Sanitation Program – East Asia and the Pacific

\(^{45}\) Desa Babat and Ibul, Muara Enim, South Sumatra; Desa Mamak and Sebasang, Sumbawa, NTB
The toilets being built under the CLTS pilots in Indonesia are similar to those constructed under similar programs in South Asia, ranging from ceramic pour-flush toilets with brick enclosures that cost $100 - $250, down to basic or ventilated pit latrines with unroofed enclosures made from plastic sheeting, palm matting or bamboo, which cost $10 - $20. The low-cost toilets built by poorer households typically cost less than $15, which is considered affordable for 60-80% of rural households, although a few enterprising households built toilets using only local materials and labor, with no cash requirement.

The pilot projects illustrate that CLTS is a simple concept that is easily and rapidly understood, transferred and replicated. It is also relatively low cost for a participatory approach, as no hardware subsidies are being provided. However, success is dependent on the quality of the facilitation and follow-up, which is difficult to ensure at large scale.

The recent CLTS pilot projects in Indonesia have generated a lot of excitement and interest in this new approach. However, these pilot projects benefited from a high level of support and expertise from WSP-EAP and the MoH during their planning and implementation, with frequent follow-up and monitoring, thus the outcomes are not necessarily representative of those from a large-scale program. Nevertheless, despite the problems and weaknesses discussed above, the CLTS pilots appear to have had greater impact than any previous rural sanitation and hygiene approaches used in Indonesia.

### 4.9 Sanitation development in peri-urban areas

Indonesia has one of the lowest rates of urban sewerage coverage in Asia. Less than ten cities have some form of network sewerage, and these networks are estimated to reach only 1.3% of the total population. With few other options, many urban households have provided their own sanitation facilities. At present, about 70% of urban households are
thought to have some form of private on-site sanitation facility, mostly small septic tanks with inadequate effluent disposal. However, the lack of investment, oversight and regulation by local government means that few drainage or septage collection services are available in most cities and towns, and safe disposal is rare. Most sewage and effluent finds its way into open access resources such as rivers and canals, resulting in widespread contamination of surface and groundwater resources.

About 30% of the urban population does not have access to adequate sanitation services. Most of this unserved population lives in densely populated slum and squatter settlements, where land tenure problems, space constraints and poverty prevent many households from investing in on-site sanitation facilities. In a context of rapid urbanization, the number of urban poor living in these informal settlements is growing, putting further pressure on already stretched resources and creating massive public health hazards.

Sanitation development in peri-urban areas and large, informal settlements is technically complex. There are usually few networked solutions possible, and insufficient space for on-site facilities such as pit latrines. Urban inhabitants tend to demand a higher level of service than rural, and the construction of facilities is often more expensive in restricted urban environments with few viable disposal options.

The WASPOLA project recently used the Sanitation by Communities (SANIMAS) initiative to pilot community-based sanitation options in peri-urban areas in East Java and Bali. These pilot projects were implemented in partnership with BORDA, an international NGO, and involved cooperation with urban communities and local governments to improve hygiene behavior and develop sustainable sanitation facilities that reflect the preferences of the target communities. Three types of community-based sanitation system are being implemented: communal toilet and bathing facilities (MCKs); communal septic tank systems; and small, simplified sewerage systems.

The ISSDP project is planning to build on the WASPOLA and SANIMAS experiences, and to strengthen the capacity of local governments to plan and implement community-based sanitation systems. While clearly an area that needs a lot more work, the SANIMAS results suggest that community-based sanitation is an effective and sustainable solution in densely-populated peri-urban areas.

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46 Bremen Overseas Research and Development Association
5 FINDINGS

5.1 Scale of activities

The WHO-UNICEF Joint Monitoring Programme\(^{47}\) (JMP) reports that only 38% of the rural population in Indonesia have ‘access to improved sanitation coverage’\(^{48}\), and suggests that rural coverage has not increased since 1985 (see Annex 5).

<table>
<thead>
<tr>
<th></th>
<th>Access to sanitation</th>
<th>Access to water supply</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Improved</td>
<td>Unserved</td>
</tr>
<tr>
<td>Rural</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>118 million</td>
<td>45 million</td>
</tr>
<tr>
<td></td>
<td>(54%)</td>
<td>(38%)</td>
</tr>
<tr>
<td>Urban</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>100 million</td>
<td>70 million</td>
</tr>
<tr>
<td></td>
<td>(46%)</td>
<td>(70%)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population</td>
<td>218 million</td>
<td>115 million</td>
</tr>
<tr>
<td></td>
<td>(53%)</td>
<td>(47%)</td>
</tr>
</tbody>
</table>

Source: JMP (2004); WDR (2005)

Given a total population of 218 million, this suggests that about 73 million rural inhabitants are currently without access to adequate sanitation services. In contrast, rural access to water supply is 69%, with 36 million rural inhabitants unserved, i.e. half as few as the population without access to sanitation (see Table 1). Based on the JMP figures, achieving the Millennium Development Goals\(^{49}\) (MDGs) will involve providing access to improved sanitation services to 36 million rural inhabitants over the next ten years.

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\(^{47}\) A global initiative by the WHO & UNICEF to report on the status of water supply and sanitation services and support country efforts to monitor the sector

\(^{48}\) The JMP defines improved sanitation as: ventilated improved pit latrines, simple pit latrines, pour-flush latrines, or connections to septic or sewer systems. Note: this definition excludes bucket latrines, open pit latrines and public or shared latrines.

\(^{49}\) Halving the number of people without access to sanitation by 2015
The rural population without access to sanitation is double that without access to water supply, but sector finance remains heavily skewed towards investment in water supply. Local governments in Indonesia appear to regard sanitation as the business of individuals, NGOs, the private sector or the national government. In this respect, sectoral allocations of the consolidated block grant provided for local government infrastructure (DAU) are revealing. Typically, water supply and housing dominate local spending, consuming 80% and 15% of the DAU funds respectively, leaving only 5% for investments in sanitation50.

Local governments are often reluctant to expend their limited funds on non-hardware components, as there is more political mileage in tangible construction activities. Therefore, high-level advocacy is required to ensure that government departments and local governments give sufficient priority and budget allocations to the software and capacity building activities needed for sanitation and hygiene improvement.

5.2 Program sustainability and effective use

Many different approaches to sanitation and hygiene improvement have been tried in Indonesia. More recently, community participation and ‘informed choice’ have been introduced to increase the involvement of communities in the planning and design of development activities. These new approaches aim to improve demand-responsiveness and thus produce more sustainable water and sanitation systems.

However, despite large investments in the rural water supply and sanitation sub-sector, the proportion of the rural population with access to improved sanitation has been static for the last twenty years. The bulk of the investment has been on water supply systems, and very few of the expenditures on sanitation and hygiene promotion appear to have resulted in either sustainable infrastructure or long-term behavior change.

There is substantial anecdotal evidence of abandoned and unused toilets from previous sanitation projects; revolving sanitation funds that never revolved because nobody repaid the loans; toilet manufacturing projects that did not sell any toilets; and non-poor households that received a new toilet every few years from different sanitation projects.

Whilst most sanitation and hygiene programs include detailed and well thought-
out implementation plans, few of these plans seem to translate into effective activities. In combined water supply and sanitation programs, water supply development generally consumes the majority of program time and resources. Given the limited time and resources remaining, sanitation promotion then becomes a simple toilet building exercise, with hygiene promotion tacked on to interventions as something of an afterthought.

5.3 Performance monitoring

Another key problem is that few sanitation and hygiene improvement programs have any measure of success other than increases in sanitation coverage. Given the central objective of health improvement, the success of sanitation and hygiene interventions should be measured not by the number of toilets and handwashing facilities constructed, but by reductions in diarrhea prevalence, reductions in open defecation, and improvements in health and hygiene behavior. Programs need to assess whether sanitation and hygiene facilities are being effectively used; whether they are sustainable; and whether interventions are reaching the target population.

The development of locally appropriate indicators to monitor public health and program performance is essential, but is a difficult task. Counting toilets is far easier than measuring gradual changes in hygiene behavior and diarrhea prevalence across a large and varied population. In Indonesia, most data on community health are derived from national household surveys, from clinical records of primary health centers (Puskesmas) and local hospitals, or from monthly reports made by community midwives (Bidan Desa).

The two latter data sources are problematic. Despite their high disease burden, poor households living in rural areas often bypass government health services by buying medicines from local shops and obtaining treatment from traditional healers or private doctors. As a result, the clinical data from primary health centers do not usually represent a full picture of morbidity among poor, rural households. Community midwives are supposed to collect information on diarrhea prevalence and morbidity, which is reported to the Puskesmas (Primary Health Centre) on a monthly basis. The quality of this data depends on the experience and commitment of the midwife, as well as their relationship with the community and the Puskesmas, thus varies greatly from place to place.

Improving the sustainability and effective use of the infrastructure and behavior change resulting from sanitation and hygiene interventions will require considerable strengthening of community and health facility monitoring, as well as a radical change in the way that these programs measure their performance and effectiveness. Sections 7.4.2 and 7.4.3 contain some initial proposals for the monitoring of program performance and impact, but this area requires close collaboration between the program preparation team and the Ministry of Health in order to define practical and reliable monitoring indicators.
6 RECOMMENDATIONS

The NPCWSSS ‘improving sanitation and hygiene behavior and services’ component needs to be different from previous Indonesian water supply and sanitation interventions in two important ways: firstly, for the sanitation and hygiene component to have any national impact on rural access to improved sanitation, or on hygiene behavior and public health, it must operate at a far larger scale than existing interventions; and, secondly, it must adopt a more programmatic approach in order to provide the long-term institutional support and monitoring required for effective sanitation and hygiene improvement.

The new program needs to meet the twin challenges of making sanitation and hygiene improvement more effective, equitable and sustainable, while also adapting interventions for implementation at large-scale across the diverse contexts found in Indonesia.

There is increasing global support for sanitation and hygiene marketing as a possible solution to the large-scale and cost-effective provision of sanitation and hygiene services. The argument is that most progress in increasing access to sanitation has been achieved by private suppliers supplying individual households, and that marketing has been more successful than anything else in promoting the adoption of sanitary toilets and making sustainable changes to people’s hygiene behavior. However, there are concerns about the ability of the marketing approach to reach the poorest households. In contrast, intensive, participatory approaches like Community-Led Total Sanitation (CLTS) are good at reaching the poorest households, but are relatively difficult and expensive to scale up, and hence likely to be less cost-effective in reaching large, diverse populations.

6.1 Combined marketing and total sanitation approach

One solution is to combine both ‘sanitation marketing’ and ‘total sanitation’ elements into the sanitation and hygiene promotion component. The early promise of CLTS in Indonesia suggests that this approach, when adapted and used within a carefully structured and targeted program, will provide an effective way of reaching the poorest households in remote, rural communities. The rest of the population can be served by a large-scale marketing program designed to develop appropriate products and services; build local sanitation businesses and supply chains; and promote sanitation and hygiene improvements.

The proposed program strategy will use provincial sanitation awareness and hygiene promotion campaigns, modeled on the campaigns planned by the Indonesia Sanitation Sector Development Program (ISSDP), and targeted at the market segments identified by the initial consumer research in each province. Beneath these provincial campaigns, there will be a two-pronged strategy: the marketing component will work outwards from the rural centers and main roads, building supply chains and local capacity; meanwhile the ‘total sanitation’ component will start in the most remote, unserved, rural communities and work inwards towards the expanding supply chains. In the long-term, it is hoped that the reach and effectiveness of market supply will enable the ‘total sanitation’ component to be phased out completely.
6.2 Phased approach in the total sanitation program

The need for cost-effectiveness requires that the total sanitation program is both simple and structured. An incremental and sequenced approach will be adopted in each community, starting with simple and low-cost interventions, and only progressing to further, more complex interventions when the community reaches its initial performance targets. The intention is to make the sanitation and hygiene interventions more demand-responsive, with further interventions only triggered when the community demonstrates interest and commitment to the improvement of its sanitation and hygiene behavior and services, and make the interventions simpler to understand, implement and monitor.

It has been suggested that many people in Indonesia are already aware of key hygiene issues like the need to wash hands before eating and after defecation; to boil and safely store drinking water; and to improve personal hygiene by regular bathing. The problem is that this awareness is rarely reflected in hygiene behavior because of common household constraints (inadequate water supply close to the home; no toilet; high cost of services) and the lack of any motivation or incentive for change. Therefore, the challenge is not in passing on negative hygiene messages (“don’t do this or that”), but in triggering positive and sustained behavioral change in the most cost-effective manner.

Therefore, it is proposed that community-level sanitation and hygiene interventions should follow a simple three-stage process, as follows:

<table>
<thead>
<tr>
<th>Stage 1</th>
<th>Campaign to stop open defecation (including safe disposal of child feces)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 2</td>
<td>Campaign to improve handwashing</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Campaign to improve other hygiene behavior and services (key behaviors and services identified by the community using PHAST methodology)</td>
</tr>
</tbody>
</table>

The Stage 2 handwashing campaign will not be triggered until the community achieves the Stage 1 goal of completely stopping open defecation. Similarly, the Stage 3 hygiene improvement campaign will not be triggered until the community achieves the Stage 2 goal of ensuring that everyone washes their hands with soap after coming into contact with feces, i.e. after defecation and anal cleansing, or after cleaning feces from a child.

This structured approach is intended to focus program and community attention on the two key actions that isolate fecal material and prevent it from reaching the local environment:

- safe disposal of adult and child feces, and
- handwashing with soap after defecation.

Once a community has shown its commitment to changing these two critical hygiene behaviors, then the program will invest time and effort in the application of a more detailed methodology, e.g. PHAST, to determine the specific hygiene behaviors and health problems that the community would like to improve.

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52 The World Bank (2005) The handwashing handbook: A guide for developing a hygiene promotion program to increase handwashing with soap
Stage 1 trigger: Community application and selection
Stage 2 trigger: 100% access to sanitation + 0% open defecation
Stage 3 trigger: 100% handwashing with soap (after contact with feces)

The trigger settings in this three-stage process are critical. If set too high, the triggers will prevent communities from progressing to the next stage of the process, thus restricting the number of communities that are involved in handwashing and hygiene improvement campaigns. A lower trigger setting for stage one, such as after 50% reduction in open defecation, would ensure that more communities reach the second stage, but is more difficult to assess and, more importantly, would remove the drive to achieve a complete stop to open defecation and 100% access to private sanitation facilities.

As discussed earlier (Section 3.1), research suggests that handwashing with soap is the single most effective public health intervention. Therefore, it could be argued that, by starting with the campaign to stop open defecation, the total sanitation program will save fewer lives and deprive some poor communities (those that do not manage to achieve the Stage 1 goal of stopping open defecation) of the basic hygiene education needed for full and beneficial health impacts. However, it should not be forgotten that the sanitation and hygiene marketing program will involve detailed and targeted hygiene promotion campaigns that use a number of different channels to deliver locally appropriate hygiene improvement messages on a number of relevant topics, which will undoubtedly include handwashing, and which should eventually reach every community in Indonesia.

In the total sanitation program, open defecation was selected as the primary behavior requiring change, ahead of handwashing, because this behavior change entails the provision and usage of sanitary toilets, and economic research suggests that hygiene promotion interventions, e.g. handwashing campaigns, are twice as cost-effective in communities where water supply and sanitation facilities already exist. Based on the CLTS pilot projects, key stakeholders in Indonesia confirm the value of focusing program and community attention on achieving ‘total sanitation’, and also suggest that the empowerment and enthusiasm associated with reaching ‘open defecation free’ status then primes communities for rapid change and improvement on other fronts.

In summary, the total sanitation program will focus on safe excreta management and handwashing first, only moving on to examine other environmental sanitation and hygiene issues (e.g. solid waste management, drainage, food hygiene, water storage, vector control) once these primary behavior changes have been successfully achieved.

### 6.3 Sanitation markets

The market for sanitation products and services is rarely well developed in rural parts of Indonesia. Ceramic toilet pans are available in most towns, but there are few low-cost sanitation products, such as plastic toilet pans, and few local masons with experience of building anything other than urban-style pour-flush toilets.

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In order to encourage the development of sustainable sanitation markets, and meet demand generated by the ‘total sanitation’ and ‘sanitation marketing’ programs, it is important to work with local manufacturers and service providers to develop appropriate sanitation products and services, and build local sanitation businesses and supply chains.

However, given the failure of previous efforts to create sanitation marts and train masons to build standard toilets, it is recommended that the design of each provincial ‘sanitation supply chain and business development program’ be based on a thorough and realistic analysis of local conditions, business needs and customer demands.

6.4 Institutional support mechanisms

Behavior change takes time to set in. Rural households can revert to their old habits very quickly if new toilets become blocked, broken or smelly, and if nobody is on hand to provide timely advice and encouragement when other problems or challenges arise.

Regular monitoring is essential for the success of decentralized implementation, and provides important feedback on the sustainability of sanitation products and services. In addition, regular follow-up by outsiders encourages households and community groups to continue with new roles and hygiene practices, and makes it more likely that toilets will remain clean and in use when latrine pits fill up and renovations are required.

The focus of the ‘total sanitation program’ is on triggering behavior change, which inevitably results in a rolling program that moves on once the sub-project is complete in a particular village. The behavior change process takes some time and may empower the community involved to tackle other development challenges, but still requires regular monitoring and support for the development of long-term and sustainable sanitation and hygiene improvements. Therefore, it is recommended that the total sanitation and sanitation marketing programs be supplemented by the establishment of institutional support mechanisms, such as local sanitation and hygiene units, embedded in local government.

While the institutional model for the implementation of the NPCWSSS remains to be finalized, it is clear that significant re-skilling is required in order that line ministries, and local government units of the Ministry of Health and Ministry of Home Affairs, are equipped to drive a program of behavior change and health improvement. The proposed local sanitation and hygiene units may prove effective in leading this re-skilling and institutional change process.

The Ministry of Health employs more than 50,000 community midwives (Bidan Desa) in Indonesia, as well as a sanitarian in each health centre (Puskesmas). Wherever possible, given their other duties and commitments, these sanitarians and midwives should be involved in the program. In particular, midwives should be involved in the community handwashing and hygiene campaigns, as life-changing events like the birth of a baby are critical opportunities for changing the habits and hygiene behavior of mothers (and others that care for young children).^{54}

^{54} The World Bank (2005) The handwashing handbook: A guide for developing a hygiene promotion program to increase handwashing with soap
6.5 Baseline sanitation data

It is vitally important that new baseline sanitation data is collected, and that broad consensus is reached on the use of these revised access figures for planning and monitoring purposes. The sanitation and hygiene improvement component detailed below contains proposals for conducting a national baseline survey of sanitation facilities, and it is hoped that this process will lead to the creation of a national database on community-based water supply and sanitation services.

6.6 Program finance

The proposed sanitation and hygiene improvement component includes significant investments in software and capacity building activities, with very little funding recommended for direct construction or subsidy of sanitation and hygiene facilities.

Given GoI’s apparent reluctance to invest in non-hardware activities, this may create problems in the financing of the program. There is likely to be some grant funding available to the NPCWSSS, either from AusAID or some of the other donors working in the sector, which allows the possibility that non-repayable funding could be used to part-finance the software and capacity building expenditures. However, in light of the need for stronger support and priority to the sanitation sub-sector, and the central role that software activities and capacity building play in sanitation and hygiene improvements, it is recommended that the GOI re-appraises its financial policies for community-based infrastructure programs.

The proposed sanitation and hygiene marketing campaigns need to cover a far larger and more diverse audience than the proposed total sanitation program. Given the significant unknowns in pricing national and provincial campaigns managed by the public sector, it is possible that the marketing costs have been under-estimated. Therefore, wherever finance is inadequate, or there is a need to deepen, expand or extend the program, it is hoped that the marketing campaigns and business development programs will be able to attract sufficient investment from private industry, e.g. soap companies interested in supporting handwashing campaigns; pharmaceutical companies interested in supporting health improvement campaigns; and manufacturers interested in expanding their markets.

7 PROPOSED SANITATION AND HYGIENE IMPROVEMENT COMPONENT

The proposed sanitation and hygiene component contains four sub-components, which aim to:

- trigger hygiene behavior change;
- create ‘informed demand’ for sanitation products and services;
- improve and increase the supply of sanitation products and services;
- improve school hygiene and sanitation;
- develop monitoring and evaluation systems to provide feedback and benchmarking;
- encourage periodic revision and refinement of program approaches;
- build sustainable support mechanisms for sanitation & hygiene services; and
- develop responsibility and accountability for sanitation and hygiene improvement.
At the time of writing the report, the institutional arrangements for implementation of the proposed NPCWSSS were uncertain. The WSLIC-2 project was implemented by the Ministry of Health, through its Directorate General for Communicable Disease Control, thus the Ministry of Health seems the natural home for any future program involving significant investments in sanitation and hygiene improvement. However, the Ministry of Public Works has extensive experience in the implementation of water supply projects, and it has even been suggested that the Ministry of Planning (BAPPENAS) may be best placed to manage the program using direct implementation by one or more of the line ministries. Given this uncertainty, the report does not attempt to develop detailed institutional arrangements for the proposed sanitation and hygiene improvement component. Instead, section 8.3 suggests the institutional issues that are likely require more detailed study and discussion during the program preparation stage.

Another major challenge has been the costing of the sanitation and hygiene improvement component. There have been no previous large-scale implementations of either ‘total sanitation’ or ‘sanitation marketing’ in Indonesia, and very little global data is available.

The total component cost (US$65 million) has been estimated based on the assumption that the sanitation and hygiene improvement component will be implemented on a national scale as part of the proposed Indonesia National Program for Community Water Supply and Sanitation Services (NPCWSSS). The basis of the estimated total component cost is laid out in more detail in Section 7.5 below.

Given the Millennium Development Goal of halving the number of people without access to improved sanitation by 2015, the five-year investment plan for this program component has been based on increasing rural sanitation coverage by 18% (from 38% to 56%). If the program succeeds in achieving this increase over its five-year lifetime, then it seems reasonable to assume that a five-year extension to the program should allow a further 18% increase in rural sanitation coverage (assuming program refinements result in greater effectiveness and efficiency), leaving Indonesia well placed to meet its MDG target (for the rural population) of 69% access to sanitation by 201555.

The NPCWSSS will involve only partial interventions in urban areas, and other urban programs will be responsible for the provision of institutionally-managed and networked services, thus no coverage targets have been set for urban areas.

It is proposed that the component for sanitation and hygiene improvement includes the following sub-components:

### 7.1 Total sanitation program (US$35 million)

The ‘total sanitation’ program is designed to cover 17,500 communities over five years. This ambitious goal represents 25% of the 70,000 rural communities in Indonesia,

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55 MDG figures used in this report are based on JMP data rather than GoI data, thus may disagree with official figures.
including (on average) 58 communities in every district. The sub-component aims to reach about 30 million poor, rural inhabitants over five years, of whom about 24 million are thought to have no access to improved sanitation. Assuming that the total sanitation program manages to provide access to ‘improved sanitation’ for only 50% of its target population, it should achieve a 10% increase in rural sanitation coverage.

The community selection process for the total sanitation program will be different to that used in the components for water supply development, as some communities with adequate access to water supply remain without access to sanitation. Therefore, this sub-component will develop an independent set of community selection criteria based on indicators from the baseline survey, e.g. access to improved sanitation, prevalence of diarrhea, access to markets etc.

As in WSLIC-2, service contracts will be used to train community facilitators; to facilitate community-level projects within the total sanitation campaign; and to monitor performance (through the ‘sanitation and hygiene unit development’ sub-component). This sub-component will improve sanitation and hygiene behavior through ‘direct consumer contact’. Sanitation and hygiene monitors will be elected in each neighborhood of the community, and these sub-community institutions will be the focus for most activities within the total sanitation program.

The total sanitation program will use the ‘ignition process’ (see Annex 3) to trigger community initiatives to stop open defecation, improve household sanitation and safely dispose of child feces. If the community manages to stop open defecation, the program facilitators will then initiate the second stage of the community intervention, which is a handwashing campaign.

The ‘second stage’ handwashing campaign will utilize the messages and materials developed by the ‘sanitation awareness and hygiene promotion campaign’ and by the proposed USAID-supported National Handwashing Campaign. If the community manages to ensure that everyone washes their hands with soap after defecation (or after cleaning feces from a child), the community facilitators will then initiate the third state of the community intervention, which is a community-driven hygiene behavior change campaign using the PHAST methodology.

The total sanitation approach avoids imposing external toilet designs, instead encouraging individuals and communities to develop their own sanitation solutions. This freedom often inspires innovative, low-cost designs using local materials, but does not guarantee an appropriate or sanitary toilet. Therefore, each provincial program will produce a regularly updated catalogue detailing the materials and costs of innovative, homemade designs for low-cost sanitary toilets constructed by local households, which should then be circulated to guide or inspire other households.

56 These figures are based on the following administration data (from 2004): 32 provinces; 302 districts; 4,918 sub-districts; 70,460 villages.
57 One male and one female monitor will be elected from each neighborhood (defined as not more than 50 households), with men voting only for the male monitor and women voting only for the female monitor.
58 A toilet catalogue produced by VERC (an NGO in Bangladesh) details 38 different toilet designs constructed by villagers, none of which cost more than US$20 (Rp 200,000).
The total sanitation program will also use institutional incentives to drive behavior change and campaign performance. Examples include ‘clean village’ competitions, citizens report cards, student health cards, community health clubs, local benchmarking (comparing community performances within each sub-district or district) and awards to local government bodies and health centers that manage to stop open defecation within their jurisdiction.

### 7.2 Sanitation and hygiene marketing (US$19 million)

The sanitation and hygiene marketing sub-component will comprise three distinct elements, which have been linked because the findings from the initial research studies will be central to both the marketing campaigns and the business development programs.

The three elements of the sanitation and hygiene marketing program are:

- Sanitation market, consumer and supplier research studies (US$ 0.25 million)
- Sanitation awareness and hygiene promotion campaigns (US$10 million)
- Sanitation supply chain and business development programs (US$8.75 million)

The main objective of the sanitation and hygiene marketing program is to persuade more than 1.67 million unserved rural households to construct (and use) sanitary toilets and improve their hygiene behavior. The achievement of this objective will produce an 8% increase in rural sanitation coverage, at a marketing cost of about US$12 per household (US$2 per person).

#### 7.2.1 Sanitation market, consumer and supplier research studies

The diverse cultures and contexts across Indonesia result in very different attitudes, habits and behaviors, thus it is proposed to conduct the detailed sanitation research studies on a provincial basis. This approach carries the risk that there will be inadequate research expertise available at the provincial level, but this activity has the advantage that it can be linked with the national sanitation research studies currently being planned by the Indonesia Sanitation Sector Development Program (ISSDP).

As in ISSDP (see Annex 3 for more detail), the research studies will be done through service contracts with local firms, NGOs or academic institutions. The first provincial research study will be a full pilot carried out in advance of the others, so that the learning from this process can be used to revise and refine the design of the remaining studies. Each provincial research study will conduct detailed examinations of local hygiene behavior, sanitation supply chains, and communication channels.

The studies will identify key hygiene messages and behavior change ‘triggers’ for the different target groups in the study area. Whilst the studies will involve comprehensive research, reporting and analysis, the outputs should focus on the identification of a few simple messages, behavior change triggers and performance indicators for each target group, and provide convincing justification for the selection of these critical products.

The provincial research studies will also examine local markets, suppliers and consumers of goods and services for sanitation and hygiene improvement, and establish what people
are willing to pay for these products and services. The studies will require the identification of all manufacturers, distributors, retailers, and masons involved in the supply of sanitation and hygiene goods (latrine pans, cement, pipes, potties, soap) and services to consumers in the study area, as well as any public, private, NGO or external actors involved in the sub-sector. Importantly, the studies will also examine consumer perceptions of existing goods and services, consumer preferences, barriers to adoption (why do so few poor households invest in sanitation facilities?) and alternative spending preferences. The studies will recommend practical and locally appropriate solutions to any barriers, gaps or shortcomings in the market highlighted by this research.

In addition, the market research studies will have to identify local communication channels and media strategies for reaching the target groups. This will involve talking to soap companies and other local firms that market products in the study area, and learning from media companies and other local outreach organizations (public, private or NGO) with experience of reaching the target groups.

7.2.2 Sanitation awareness and hygiene promotion campaigns

The primary aims of the provincial campaigns are to: increase demand for sanitation; increase public and political support for sanitation improvements; raise awareness of low-cost sanitation products; and promote the adoption of key hygiene behaviors to reduce disease transmission.

The strategy and materials for the sanitation awareness and hygiene promotion campaigns will be designed by professional marketing and media specialists under service contracts, through a consultative process that addresses the issues, opportunities and constraints that emerge from the research studies. Using the ISSDP model (see Annex 3), the design and implementation of the provincial campaigns will be overseen by a national coordinator with extensive experience managing large-scale public health and hygiene improvement campaigns (preferably in Indonesia). Wherever appropriate, the provincial campaigns will form partnerships with other sanitation and hygiene promotion initiatives, and incorporate relevant elements of these initiatives to ensure consistent messages and approaches within the campaign area and target groups.

The campaigns should be segmented to address and influence the different priorities, attitudes and behaviors of the target groups identified by the research studies, and allow the use of several funding and implementation models. Specific efforts should be made to examine the different challenges and priorities found in peri-urban communities.

The campaign will also require an advocacy component calling for greater investment in sanitation and hygiene improvement, which should be targeted at national and local decision-makers, including politicians, administrators, government officials, community leaders, and health service providers; the campaign should involve local trend-setters and role models, such as entertainers, sportspeople, traditional chiefs and religious leaders. Exposure visits to communities with successful sanitation and hygiene improvement projects are powerful tools for overcoming political resistance and generating support for new ideas and approaches, thus should be incorporated in all promotional campaigns.
The segmentation of the provincial campaigns should take account of the parallel implementation of the ‘total sanitation program’ in remote, rural communities. The campaigns should ensure that specific messages and activities are developed to supplement the participatory approaches used by the total sanitation program in these communities, and to enable the campaigns to reach poor, rural households that have limited media or market access.

The sanitation awareness and hygiene promotion campaigns should also develop promotional materials and strategies for use in schools. The school hygiene and sanitation sub-component includes funding for district workshops, at which schoolteachers will be trained to use these campaign materials, and integrate them into school curricula and health education activities.

All campaign elements will require a process of pre-testing and refinement, then pilot implementation and evaluation in one district, before the final, revised provincial campaign is rolled out. Regular monitoring and evaluation of the campaign performance and impact will be carried out through the ‘sanitation and hygiene unit development’ sub-component.

7.2.3 Sanitation supply chain and business development programs

The main objective of the provincial sanitation supply chain and business development programs will be to improve the promotion and supply of goods and services for sanitation and hygiene improvement. The provincial programs aim to develop a range of appealing and affordable sanitation options; promote these products through direct marketing and local advertising; and create links between potential customers and competent service providers.

The area covered by each provincial program will eventually match the area covered by the sanitation awareness and hygiene promotion campaign, but the programs will be developed outwards from the main market and supply hubs. Only 25% of communities will be targeted, with communities selected based on their demand for sanitation and their proximity to markets (for ease of supply). The long-term aim is that local supply chains will be able to deliver affordable sanitation goods and services to even the most remote communities, allowing those communities targeted by the ‘total sanitation program’ to upgrade and improve their sanitation facilities using market-bought goods and services.

The provincial programs will use service contracts to train masons and suppliers, improve product marketing, and organize promotional events. The programs will also employ a provincial technical specialist capable of improving sanitation designs and refining manufacturing processes.

Initially, the provincial programs will focus on technology transfer and capacity building. Based on the consumer research information collected during the provincial studies, the technical specialist should work with local suppliers and communities to identify a range of sanitation options that appeal to local consumers, are affordable, and can be constructed using locally available materials and skilled labor. Where possible, the specialist should attempt to reduce the cost of these options through material substitution,
simple design improvements, and the introduction of imported technologies, e.g. low cost plastic toilet pans from South Asia.

The next step is to transfer these ideas to a network of suppliers. Each district will select local suppliers and masons interested in developing their construction skills and expanding their businesses. If possible, there should be two to three masons from every eligible community (to encourage competition). These private masons will be given basic construction training (when required); taught the basic principles of the design, operation and maintenance of a low-cost sanitary toilet; and instructed how to build the range of toilet designs developed from the consumer research studies. All program staff involved in the sanitation awareness and hygiene promotion campaign or the supply chain development program will also attend this technical training.

In addition, the suppliers and masons will be trained in basic business skills such as budgeting and marketing. Each district sub-program will assess the potential market size and advise the newly-trained service providers on the start-up, operation and expansion of their sanitation businesses. Manufacturers and retailers will be encouraged to provide credit to masons (and other frontline service providers) so that they can expand their businesses, and masons will be encouraged to allow poor households to pay by installment. Distribution costs will be reduced by encouraging retailers to create storage depots and retail outlets where demand is high, e.g. for cement, toilet pans and bricks.

One of the key constraints to sanitation development is a lack of reliable product information. Most poor households believe that toilets are expensive and unaffordable, thus show little interest in sanitation programs. Therefore, the provincial programs will invest in marketing and promoting a range of appealing and affordable sanitation products through local adverts, community roadshows, sanitation exhibitions (places to view products), demonstration toilets, program-financed discounts and product catalogues.

The provincial programs will also develop an accreditation system for competent service providers (masons). Trusted local institutions, e.g. health centers, will be encouraged to recognize and endorse service providers trained by the program, thus removing doubts that potential customers may have about their technical competence or experience.

### 7.3 School hygiene and sanitation improvement (US$6 million)

The school hygiene and sanitation improvement sub-component includes two main activities:

- School sanitation and hygiene facilities (US$ 4.5 million)
- District workshops on school hygiene and sanitation (US$ 1.5 million)

#### 7.3.1 School sanitation and hygiene facilities

It is proposed that a fixed sum (US$500) be provided for the construction of school sanitation and hygiene facilities in each of the 17,500 communities to be covered by the total sanitation program. However, this sum will not be made available until the community has completed the first two stages of the total sanitation program: stopping
open defecation, and ensuring that everyone washes their hands with soap after contact with feces.

Following independent verification of these achievements, the community has the option to invest the US$500 in improving the sanitation and hygiene facilities of the school that the children in the community attend. However, any additional facility costs (above US$500) will have to be made up by the Ministry of Education, the local government, or by the community itself. In this manner, the program hopes to leverage more funds for school sanitation; increase the sense of ownership; and avoid ineffective investments in duplicate school facilities. It is also hoped that the desire for improved school facilities will provide an additional incentive for the community to meet its total sanitation targets.

7.3.2 Workshops on school hygiene and sanitation

District workshops on school hygiene and sanitation will take place in all program areas, regardless of community achievements in the total sanitation program.

The promotional materials and approaches to be used in the school hygiene and sanitation improvement sub-component will be developed under the sanitation and hygiene marketing sub-component. These materials and approaches will then be incorporated into school curricula and health education activities following a series of district workshops on school hygiene and sanitation, which will be attended by local primary school teachers and educational extension staff.

Detailed information on effective promotion of hygiene and sanitation in schools, including a ‘toolkit on hygiene, sanitation and water in schools’, is now available from the World Bank website: http://www.schoolsanitation.org/.

7.4 Development of provincial sanitation and hygiene units (US$5 million)

This sub-component aims to develop a sustainable network of ‘provincial sanitation and hygiene units’. These units will be established using program finance, but will be located within local government health structures, and all recurrent funding will be channeled through local government budgets.

The sanitation and hygiene units will have four main tasks:

- Conduct baseline survey
- Monitor and evaluate program performance
- Monitor and evaluate program impact
- Provide institutional support to community programs

7.4.1 Baseline survey

The establishment of the provincial sanitation and hygiene units will be one of the first program tasks, as these units will be responsible for developing consensus on a set of practical monitoring indicators with the Ministry of Health, and conducting a thorough baseline survey using the program performance and impact indicators discussed below.

The market research studies will provide much of the objective information normally provided by a baseline survey, hence it is recommended that, where possible, the baseline
survey be conducted using a collaborative, multi-stakeholder approach. It is imperative
that the baseline survey establishes consensus on access to improved sanitation, given the
centrality of this measure to any assessment of progress towards the sanitation MDG.

It is proposed that the implementation of the baseline survey should follow the following
approach. In the run up to the first South Asian Conference on Sanitation (SACOSAN) in
2003, the Bangladesh government realized that it needed more accurate and detailed
sanitation data in order to develop a realistic strategy and implementation plan. A rapid
baseline survey was commissioned, using public, NGO and donor resources to cover
every community in the country in just three months at minimal cost (donors and NGOs
funded their own inputs). Prior to the rapid baseline survey, 45% of the population was
thought to have access to improved sanitation, but the survey results led to official
sanitation coverage being revised down to 32%. The baseline survey has since been
widely disseminated, and provides a common and undisputed database for all to work
from.

In addition to the performance and impact indicators, the baseline survey will also collect
information on the community selection criteria required for the sanitation and hygiene
improvement component, e.g. access to markets.

7.4.2 Monitoring and evaluation of program performance
The monitoring and evaluation of program performance will focus on hygiene behavior
change and program outcomes using easily collectable and verifiable indicators. It is
important that the Ministry of Health lead the process to select and define these
performance indicators, as it is hoped that they can be integrated into all future sanitation
and hygiene interventions. Where appropriate, relevant indicators from the WSLIC-2
sustainability and outcome monitoring system, which is based on the MPA 59, will be
adopted.

Indicators need to be developed to monitor the performance of each of the following sub-
components:

- Total sanitation program
- Sanitation and hygiene marketing
- School hygiene and sanitation

The headline performance figures for the total sanitation program will be the number, and
proportion, of communities reaching stage one (open defecation stopped) and stage two
(100% handwashing after defecation or handling feces) of the process. As the program
will not provide hardware subsidies, the number of ‘active’ sanitation facilities will be a
reasonable proxy for the number of households that have stopped open defecation. When
100% sanitation coverage has been achieved and the community wishes to declare itself
‘open defecation free’, an independent audit will be used to confirm that open defecation
(including defecation in water bodies) has stopped.

59 Methodology for Participatory Assessments (MPA)
Given the program focus on stopping open defecation and increasing handwashing after defecation, special attention should be paid to defining reliable indicators (or proxies) of the incidence of open defecation and handwashing. A recent guide to assessing hygiene improvement\(^{60}\) suggests the following possible indicators (and sources of data):

- % households with access to an improved and hygienic toilet facility (observation)
- % households that use an improved and hygienic toilet facility (observation)
- % caretakers washing hands properly with soap and at appropriate times (direct observation or survey)
- % households with access to a place to wash hands that has all essential supplies, e.g. water, pouring device and soap (observation)
- % children under age five whose feces were disposed of safely (observation or survey)

The sanitation and hygiene units also need to work with communication and marketing specialists to determine how best to measure the performance and reach of the marketing and promotional campaigns. Possible community-level indicators include:

- % caretakers who have been reached through different communication channels about water, sanitation or hygiene during past month (survey)
- % caretakers who have heard about hygiene promotion (survey)
- % caretakers who can recall at least one hygiene message (survey)

The performance indicators selected for the total sanitation campaign should be applicable in all communities, whatever the approach, to enable their use in assessing the performances of the marketing and promotional campaigns. A comparison of the varied impacts on open defecation and handwashing (and any other common performance indicators selected) will provide useful information about the relative cost-effectiveness of the different approaches.

The provincial sanitation and hygiene units will be responsible for regular monitoring of program performance, and for benchmarking the performance of facilitator and district teams. The units will also arrange annual community audits by independent teams, which will provide important information about the sustainability of program investments.

7.4.3 Monitoring and evaluation of program impact

Ideally, the monitoring and evaluation of program impact would focus on health improvements using key disease indicators from program communities but, as discussed earlier (Section 5.3), it is often difficult to obtain sufficiently reliable and relevant health data to allow accurate assessment of the impact of sanitation and hygiene interventions.

Given the enormous challenge of overhauling the Ministry of Health’s community health monitoring system, it is proposed instead to supplement the performance monitoring to be carried out by local government (as described in Section 7.4.2) with specialist evaluations of hygiene behavior change in a few randomly selected (but representative) areas in each province. The specialist impact evaluations will be conducted by suitably qualified and

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\(^{60}\) EHP (2004) Assessing hygiene improvement: Guidelines for household and community levels
experienced consultants before the program begins, and then at regular intervals (e.g. every two years) throughout the program life.

Despite the well-recognized difficulties in making reliable assessments of the prevalence of diarrhea in a community, it is recommended that each program community undertake an annual two-week surveillance of the incidence of child diarrhea. This annual survey should be coordinated by the health center sanitarian, with assistance from the community midwife, through the network of neighborhood sanitation and hygiene monitors established by the total sanitation program (see Section 6.2). While this annual survey is unlikely to provide an accurate assessment of community health, it should give a rough indication of relative program impact on the community over a five-year period, as well as acting as an annual reminder to both the community and the local health officials of the importance of the behavior changes promoted by the program, and the impact that these sanitation and hygiene improvements can have on family health.

7.4.4 Institutional support to community programs

The provincial sanitation and hygiene units will provide specialist support to district programs through involvement in capacity building initiatives; organization of knowledge sharing events; and dissemination of program innovations and improvements. The units will also be responsible for assembling independent teams for community audits, program evaluations and periodic reviews.

7.5 Component cost estimates

Given the roughness of the cost estimates, and the likelihood that they will have to be reworked once better data is available, no attempt has been made to break down costs into any detail, or to allow for inflation over the life of the program.

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Total sanitation program</td>
<td>US$ 35.0 million</td>
</tr>
<tr>
<td>2. Sanitation and hygiene marketing</td>
<td>US$ 19.0 million</td>
</tr>
<tr>
<td>3. School hygiene and sanitation program</td>
<td>US$ 6.0 million</td>
</tr>
<tr>
<td>4. Development of provincial sanitation and hygiene units</td>
<td>US$ 5.0 million</td>
</tr>
<tr>
<td><strong>Total component cost</strong></td>
<td><strong>US$ 65.0 million</strong></td>
</tr>
</tbody>
</table>

7.5.1 Cost estimate for total sanitation program

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nr of communities</td>
<td>17,500</td>
</tr>
<tr>
<td>Cost per community</td>
<td>US$ 2,000*</td>
</tr>
<tr>
<td><strong>Total program cost</strong></td>
<td><strong>US$ 35 million</strong></td>
</tr>
</tbody>
</table>

* Cost per community is based on the estimates below

(a) *WSLIC-2 project*

District-level costs (for 2,500 communities) = US$ 7,300 per community

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61 Percentage of children under five with diarrhea in the two week survey period
These costs represent the total time and resources used by project staff (consultants and facilitators) in preparing and implementing community action plans, with no allowance for project management costs. During rapid appraisals in September 2005, project staff at the district level estimated that 90% of their time and resources were expended on water supply development.

Assuming that 25% of the costs relate to community development, sanitation and hygiene promotion, the cost = US$ 1,825 per community.

(b) **CLTS pilot projects**

Training workshops & community level activities = US$ 4,000 per community

Despite training about 30 facilitators at each district CLTS workshop, the pilot projects covered only four communities per district (on average). As a result, the average cost per community is far higher that it would be in a larger-scale program.

Assuming that five teams of two facilitators were formed following each training workshop, and that each team could complete the ‘total sanitation’ process in four villages per year, the intervention cost = US$ 1,800 per community.

(c) **Total sanitation in South Asia**

Research into total sanitation programs in South Asia suggests that typical program costs (including program management) range from US$10 to US$25 per household, equivalent to from US$ 2,800 to US$ 7,000 per community. These costs include many of the more general promotional activities that will be covered by the other sub-components of the NPCWSSS, thus an equivalent cost would be less than US$ 2,000 per community.

Based on these simplistic estimates, the cost of the total sanitation program is unlikely to exceed US$ 2,000 per community. However, more detailed information on total sanitation costs will be essential when drawing up the final plans for this sub-component.

### 7.5.2 Cost estimate for sanitation and hygiene marketing

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Market, consumer and supplier research studies</td>
<td></td>
</tr>
<tr>
<td>One-off activity at the start of the program</td>
<td>US$ 0.25 million</td>
</tr>
<tr>
<td>(b) Sanitation awareness and hygiene promotion campaigns</td>
<td></td>
</tr>
<tr>
<td>Five year campaign @ $2 million per year</td>
<td>US$ 10.0 million</td>
</tr>
<tr>
<td>(c) Supply chain and business development program</td>
<td></td>
</tr>
<tr>
<td>Nr. of communities (25% total)</td>
<td>17,500</td>
</tr>
<tr>
<td>Cost per community</td>
<td>$500</td>
</tr>
<tr>
<td>Program cost (over five years)</td>
<td>$ 8.75 million</td>
</tr>
</tbody>
</table>

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62 Robinson (2005) *Scaling up rural sanitation in South Asia: Lessons learned from Bangladesh, India and Pakistan*
(a) Sanitation market, consumer and supplier research studies

The Handwashing Handbook (World Bank, 2005) suggests that a typical consumer research study takes two months of fieldwork with a team of eight to fourteen people, and costs US$20,000 – US$ 80,000.

This research will need to examine market, consumer and supplier perspectives, and will be carried out in a series of separate provincial studies. Therefore, US$250,000 has been allowed for the studies. Before finalization, these costs should be compared against the cost of the similar research studies currently being tendered by the ISSDP project.

(b) Sanitation awareness and hygiene promotion campaigns

There are limited data available on the costs of large-scale marketing approaches. The following data are drawn from an economic analysis of recent handwashing initiatives:

<table>
<thead>
<tr>
<th>Initiative</th>
<th>Total Cost</th>
<th>Annual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Support for Child Survival (BASICS) Project in Central America</td>
<td>$1.004 million</td>
<td>$251,000 (at 1999 prices)</td>
</tr>
<tr>
<td>Peru National Handwashing Initiative</td>
<td>$2.567 million</td>
<td>$1.027 million (at 2005 prices)</td>
</tr>
</tbody>
</table>

The Secretariat for the Global Handwashing Partnership suggests that typical costs for national handwashing initiatives are from US$400,000 to US$500,000 per year. It should also be noted that the private sector, e.g. soap companies, media companies and service organizations, can be brought into the partnership to reduce costs through creative co-branding, donations of airtime, or provision of outreach and marketing capacity.

Another important variable is the degree of fragmentation in the media. For example, if the government has one radio and one television channel that reach the poor throughout the country, the campaign cost would be lower than these average figures. However, if the media market is fragmented both geographically and linguistically, it will be more expensive for a large-scale program to reach the poor.

Indonesia’s wide cultural, environmental and geographical diversity suggests that provincial campaigns are likely to be more accurately targeted than a single national campaign. Whilst there will be some knowledge sharing between these provincial campaigns, this approach is likely to increase the total campaign costs.

For the purposes of this preliminary cost estimate, it has been assumed that US$2 million per year will be needed for the provincial marketing campaigns, costing a total of US$10 million over the five-year life of the program.

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64 eMail from Kate Tulenko (dated 15 November 2005)
(c) Sanitation supply chain and business development programs

As the critical part of the supply chain is the interface with the community, this sub-component has been costed on a per community basis. It has been assumed that this campaign will target 25% of rural communities, although these will be different communities to those targeted under the total sanitation program.

The IDE Vietnam sanitation marketing program involved one of the few campaigns to build local supply networks and develop local sanitation businesses. It operated on a relatively small scale (covering 30 communes with a total population of 323,000) and spent about US$1 per person. The total cost of this program was equivalent to about US$1,900 per community (population 1,800). However, this amount includes program overheads, plus the development and implementation costs of the advertising and promotional campaigns.

Given the significantly larger scale of the proposed NPCWSSS, and the provision for promotional campaigns and community development under the other sub-components, US$500 per community has been allowed for the supply chain and business development campaign.

7.5.3 Cost estimate for school hygiene and sanitation improvement

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Workshops on school hygiene and sanitation</td>
<td></td>
</tr>
<tr>
<td>Nr. of districts</td>
<td>300</td>
</tr>
<tr>
<td>Cost per workshop</td>
<td>$5,000</td>
</tr>
<tr>
<td>Training cost (over five years)</td>
<td>$1.5 million</td>
</tr>
<tr>
<td>(b) School sanitation and hygiene facilities</td>
<td></td>
</tr>
<tr>
<td>Nr. of communities (50% of total sanitation campaign)</td>
<td>9,000</td>
</tr>
<tr>
<td>Cost per community</td>
<td>$500</td>
</tr>
<tr>
<td>Hardware cost (over five years)</td>
<td>$4.5 million</td>
</tr>
<tr>
<td><strong>Total cost</strong></td>
<td><strong>US$ 6.0 million</strong></td>
</tr>
</tbody>
</table>

(a) Workshops on school hygiene and sanitation

For the moment, it has been assumed that 300 district workshops will be held (enough to cover almost every district in Indonesia) and that each workshop will cost US$5,000.

(b) School sanitation and hygiene facilities

Only US$500 has been allocated for school sanitation and hygiene facilities in each community, in an attempt to make the school hygiene and sanitation sub-component more demand-responsive and cost-effective. The intention is that this fixed amount is available to part-fund school sanitation or hygiene facilities, with any additional costs provided either by the Ministry of Education, local government, or the community itself.

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65 Frias & Mukherjee (2005) *Harnessing market power for rural sanitation: Making sanitation attractive and accessible for the rural poor*
In order to release the school sanitation and hygiene allocation, the community has to complete the first two stages of the total sanitation program, i.e. stop open defecation and achieve 100% handwashing. Given the likelihood that many communities will not complete these stages, the cost estimate only includes allocations for 50% of the communities to be covered by the total sanitation program.

### 7.5.4 Cost estimate for development of provincial sanitation and hygiene units

<table>
<thead>
<tr>
<th>Item</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Development of provincial sanitation and hygiene units</td>
<td>US$ 5.0 million</td>
</tr>
<tr>
<td><strong>Total cost</strong></td>
<td><strong>US$ 5.0 million</strong></td>
</tr>
</tbody>
</table>

The institutional arrangements for program implementation, and for the functioning of the provincial sanitation and hygiene units, require elaboration during the program preparation phase. For the purposes of this preliminary cost estimate, it has been assumed that the cost of establishing and developing the network of provincial sanitation and hygiene units, including initial program requirements such as the baseline survey, will require US$1 million per year.

### 8 NEXT STEPS

This report is based on a three-week mission to Indonesia, supplemented by secondary data from previous sector studies and evaluations. While every effort has been made to provide a comprehensive assessment of community-based sanitation and hygiene services in Indonesia, and to make realistic proposals for sanitation and hygiene improvement under a new national program, time and resource constraints have resulted in some inevitable shortcomings and omissions.

In particular, three areas require more thorough examination during program preparation:
- Evaluation of CLTS in Indonesia
- Program implementation in peri-urban areas
- Institutional arrangements for sanitation and hygiene improvement

#### 8.1 Evaluation of CLTS in Indonesia

The proposed ‘total sanitation program’ accounts for 54% of the estimated total cost of the US$65 million Sanitation and Hygiene Improvement component. Given the significance of this sub-component to the NPCWSSS, and the short time that has elapsed since community-led total sanitation (CLTS) was introduced to Indonesia, it is imperative that a rigorous and independent evaluation of the CLTS pilot projects is conducted before the approach is scaled up into a national program.

The evaluation should interrogate the replicability of the CLTS pilot projects and approaches at scale, and generate reliable data for use in future policy and investment decisions. Some stakeholders have expressed concerns about the impact of the ‘zero hardware subsidy’ policy on the affordability of toilets by the poorest; the safety and sustainability of the very low-cost toilets that the poor tend to construct under CLTS...
projects; and the limited hygiene promotion built into the CLTS process. In order to respond to these concerns, the evaluation should, at a minimum, collect detailed information on toilet costs, toilet designs, affordability, financing, barriers to adoption, safe excreta disposal, sustainability, hygiene promotion activities, evidence of hygiene behavior change, incidence of diarrheal disease, and so on.

8.2 Program implementation in peri-urban areas

Given the limited time and resources available, the main focus of the research for this report has been on sanitation and hygiene improvement in rural areas. Neither the WSLIC-2 project, which provides much of the evidence and experience presented here, nor any of the other community-based projects that were studied, operate in urban areas.

The one exception is the SANIMAS pilot project, whose approaches to community-based urban sanitation development are now being incorporated into the Indonesian Sanitation Sector Development Project (ISSDP). The following suggestions on program implementation in peri-urban areas derive from the work done in preparing ISSDP, and require more work to integrate them with the other sub-components of the NPCWSSS.

Following the SANIMAS model, peri-urban sub-projects will involve an intensive facilitation process at the community and city level to generate demand for community-based sanitation services and select eligible communities for participation. The process will begin with city level meetings to introduce community-based sanitation, with the participation of eligible communities and other stakeholders (i.e. government officials, NGOs, private sector). Following these meetings, communities interested in participating in the program will submit expressions of interest detailing their needs, willingness to pay, experience with past projects, and other characteristics.

Following selection, participating communities and local government facilitators will take part in a series of capacity building workshops on informed choice of systems and the development of community action plans outlining the institutional, technical and financial aspects of community-based sanitation development. Communities will be expected to contribute with a mixture of in-kind and cash contributions, while local governments will be asked to make contributions that at least match those made by the communities. The arrangements for the development of neighborhood sanitation (including domestic, school and small enterprise sanitation facilities) will be conceptualized in a participatory community action plan. This action plan will serve as a contract to outline community obligations and tasks, on which basis the community will then set up a sanitation committee to collect contributions and organize procurement and construction oversight. This sanitation committee will require training in system operation and maintenance, including cost recovery systems to fund further improvements and non-routine maintenance.

8.3 Institutional arrangements for sanitation and hygiene improvement

Institutional arrangements are critical to the effectiveness and sustainability of large-scale program implementation. Unfortunately, these proposals for the sanitation and hygiene improvement component have been developed in isolation from the rest of the program preparation, which leaves many of the institutional questions unanswered.
The findings in this report make clear that the sanitation and hygiene improvement component needs to be more separate from the water supply development component than in previous projects. It is also apparent that the parallel procurement and management systems established by projects like WSLIC-2 reduce the ownership and accountability of the government bodies responsible for implementation.

The long-term solution will be implementation managed by local government, but the transition from donor-funded project management units to permanent institutions at the province and district level will take time, and require considerable capacity building and institutional reform.

At present, there is little sanitation and hygiene improvement capacity at any level of government. Therefore, it is unrealistic to expect the forthcoming national program to move immediately to decentralized implementation through local sanitation and hygiene units. The proposals in this report include funding for the establishment of provincial sanitation and hygiene units, which will initially be responsible for monitoring and evaluation of program performance and impact, and for providing long-term support to community-based sanitation and hygiene services. But this report has not tackled the more difficult issues of long-term funding for these units, which should be included in local government budgets, or the future role of these units in managing the development and provision of local services.

The following institutional issues require more detailed study and discussion with the Government of Indonesia:

- Decentralized management of sanitation and hygiene interventions
- Lines of accountability for sanitation and hygiene investments
- Recruitment and training of community sanitation and hygiene specialists
- Long-term role of the community facilitators trained to conduct CLTS activities
- Identification of suitable institutions to conduct provincial market research studies
- Modalities of collaboration with private sector contributors to marketing campaigns
- Specialist support for the implementation of the supply chain and business development program (e.g. from IDE Vietnam)
- Involvement of school teachers in district workshops on school hygiene and sanitation
- Implementation of a multi-stakeholder baseline survey
- Establishment of provincial sanitation and hygiene units

It is also crucial that all of the relevant government bodies, both line ministries and local governments, buy in to the proposals detailed in this report, and that any concerns or contradictions are discussed and resolved during program preparation. A major part of the program preparation process will be to build stakeholder consensus on how to synchronize the different sectoral inputs at local government level, and how to align these inputs with the government’s national policy for community-based water supply and environmental sanitation. The main objective is to improve sustainable access to water supply and sanitation services, but this objective will only be reached by improving the priority of water supply, sanitation and hygiene in local government budgets, and
building local government capacities to facilitate the provision of water supply, sanitation and hygiene services, thus some of these broader issues need to be tackled at this stage.
References


ANNEX 1 Consultant’s Terms Of Reference

Hygiene and Sanitation Specialist Technical Assistance for the Indonesia National Program for Community Water Supply and Sanitation Services

1. Purpose

The purpose of this consultancy is to provide expert technical guidance to the World Bank/Indonesia team and the Government of Indonesia/ Ministry of Health in the design and preparation of:

- the improving sanitation and hygiene behavior and services component of NPCWSSS
- the sanitation and hygiene aspects of the related capacity building component of the NPCWSSS.

2. Background

Indonesia’s water supply and sanitation sector is among the poorest performing in the region – and the lack of adequate service coverage and quality has had severe consequences on public health, the economy, and the environment. Indonesia ranks 7th out of 11 countries in the region for both water and sanitation coverage. Only 50 percent of the population has access to water from improved sources considered safe (2002, SUSENAS). In rural areas, access is even lower (41%). Only 1.3 percent of the urban population is reached through sewerage services. While access to basic sanitation in rural areas is reported to be 52 percent, the figure is probably much lower since the data does not indicate ownership of sanitation facilities, or if they meet technical and hygiene standards. The impact is evident – although infant mortality averaged across provinces is 35 per 1000 live births (Indonesia Demographic and Health Survey, 2002) it is known to have reached 121 per 1,000 in 2001 in low-income areas. Of the four most important direct causes of Under-5 mortality in Indonesia, two are diarrhea and (MOH, 2001. Rencana Strategi Nasional) - both sanitation-related illnesses linked to poor quality of sanitation, hygiene and water supply. Indonesia has one of the highest incidences of typhoid in the region, which is inconsistent with its per capita GNI over $700. Economic losses from inadequate sanitation and poor quality water were estimated at over 2.4% of GDP in 2002.

It is now appropriate to prepare the next major sector investment as a national program for community-based WSS services. Currently there is a national policy framework and several projects delivering RWSS services. There is, however, no national program framework that can harness and channel resources for RWSS consistently, using approaches to ensure sustainability and impact on poverty. The government of Indonesia’s objective for this national program will be to leverage an adequate stream of ongoing funding for WSS improvements from local governments, private sector, donor agencies and user communities, at a rate required for annual progress towards the WSS MDGs in the country.
The strategy will be to achieve this through the institutionalization of improved practices for sustainable and equitable WSES service delivery, which flow logically from the Community-based WSES Policy. Both these outcomes are indicators for success also in the World Bank Indonesia CAS 2004-06. The national program will include components for operationalizing the sector policy with a critical mass of local (district) governments, catalytic follow-up support to enhance sustainability of investments in areas previously covered in WSLIC 1 and 2, and institutionalizing mechanisms for developing sector management capacity at sub-national levels. GOI is currently finalizing its Medium Term Plan and community-based WSES is included as a principal approach for delivering services in order to achieve development targets.

In addition, the program will support the development of local markets for the delivery of services, particularly sanitation and hygiene services, through a process of stimulating local demand and simultaneous stimulation of local supply capacity to meet the demand.

The proposed new project/program will build on the Government and the Banks’ considerable experience in rural community driven water supply and sanitation in Indonesia. WSSLIC 1 (1994 - 99) was successful in improving water supply coverage, and to a lesser extent sanitation, in roughly 2200 villages of 6 provinces. WSLIC2 (2000-2007) built on WSSLIC 1, incorporating a KDP-like funds channelling model to communities and a greater focus on health and hygiene. WSLIC 2’s mid-term review has shown (a.) communities can form, maintain, and manage organizations to provide water and improve sanitation, (b.) project benefits are targeting the underserved and are being shared equitably within the communities. But as in the first WSLIC project, and in line with other international experience, WSLIC 2 has had less significant success with the sanitation sub-component. However, significant learning has been gained in the process. Further lessons are being gathered through WASPOLA-supported field trials of innovative sanitation approaches in WSLIC 2 communities, which will help strengthen future operations. Overall the rural community-based approach has been judged a success and met with approval from GOI, and has drawn interest of other donors.

The purpose of the proposed new NPCWSSS project is to enhance community access to and effective use of improved water supply and sanitation services through:

- Increasing sustainable access to improved services
- Enabling health-promoting and environmentally sound use by all sections of communities.
- Increasing local government investments in and effective management of the WSS sector locally.

NPCWSSS will be developed around the success and shortcomings of WSLIC2. Since under the decentralization law of year 2001, the Local Government (district level) is principally responsible for providing water supply and sanitation services, the project will focus specifically on building up their role in overall project implementation. Among the key features of the project are:
- Effective participation of the local government in the overall process, by involving them early in the process and ensuring their ownership through learning-by-doing approaches to project implementation.
- A clear focus on “community-managed” systems rather than rural, which could mean more sub-projects in peri-urban areas, and greater linkages with utility-managed services (e.g. for bulk supply, maintenance contracts, etc.)
- Stronger focus on sanitation improvement, incorporating newer approaches such as focus on behavior change objectives rather than construction, promotional and market-oriented approaches, community wide approaches for scaling up, institutional changes needed to enable the adoption of such approaches. However, in view of the limited experience available globally on the subject, implementation approaches will emphasize flexibility and efficiency of learning processes rather than targets and subsidies for construction of latrines.
- A programmatic approach, with a national scope.
- Emphasis on the pooling of funds from all sources for WSS interventions at the local government (district) level – to enable their coordinated utilization in keeping with the sector policy and accompanying strategies, in order to maximize impact on population, health and productivity.

The project will operate in Sumatra, the Eastern Islands, and Kalimantan, as well as augmenting the level of service in the areas which were covered previously under WSLIC 1 and 2 (13 other provinces. NPCWSSS will be an on-grant to local governments managed by the Ministry of Health, totaling US$150 million. NPCWSS is composed of four components:

- Component 1. Local institutions and community capacity building ($20 million) – assisting local governments to develop the capacity to address national MDG-WSS related targets through local development plans and budgets; and facilitate, quality-assure, support, and monitor sustainable and equitable community-managed WSS and hygiene improvements.

- Component 2 Improving sanitation and hygiene behavior and services ($20 million) – Program interventions will include raising public awareness and demand for improved sanitation and hygiene behaviors. This will be done through
  - appropriate combinations of methods for improving key hygiene practices in schools and communities,
  - providing incentives for community wide behavior change for improved hygiene and sanitation and
  - strategic support for the development of self-sustaining local ‘sanitation markets’ for the demand-responsive supply of sanitation/hygiene services.

Program interventions will build local government capacity to address hygiene and sanitation promotion according to current state-of-the-art knowledge about behavior changing communication. This implies
• research into local hygiene/sanitation practices and people’s motivations for changing those practices;
• using marketing-oriented approaches instead of educational ones,
• seeing communities as consumers of sanitation/hygiene services instead of people needing to be “health-educated”.

Local business development services would be supported at the request of local governments, so that sanitation service provision can attract local entrepreneurs and generate local livelihoods, and supply value chains can be built up targeting all segments of local consumers including the poorest. The implementation of this component will require a flexible learning-oriented approach so as to allow continuous improvements based on the monitoring of results.

• Component 3 Developing water infrastructure ($100 million) – assisting communities to plan, build, manage and sustain improved water systems of their choice.

• Component 4 Project Management and Support ($10 million). This component will strengthen the implementation capacity of the Executing Agency and the implementing agencies.

3. Specific Tasks

a. Review relevant background materials from Indonesia (to be provided by the Bank co-TTLs) as well as current relevant literature on related large scale sanitation and hygiene promotion efforts and lessons learned from other developing countries.

b. Travel to Indonesia and join the World Bank NPCWSSS team as the hygiene and sanitation specialist in the project preparation process. Take the lead in working with the GOI/Ministry of Health/local governments and providing guidance in the development and of the $20 million Improving sanitation and hygiene behavior and services component of the project. Consult all key stakeholders at both the national and selected local levels and ensure that the design of the component is based on broad consensus and ownership of the approach by the eventual project implementers.

c. As directed by the Bank Task Team Leader, prepare the relevant sections of the Project Appraisal Document (PAD) and the Project Implementation Plan (PIP).

4. Deliverables

a. Written section(s) of the design of Component 2 of NPCWSSS in the PAD and PIP, which clarifies how the component objectives are to be achieved, along with roles, responsibilities, costs, timelines and progress measurement indicators.
b. Documented evidence of stakeholder consultations and consensus - developing activities carried out in Indonesia regarding the contents and proposed implementation procedures for Component 2, i.e. among Central and Local Government agencies, the World Bank, NGOs and private sector agencies who may partner large scale public awareness and demand generation campaigns for improving sanitation services.

5. Expected Results

A direct result of this consultancy will be the positive appraisal of the $20 million sanitation and hygiene component, approval of the loan by the sector board and signing of loan by GOI. This will result in the significant increase in Bank lending for sanitation and hygiene and also result in an improved project component design.

An indirect result of this consultancy support will be that the NPCWSSS will contribute considerably to knowledge base regarding scaling up sanitation and hygiene by testing approaches for scaling up with sustainability, using a learning-by-doing and partnership-building approach with local governments, user communities, nationally operating private sector agencies as well as the local private sector in Indonesia.

A second indirect result of this consultancy is that sustainable population access to, and hygienic use of sanitation services in rural and peri-urban in Indonesia will be scaled up and; the strengthening of the capacity of local governments to develop and support self-sustaining local markets for sanitation services. Both these hoped for results contribute directly to achieving the sanitation MDGs in Indonesia in ways that are locally sustainable and that leverage the maximum possible resources from the household and local private sectors, besides government budgets, for sanitation.

6. Personnel and Level of Effort

Professional qualifications in project budgeting and household and community level sanitation finance, with at least 10 years’ experience in design and appraisal of large scale projects/programs for improving access to safe sanitation services and population hygiene behavior. Experience with local private sector development for improving sanitation and water services in developing countries is an additional special requirement.

Estimate 30 days of consultant time within this period. One trip to Indonesia and some travel within Indonesia are envisaged

7. Estimated Schedule

Travel to Indonesia in July 2005
## ANNEX 2  List Of Attendees At Mini-Workshop

<table>
<thead>
<tr>
<th>Name</th>
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<td>1 Wayan Widaya</td>
<td>Kasubdit Diare</td>
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<td>2 Sri Endah Suwarni</td>
<td>Staff SDIT PHS</td>
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<td>3 Syamsul Rivai</td>
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<td>4 Djoko Wartono</td>
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<td>8 Chandra Rudyanto</td>
<td>Staff SD PKA</td>
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<td>9 Maraita</td>
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<td>10 Ismail Malik</td>
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<td>11 Ace Hayati</td>
<td>Acting Director</td>
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<td>12 Rusliana P</td>
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<td>17 Imam Syahbandi</td>
<td>Staff WSLIC - 2</td>
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<td>18 Muhajir</td>
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<td>19 Rheidda P</td>
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<td>20 Zainal IN</td>
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<td>21 Ardiyanto</td>
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<td>32 Deborah Bowman</td>
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<td>33 Alison Baker</td>
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<td>34 Rani Noerhadhie</td>
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<td>35 Isabel Blackett</td>
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<td>37 FX Sudardjo</td>
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<td>38</td>
<td>Nurhadi</td>
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<td>40</td>
<td>Nila Mukerjee</td>
<td>SR.C.D. Specialist</td>
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<td>41</td>
<td>Edhie S Rahmat</td>
<td>Health Specialist</td>
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<td>42</td>
<td>Amanah A</td>
<td>Economic officer</td>
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<td>43</td>
<td>Amin Robiarto</td>
<td>MPA/PHAt Specialist</td>
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<td>46</td>
<td>Devi Setiawan</td>
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<td>Andy Robinson</td>
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<td>50</td>
<td>Hendra</td>
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<td>Sonny BM</td>
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ANNEX 3  Indonesia Sanitation Sector Development Project (ISSDP)

The following terms of reference were used for a contract being tendered by ISSDP during the preparation of this report. These terms of reference are not part of the proposed activities of the NPCWSSS and have only been included to elaborate the detailed and well thought-out efforts being undertaken by other sector projects.

Terms of Reference for Sanitation Awareness Raising & Hygiene Promotion

Objective
The objective of the consultancy component is to provide the management, technical and survey capacity to work with GOI (mainly MOH) and its other partners to:

Sanitation
- Design and implement consumer and market research on sanitation, including a method for establishing what people are prepared to pay (effective demand) for sanitation services, including safe disposal of wastes
- Design and implement market research on suppliers of sanitation services - both public and private sector
- Develop a national segmented sanitation awareness raising and marketing campaign – based in very specific messages and relevant sanitation solutions
- Develop segmented funding proposals for implementing the sanitation awareness raising marketing campaign

Hygiene
- Design and implement research on household and personal hygiene behaviors
- Develop a national segmented hygiene promotion campaign
- Develop segmented funding proposals for implementing the hygiene promotion campaign

Sanitation and hygiene
- Design and implement a segment of the sanitation marketing and hygiene promotion campaigns targeted at poor households.
- Develop impact monitoring indicators and a monitoring program the each component above.

The work will be undertaken in the context of all existing MOH and other health promotion activities and programmes: in particular Healthy Cities, various USAID support initiatives etc.

Task - Marketing, consumer and supplier behavior studies
- Design and implement consumer and market research on sanitation, including a means for establishing willingness to pay for sanitation services
- Design and implement market research on suppliers of sanitation services (public, private and NGO sectors)
- Design and implement research on household and personal (sanitation and water related) hygiene behaviors.

The research will first involve an overview of existing studies and known trends in water and sanitation related behaviour and varying attitudes toward sanitation; disaggregated
community studies and research to develop baseline data detailing current sanitation and hygiene behaviors and attitudes, access to sanitation services and indicators of change. The fast track study ‘The state of sanitation in Indonesia’ undertaken during the procurement phase will provide information.

The primary focus will be to understand current behavior and attitudes, and identify various target groups (including users and existing/potential suppliers); key messages and effective approaches for the campaign/program. It will involve consumer surveys; participatory methods; meetings with prominent individuals, local governments, NGO’s, media, the private sector and other stakeholders to determine past experiences, key obstacles and attitudes of the various actors in the sector. There is a particular need to understand peoples attitudes to the impact of disposal of wastewater and other wastes on the wider environment.

Where significant vulnerable population groups are identified e.g. infants and children, the market research will provide specific information on child sanitation practices and habits of both children and their caregivers.

One specific element of the studies requires research the effective demand of existing and potential customers to pay for connections to municipal sewerage services and other sanitation services. Wastewater removal and treatment services need to be significantly extended, which will only be possible if cost recovery for operations and maintenance is improved. Initially cost recovery will be targeted at the commercial, business and more wealthy neighbourhoods, but ultimately all for users of centralized and decentralized wastewater systems. The relevance of previous studies (e.g. willingness to pay studies in Semerang) and of the experiences of SANIMAS and other community-based sanitation systems with cost recovery will be considered.

The field research (consumers and suppliers) will be undertaken in at least seven cities and areas. These will be ISSDP cities (City capacity building and strategies) and others. Where possible – the results and information gathered in the field will be made available and discussed with the Consultant and Sanitation Working Groups at the city level, in addition to the compiled national level for the campaign design. In this respect, the studies (and pre-testing) carried out under this component will need to be carefully and sensitively coordinated with the city capacity building and strategies teams and with other city and program staff. Outputs will include the studies supported by a report on the synthesis and implications of the findings.

The hygiene promotion research will need to firstly review the hygiene research carried out to date in Indonesia, including any impact evaluations of existing hygiene programs. Based on the findings any additional studies required will be designed and implemented to fill gaps or compliment the existing data and programs. The synthesis reports will need to address both the existing findings and any results of new research carried out under ISSDP. It is anticipated that hand-washing with soap will be a target area, and as such the recent international work is expected to be used as a model.66

Task - Design sustainable nation-wide sanitation & hygiene promotion campaigns

- Develop a national segmented sanitation awareness raising & marketing campaign

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Develop a national segmented hygiene promotion campaign

The primary objective is to improve sanitation by stimulating sanitation demand from individuals and communities, and increasing political will (national and local) for sanitation service delivery improvements, at the same time as matching the greater demand with stronger marketing from suppliers of sanitation products/facilities. The hygiene promotion campaign will compliment this by promoting the adoption of key hygiene behaviours to reduce disease transmission.

The consultant is required to formulate responsive and sustainable campaigns through a consultative process that addresses the opportunities and constraints that emerge from the marketing studies. When and where possible the hygiene campaign will incorporate existing campaigns and elements of current hygiene promotion programs. This will facilitate increased partnerships and support for the overall strategy.

The campaign/program will be designed for government approval, and segmented so that it can be funded from a range of sources. The specifics of the campaign will be spelt out, building on knowledge gained from the studies and similar campaigns in Indonesia and internationally.

The design will consider questions known to influence demand and behaviour, for example

- What are the target audiences for the campaigns? Should the activity be nationwide or targeting trendsetters, selected areas and/or communities? Which segments of the population are most vulnerable and would benefit most from sanitation and hygiene improvements? Or all these groups at different stages, in different component of the campaign?

- The campaign strategy will include a targeted segment to improve the current preparedness to pay connection and recurrent costs for municipal sewerage services. This strategy should consider linkages to initiatives aimed at improving cost recovery for urban water supply.

- What are the best approaches to be adopted in differing locations? Would community-led approaches be used? Who would promote and co-ordinate such an approach? Should mass media campaigns be used in urban areas or rural areas or both? Which media will be most cost-effective? Hand-washing with soap in both rural and urban conditions? Are other hygiene behavior changes needed?

- What are the ingredients of campaigns/programs specifically targeting the poor (e.g. awareness or/and improved supply)? The non-poor, including commercial and business (e.g. new regulations and/or enforcement)?

- How will the campaign address increased participation by the private sector in the supply of sanitation goods and services? Are there specific products that should be marketed in a commercial manner?

- What elements are required to be part of an advocacy component to aimed at decision makers e.g. new regulations, enforcement of regulations, more public investment etc. What are the design components and approaches to the advocacy campaign (to be implemented in part under the ISSDP component National enabling framework)
The design process will involve the appointment of a national hygiene/hand-washing coordinator, building strong relationships with, and ensuring real partnership and capacity-building, where needed among relevant partners such as the Ministry of Health, Ministry of Public Works, PDAMs, NGOs, media, the private sector and incorporating existing sanitation and hygiene programs. This is fundamental to ensuring ownership, relevance and sustainability of the implementation of the advocacy, marketing, and hygiene promotion campaigns.

All campaign elements will require a process of pre-testing, evaluation and redesign/refinement, then a formal piloting phase with mass media, local government, NGO/CBO neighbourhood/household campaigns in the ISSDP and other cities.

A monitoring program including indicators of impact and means of verification will be developed for each campaign segment. These will refer to the baseline data and indicators identified in the consumer studies.

**Task - Develop and implement targeted campaign to poor households and children**

- Design and implement a segment of the sanitation marketing campaign and a segment of hygiene promotion targeted at poor households.

Data from the consumer and marketing studies will reveal areas where hygiene promotion and sanitation interventions will have the highest impact, as will the ISSDP study *Sanitation in poor urban communities*. These sources of information will be the main data for developing a campaign segment aimed specifically at poor communities. The market research stage will provide information on child sanitation practices and habits of both children and caregivers. Experience in Indonesia and from agencies such as UNICEF will form a well established foundation for formal campaigns through schools, mother and child clinics and through the media.

Formal sanitation programs for children and their caregivers will focus on behavior change to eliminate the primary means of transmission identified. This output will result in an approach and program design for improving sanitation for children. In the selected cities this approach can be piloted in conjunction with the community-based sanitation improvements (Component 5 implemented by GOI) which will enable communities to prioritize school sanitation facilities.

The design will address issues of price and consider if pricing structures can make people want sanitation? What are households prepared and able to pay? And for what features, demands, services? How can price guide product development? and financing (is household credit an issue, how is this best addressed).

The implementation will be monitored for impact and adjusted according to feedback received from national and local level stakeholders as necessary.

The roll-out of the sanitation and hygiene promotion campaign segments targeting the urban poor in the six selected cities will funded within this project. This component will

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67 This could link in and be supported by the Global handwashing initiative – see [http://www.globalhandwashing.org](http://www.globalhandwashing.org)
need careful planning timing to ensure it fits well with the progress being made with City level capacity building and strategies.

**Task - Campaign design packaged for funding**
- Develop funding segmented proposals for implementing the sanitation public awareness and the sanitation marketing campaign
- Develop segmented funding proposals for implementing the hygiene promotion campaign

Following a piloting stage and finalisation of the campaign elements, the most important follow-on will be the packaging of various segments of the program/campaign.

The formation of local partnerships during the research, design and development stage is crucial to ensure sustainability from local sources of funding for the implementation of the program as ISSDP will not be able to cover the full cost of implementing the campaign. The design process will promote partnerships to mobilize public and private sector interest and investment. The sanitation and hygiene campaign strategies will be finalized and then approved by government. It is intended that the Department of Health, through its existing structures and programs plays a key role in the development and implementation of the program, and that the role of local governments in a role out of components at the city level will be developed through City level capacity building and strategies.

The Consultant will develop segmented funding proposals, while holding discussions regarding funding and promotional activities with a range of potential partners. These could be in Government (local governments, DoH); private sector (eg, soap and water companies, the media, manufacturers and retailers of pipes and bathroom fixtures, small business associations etc.) as well as donors (bilateral, NGO, multilateral etc) already working or interested in sanitation service provision, hygiene promotion and poverty reduction.

**Task - Campaign monitoring**
- Develop impact monitoring indicators and a monitoring program the each component above.

The indicators established at the outset and confirmed during the design phase will be used to evaluate the effectiveness of the campaign at the end of the 3-year project period. Each campaign segment will include impact indicators, including practical and cost effective means of verification of the indicators.

The implementation will be monitored for impact and adjusted according to feedback received from national and local level stakeholders as necessary.

**OUTPUTS AND DELIVERABLES**

**Sanitation market, consumer and supplier studies**
- Detailed sanitation studies and sanitation market research with comprehensive reports on analysis and implications. The identification of key messages and ‘triggers’ for different target groups are required for both urban and rural areas.
Additional hygiene behavior studies will be presented. Comprehensive analysis reports and implications based on both the new and existing studies providing key messages and ‘triggers’ for different target groups.

**National Public Awareness Campaigns for sanitation developed and tested**

- A multifaceted (segmented) sanitation awareness raising campaign targeted at the general public (community), existing and potential suppliers and local governments for urban and peri-urban areas is designed, tested and refined.
- A sanitation advocacy approach aimed at politicians, influential people, trend setters and senior officials in national government is designed, tested and refined.
- The campaign designs are required to include materials, examples and samples, costs estimates etc.

**National hygiene promotion campaign designed**

- A segmented hygiene promotion campaign designed. The design will include multiple role-players and will be targeted at individuals, households and communities with components for local and national government levels in both urban and rural areas.
- The campaign design will include materials, examples and samples, costs etc.

**Develop a targeted campaign for poor urban households and children and implement in the six selected cities**

- Specific campaign approach designed and tested, to improve sanitation and hygiene behaviors for poor children and their carers in poor urban communities.
- Costed and prioritized proposals to improve school sanitation and hygiene, in schools with not sanitation in poor communities in 6 cities in the *City strategies and Action Plans*.
- Implementation of campaign segments designed to empower poor communities to improve their sanitation and hygiene behaviors, with a integration of willingness to pay into the approach taken.
- An impact monitoring schedule. Targets and objectively verifiable indicators should be identified and linked to the baseline data and indicators.

**Proposals for funding**

- Minutes of meetings and correspondence from potential partners and funders, indicating interest and commitment.
- Draft proposals designed to enable interested partners in funding segments of the campaign (available in MS Word for easy adaptation)

**Proposals for monitoring and indicators**

- A full impact monitoring schedule for all components (included in each segment design and also combined as a monitoring document) over time. Targets and objectively verifiable indicators should be identified and linked to the baseline data and indicators.
ANNEX 4 Community-Led Total Sanitation

Sanitation investments are normally targeted at individual households, on the basis that both construction and use of toilets depend on private decisions and household-level hygiene behaviour. Most traditional sanitation programmes provide some form of subsidy to reduce the cost of building a toilet, and back this financial incentive with sanitation promotion and hygiene education that highlight the benefits of toilet use and good hygiene behaviour.

This approach normally results in an incremental change in sanitation coverage, with improvements within a community becoming steadily more difficult once early adopters and non-poor households have installed sanitation facilities. It is also costly, as many conventional sanitation programmes promote durable, well-built and expensive toilets, and thus tend to offer significant hardware subsidies in order to persuade households to pay their share of the considerable costs of toilet construction.

Few large-scale sanitation programmes of this type have been successful. High hardware subsidies usually result in sanitation programmes being able to reach fewer people, and prove tempting for non-poor households. In addition, households who build toilets under heavily-subsidized programmes often feel less ownership for their facilities and may be less inclined to make any lasting improvements to their hygiene behaviour.

Over the last few years, non-governmental organisations (NGOs) in Bangladesh have been pioneering a new approach to sanitation development. It is known as Community-Led Total Sanitation and has several fundamental differences from conventional approaches, including:

- Focus on stopping open defecation (rather than building toilets)
- Need for collective action (to stop open defecation within the community)
- No toilet subsidy (households must finance their own toilets)
- Promotion of low-cost homemade toilets constructed using local materials (rather than standard toilet designs imposed by outsiders)

This approach recognizes that sanitation is both a public and a private good, and that individual hygiene behaviour can affect the whole community – if your neighbours defecate in the open, then your children risk excreta-related disease even when the members of your own household use a sanitary toilet, wash their hands, and practice good hygiene. In this sense, ‘total sanitation’ refers to a total stop on open defecation, which requires that everyone in the community either owns or has access to a sanitary toilet.

Ignition – one way to stop open defecation?

Open defecation is a practice that is centuries old in most rural areas. To many villagers, it appears to cost nothing and to do little harm. Given this situation, something dramatic is required to change people’s thinking and behaviour, as the dire record of most rural sanitation programmes

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68 Extract from Robinson, A (2005) Scaling up rural sanitation in South Asia: Lessons learned from Bangladesh, India and Pakistan
69 Notably WaterAid Bangladesh and VERC
70 Kar (2003)
attests. In Bangladesh, NGOs (notably VERC and WaterAid) developed a participatory ‘ignition process’ to begin this change, including the following components:

- Social mapping of the village
- Defecation map with defecation mobility (including ‘crisis’ defecation)
- **Walk of shame (transect walk to open defecation areas and water points)**
- Changes and trend of village water and sanitation situation
- Livelihood analysis and well-being grouping
- Possession of toilets by different groups
- **Excreta calculation (amount of excreta added to village by open defecation)**
- Contamination mapping (pollution caused by excreta and fecal-oral contamination links)
- Group discussions on diseases due to open defecation, emergencies, medical costs

Many of these steps will be familiar, but two of the elements, the walk of shame and the excreta calculation, are new and effective motivational tools. During transect walks to sites of open defecation, it is common for members of the community to be embarrassed to visit these dirty spots with outsiders, and attempt to move away quickly. But the facilitators like to stop and ask questions: which families use this spot for defecation? what happens during emergency defecation at night, or during diarrheal incidents? … these questions are often answered by people covering their noses with their hands.

Normally, when outsiders are taken around a village, the community likes to focus on its positive aspects and achievements, and feel a sense of pride. These ‘walks of shame’ reveal a different reality. Although everyone sees the filth and dirt everyday, often they only awaken to the problem when visiting these sites with groups of outsiders that analyze the situation in detail.

A collective calculation of the amount of excreta that open defecation adds to the local environment is an interesting and participatory method of helping communities to realize the magnitude and extent of their sanitation problem. Participants make their own estimates of the amount of faeces contributed by one person in one day, then keep multiplying to calculate contribution per family, per week, per year and so forth. In Mosmoil village (Rajshahi district, Bangladesh) the community calculated that 50,000 tons of human excreta were being added to their village environment every year. Communities are usually horrified by these figures, and immediately begin to wonder about the various routes of fecal contamination. Flow diagrams are then drawn to trace contamination routes to ponds, household utensils, domestic articles and, most importantly, to food through hands, flies, chickens, household pets and so on.

After these intensive participatory exercises, a positive force to deal with the situation tends to emerge, with people voicing their eagerness to stop open defecation and to construct toilets. In this way, the ‘ignition process’ triggers change and fires enthusiasm for sanitation development!

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After Kamal Kar (2003)

The main advantage of the total sanitation approach over conventional policies is that it is a community-wide approach, which requires that every household in the community stops open defecation and uses a sanitary toilet. This approach involves even the poorest and most vulnerable households in the community, and ensures that the community and local government focus on helping these households gain access to a sanitary toilet with a safe excreta disposal system. This process is the reverse of most conventional sanitation programmes, which tend to favour those that can afford toilets, those that have land available to build toilets, and those that are first on the list for subsidised facilities. All too often, conventional programmes leave coverage of the poor and the marginalised, i.e.
those most affected by inadequate sanitation, until long after everyone else has been served.

NGOs in Bangladesh state that they have used the total sanitation approach to support more than 1,000 rural communities in stopping open defecation, using participatory techniques to raise awareness of local sanitation issues and assist communities to solve their own problems (see box on ‘ignition’). The combination of internal community pressure and external NGO support is reported to have enabled hundreds of rural communities in Bangladesh to reach 100% sanitation coverage within less than a year, without any hardware subsidies.

The total sanitation approach encourages rural households to use their initiative and funds to build basic sanitary toilets, without imposing standard external designs. This allows very low cost toilets to be built using freely available local materials, thus making toilets more affordable and accessible to the rural poor. It also permits more programme funds to be spent on important software activities like sanitation and hygiene promotion.
ANNEX 5  Joint Monitoring Program data on rural sanitation coverage