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37th WEDC International Conference, Hanoi, Vietnam, 2014**SUSTAINABLE WATER AND SANITATION SERVICES
FOR ALL IN A FAST CHANGING WORLD****Applying a “small doable action” behaviour change approach
to address monumental challenges in SW Bangladesh***J. Rosenbaum, A. H. M. K. Sikder & S. Ferdous, USA***BRIEFING PAPER 2056**

CLTS focuses on trigger commitment to ending open defecation. But what do you do when communities practice fixed point defecation, yet almost NONE of it is hygienic and it leaks into the environment?? This paper will first generally describe the USAID WASHplus/Bangladesh activity, and continue to highlight some of the innovative behaviour change approaches we are applying to a particularly challenging area of Southwestern Bangladesh. Our approach to increasing the practice of WASH behaviours is both theory-based and grounded in established best practice, and focuses on making change possible and sustainable by addressing both essential ‘supply’ of key WASH products and negotiating a menu of “small doable actions” that are both feasible and effective for resource constrained households.

Introduction

This paper will first generally describe the USAID WASHplus/Bangladesh activity, and continue to highlight some of the innovative behaviour change approaches we are applying to a particularly challenging area of Southwestern Bangladesh, with a marginalized population in a tidal area with seasonal flooding.

WASHplus/Bangladesh is a USAID-sponsored project led by the international NGO FHI360 with WaterAid as lead implementation partner in collaboration with local government and communities. The three-year program seeks to establish sustainable provision of lifesaving safe water, improved sanitation, and hygiene (WASH) for to about a quarter million marginalized people living in four upazilas (sub-districts), in Barisal Division in southwestern Bangladesh. The targeted sub-districts were selected based on their great need for sanitation and hygiene; where access is low, poverty is high and acute respiratory infections and WASH-related diseases such as diarrhea are widespread.

Millions of poor and marginalized people in hard-to-reach areas in rural Bangladesh are still deprived of their basic rights to safe drinking water and improved sanitation facilities. Despite the fact that access to WASH services has received global acceptance as a basic human right, equitable and pro-poor WASH services are yet to be achieved in Bangladesh. The problem is exacerbated by resource limitations, disproportionate investment by government and donor communities in urban areas, extreme geographic and technological challenges, and institutional and capacity gaps, such as poor local governance. The gap between national policy and implementation at the local level has posed a challenge to successful WASH service delivery, particularly in the hard-to-reach southwest region.

The project areas coincide with USAID Feed the Future target areas for improved nutrition programs, with the intent of integrating WASH and nutrition programming. Given that gastro-intestinal infection and diarrhea thwart the uptake of nutrients and perpetuate the cycle of under-nutrition and morbidity, access to WASH services will bolster ongoing efforts to reduce under-nutrition in the targeted *upazilas*. To address the great challenges found in the four *upazilas*, the project seeks to:

1. Reach poor and marginalized communities to increase and sustain access to safe water sanitation and hygiene using locally appropriate technologies;
2. Build community and local government capacity to operate and maintain water and sanitation facilities, demand increased allocation and pro-poor targeting of national and local government funds, and community contributions to ensure sustainability of project interventions and impact;

3. Strengthen coordinated WASH-nutrition programming in Bangladesh; and
4. Strengthen collaboration between government, the private sector and civil society in the WASH sector.

To achieve project goals, we apply comprehensive and innovative behavior change approaches described in this brief, working through local partner NGOs and communities, to achieve sustainable WASH improvement. We are just one year into the three year activity, and are just extracting ‘lessons learned’.

National WASH context

According to the World Bank Environmental Country Assistance Strategy (2006), the cost of the current water and sanitation challenges in Bangladesh is an estimated USD \$800 million per year including both direct and indirect health costs. The Water and Sanitation Program (WSP) of the World Bank found the annual economic impact of inadequate sanitation in Bangladesh is estimated at BDT 295,500 million, equivalent to USD \$4,230 million or 6.3 % of the GDP. (Bakarati 2010) At the same time, the World Health Organization (WHO) reports the return on investment in Bangladesh WASH programs is 5:1, implying a significant economic benefit to investing in WASH programming.

Current WASH and nutrition situation in project area

The project conducted a rigorous baseline evaluation (WASHplus 2014), using a cross-sectional, pre-post design, where quantitative and qualitative approaches are combined. Various data collection methods were employed in the study to gather information on different variables and themes. The quantitative sample was randomly selected from the target villages, with a total sample size just under 1500. The following highlights of baseline findings provide an overview of the intervention area:

Access to improved water is almost universal

- Almost all of the households have tube well as the main source of drinking water (98.9%). Only 1 percent use surface water in this regard.
- About 64 percent reported that less than 15 minutes is required to fetch water, followed by 31 percent required 15 to 30 minutes. On average about 14 minutes are required to fetch water from the source to the household.

Despite almost universal access, households choose to use other inferior sources for household use other than drinking, including highly polluted pond and canal water for cooking, bathing and washing.

Sanitation

- Only about 10 percent of the surveyed households have access to improved sanitation facilities, i.e., water sealed pit latrine.
- 63% have pit latrine with slab (broken water seal)
- About 19% used a “hanging latrine” over the nearby canal or pond, following pit latrine without slab (4.5%) and remaining 4% defecate in open place or bushes.
- 32% of households reported that children defecate the household latrine, followed by ‘putting or rinsing feces into household latrine’ (16.8%) or ‘throwing into a specific hole’ (17.9%). However, one third of them (33.1%) report that they do not use a specific place disposal.

Handwashing after defecation

- 33% have hand washing place inside or near to latrine (within 5 yards)
- 94% of these have water available in the place however the majority 82.6% have no soap

Handwashing before food preparation and feeding/eating

- One third of the households have hand washing stations at or near the area/ kitchen for preparing complementary foods for children undergoing weaning, while two thirds do not have.
- Among those who have, the majority do not have soap (87.2%)

Child health, WASH and nutrition

Under-nutrition is prevalent in Bangladesh, causing poor development and severe stunting in children. Nationally, 41% of children under 5 are stunted, 42% in the WASHplus project area (WASHplus 2014). About 10% are wasted overall, 30% of them are malnourished or underweight in baseline area measures, which is not notably different from national averages; and almost equal for girls and boys (30.6-30.3%).

Under-nutrition is a result of not only lack of access to food but also poor hygiene practices and inadequate access to and use of quality water and sanitation. The baseline statistics documenting poor handwashing and sanitation highlight the toll of this vicious cycle on young infants and children. This environment can also lead to the inability to fight infections, leading to increased risk of acute respiratory infections (ARI), the number one cause of mortality among children under 5. By improving WASH practices, WASHplus aims to combat both diarrhea and ARI, contributing to decreasing rates of under-5 morbidity and mortality.

While limited access to nutrient-rich foods is one challenge to ensuring proper nutrition in mothers and children, poor quality of sanitation facilities and other means of fecal contamination contribute to the burden of under-nutrition in these regions. Poor hygiene practices create a cycle where children are more susceptible to diarrhea when exposed to faecal matter; faeces are easily spread by caretakers do not wash their hands with soap prior to cooking and feeding the child. Children in these environments are more prone to diarrhea, which negatively affects their ability to eat and absorb necessary nutrients. Prevalence of diarrhea among children 0-59 months of the survey area during two weeks prior to the survey found 19.0%; there is no difference between boys and girls in this regard. The growth stunting affecting children under 2 is largely irreversible and affects not only physical growth, but also emotional and intellectual development. (Victora 2008) Therefore, WASHplus aims to integrate WASH into nutrition programs to break the cycle promote child growth and health, as well as family resiliency.

The WASHplus project underlying theoretical framework

In order to see improvements in health, social and economic well-being of families in the project districts, the WASHplus activity aims to increase the consistent and correct practice of a suite of WASH behaviors including:

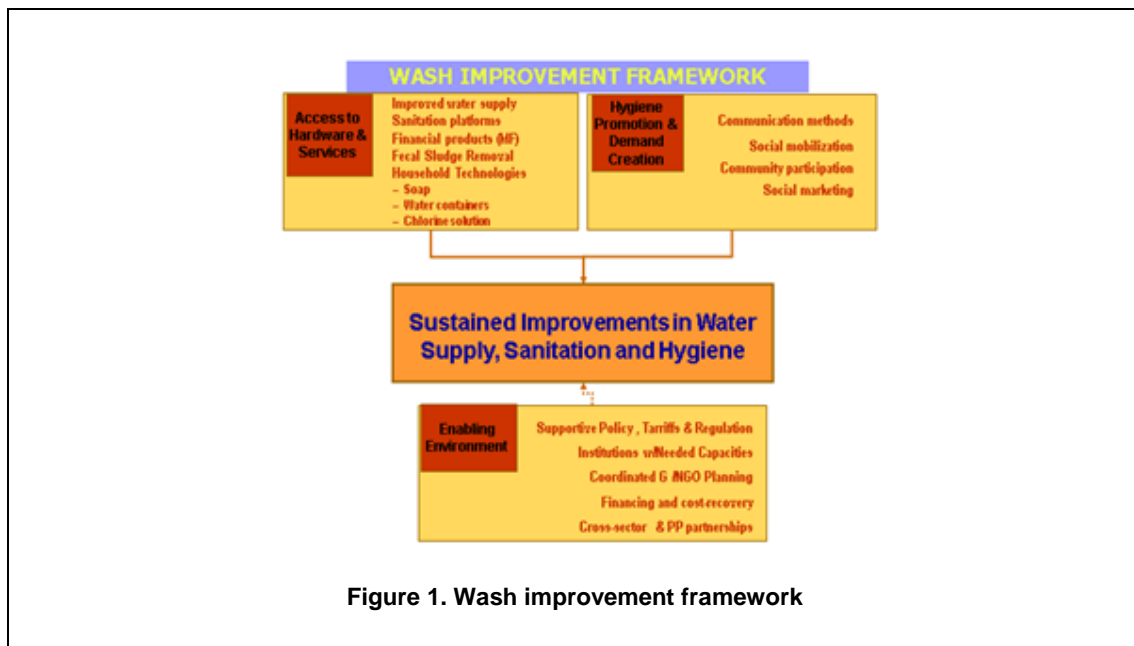
- safe and hygienic disposal of a, including infant faeces,
- consistent and correct handwashing at critical junctures, particularly after defecation and before food preparation and feeding/eating,
- safe handling and storage of household water; and
- menstrual hygiene

Our strategy for increasing the practice of WASH behaviors is both theory-based and grounded in established best practice. Rather than embracing one particular theory of behaviour change, the WASHplus strategy is constructed around the USAID WASH Improvement Framework (EHP 2004), which posits that in order to realize sustained behaviour change or WASH improvement, three key domains must be engaged:

1. Access to hardware and services, such as water supply, soap, sanitation products, and financial ‘products’ like loans
2. An ‘enabled environment’, that includes a supportive policy environment, institutions with the needed capacities, coordinated government and non-governmental organizational planning and
3. Hygiene promotion and demand creation, that includes social mobilization, community participation, CLTS, social marketing and behavior change communication.

Therefore, the WASHplus strategy addresses increased access to necessary products and services, a supportive ‘enabling environment’ with key policies, government and civil society with the essential skills to plan, manage and support WASH; and finally promotion and demand creation through CLTS social mobilization, sanitation marketing, and promotion. This directly corresponds to our project objectives.

To improve WASH practices, increasing knowledge and awareness is necessary, but not sufficient. A host of other factors are also critical to the performance or non-performance of our WASH practices.



The design of the overall WASHplus activity in Southwest Bangladesh aims to increase access to water and hygienic sanitation; to strengthen local government capacity to plan, manage, implement and evaluate WASH hardware and software activities; to stimulate formal and informal community institutions like mosque and civil society to reinforce social norms that are supportive of WASH. These social norms are the unwritten rules that guide individuals to ‘do’ or ‘not do’ certain behaviors; they remind us what is ‘expected’, what people important to us think that we ‘should do’. In general, the cross cutting factors most influential in WASH behaviors include: Perception of risk (of fecal contamination, of NOT washing hands), skills, access to key “enabling” products, self-efficacy (the sense that individuals and/or communities can do something to make things better), key knowledge, and social norms.

Improving WASH practices... one small doable action at a time

The WASHplus behavior change strategy also is built around the evidence that people can rarely go from current practice to ideal practice, for example, from sedentary lifestyle to five aerobic exercise sessions a week, or from open defecation to consistent use of a VIP latrine. Based on this understanding, WASHplus incorporates what we’ve named a *‘small doable action’ approach* to changing WASH practices. Rather than setting the behavioral objectives of WASHplus as the ideal WASH practices (e.g. put children in diapers; wash hands of all family members at all 7 critical junctions with running water and soap), we construct a continuum of behaviors that lead from unacceptable to ideal. Small doable actions are behaviors that are deemed ‘feasible’ to perform in resource constrained settings, from the householder point of view; and effective at the individual and public health levels. Behaviors that meet these two criteria – feasible and effective – are considered ‘small doable actions’ and including in the ‘menu of options’ for WASH behavioral improvement.

These small doable actions are then ‘negotiated’ with householders, rather than focusing on educating households to adopt ideal practices or ‘promoting’ without dialogue. The process of ‘negotiation’ involves a community agent such as an ‘outreach worker’ assessing current practice, and problem solving with householders to commit to trying an improved WASH practice. This approach contrasts with predominant hygiene promotion that assumes householders aren’t practicing ideal practices because they are unaware, and that through awareness raising and education, ideal practices will be catalyzed. In the Bangladesh program, these behaviors are ‘negotiated’ in group sessions in courtyards, in tea stalls, at households and other venues.

Below is a pictorial representation from an Ethiopian job aid for health workers of small doable actions related to safe water handling, to help guide their interactions with households. The first picture in row “E” is an ‘unacceptable’ current practice of uncovered water with animals and flies, followed by the “menu of options” that move toward an ideal practice of a covered jerry can and cup hung on the wall for serving.

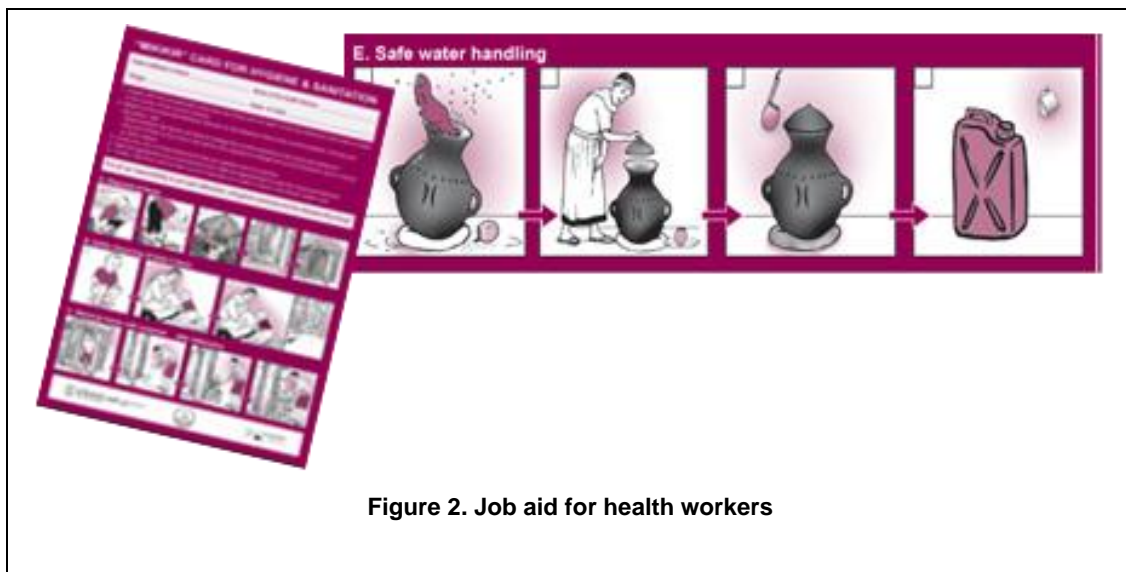


Figure 2. Job aid for health workers

While WASHplus works with local government and communities to rehabilitate and install water and sanitation infrastructure, there are often improvements solidly in the ‘domain’ of households, communities or schools for improving existing infrastructure, such as re-hanging doors, stabilizing or raising sanitation platforms, patching leaky latrines, hanging tippy tap handwashing stations, etc. These small improvements also fall into the category of ‘small doable actions’ that can improve WASH and address the environmental or ‘supply’ factors influencing improved WASH. Therefore, while WASHplus works with local governments and communities on major water and sanitation infrastructure, we will also be encouraging ‘small doable’ improvements in hardware as they influence WASH practice.

Unique behavioural challenges

While WASHplus aims to improve the entire ‘suite’ of WASH behaviors, particular focus will be placed on the following behaviors based on an assessment of current practice, available baseline and other epidemiologic data, environmental and social factors.

Safe and hygienic disposal of faeces

As demonstrated in baseline measures, many Southwest villages have high levels of latrine coverage and use, but these latrines either intentionally or inadvertently leak into the surrounding ponds, canals or other parts of the surrounding environment. As with many sanitation activities, WASHplus will incorporate CLTS-like ‘triggering’ to engage communities in the process of examining their current situation and engaging them commit to ending UNHYGIENIC defecation practices and invest/engage in hygiene practices. In the case of our intervention districts, very little open defecation takes place, rather fixed point defecation in latrines that leak faeces into the environment, see photograph 1. Our challenge will be to trigger actions that end unsafe fixed point defecation, either fixing leaky latrines - by patching leaky rings, upgrading systems, or a range of small doable actions that we are in the process of developing with local communities.

A ‘catalogue’ of safe, hygienic and feasible improvements has been developed, and will be further expanded as more ‘feasible options’ are identified. The catalogue includes different designs of latrine that would provide solution to the geo-physical characteristics of the southwestern coastal parts. The designs include raised plinth and sand envelopment around the pit to confine faeces within the pit and to reduce pathogen transmission to the environment. The improvements are retrofitted in the traditional single and twin offset pit latrine design.



Photograph 1. Latrines that leak faeces

Sanitation marketing, now often ‘twinned’ with CLTS under the ‘total sanitation’ umbrella, is a part of the WASHplus project model. Local entrepreneurs are being trained in marketing appropriate sanitation products (many in the ‘catalogue’), and coordinating with local triggering efforts to ensure a smooth supply-chain of necessary materials, allowing marketers to reach out to householders with sanitation options and financing they desire. This coordination of supply, demand, coordinated planning and training to address sustainable WASH improvement illustrates the use of the WASH Improvement Framework as an innovative and comprehensive behavior change tool.

To integrate WASH and nutrition programming, WASHplus will work to site water and sanitation infrastructure in areas where we overlap with USAID ‘Feed the Future’ nutrition projects. At the same time, we work to integrate a very defined behavioural focus on handwashing before food preparation and infant feeding, and safe disposal of infant faeces to specifically address faecal contamination of under two year olds as complementary foods are being introduced. A menu of ‘small doable actions’ for safe and feasible disposal of infant faeces is currently under development and much needed when considering current baseline practice.

To support handwashing at this particular junction, the focus is on introducing tippy tap handwashing stations near to food preparation areas. This implies introduction of a second tippy tap into the household, one by the latrine and another near the food area, a behaviour that has not explicitly been promoted in many WASH interventions. Placement of a tippy tap facilitates handwashing when flowing water is not readily available, and also serves as a reminder to wash, which has been shown in other health areas to be a key determinant of practice. (Neal 2012)

Conclusions and Lessons Learned

As intervention has just begun, our lessons are just emerging. Already we have seen that the comprehensive behaviour change approaches outlined in this brief that take into account both the complexities of human behaviour and the unique geographic challenges offer promising strategies for meeting the immense WASH challenges of Southwest rural Bangladesh precisely because they allow for local creativity and innovation, and address hardware as well as promotion. We anticipate they will require intensive resource inputs at the level of the community outreach workers; and longer programme time frames to see behaviour change reach their targets. We hope to gather data that measures the small doable action approach to changing and sustaining WASH practices and provides some contrast to approaches that promote ideal but perhaps not feasible behaviours.

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