

PREMIUM CONTENT

# Rising above the floods: keeping families safe with climate-resilient toilets



FINISH Mondial



Taslima Akter and her child in front of their newly constructed climate-res

Content by:  
**Anas Hussain**



Content by:  
**Anja  
Bruschweiler**



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**W**hen the **monsoon rains** arrive in Gaibandha, water spreads across courtyards and paths, turning familiar spaces into shallow pools. Homes flood, transport is disrupted, and daily routines are thrown into disarray. Inundations can last for weeks, and the cycle repeats every year. For families like Taslima Akter’s, even the most basic facilities, like toilets, can become nonfunctional.

"Our whole courtyard goes under water with the rains and floods. Our old toilet was completely submerged, the waste overflowed, and we could not use it," Taslima recalls. With nowhere private at home, she and her children often had to walk to a neighbor’s latrine on higher ground — a precarious journey, especially after dark. "Going to distant places at night to use a toilet felt very risky and embarrassing, especially for a woman," she adds.

The sanitation challenges also pose serious health risks. **When the toilets get flooded, waste comes out and makes people vulnerable to various waterborne diseases.** Children, women,

Rising above the floods: keeping families safe with climate-resilient toilets elderly and people with special needs suffer more in such conditions.

## An innovative design that holds water

Taslima’s worries eased when a small, green corrugated-iron structure appeared at the back of her yard: a **Climate-Resilient Toilet (CRT)**, part of a pilot program implemented by **FINISH Mondial Bangladesh (FMBD)**.



*The toilet and treatment chambers, which anaerobically treat human waste on-site, are elevated to withstand rising water levels during floods.*

### The Climate-Resilient Toilet (CRT) adapts to its environment through an elevated on-site treatment system

typical flood levels, the CRT remains fully functional during inundation.

“It’s a holistic system that can be used uninterrupted, even during floods,” explains Dr. Jha. “Waste is safely contained, biologically treated, and filtered — all within the unit — so there’s no risk of contaminating groundwater or surface water, even during floods, with minimal operational and maintenance costs.”

### A way forward as climate risks rise

With climate change driving more frequent and intense floods, solutions like the CRT are becoming increasingly urgent. According to the World Health Organization (WHO), 45 million

Developed by sanitation expert **Dr. Pawan Kumar Jha**, the CRT adapts to its environment through an elevated on-site treatment system. The design combines a flush toilet with three interconnected, sealed chambers that use compactly placed bacterial growth media in the treatment chamber to treat human waste onsite anaerobically. By keeping both the superstructure and the treatment unit above

people in Bangladesh already face unsafe sanitation, and climate impacts are only expected to worsen the crisis.



“Climate change is already reshaping lives in Bangladesh, one of the most climate-vulnerable countries,” says Wahida Anjoom, Country Coordinator, FINISH Mondial Bangladesh. “The lowest-income cor are hit hardest. **When toilets fail, families lose health, dignity, and — especially women and girls. That’s why climate-resilient WAS solutions are so essential.**”

FINISH Mondial’s Climate Resilient Toilet was designed for local adaptability and long-term sustainability, using readily available ma training local masons to build them. But as Anjoom notes, technolog not enough: “Affordable WASH loans and municipal partnerships ar turn a good idea into something households can actually implement. is the bridge that connects innovation to real impact. That is where v putting our energy — building partnerships that expand access.”

This vision is already taking shape. In Gaibandha and Jamalpur, pilots were implemented with local authorities and partners. A technology-sharing workshop with government agencies, NGOs, INGOs, and sector experts and relevant stakeholders within and beyond borders also generated practical recommendations on affordability and design improvements. **FINISH Mondial is now working with microfinance institutions to integrate WASH loans for climate-resilient toilets**, while collaborating with technical experts to refine the model for more affordability and explore its potential expansion to other vulnerable municipalities.



Wahida Anjoom (centre right) at a national-level workshop on sanitation financing with representatives of microfinance institutions.

### When the water comes, we don’t worry anymore

Back in Gaibandha, the impact for Taslima Akter and her family has been immediate. **"This new toilet never goes under water, and now we can use our own toilet day or night — even during floods,"** she says, pointing to the raised platform. "There is no smell, and the waste is safely processed within the system. My children haven’t fallen sick from waterborne diseases like before."

As the first in her village to receive a Climate-Resilient Toilet, Taslima has also become a point of reference for others. Neighbors have visited to see how the system works in practice. “I

Rising above the floods: keeping families safe with climate-resilient toilets encourage my friends and neighbors to adopt this technology,” she says. “If it can make our lives safer and healthier, it can do the same for theirs.”

