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**SUSTAINABLE WATER AND SANITATION SERVICES
FOR ALL IN A FAST CHANGING WORLD**

**Children: a vital component for achieving total sanitation
and associated benefits (Bangladesh case study)**

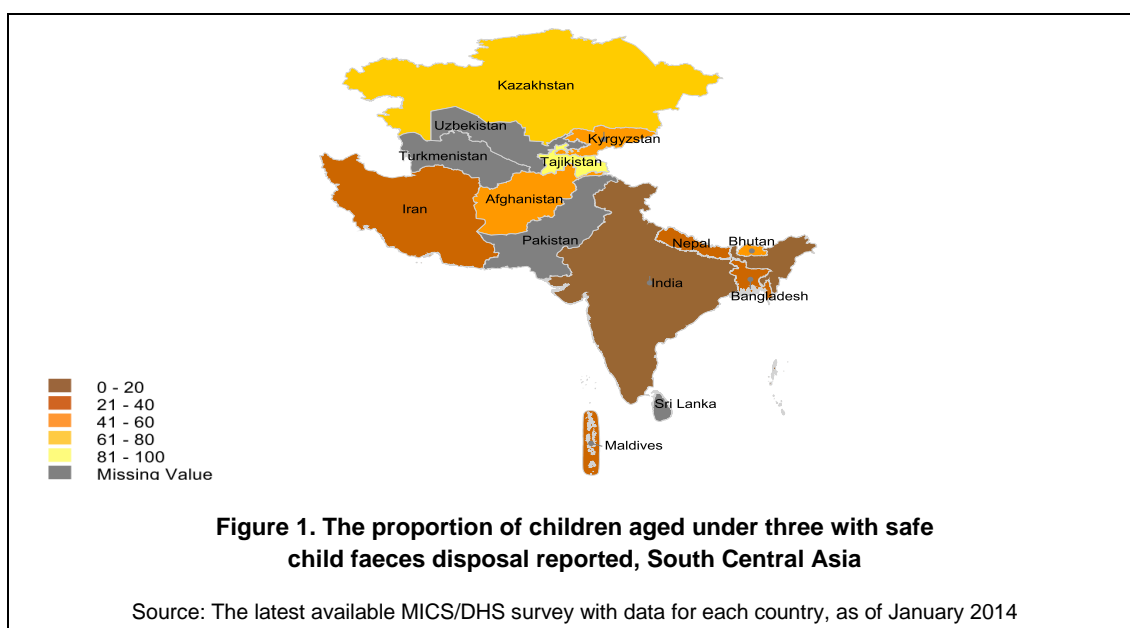
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BRIEFING PAPER 1932

While the impact of poor sanitation is often measured by the effects on children, most sanitation interventions target adults. Global monitoring of sanitation coverage against the Millennium Development Goals (MDGs) generally also overlooks sanitation among young children. In Bangladesh, the faeces of only 22% of children under age three were disposed of safely in 2006, and children in more marginalized households were least likely to have their faeces safely disposed of. Even in households with improved sanitation, 22% of children’s faeces were reported to be left in the open. These inequities are emblematic of trends seen in developing countries worldwide. This paper provides a policy and programming-relevant overview of child sanitation in Bangladesh, a country with relatively more interventions focused on increasing demand, improving supply, and creating an enabling environment for the safe disposal of child faeces.

Overview of current practices

The WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation (JMP) tracks progress towards Millennium Development Goal 7, “to reduce the number of people without access to adequate sanitation by half.” However, the estimates are based on one type of sanitation coverage per household, and hence overlook sanitation practices of young children. Due to their developmental status and safety concerns, young children may not be able to use a toilet or latrine, even if their household has access to one.

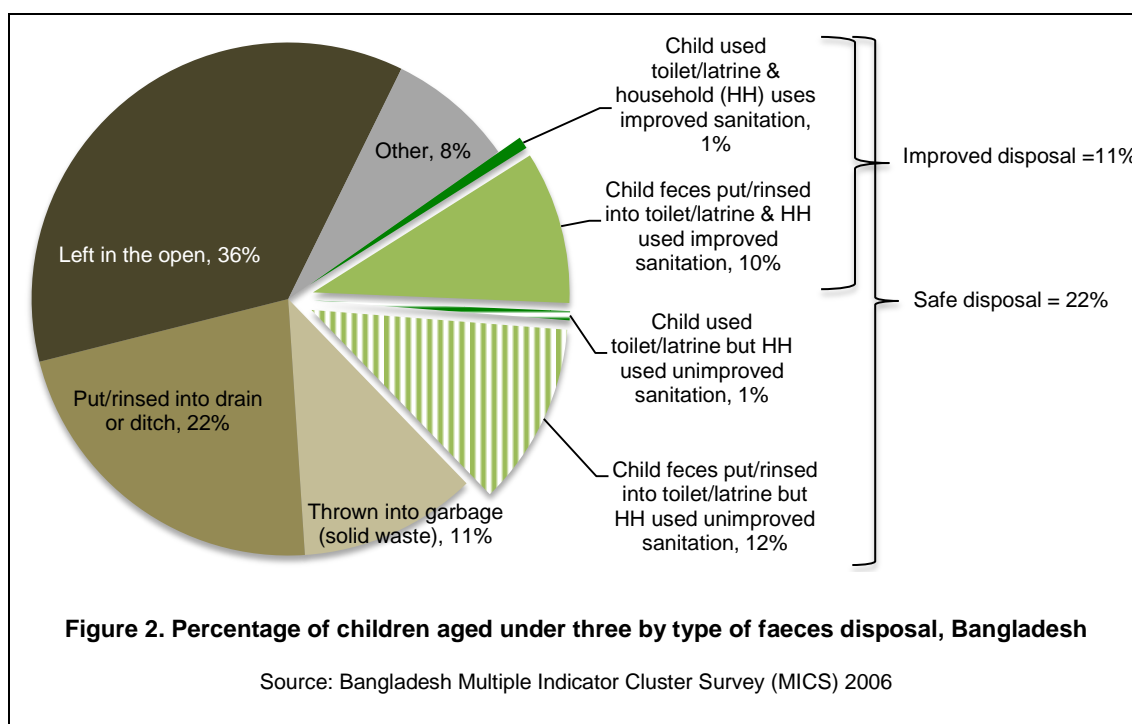


Just as with adult sanitation, safe disposal of children’s faeces should ensure separation of the stool from human contact and an uncontaminated household environment. Instances where a child uses or their faeces are put or rinsed into a toilet or latrine are considered more likely than other disposal methods to break the faecal-oral transmission chain. For the purposes of this document, instances where a child uses or their faeces are put or rinsed into a toilet or latrine are referred to as safe while other methods are termed unsafe.

In Bangladesh, in 2006, only 22% of households reported that the faeces of their children under three were deposited into a toilet/latrine (Figure 2)

According to calculations based on the 2006 Bangladesh population estimates issued by the United Nations Department of Economic and Social Affairs (UNDESA) in 2013, the stools of over 7.5 million children under three were therefore not disposed safely. This includes over 3.5 million children whose faeces were left in the open. Even among those 22% of households with safe child faeces disposal, only half (11% overall) have an improved sanitation facility into which they could easily dispose the faeces. This stricter definition of disposal type is called “improved disposal” in Figure 2.

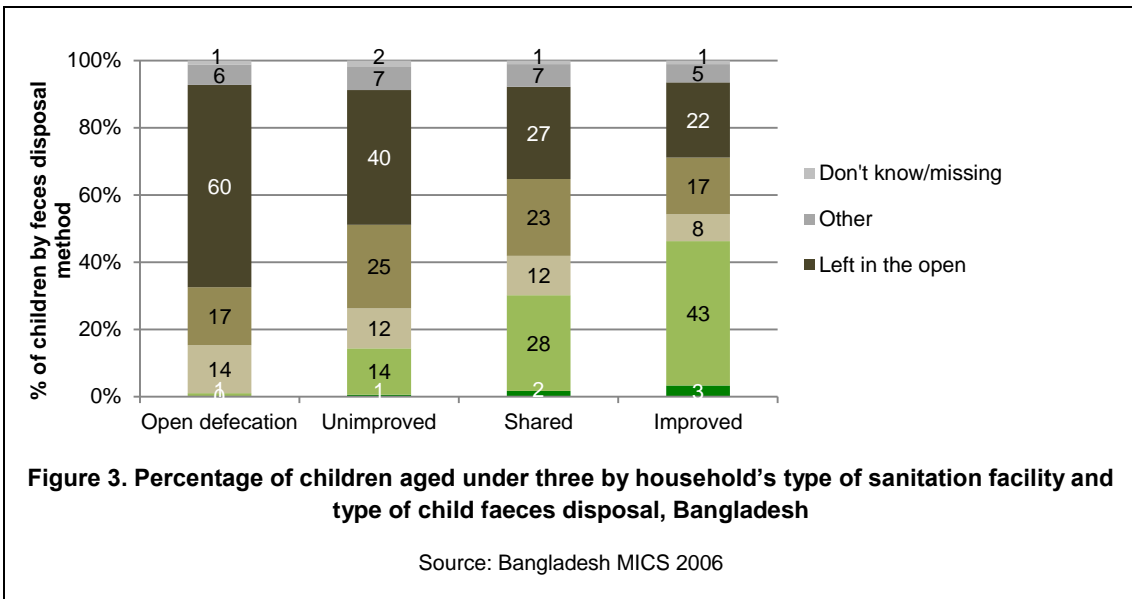
Faecal contamination of infant and young children's play areas was reported in 66% of households in Bangladesh and about half of the mothers reported seeing a child touch or eat animal faeces in the previous two weeks (Zeitlin et al., 1990). According to the latest available Multiple Indicator Cluster Survey or Demographic and Health Survey for countries in the South East Asia region (survey years range from 2006-2011), the Maldives, Iran, Nepal, Kyrgyzstan, Afghanistan, Bhutan, Kazakhstan and Tajikistan all have lower rates of unsafe child faeces disposal than Bangladesh, while India has higher rates (Figure 1).



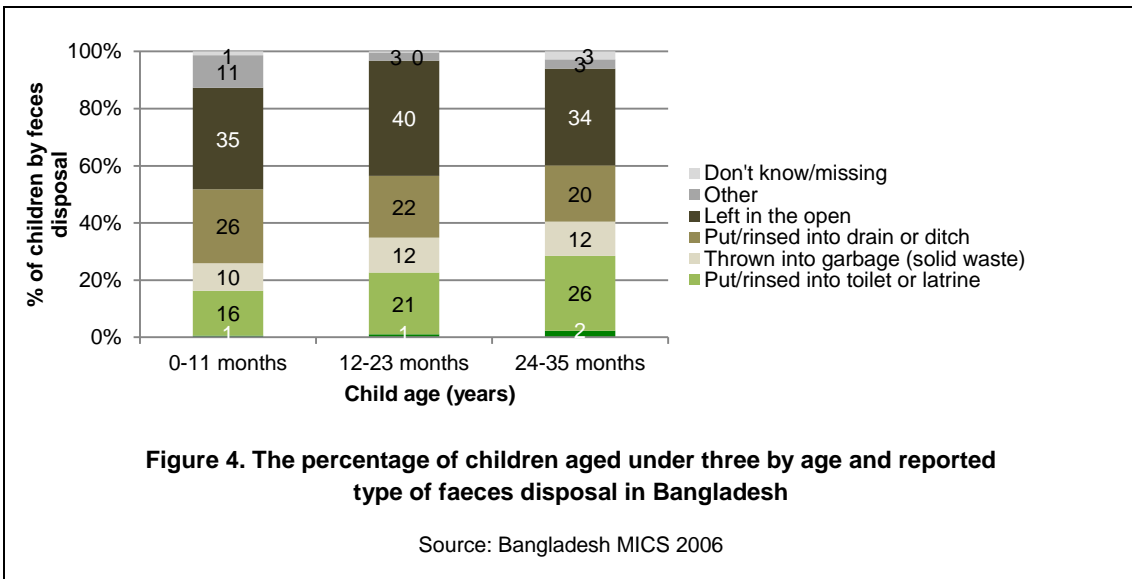
In Bangladesh, marginalized households and households with younger children consistently report higher rates of unsafe disposal of child faeces

Houses without improved sanitation, rural areas and poorer households were generally less likely to report safe disposal.

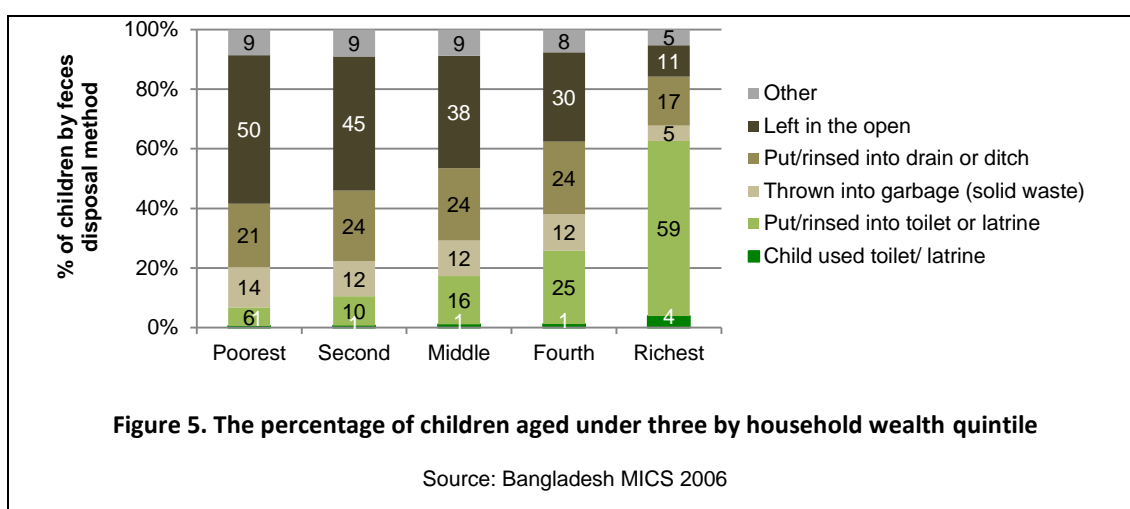
Households practicing open defecation reported the highest level of unsafe child faeces disposal (Figure 3). However, it is important to note that in Bangladesh, even among households with improved sanitation, 53% reported unsafe behaviours (all disposal types except “child used toilet/latrine” and “put/rinsed into toilet or latrine”). Among households with improved sanitation, the faeces of 22% of children are being left in the open and those of 17% of children are being put or rinsed into drains or ditches.



In addition, households with younger children were generally more likely to report unsafe disposal methods. Households are most likely to report child faeces being unsafely disposed of during the first 0-11 months of age. There is also a peak in open defecation (faeces “left in the open”) for children aged 12-23 months, the same age when the majority of children have just started walking.



Those children who live in the poorest 20% of households are most likely to live in a household that reported unsafe disposal of the child's faeces (Figure 5). However, over a quarter of the wealthiest 20% of households still report leaving child faeces in the open, or putting/rinsing them into a drain or ditch.



Note on data sources used above

Unless otherwise specified, all analysis presented above is based on self-reported child faeces disposal behaviour collected in the Bangladesh MICS 2006, which is the latest MICS/Demographic and Health Survey (DHS) on file for Bangladesh that records child faeces disposal behaviours. There is global evidence, as well as evidence from Bangladesh, that self-reports may overestimate safe disposal (Stanton et al, 1987). Although in Bangladesh MICS2006 22% of children reportedly either used a toilet/latrine or their faeces was put/rinsed into the toilet/latrine, a structured observation of behaviour conducted under UNICEF's Sanitation, Hygiene Education and Water Supply in Bangladesh (SHEWA-B) program in 2007 found only 9% of subjects disposing child faeces into a toilet/specific pit (Akhtaruzzaman, Islam & Islam, 2011). Regardless of this issue, self-reports are currently regarded as the most efficient method for gauging safe disposal of children's faeces.

Interventions and emerging possible program integrations ideas from the field

A range of efforts to increase demand, improve supply, and create an enabling environment for the safe disposal of child faeces during the first years of life are underway by various organizations in Bangladesh

Three of these activities, which address different aspects of the collection, transport, and disposal of child faeces and toilet training are discussed below.

WASH Benefits

WASH Benefits and the International Centre for Diarrheal Disease Research, Bangladesh (icdrb,d) developed an intervention with three components: 1) a sani-scoop hoe for picking up faeces, 2) plastic child potties with a removable tray, and 3) a new or upgraded dual pit latrine for each household in its compound. The intervention emphasizes safe disposal of faeces from the compound (WASH Benefits, 2014). A randomized controlled trial (RCT) is being carried out to measure impacts. Self-reported data about the respondent's use of the interventions indicated improvement. However, observations of faeces in the household environment found only a statistically insignificant difference (Luby, et al. 2013).

UNICEF and SHEWA-B

Through UNICEF's Sanitation, Hygiene Education and Water Supply in Bangladesh (SHEWA-B) project, 10,000 trained local community workers provide hygiene instruction to their neighbours, primarily focusing on the mothers of children under five (UNICEF, 2013). According to a study conducted in 2012, structured observations did not record statistically significant increases in the proportion of child faeces disposed in a latrine or pit (Luby, op.cit.)



Photograph 1. A potty already available in the Bangladesh market



Photograph 2. A sani-scoop adapted from a common hoe by iddr,b.

BRAC

BRAC (formerly Bangladesh Rural Advancement Committee)'s 2006-7 baseline survey found that adults placed less importance in the contamination potential of children's than adults' stool and only 11% of respondents regarded "after cleaning children's stool" to be an appropriate time for handwashing (BRAC, 2008). In response to these findings, the organisation is targeting over 17 million people in Bangladesh with safe faeces disposal interventions. The authors could not locate an evaluation of these efforts. The program educates children under five and their mothers about proper hygiene practices, through the use of flipcharts and brochures that include messages such as:

- Did you know that the feces of small children can be dangerous? Try to throw the children feces into the latrine.
- Your children need a hygienic latrine and need to use it.
- After cleaning the child's bottom throw the child feces into the latrine; it is important to wash both hands with soap (BRAC 2013).

Preliminary recommendations and potential lessons learned

Given the relatively few programmes focusing on children's sanitation in Bangladesh and also globally, there is not a strong evidence base on what works best for effectively increasing the safe disposal of child feces. Significant knowledge gaps must be filled before comprehensive practical evidence-based policy and program guidance will be available. Nevertheless, those organizations mentioned above plus other experts working in or researching children's sanitation globally have published a number of recommendations and possible methods for incorporating child feces management into existing programs. These are collated below.

Increase demand:

- Emphasize that a community cannot be certified as open defecation free unless everyone's faeces are safely disposed of, in locations using community-led total sanitation (UNICEF, 2013).
- Introduce education programs in schools and pre-schools to encourage caregivers' understanding that children's stools are dangerous in communities where people consider children's faeces as relatively inoffensive (Feachem, et al. 1983).
- Tailor messaging to target audiences. For example, place emphasis on disposing the faeces into a toilet/latrine for children not developmentally able to use a toilet (UNICEF, op.cit.).
- Incorporate the entire range of relevant motivators -health, time saving, ease of cleaning and pride, etc- into communication materials (Luby, op.cit.).
- Maximize the frequency of program-to-beneficiary contact (Galway, 2000)
- Encourage caretakers to dispose of the wash water properly if washable diapers or nappies are used (UNICEF, op.cit.).
- Communicate the importance of consistency in the new behaviours established for preventing faeces coming into contact with humans (Luby, op.cit.).

Improve supply:

- Look for any affordable local tool already in the market that can be redeployed and remarketed for safe faeces disposal – thus making use of pre-existing supply and local familiarity of the product (ibid.)
- Encourage the installation of household toilets and a convenient water supply to increase the availability and therefore likelihood of safe child faeces disposal (Feachem, op.cit.).

- Inspire toilet training through the use of training tools, such as the “safe squat”, with use of an improved toilet/latrine (UNICEF, op.cit.).

Create an enabling environment:

- Work with governments to incorporate safe disposal of child faeces into existing interventions.
- Maintain a feedback loop between your intervention and its impact to correctly identify and address any issues (Feachem & Luby op.cit.)

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Notes

The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by WSP or UNICEF.

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