



# ODF ASSESSMENT IN MADHESH PRADESH

## Findings and Recommendations

Sital Uprety, Anjil Adhikari, Abhinay Man Shrestha, Sanjeena Sainju, Sara Marks

DOI: 10.55408/eawag:31579

Publisher: Eawag (Swiss Federal Institute of Aquatic Science and Technology) and Oxfam

Published: 2023, Dübendorf, Switzerland

**eawag**  
aquatic research

  
**OXFAM**

## ABSTRACT

This policy brief presents the main result and policy recommendations from the field level assessment of sanitation facilities in the flood risk communities of *Madhesh Pradesh*. The field-level data were collected from twelve local government units (eight municipalities and four rural municipalities) spread across the province's four districts. The study found several factors causing slippage in sustainable toilet use. Some households do not have toilets, while some households with toilets are still practicing open defecation (OD). The dysfunctionality of toilet is one of the most significant factors driving these households to practice open defecation. The impacts of floods have further exacerbated toilets' dysfunctionality, making them less usable for households. Furthermore, households with poor finances are already practicing OD to avoid recurring costs associated with desludging. However, to reduce this in the long run, effective public-private investments are required around building public toilets and creating a sustainable sanitation market and services. Also required would be the establishment of proper financing mechanisms for households to access funds to build and maintain a toilet, so that it is affordable and accessible for all throughout the year.

## INTRODUCTION

The history of sanitation promotion campaigns in Nepal dates back to the 1980s. However, the extensive work in the sanitation sector did not start until 2011 A.D, when the Sanitation and Hygiene Master Plan (SHMP) was developed by the Government of Nepal (GON) and put into action (Adhikari, 2021). The plan primarily focused on building universal toilet coverage, including the proper use of toilets in urban and rural areas by 2016/17 (GON, 2011). The effective implementation of the plan and an untiring work from WaSH (Water, Sanitation and Hygiene) stakeholders pushed the national sanitation coverage from 6% in 1990 to 87.3% in 2016. (Chitra Bahadur Budhathoki, 2019). Finally, Nepal was officially declared an Open Defecation Free (ODF) zone in a declaration ceremony held on the 30<sup>th</sup> of September 2019 in Kathmandu (MOWS, 2020). Unfortunately,

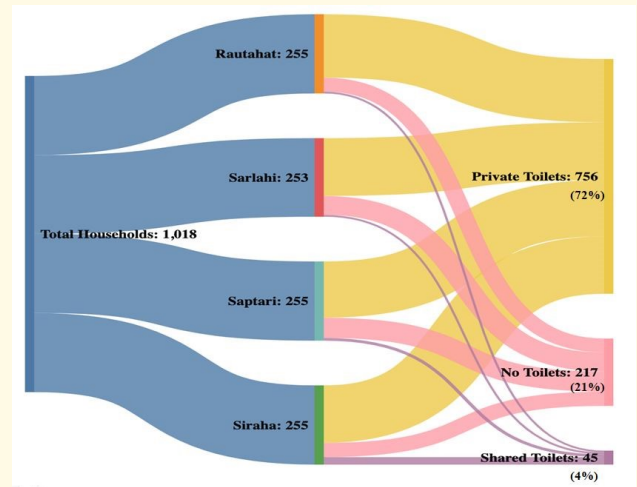


Figure 1. Streamline Diagram of the Toilet Coverage among the surveyed HHs in the Study Sites

desch on these toilets is yet unknown. In this context, it is prudent to stop and reflect on Nepal's ODF status.

To address this knowledge gap, Eawag and Oxfam conducted the assessment of ODF toilets in the flood-affected regions of the Madesh Pradesh, focusing on four districts, Siraha, Saptari, Rautahat, and Sarlahi, to understand and reflect on how ODF toilets have been operating and what should be done further to reduce slippage and move towards the national goal on total sanitation. To address the knowledge gap, Eawag and Oxfam conducted the assessment of ODF toilets in the flood-affected regions of the Madesh Pradesh, focusing on four districts, Siraha, Saptari, Rautahat, and Sarlahi, to understand and reflect on how ODF toilets have been operating and what should be done to prevent further slippage and move towards the national goal on total sanitation.

## IS THERE SLIPPAGE IN ODF AREAS?

Although the country has made significant progress in increasing toilet coverage and declared ODF in 2019, there have been slippages in the ODF movement in the last few years. Our study, surveying 1018 households (HHs), identified that 21% of the surveyed HHs do not have toilets. 75% of the HHs have private toilets among the households with toilets, and 4% of the HHs depend on shared toilets (Fig 1). Among HHs that don't have toilets, the practice of Open Defecation (OD) is higher during the dry season compared to the rainy season. In the rainy season, they prefer using shared toilets to avoid flood hazards.

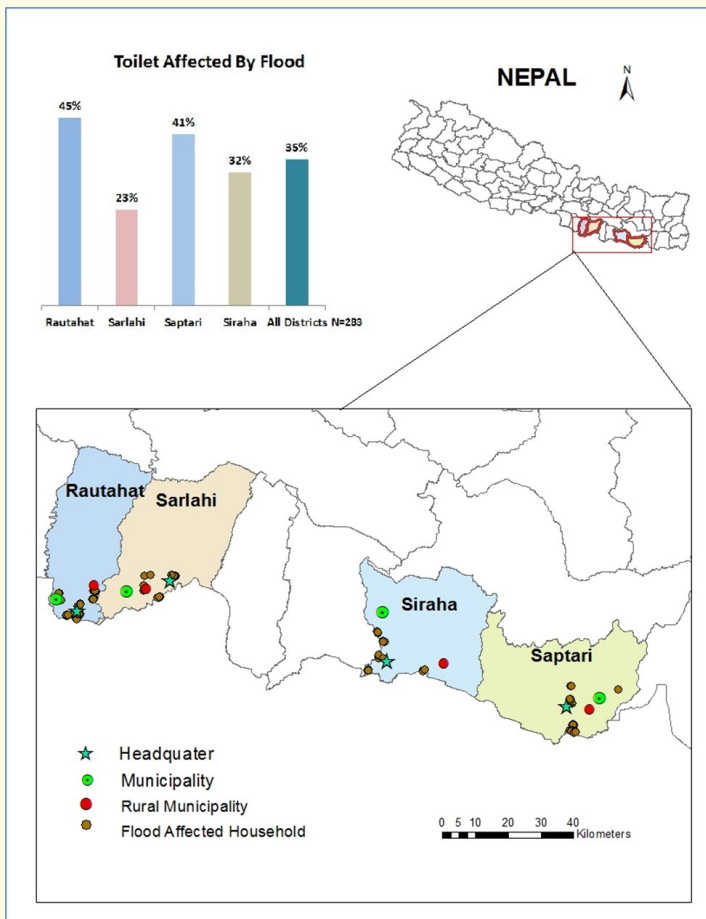


Figure 2. Sampling Sites and Flood Affected HHs

after only three years of being declared an ODF zone, there are already concerns regarding some possible slippage in the ODF campaign. Moreover, a study has already found slippage in the ODF campaign: highest in the Madesh Pradesh; approx. 16% drop in households using improved sanitation facilities (UNICEF, 2019). Also, the impact of the annual flooding in the Madesh Pra-

## WHO ARE THESE LAST MILE HOUSEHOLD?

The study found that those who practiced OD mainly were from households with no budget (88% of HHs, N=217) or a proper space to build a toilet (49% of HHs, N=217). Additionally, some HHs with toilets also occasionally practiced Open Defecation. The respondents reported that only 84% of HHs with toilets used them regularly, while 18% practiced OD when away from the primary residence, i.e., on a farm or a market. This could be because of the unavailability of proper public toilets in places of need. Notably, people who did not use household toilets despite having one were primarily children, older adults, and People with Disabilities (PWDs), as toilets are not usually user-. However, the reasons for young not using toilets weren't clear and we wanted to understand this gap; what were these reasons?

## WHY WERE SOME TOILETS NOT USED EFFECTIVELY?

- A household toilet that is less functional and **lacks cleanliness** sees less usage. A structurally stable, clean toilet that can be accessed easily during the flooding period is considered a functional toilet and is used more effectively.
- However, a functional **toilet far from the house** is used less than the one near the house.
- Families with lower **education profiles** were found to practice OD more than families with higher education profiles.
- Additionally, it was also found that **older toilets** were used more consistently than newer ones. This indicates that if there is a toilet in the house, households will gradually make its consistent use. Notably, the choice to consistently use a toilet is linked to the financial status of the HHs as well. It was observed that HHs with higher **spending ability** chose septic tank toilets over single pit toilets (Fig 2). HHs with lower spending ability were also found to have intentionally inconsistent use of their toilets to avoid costs associated with desludging.



Figure 3. Major Factors influencing the Use of Toilets (note: will require to increase the font size and re-adjust the hyphenation)

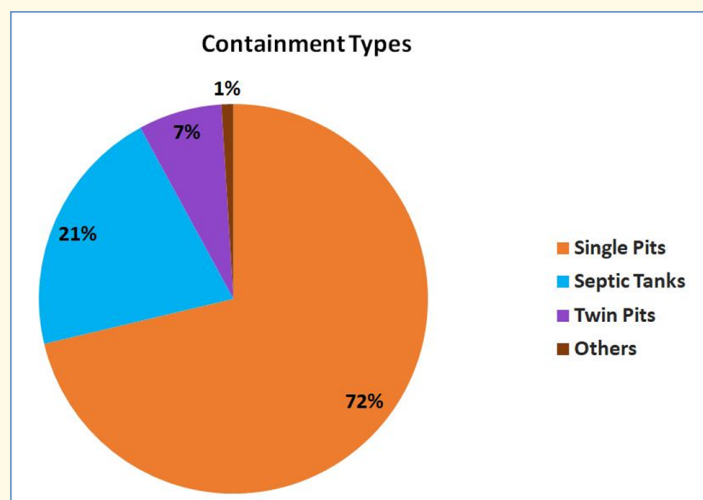


Figure 4. Major Containment Types in the Study Sites

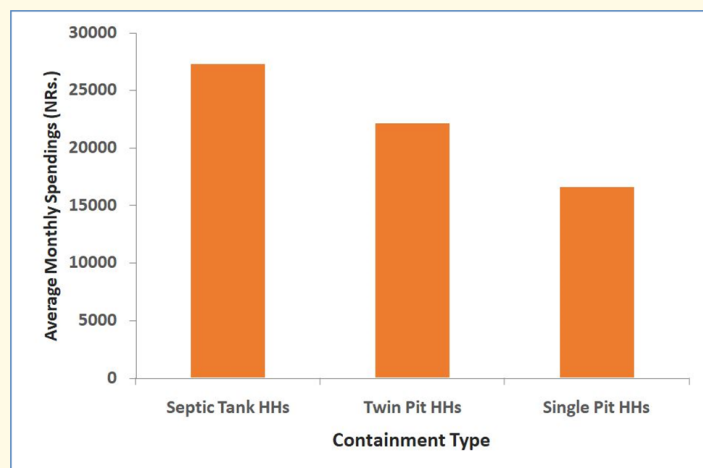


Figure 5. Average Monthly Spendings of HHs having the three containment types

## REDUCED USABILITY! – WHAT IS THE THREAT?

The study has shown that reduced usability of household toilets would push the HHs easily back to alternative and unsafe defecation practices. About 68% of the HHs with toilets voiced to choose to defecate openly if their household toilets become dysfunctional. This indicates that HHs with poorly structured toilets inundate in the rainy season, and HHs who lack the means to keep their toilets clean, are the HHs who are at the verge of going back to open defecation.

## FLOODING EVENTS SHOULD BE CONSIDERED FOR TOILET DESIGN!!

An important findings is that flooding needs to be considered when designing toilets in vulnerable communities as the impact of the flood on household toilets is significant (35% HHs, N=801).

During the monsoons, toilets affected by floods are inaccessible as they are filled with water (27% HHs, N=283) or worse, washed away by the floods (8% HHs, N=283), or turn unhygienic due to excreta gushing on the surface. All these factors have affected the usability of toilets.

## WHERE SHOULD WE ACT?

Nepal has already made significant progress in improving access to sanitation facilities. Therefore, it is now the responsibility of all concerned stakeholders to act immediately to reduce the slippage and support the country in moving towards total sanitation. So, where should we start?



## BUILDING PUBLIC LATRINES

### WHO SHOULD DO IT



Local  
Government



Private  
Sector



## RESILIENT STRUCTURE

### WHO SHOULD DO IT



DWSSD



Local Govern-  
ment



## WASH FINANCING

### WHO SHOULD DO IT



Private  
Sector



NGO



Market and  
consumer  
researchers

## SHIFT FROM BEHAVIOUR CHANGE TO DEMAND CREATION

### WHO SHOULD DO IT



Local  
Govern-  
ment



NGOs/  
INGOs



Private  
Sector



## BUILDING PUBLIC LATRINES

The local government should invest in public toilets in markets and public spaces as 18% of HHs reported practicing OD while away from home. The location of the public latrines should be identified based on public movement. “Pricing the toilet use” can make public toilets less appealing initially. Thus, public toilets should be fully subsidized for a few years: until people develop a habit of using them regularly. Once public toilets become the norm, open defecation practice will be rare, which is when pricing should be considered. Public and private partnership model should be promoted. There are private sectors who are willing to manage public latrines but are more interested to take both construction and maintenance contract.

## RESILIENT STRUCTURE

The ODF campaign focused mainly on the sub-structure<sup>1</sup> and allowed HHs to construct a superstructure as per their financial capacity. As a result, poor super-structures were constructed, and usability was heavily compromised. Therefore, safe toilet design structures should be promoted. A quality structure comprises of both quality sub-structure, quality superstructure and quality containment. This can be done by developing standard and regulatory framework for sanitation design which are flood resilient so that toilets do not get flooded in monsoon pushing people back to open defecation. Additionally, age-friendly, and PWDs-friendly toilets designs and construction should be promoted. A resilient structure that is functional throughout the year and is therefore likely to be used more by the community.

## SHIFT FROM BEHAVIOUR CHANGE TO DEMAND CREATION

Most HHs in communities have toilets now. Therefore, now is the time for a gradual shift from traditional awareness campaigns to demand creation interventions. Sanitation should not just be advertised as a factor of hygiene but also as a symbol of the basic standard of life. There is a desire to construct, operate and maintain toilets to keep them clean and intact. Partnership with the private sector is essential to understand customer psychology and strengthen the sanitation market to fulfil the demand. However, the WaSH stakeholder should constantly work to ensure the affordability of the toilet accessories.

## WASH FINANCING

About 68% of HHs that did not build toilets or could not rebuild them after being damaged by flood share the same

story-lack of budget. For that reason, it is essential to work extensively on the WASH financing, prioritizing creating access to dedicated microfinance schemes and providing a conducive market for building sustainable sanitation business models together with the private sector.

However, the research doesn't recommend construction incentives for HHs as the study identified that those who had built toilets with construction incentives featured poor super-structure.

## THE PROBLEM NEXT DOOR...

### FAECAL SLUDGE MANAGEMENT

Faecal Sludge Management was not the focal point of this study; however, it was observed during the study that high desludging costs affect the consistency of toilet use. During monsoons (flooding season), toilets in vulnerable communities have sludge gushing on the surface, making toilets unusable. Concerned stakeholders should soon work to address solutions for sludge management as our survey showed that households with minor spending ability practice OD to avoid recurring costs associated with desludging. All stakeholders should gradually focus on working in entire sanitation chain for safe and sustainable shift towards total sanitation.

## REFERENCES

1. Adhikari, K. a. (2021). *Case Study 1: Nepal Sanitation Movement Lessons Learnt on Targets and Monitoring, The Sanitation Learning Hub*. Institute of Development Studies.
2. Chitra Bahadur Budhathoki, P. (2019). *Water Supply, Sanitation and Hygiene Situation in Nepal: A Review*. JOURNAL OF HEALTH PROMOTION Vol. 7 June 2019 pp. 65-76 ISSN: 2631-2441.
3. GON. (2011). *SANITATION AND HYGIENE MASTER PLAN*. Government of Nepal.
4. MOWS. (2020). Retrieved from Ministry of Water Supply: <https://mows.gov.np/>
5. UNICEF. (2019). *Multiple Indicator Cluster Survey*.

<sup>1</sup> Under substructure —use end note and put: SHMP 2011 - Sanitation and Hygiene Master Plan, drafted by Steering Committee for National Sanitation Action, GoN 2011

© Eawag and Oxfam in Nepal

This case study was written by Sital Upirety, Anjil Adhikari, Abhinay Man Shrestha, Sanjeena Sainju and Sara Marks. Special thanks to Eawag Postdoctoral Fellowship and Eawag Discretionary Funding for supporting this research study. Thanks to local partners Bagmati Welfare Society Nepal (BWSN), Rural Development Centers (RDC) and Koshi Victim Society (KVS) for providing ground level support.

For more information, or to comment on this report, email [Sital.Upirety@eawag.ch](mailto:Sital.Upirety@eawag.ch) and [aadhikari@oxfam.org.uk](mailto:aadhikari@oxfam.org.uk). This work is licensed under the Creative Commons Attribution 4.0 International License. To view a copy of this license, visit <http://creativecommons.org/licenses/by/4.0/>.