Global Scaling Up Rural Sanitation

Summary of the Impact Evaluation Baseline Survey in Indonesia

January 2011

INTRODUCTION

In response to the preventable threats posed by poor sanitation, the Water and Sanitation Program (WSP) launched Global Scaling Up Rural Sanitation to improve the health and welfare outcomes for millions of people living in rural areas. Local and national governments are implementing the project in India, Indonesia, and Tanzania with technical support from WSP. The project aims to reduce the risk of diarrhea and therefore increase household productivity by stimulating demand for sanitation.

One of the project’s global objectives is to learn about and document the health and welfare impacts of the project intervention. In order to assess these impacts, the project is implementing an impact evaluation (IE) to measure the causal effect of the project intervention against the specified outcomes. The study is using a randomized-controlled experimental design. The IE study includes several rounds of surveys: pre-intervention (baseline), concurrent (longitudinal), and post-intervention (endline).

This Research Brief summarizes the main findings of the baseline survey in Indonesia.¹

IMPACT EVALUATION STUDY DESIGN

Known as Sanitasi Total dan Pemasa-ran Sanitasi (StoPs) in Indonesia, the project is being implemented in 29 rural districts (kabupaten) in East Java. As shown in Figure 1, the impact evaluation studies eight of the 29 districts—a total of 2080 households in 160 sub-villages (dusun). In each of the participating districts, the impact evaluation team randomly selected 10 pairs of villages. Each pair consists of one treatment village and one comparison village from the same kecamatan (sub-district). The sample is geographically representative and representative of the households in rural East Java.

Figure 1: Impact Evaluation Districts and Treatment and Control Villages in East Java

¹ The baseline survey was conducted August—September 2008.
Baseline Findings: Sanitary Conditions and Child Health

| Access to improved water (% HHs) | 87.3% |
| Access to improved sanitation (% HHs) | 48.5% |
| Practice open defecation (% HHs) | 39.5% |
| Place for washing hands with soap and water (% HHs) | 47.0% |
| Diarrhea prevalence, previous 48 hours (% children <5) | 4.3% |
| Diarrhea prevalence, previous 7 days (% children <5) | 7.3% |
| ALRI prevalence, previous 48 hours (% children <5) | 2.0% |
| ALRI prevalence, previous 7 days (% children <5) | 2.6% |
| Anemia (% children <2) | 70.9% |

The IE in Indonesia is designed to measure a broad range of health and welfare impacts, as discussed in Box 1.

KEY FINDINGS

The use of improved sanitation and the availability of water and soap are substantially lower among the poor. Only 49% of all households in the IE sample, regardless of income, have access to improved sanitation. Not surprisingly, the proportion of the richest 25% of households who have improved sanitation (72.2%) is 2.6 times higher than the poorest 25% of the sample (28.7%). Fifty-five percent of the poorest households defecate in the open, compared to 17.9% of the richest households. And while 31.4% of those in the poorest quartile report having water and soap available to wash hands, the figure doubles to 64.1% in the wealthiest quartile.

Although 98% of respondents report washing their hands after defecating, fully stocked handwashing facilities are not always available. Only 70% percent of households report having a specific place for washing hands. For these households, soap and water were observed in 47% of

Box 1: Health and Welfare Impacts

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¹ For complete results, please see Scaling Up Handwashing Behavior: Findings from the Impact Evaluation Baseline Survey in Indonesia, available at www.wsp.org/scalingupsanitation

³ As per JMP definitions
⁴ HH: Households
⁵ ALRI: Acute Respiratory Infection
⁶ Anemia defined as Hemoglobin <110 g/L
⁷ Not collected for baseline, however most likely will be collected for endline survey
children under five years of age (8.4%) are reported to have had diarrhea in the past two weeks. Prevalence of diarrhea in the previous 14 days is highest in those households without improved sanitation (10.1% versus 6.5% for those with improved sanitation), without an improved water source, and without soap and water at places for washing hands. Diarrhea prevalence is negatively related to income, which was expected since richer households tend to have better access to sanitation.

Households with improved sanitation showed higher levels of child growth and development, and lower rates of anemia. A higher degree of child development for every type of skill for age (communication, social-personal, and gross motor skills) is systematically observed in children living in households with improved sanitation. Similarly, the Z-scores for all child growth measures (weight-for-height, height-for-age, body mass index, weight-for-length, arm circumference-for-age, head circumference-for-age) tend to be smaller in children from richer households, indicating better nutritional status (Illustration 1).

Young children without access to improved sanitation are more vulnerable to diarrhea. A relatively high percentage of places. On average, only 54% of toilet facilities include some sort of handwashing device, and a majority of households (60.4%) wash hands by pouring the water from a bucket. Across all income quartiles, 29% of households do not have soap at the place for washing hands, and in the poorest households, 38.5% wash hands with water alone.

Access to improved drinking water is relatively high, even among the poor. The majority of households (87%) have access to an improved water source. This is high even among the poorest households (85%). The majority of households obtain water from protected dug wells (36%), tube wells (23%) and protected spring water (19%). Some households (about 15%) do, however, consume water from unsafe sources such as unprotected wells (10%). Ninety-seven percent of households reported they boil their drinking water prior to drinking.

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Illustration 1: Collection of Anemia and Growth Measures

Health enumerators with biometric equipment (left) traveled to the 160 sub-villages participating in the IE baseline survey. They collected blood samples to test for anemia prevalence (right) and recorded child growth measurements. The project collected baseline data from 2,080 households in eight East Java districts covered by the project implementation. Photos by Lisa Cameron.
With an average of 71%, the rates of child anemia in the IE sample are extremely high across incomes and geographic areas. However, children are less likely to be anemic in households with improved sanitation and water sources.

**NEXT STEPS**

In addition to providing useful information for the design of the intervention, the data presented here will be used to evaluate the impact of the Indonesia rural sanitation project on child health and caretaker productivity. The evaluation study hopes to measure and learn about the impact of the intervention on sanitation use that will be used to guide future projects and policy both in Indonesia and globally. The subsequent collection and analysis of the post-intervention data, in conjunction with the longitudinal data, will enable a close examination of the links between poor sanitation, poor health, and longer-term child development.

The impact evaluation aims to identify to what extent these outcomes are attributable to poor sanitation and to quantify the extent to which the project is able to improve these vital aspects of child health. As outlined earlier, the impact evaluation study utilizes a series of household and community surveys. These include the baseline, approximately 18 waves of longitudinal monitoring, and post-intervention follow-up questionnaires.

At the time of this brief’s publication, longitudinal data collection is completed, and post-intervention data collection is scheduled to be completed by the end of 2010. Data analysis and impact assessments will be conducted soon after, and a full impact evaluation report of Global Scaling Up Rural Sanitation will be published by the end of 2011.

—by Lisa Cameron and Manisha Shah

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**Related reading**


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**About the project**

Global Scaling Up Rural Sanitation is a WSP project focused on learning how to combine the approaches of CLTS, behavior change communications, and social marketing of sanitation to generate sanitation demand and strengthen the supply of sanitation products and services at scale, leading to improved health for people in rural areas. It is a large-scale effort to meet the basic sanitation needs of the rural poor who do not currently have access to safe and hygienic sanitation. Local and national governments are implementing the project with technical support from WSP. For more information, please visit www.wsp.org/scalingupsanitation.

**Contact us**

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