

Key messages:

- In 2011, over half of all households (52 percent) surveyed in Mozambique reported unsafe disposal of the feces of their youngest child under age three.
- Even among households with improved toilets or latrines, 31 percent reported unsafe child feces disposal behavior.
- Safe child feces disposal steadily increases with the wealth of the household: only 19 percent of the poorest quintile reports safe disposal compared to 71 percent of the richest quintile.¹

OVERVIEW

Safe disposal of children's feces is as essential as the safe disposal of adults' feces. This brief provides an overview of the available data on child feces disposal in Mozambique and concludes with ideas to strengthen safe disposal practices, based on emerging good practice.

The Joint Monitoring Programme for Water Supply and Sanitation (JMP) tracks progress toward the Millennium Development Goal 7 target to halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation. The JMP standardized definition for an improved sanitation facility is one that hygienically separates human excreta from human contact.²

According to the latest JMP report, only 21 percent of Mozambique's population had access to improved sanitation in 2012.³ This means that 19.9 million individuals in Mozambique lacked improved sanitation in 2012, of which 10 million practice open defecation. However, these estimates are based on the household's primary sanitation facility, and may overlook the sanitation practices of young children. In many cases, children may not be able to use an improved toilet or latrine—because of their age and stage of physical development or the safety concerns of their caregivers—even if their household has access to one.

SUMMARY OF CHILD FECES DISPOSAL DATA

In 2011, just under half of all households (48 percent) surveyed in Mozambique reported that the feces of their youngest child under age three were safely disposed of. Only 17 percent of households in Mozambique reported that their youngest child's feces were deposited into an improved sanitation facility, according to the 2011 Mozambique Demographic and Health Survey (DHS) (see Figure 1). This low percentage of households reporting improved child feces disposal is slightly lower than the overall percentage of households using improved sanitation (21 percent).



Between 2003 and 2011, reported safe disposal of children's feces increased in both urban and rural areas (see Figure 3). Although most of the increase in safe disposal occurred in rural areas, households in urban areas remain substantially more likely than rural households to use safe feces disposal.

In Mozambique, households lacking improved sanitation, those in rural areas, and poorer households—as well as households with younger children—have a higher prevalence of unsafe disposal of child feces. Households practicing open defecation reported the highest level of unsafe child feces disposal, at 83 percent (see Figure 4). For the remaining 17 percent of households practicing open defecation (i.e., they do not use a toilet or latrine), it is possible, but not probable, that they deposit their children's feces into a latrine (see notes on self-reported data in the “Data Sources” section).

The prevalence of safe feces disposal varies a little across age groups. One-year-old children have the highest prevalence of safe disposal, whereas four-year-old children have the lowest (see Figure 5). The low prevalence of safe disposal in children aged four is due in part to the large amount of missing data for this age category; this may simply reflect that caregivers are no longer as involved or aware of

What Is “Safe Disposal” of a Child's Feces?

The safest way to dispose of a child's feces is to help the child use a toilet or latrine or, for very young children, to put or rinse their feces into a toilet or latrine. For the purposes of this brief, these disposal methods are referred to as “safe,” whereas other methods are considered “unsafe.” By definition, “safe disposal” is only possible where there is access to a toilet or latrine. When a child's feces is put or rinsed into an “improved” toilet or latrine, this is termed “improved child feces disposal.”

FIGURE 1 Safe disposal prevalence is low, but the prevalence of improved disposal is even lower. Percentage of households reporting each feces disposal practice for their youngest child under age three, Mozambique, 2011.

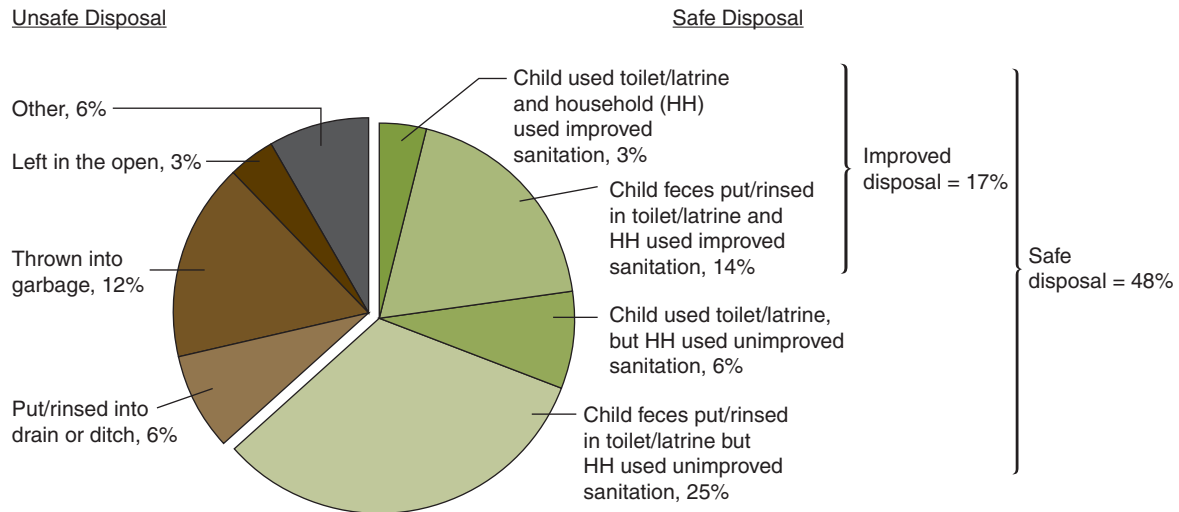
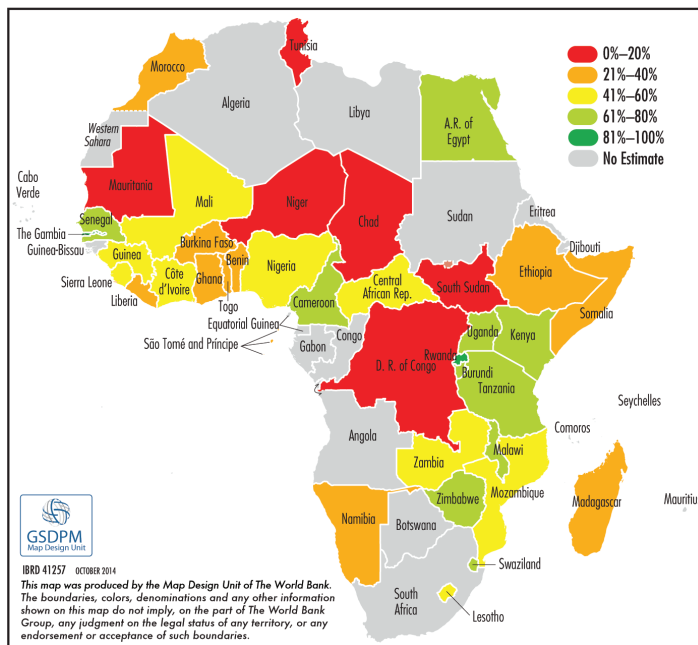


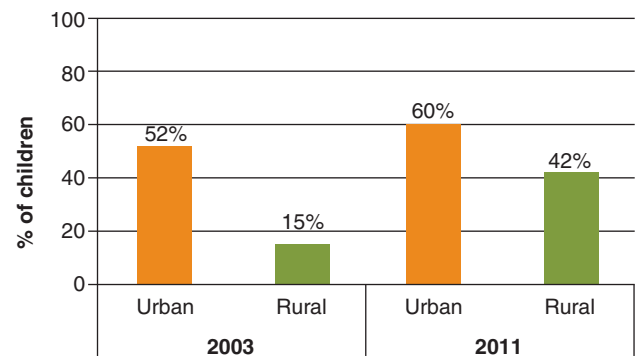
FIGURE 2 Several countries neighboring Mozambique report a higher percentage of children's feces being safely disposed of. Percentage of households reporting safe feces disposal for their youngest child under age three, Africa.⁴



where their older children defecate. At these young ages, the behavior of the child's caregiver is critical to dispose of the feces safely and shape the child's toilet training.

Safe disposal differs widely across wealth asset quintiles.⁵ The poorest quintile of households is substantially less likely than the richer and richest households to report safe child feces disposal: only 19 percent of the poorest quintile reports safe disposal compared to 71 percent of the richest quintile (see Figure 6). Looking at overall sanitation facility coverage for households with children under age

FIGURE 3 The prevalence of safe child feces disposal in rural areas has increased over time, but there is still substantial disparity between urban and rural areas. Percent of households reporting safe feces disposal for their youngest child under age three, by urban and rural residence, Mozambique, 2003 and 2011.⁶



three in Mozambique, only 9 percent of the poorest households reported use of a toilet/latrine compared to 98 percent of the richest quintile. This is an important factor in child feces disposal: by definition, safe disposal is only possible when there is access to a toilet/latrine.

Behind this national-level data, there is wide variation in child feces disposal practices, with a greater prevalence of unsafe practices among households without access to improved sanitation, in rural areas, and those that are poorer. For example, unsafe disposal in rural areas and among the poorest 20 percent of households is much worse than among children overall. Although this brief only focuses on one socioeconomic indicator at a time, applying multiple lenses would show even greater extremes of disparity—with the poorest rural households reporting the greatest prevalence of unsafe disposal.

FIGURE 4 Two-thirds of households with access to any sanitation facility (shared, unimproved, or improved) reported safe child feces disposal. *Reported feces disposal practice for households' youngest child under age three, by household sanitation facility type, Mozambique, 2011.*

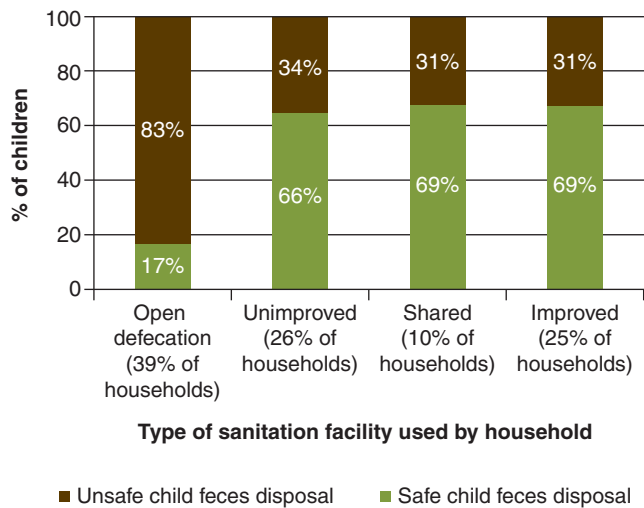
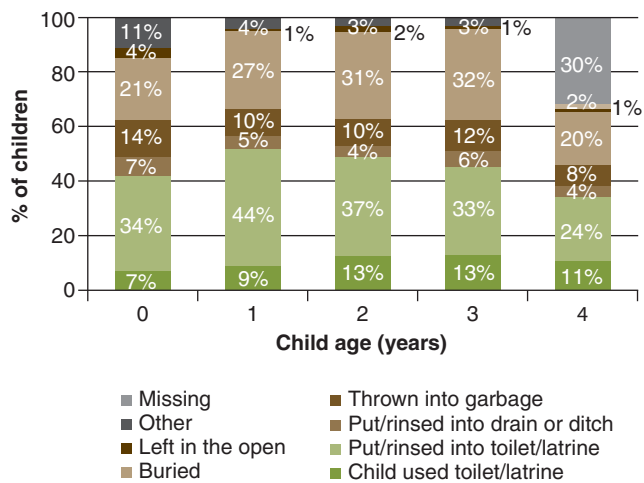


FIGURE 5 Safe child feces disposal is fairly similar across child age groups, but peaks in children one year old. *Reported feces disposal practice for children of different ages, Mozambique, 2011.*



IDEAS FOR CONSIDERATION

In general in Mozambique, sanitation for children under age three has been a neglected area of policy and program intervention. Given the relatively few programs integrating children's sanitation in Mozambique and globally, there is not a strong evidence base of effective strategies for increasing the safe disposal of children's feces. Significant knowledge gaps must be filled before comprehensive, practical, evidence-based policy and program guidance will be available. Nevertheless, organizations and governments interested in improving the management of children's feces could consider:

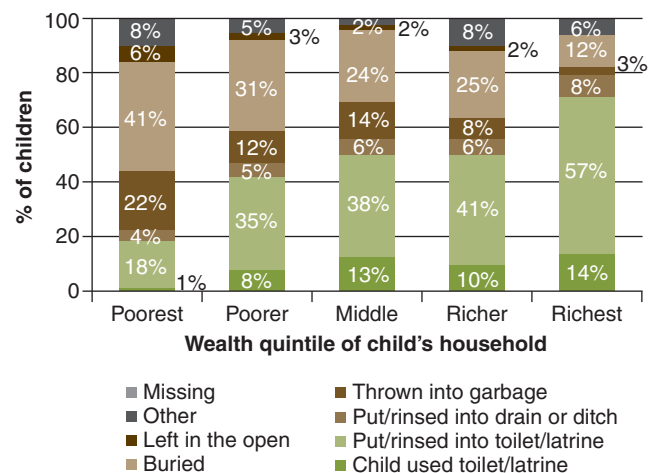
- Conducting formative research to understand the behavioral drivers and barriers to safe child feces disposal

What Is the Impact of Unsafe Disposal of Children's Feces?

There is widespread belief that the feces of infants and young children are not harmful, but this is untrue. In fact, there is evidence that children's feces could be more risky than adults' feces, due to a higher prevalence of diarrhea and pathogens—such as hepatitis A, rotavirus, and *E. coli*—in children than in adults.⁷ Therefore, children's feces should be treated with the same concern as adults' feces, using safe disposal methods that ensure separation from human contact and household contamination.

In particular, the unsafe disposal of children's feces may be an important contaminant in household environments, posing a high risk of exposure to young infants.⁸ Poor sanitation can result in substantial health impacts in children, including a higher prevalence of diarrheal disease, intestinal worms, enteropathy, malnutrition, and death. According to the World Health Organization (WHO), most diarrheal deaths in the world (88 percent) are caused by unsafe water, sanitation, or hygiene. More than 99 percent of these deaths are in developing countries, and about eight in every 10 deaths are children.⁹ Diarrhea obliges households to spend significant sums on medicine, transportation, health facility fees, and more, and can mean lost work, wages, and productivity among working household members.¹⁰ Stunting and worm infestation can reduce children's intellectual capacity, which affects productivity later in life. The WHO estimates that the average IQ loss per worm infection is around 3.75 points.¹¹

FIGURE 6 Safe child feces disposal steadily increases with the wealth of the household. *Reported feces disposal practice for households' youngest child under age three, by household wealth quintile, Mozambique, 2011.*



- Strengthening inclusion of safe child feces disposal into Community Education and Participation (PEC) activities by the Ministry of Health and nongovernmental organizations (NGOs), including efforts to change the behavior of caregivers through programs that encourage cleaning children after defecation, potty

training children, and using appropriate methods to transport feces to a toilet/latrine as well as handwashing with soap after fecal contact and before preparing food or feeding a child

- Exploring opportunities to integrate child sanitation into existing interventions that target caregivers of young children, such as including key messages in antenatal/newborn care materials and infant and young child feeding guidance provided to parents, ensuring that midwives' training, as well as early childhood development materials and preschool programs, include information on safe child feces disposal
- Partnering with the private sector to improve feces management tools, such as potties, diapers, tools for retrofitting latrines for child use, and scoopers
- Improving the enabling environment for management of children's feces, by including specific child feces related criteria in open defecation free (ODF) verification protocols and in national sanitation policies, strategies, or monitoring mechanisms.

DATA SOURCES

Unless otherwise specified, all analysis in this brief is based on self-reported child feces disposal behavior collected in the 2011 Mozambique DHS 6. This is the latest Multiple Indicator Cluster Survey (MICS) or DHS available for Mozambique that records child feces disposal behaviors.

The MICS and DHS collect data in a generally harmonized manner and hence are the basis for this country profile series. However, whereas the DHS collects data on the youngest child under age five living with the mother for each household, the MICS collects data on all children under age three who live with the respondent (mother or caretaker). To maximize comparability, we restricted all analysis to children under age three in all figures, except Figure 4.

However, the fact that the MICS data are for all children in the age group and the DHS data are only for the youngest per household means that some limitations to the comparability of the MICS and DHS data presented in Figure 2 remain. Figure 2 presents MICS data for the following countries: Central African Republic, Chad, the Democratic Republic of Congo (DRC), Gambia, Ghana, Malawi, Mauritania, Nigeria, Sierra Leone, Somalia, South Sudan, Swaziland, Togo, and Tunisia. Figure 2 presents DHS data for the following countries: Benin, Burkina Faso, Burundi, Cameroon, Cote D'Ivoire, Egypt, Ethiopia, Guinea, Kenya, Lesotho, Liberia, Madagascar, Mali, Mauritania, Morocco, Mozambique, Namibia, Niger, Rwanda, Sao Tome and Principe, Senegal, Tanzania, Uganda, Zambia, and Zimbabwe.

It is likely that self-reports overestimate safe disposal.¹² In Bangladesh, for example, although 22 percent of children reportedly either used a toilet/latrine or their feces were put or rinsed into the toilet/latrine (according to MICS 2006), a structured observation of behavior conducted under UNICEF's Sanitation, Hygiene Education and Water Supply in Bangladesh (SHEWA-B) program in 2007 found that only 9 percent of subjects disposed of children's feces into a toilet/specific pit.¹³ Regardless of this issue, self-reports are currently regarded as the most efficient method for gauging safe disposal of children's feces.

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- 2 The JMP has established a set of standardized definitions to categorize improved sanitation, which are used to track progress toward Millennium

Development Goal 7. However, these definitions are not always the same as those used by national governments. See *Progress on Drinking Water and Sanitation: Update 2014*.

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NOTES

We're interested in your thoughts. Have you found different evidence of what works through your own programming? If you have thoughts to share, or know of a program that is encouraging the safe disposal of children's feces, please contact WSP at worldbankwater@worldbank.org or UNICEF at WASH@unicef.org so that we can integrate your information into future program guidance.

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