CAUSAL DESIGN

Shared Latrine Use and Dynamics in Rural Cambodia: Full Report

WATERAID & PLAN INTERNATIONAL CAMBODIA

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ACRONYMS

CLTS	Community-Led Total Sanitation
CRSHIP	Cambodia Rural Sanitation and Hygiene Improvement Program
DDG	Disaggregated Data Gathering
DRHC	Department of Rural Health Care
EA	Executing Agency
FSM	Faecal Sludge Management
GSF	Global Sanitation Fund
HH	Households
IP	Implementing Partner
JMP	Joint Monitoring Programme for Water Supply, Sanitation and Hygiene
L&D	Learning and Documentation
M&E	Monitoring and Evaluation
MDG	Millennium Development Goal
MRD	Ministry of Rural Development
NS-RWSSH	National Strategy for Rural Water Supply, Sanitation and Hygiene
OD	Open Defecation
ODF	Open Defecation Free
SDG	Sustainable Development Goal
SM	Sanitation Marketing
TB	Tuberculosis
UNICEF	United Nations International Children's Emergency Fund
WASH	Water, Sanitation and Hygiene
WHO	World Health Organisation
WSSCC	Water Supply and Sanitation Collaborative Council

EXECUTIVE SUMMARY

Throughout two programme phases, the Cambodia Rural Sanitation and Hygiene Improvement Programme (CRSHIP) has worked to increase access to improved sanitation and to promote proper hygiene practices in rural Cambodia. As part of CRSHIP, WaterAid Cambodia and Plan International Cambodia engaged Causal Design to conduct a qualitative research project focused on better understanding shared latrine use — the practice of two or more households sharing a latrine on a regular basis — in open defecation free (ODF) communities in rural Cambodia.

This exploratory, qualitative research project focused on who is sharing and the dynamics of shared latrine use. More specifically, this study was designed to identify common and varying characteristics of shared latrine users, understand factors that facilitate or motivate sharing, and explore sharing households' current sanitation practices, their satisfaction with that arrangement and their future sanitation intentions.

BACKGROUND AND CONTEXT

Shared latrine use in Cambodia

The practice of two or more households sharing a latrine is implicit in the Ministry of Rural Development's (MRD) National Community-Led Total Sanitation (CLTS) Guidelines. Those guidelines define an ODF village as one where 100 percent of households do not practice open defecation and at least 85 percent of households have access[1] to a functional improved latrine — meaning up to 15 percent of households may use shared latrines (MRD, 2013). However, to date there has been limited research into shared latrine use in Cambodia.[2]

Broader shared latrine classifications and debate

Globally, approximately 600 million people use a shared latrine (WHO & UNICEF, 2017). Latrines that are shared between two or more households are generally thought to be less clean, less hygienic, and more difficult to access than latrines which are used (exclusively) by a single household. (WHO & UNICEF, 2006; Sinha, 2017). When multiple households share a latrine, the likelihood of excreta being present outside the latrine pan is higher, which increases the risk of infectious disease transmission. If a latrine is unclean or difficult to access, people may be less likely to (exclusively) use the latrine; instead they may open defecate.

For these reasons, the WHO and UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) classifies improved latrines that are shared between two or more households as a "limited" service (WHO & UNICEF, 2017). However, some environmental health researchers, academics, and practitioners have argued that shared latrines can be clean and hygienic and represent a financially, pragmatically, and socially viable solution for households that would otherwise be unable to access safely managed latrines (Massa et al., 2017). The JMP acknowledges that cultural practices and socio-economic constraints may mean that shared latrine use is the best short-term option in some low-income, highly-populated urban areas; however, it does not extend that consideration to rural areas (WHO & UNICEF, 2017).

METHODS AND EXECUTION

An applied qualitative research approach was used to develop an informed, in-depth understanding of who is using a shared latrine and what is facilitating or motivating sharing, within particular households and clusters. The themes, patterns, and preliminary insights from this cross-sectional study are designed to increase sectorial understanding of shared latrine use.

[1] In this context CRSHIP interprets 'access' as household ownership of a latrine.

[2] iDE's Sanitation Marketing Scale Up data (2018) indicates that the proportion of households who share a latrine could be as high as 23 percent. Their multi-year survey initiative found that the proportion of households who share a latrine with another household has increased over time — from 8 percent in 2014, to 15 percent in 2016, and 23 percent in 2018. This indicates that more households may be gaining access to a latrine through sharing.

To develop a stronger understanding of shared latrine use, Causal Design's research team:

- Scanned relevant literature and data sets.
- Led consultations with select rural WASH sector practitioners.
- Facilitated group interviews with village leaders and sanitation focal points from six ODF-certified villages across Svay Rieng, Kampong Chhnang, and Kampong Speu provinces.
- Facilitated semi-structured, in-depth interviews with shared latrine using household members across 24 sharing clusters. (The 24 latrine sharing clusters were comprised of four clusters from each of the six target villages. In total, 51 people from 44 households were interviewed – including a mix of latrine 'hosts' (latrine owners) and 'sharers'.)
- Conducted observations of shared latrine using household clusters (focused on latrine infrastructure, household structures and surrounds, rather than on behaviours).

Key Research Questions:

1. **Who** is using a shared latrine in ODF-certified villages? What are the common and varying characteristics of households who are sharing a latrine?
2. **Why** are households sharing a latrine? What factors are facilitating or motivating shared latrine use?
3. **What insights, implications and questions** does this present for Cambodian rural WASH sector policy, guidelines and programming?

The use of purposive (or non-probability) sampling and the limited sample size mean that the findings cannot be — and are not intended to be — generalised to the broader Cambodian population. While conclusive or causal statements about what is driving shared latrine use cannot be made, this research does provide grounded, credible, case-focused information that answers specified research questions. Findings can be used to help build a more nuanced understanding of shared latrine use, and users, in rural Cambodia.

KEY FINDINGS

Latrine sharing: Prevalence and practice

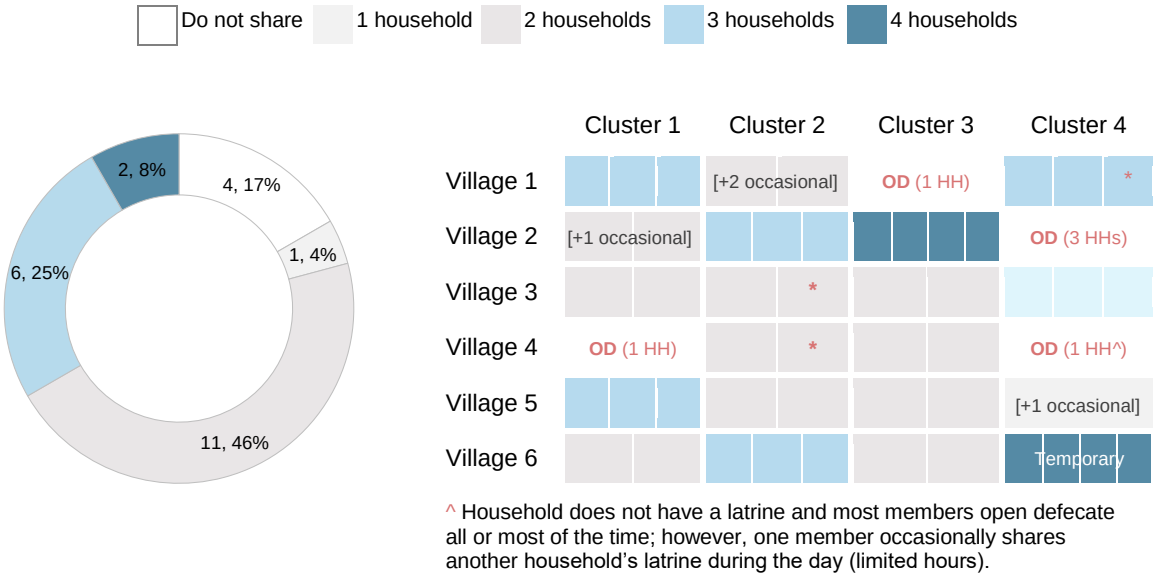
Across the six ODF-certified villages included in this research, **a notable proportion — 8 to 15 percent — of households do not have their own latrine and are sharing another household's latrine on a regular basis**.

There was evidence of occasional or exclusive open defecation in each of the six focus ODF-certified villages. Household open defecation rates varied between 1 and 10 percent.

Sharing clusters are commonly comprised of two households; however, in some instances one latrine is being shared between three or four different households (Figure 1). This finding challenges the assumption voiced by some WASH practitioners that no more than two households ever share a latrine on a regular basis.

Many latrine hosts and sharers thought that their latrine was being used by too many users, and that each household should have their own latrine. The number of regular latrine users within a sharing cluster ranged from five to fourteen people.

Figure 1. Number of households sharing one latrine on a regular [or occasional] basis (n=24 clusters, 54 households) [3]

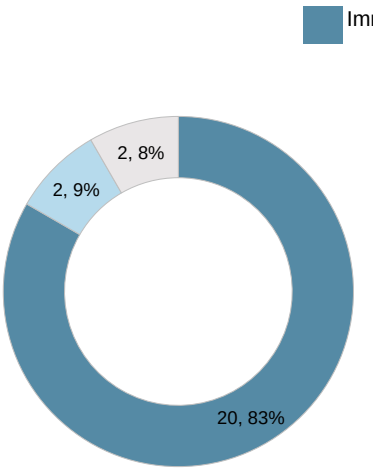


^ Household does not have a latrine and most members open defecate all or most of the time; however, one member occasionally shares another household's latrine during the day (limited hours).

Sharing relationships

Hosts were much more likely to share a latrine with close family members (i.e. children, grandchildren, parents, or siblings), rather than more distant relatives or non-relatives (Figure 2). Only two hosts shared their latrine with non-relatives; in both those cases sharers were older people who lived nearby. Other forms of non-relative latrine sharing appears to be rare.

Figure 2. Relationship between latrine host and sharer (n=24 relationships, OD clusters excluded)



Relationship between Host and Sharer	#	%
Immediate family	**20**	**83%**
Parent → Child	9	38%
Sibling → Sibling	7	29%
Child → Parent	3	13%
Grandparent → Grandchild	1	4%
Extended family	**2**	**8%**
Nephew → Aunt	2	8%
Non-relatives	**2**	**8%**
Non-relative→ Non-relative	2	8%
Total	**24**	**100%**

Reported non-relative sharing may sometimes mask exclusive open defecation practice. Four of the 24 clusters identified by village leaders were not actually sharing a latrine with other households; they were open defecating. In three of those four instances, those reported sharing clusters had been described as non-relative sharers.

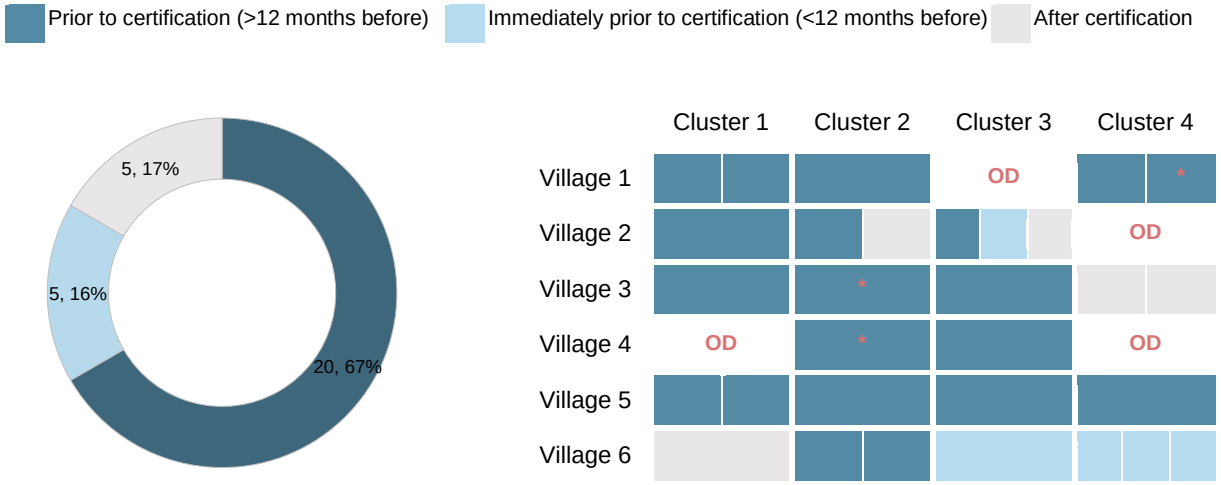
[3] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Sharing duration and models

Households had been sharing a latrine for between 1 month and 12 years. Of the 30 sharers, approximately one-quarter (27 percent) had been sharing a latrine for more than six years. An additional 30 percent had been sharing for over three (but less than six) years. This challenges the assumption, expressed in some WASH sector consultations, that latrine sharing is usually or always a short-term solution.

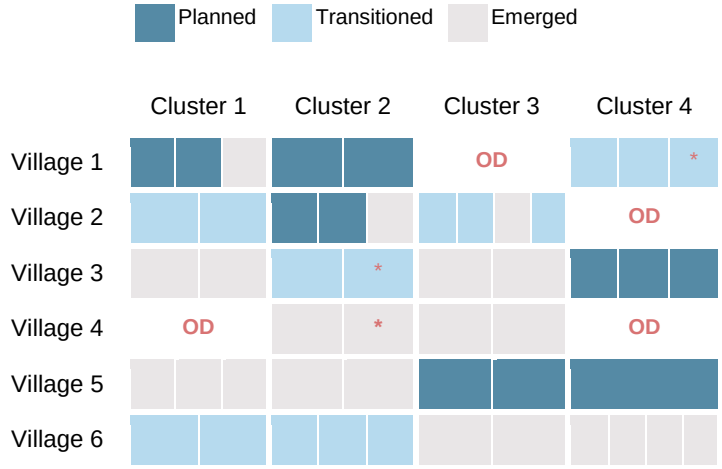
In most clusters, sharing pre-dates village ODF certification. Of the 30 sharers, two-thirds had been sharing a latrine at least 12 months prior to ODF certification in their village — many of those sharers had been sharing for significantly longer than that.

Figure 3. Map of sharing prior to, at the time of, and after ODF certification (n= 24 clusters, 30 sharers) [4]



Most sharing arrangements had not been *planned*. In three-quarters of clusters sharing arrangements had *emerged*, or households had *transitioned* to a latrine sharing model over time. Households who had *planned* to share a latrine were the most satisfied with their sharing arrangement.

Figure 4. Planned, transitioned and emergent sharing models (n=24 clusters, 54 households, 30 sharers) [5]



[4] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.
[5] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Latrine sharing models

Planned – Households intended for the latrine to be shared by two or more households. In many cases co-hosts or hosts and sharers made a financial or in-kind (materials or labour) contribution to the construction and ongoing maintenance of the latrine. In two cases, the larger number of users was considered and incorporated into the latrine design (e.g. larger latrine pits were installed). Seven sharers across six clusters had planned to share a latrine.

Transitioned – Parents had built a latrine for their household only. Their children had then grown up and moved into a separate house nearby (usually on the same block of land) but continued to use the host's latrine. Nine sharers across six clusters had transitioned to a sharing model.

> *"My daughter has been married for four years. Before she got married, she lived with me and used this latrine as well."* (Host, Village 2, Cluster 1)

Emerged – The host did not intend to share a latrine with another household; sharing emerged over time. After the host had built the latrine, the host either invited the sharer's household to use the latrine on a regular basis (*host invited*) or the sharer approached the host and asked whether their household could use the latrine (*sharer requested*). (In one case, a sharer neither asked or was invited to use a latrine; they simply started using it.) For fourteen sharers across eleven clusters, sharing had emerged over time.

> *"I built it for my house only, but after I built it my younger siblings asked to use it."* (Host, Village 4, Cluster 2)

Facilitating factors

Latrine sharing is motivated or facilitated by:

- **Geographical proximity** – Hosts tend to share their latrine with households who live next door to them or on the same plot of land. In some cases, hosts and sharers live (very) close together on a small plot of land and there is insufficient space to build a latrine for each household. All households who lived further than 50 metres away from one another did not (exclusively) share a latrine; those households were open defecating.
- **(Familial) relationship** – Hosts tend to share their latrine with close family members (i.e. children, grandchildren, parents, or siblings). Many hosts emphasised their relationship with sharers as a reason that they decided to — and continue to — share a latrine.
- **Life stage of sharers** – Hosts tend to share their latrine with sharers during two specific life stages: – with families who have young children and are in the process of establishing their own household, and/or with older people.
- **Disadvantage** – Disadvantage appears to be motivating at least some households to share a latrine. Both hosts and sharers experienced potential disadvantage; however, a significant number of sharers experienced multiple and intersecting forms of disadvantage. Sharers variously experienced chronic illness or illness impacting their life and livelihood, a functional disability, and/or were widowed or single/ unmarried members of single occupant (and often female headed) households. Additionally, some sharers were elderly and/or poor.
- **Poverty** – Some sharers are experiencing poverty and are unable to build a latrine for their household only. Over 60 percent of clusters (15 of the 24) include at least one household who identified as ID Poor 1 or ID Poor 2, or was classified as poor based on analysis of their responses to questions focused on sufficient access to food, household assets, and household income over a 12-month period. In most of those clusters, it was the sharer household who was poor (11 of 15 clusters). Additionally, three of the four households who open defecate are poor.
- **Limited financial resources <u>at this time</u>** – Some sharers have limited financial resources available due to substantial recent investments. Many of those sharers had built a house within the last few years or were currently — or about to begin — building a house (and would then move away from interim or transition housing).

In contrast to responses from respondents who were poor, sharers who had limited financial resources at this time — and their respective hosts — often emphasised their intent to build a latrine, describing it as being "just a matter of time".

- **Community pressure** – A few hosts share their latrines because of direct or indirect community pressure to do so. In one cluster, latrine sharing had been initiated by a village leader.
- **Intrinsic motivations and beliefs** – Some hosts emphasised empathy, pity, a sense of responsibility, and their desire to be a positive role model as reasons why they share their latrine. A desire to avoid shame associated with family members open defecating (which was generally linked to the views or perceptions of other community members) was also a factor.

For hosts, sharing is often a pragmatic, altruistic, and considered decision. Sharing is conditional; hosts share with specific households but indicated that they were neither interested nor open to sharing with other households, particularly non-relatives, on a regular basis.

Latrine type and quality, waste storage and disposal

All of the 20 clusters who share a latrine on a regular basis had a pour-flush latrine. Latrine shelters or above-ground structures were generally of good quality and users found the latrine to be sufficiently private, comfortable and safe.

Only two clusters had deliberately designed their latrine (including the below-ground structure) for sharing.

There was no evidence that hosts intend to stop sharing once the pit is full or that had been, or would be, a catalyst for sharers to build their own latrine or revert to open defecation. Some clusters had already had to empty their latrine pit and had continued sharing a latrine after that time. Some households had already disposed of faecal sludge in an unsafe way; other respondents planned to dispose of waste in a manner that may not protect community members from pathogen exposure**.**

Latrine access and use

Both hosts and sharers said that all household members, including children and elderly people, could *access* the latrine to urinate or defecate at any time during the day or night. Most school-aged children and adults living within sharing clusters always *use* a latrine to defecate, and usually to urinate, when they were at home.

Latrine use was much lower among young children. Both the place of defecation for infants and young children, and child faeces disposal practices, present sanitation and environmental health challenges. There were multiple observations and reports of children's faeces in a central location in the yard, proximate to a house.

Roles and responsibilities: Construction, maintenance and cleaning

In most sharing clusters the latrine belongs to, and is the responsibility of, the host or owner. The host had paid for and built their latrine and was usually responsible for ongoing maintenance and repair costs. While hosts and sharers contributed to cleaning, a female member of the host household was primarily responsible for cleaning the latrine regularly.

In the three instances where a latrine was co-hosted (co-owned), those costs and responsibilities were shared; each household contributed to building, maintaining, repairing, and cleaning the latrine.

Benefits and challenges

Many hosts and sharers reflected that "there are no benefits" to sharing a latrine beyond a sharer not having to open defecate. Hosts and sharers highlighted the sanitation or hygiene benefits of sharing and linked those to broader health outcomes. Some hosts emphasised the ability to help others who did not (yet) have a latrine as a benefit.

Both hosts and sharers emphasised that sharing a latrine with another household is "not easy". Challenges included: difficulty accessing a latrine because other people were using it, cleanliness, increased resource use, and (perceived or real) concerns that hosts were not happy to share their latrine.

Satisfaction

Satisfaction levels varied greatly both within and between different latrine sharing clusters. Satisfaction levels were *high* among hosts and sharers who had planned to share a latrine, and among households that included member(s) who were aged over 60 years, were widowed or single, and/or were ill. Satisfaction levels were *lower* among clusters with a high number of users. Most households who were building, about to build, or had recently built a house were unsatisfied or somewhat unsatisfied with their sharing arrangement.

Future intent

Most sharers and hosts would prefer to have their own latrine; however, only one-third of sharers have a realistic plan to build their own latrine within the next two years. The prolonged period for which many clusters have already shared a latrine — and number of sharers who do not have clear plans or set timeframes for building their own latrine — challenges the assumption voiced by village leaders and in WASH sector consultations that sharing is only a short-term arrangement.

Sharers repeatedly emphasised convenience, ease of accessibility, and ability to bathe privately as the reasons they would like to have a latrine for their household only. Some (though fewer) sharers and hosts also expressed that they would value the autonomy or independence of having their own latrine.

RECOMMENDATIONS

Based on the findings summarised above, and detailed with supporting evidence in the body of this report, it is recommended that CRSHIP partners and other interested rural WASH sector practitioners:

Incorporate a rapid-assessment tool into the ODF verification process to help distinguish between 'reported' and 'actual' cases of latrine sharing. Non-relative latrine sharing appears to be rare — and may sometimes mask exclusive open defecation practice. Almost all 'actual' sharers lived next door to the latrine host or on the same plot of land. All households who lived further than 50 metres away from one another did not (exclusively) share a latrine; they were open defecating.

Recognise the diversity of motivations for sharing a latrine; sharing clusters should not be seen as a homogenous group. Households share a latrine for different reasons – and differentiated (or nuanced) programming and policy responses are required.

Ensure sustained sanitation messaging continues post-ODF certification. Encourage new home owners and current latrine sharers to aspire to have a latrine for every household and support local authorities to mandate latrines in new homes. Additionally, sanitation marketing campaigns should reflect the reasons latrine sharers would like to have a latrine for their household only — including convenience, ease of accessibility (at night and as people age), the ability to bathe privately, as well as household autonomy and independence.

Consider incorporating partial, targeted hardware subsidies into sanitation and hygiene programmes as a means of ensuring the poorest and most disadvantaged households can own, access and use a latrine. Consider extending subsidy coverage to households with member(s) experiencing chronic illness, such as HIV/AIDS or tuberculosis, or who have been considerably affected by recent significant or prolonged sickness because these people may face substantial barriers to owning their own latrine and may find other households are unwilling to share their latrine as an interim sanitation solution.[6]

Contextualise messages and approaches used in 'last mile' efforts recognising that some ID Poor and disadvantaged households genuinely cannot afford a latrine. Mass sanitation marketing and behaviour change approaches (particularly those centred on community pressure and shame associated with open defecation) are

[6] The cost of medicine and the inability to work (or work as much) due to illness meant that sharers who experienced illness (as well as two households who open defecate) had not been able to build their own latrine. However, various respondents also indicated that their household would be reluctant to share a latrine with members of another household who were ill or chronically ill, based on (sometimes scientifically-unfounded) concerns of contamination.

unlikely to be effective given financial barriers faced by some latrine sharers and may also (inadvertently) contribute to further marginalisation or stigmatisation.

In guidelines and programming, consider latrine sharing as a step or rung on the sanitation ladder — a short to mid-term sanitation solution as households save for their own latrine. All households with sufficient space to build a latrine for their household should be encouraged to do so; 100 percent latrine coverage is desirable. Rural WASH practitioners, latrine hosts and sharers emphasised latrine sharing as a pragmatic short- to mid-term solution. However, in most cases latrine sharing it is not a preferred option. Latrine sharing appeared to work best when households had planned for the latrine to be shared by two or more households and co-hosts or hosts and sharers had made a financial or in-kind contribution to the construction, ongoing maintenance and cleaning of the latrine.

Consider developing guidelines for households who do not have enough space to comfortably build a latrine and for whom latrine sharing may represent a longer-term solution. Provide guidance on how to intentionally design a latrine to be shared – such as including a larger waste storage pit to account for the larger user load associated with sharing, and separating bathing and latrine areas to reduce "traffic jams" during peak times of the day. Additionally, guidance should encourage households to discuss roles and responsibilities, and the ways that members of different households can contribute to latrine construction, maintainance and cleaning (financially or in-kind). Doing so may proactively address some of the barriers faced by hosts and sharers over time.

Recommendations on emergent themes

This study focused specifically on shared latrine use and dynamics. However, two key recommendations on broader sanitation themes emerged from this research.

Within each of the six ODF-certified villages that were the focus of this research, there was evidence that some households, or household members, are open defecating on an exclusive or regular basis. Additionally, households are often not disposing of infant faeces into latrines and there is evidence of human excreta within village environments. As such, the six ODF-certified villages visited are not meeting all of the MRD's National CLTS Guidelines for ODF villages.

Plan for ongoing ODF monitoring and re-verification, as well as continued sanitation interventions, to ensure current ODF levels are maintained and enhanced.

Promote hygienic infant faeces disposal and encourage age appropriate potty and latrine use.

1.0 INTRODUCTION

WaterAid Cambodia, together with Plan International Cambodia, engaged Causal Design to undertake targeted research into shared latrine use in rural Cambodia. This qualitative research was commissioned by the Cambodia Rural Sanitation and Hygiene Improvement Programme (CRSHIP) programme, which is funded by the Global Sanitation Fund (GSF) of the Water Supply and Sanitation Collaborative Council (WSSCC).

1.1 Description of research

The purpose of this research is to better understand shared latrine use — the practice of two or more households sharing a latrine on a regular basis — in open defecation free (ODF) communities in rural Cambodia. It is estimated that up to 15 percent of households in ODF-certified villages are sharing latrines, but there has been limited research into:

- **Who** lives in households that are sharing a latrine and what are the common and varying characteristics of those households (i.e. socio-economic and disadvantage status, geographical proximity to other households, and familial or social relationships between households that share latrines)
- What **motivates** households to share a latrine
- What are **current sanitation and hygiene practices** in latrine sharing households in terms of access, use, cleaning, and maintenance
- What are the **benefits and challenges** of households sharing a latrine, and
- What are the **future intentions** of households who are currently sharing a latrine (i.e. whether or not they intend to build their own latrine and are taking steps, or facing barriers, to do so).

This exploratory, qualitative research project focused on who is sharing and the dynamics of shared latrine use. More specifically, this study was designed to identify characteristics of shared latrine users, understand factors that facilitate sharing, and explore households' current sanitation practices, their satisfaction with that arrangement and their future sanitation intentions. Grounded insights and findings from this research will be shared with the Cambodian rural water, sanitation and hygiene (WASH) sector, and may be used to help inform and strengthen national guidelines and sanitation programming.

1.2 Research questions

The following research questions were used to guide data collection and analysis:

1. **Who** is using a shared latrine in ODF-certified villages? What are the common and varying characteristics of households who are sharing a latrine?
2. **Why** are households sharing a latrine? What factors are facilitating or motivating shared latrine use?
3. **What insights, implications and questions** does this present for Cambodian rural WASH sector policy, guidelines and programming?

1.3 This report

This section of the report introduced the purpose of this research project and key research questions. Section 2 provides a brief overview of the health challenges associated with open defecation and poor sanitation and hygiene practice and outlines The Royal Government of Cambodia's commitments to improve rural sanitation. An overview of global shared latrine research, classifications, and debate is then provided. Section 3 focuses on the data collection, sampling, and analysis methods applied in this project.

Sections 4 - 13 present research findings and interpretations, responding to each of the key research questions presented above. Section 4 outlines the prevalence of sharing, and the number of households and people who are sharing a latrine within sampled clusters. Section 5 continues to answer the question: *who is using a shared latrine?* by outlining the common and varying characteristics of, and relationships between, hosts and sharers. Section 6 presents the duration (number of years) for which households have been sharing a latrine and explores how sharing was initiated. Section 7 addresses the question: *why are households sharing a latrine?* by exploring the range of factors that facilitate or motivate sharing. Section 8 focuses on latrine infrastructure, waste storage, and faecal sludge

management disposal practices. Section 9 explores latrine access and use, highlighting differences in use between young children and adults. Section 10 discusses patterns in shared latrine construction, maintenance, and cleaning practices. In Sections 9 and 10 the benefits and challenges associated with sharing are outlined, and reflections on users' varying levels of satisfaction with latrine sharing arrangements are presented. Section 11 outlines sharers' intentions to build their own latrines.

A summary of recommendations – linked to key findings – is presented in Section 14, responding to the question: *what insights, implications, and questions does this present for Cambodian rural WASH sector policy, guidelines, and programming*?

2.0 BACKGROUND AND CONTEXT

2.1 Sanitation and health

Open defecation and poor sanitation and hygiene practices remain a serious issue in Cambodia. Open defecation rates in rural Cambodia are among the highest in the East Asia region (WHO & UNICEF, 2013). Globally, poor sanitation is associated with higher prevalence of infectious diseases, including diarrhoea, trachoma, schistosomiasis, and soil-transmitted helminths (Clasen et al., 2014, Massa et al., 2017). Diarrhoea accounts for the largest share of sanitation-related illness and deaths, particularly among children (Clasen et al., 2014). In Cambodia, diarrheal incidence among children tends to be higher than in Southeast Asia as a whole (Miller-Petrie, Voigt, McLennan, Jenkins & Cairncross, 2015). There is also evidence that poor sanitation is associated with stunting (Kov, Smets, Spears & Vyas, 2013; Sinha, 2017). In Cambodia, stunting was prevalent among 32 percent of sampled children under the age of five in 2014 (National Institute of Statistics, Directorate General for Health & ICF International, 2015).

2.2 Commitments and action to improve rural sanitation

The Royal Government of Cambodia acknowledges the health challenges associated with poor sanitation and has committed to improve sanitation and to promote proper hygiene practices in rural Cambodia. In 2014, the Government adopted the National Strategy for Rural Water Supply, Sanitation and Hygiene 2011-2025 (NS-RWSSH). The NS-RWSSH, which was developed by the Technical Working Group for Rural Water Supply, Sanitation and Hygiene in coordination with the Ministry of Rural Development (MRD), sets the ambitious target of ensuring that:

> *Every person in a rural community has sustained access to safe water supply and sanitation services and lives in a hygienic environment by 2025.*

The specific sanitation target outlined in the NS-RWSSH is that:

> *By 2025, 100 percent of the rural population will have sustainable access to improved sanitation services and live in a hygienic environment.*

The Government's focus aligns with a global push to end open defecation and improve sanitation and hygiene for all. Sustainable Development Goal (SDG) Target 6.2 aims to:

> *By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations* (UN, 2015).

In Cambodia, Government and non-government actors, at both a national and sub-national level, have been addressing rural water supply, sanitation and hygiene challenges. Since 2011, the Cambodia Rural Sanitation and Hygiene Improvement Programme (CRSHIP) has been working to increase access to improved sanitation and to promote proper hygiene practices in line with the NS-RWSSH, MDG and (later) SDG targets. A Global Sanitation Fund (GSF) grant was awarded to the MRD and Plan International Cambodia (Executing Agency), who have worked with Programme Implementation Partners (IPs) to increase, and accelerate the pace of, sanitation improvements in

rural areas. Throughout two programme phases (CRSHIP 1 and CRSHIP 2), IPs have been promoting the consistent use of latrines, hand-washing with soap, and safe drinking water in rural communities through a combination of participatory development approaches, namely; Community-led Total Sanitation (CLTS); School-Water, Sanitation and Hygiene (Sc-WASH), and Sanitation Marketing (SM). Throughout CRSHIP, rural sanitation efforts have focused on ending open defecation in villages within target provinces. WaterAid Cambodia, the Learning & Documentation (L&D) sub-grantee, has been responsible for enhancing the capacity of CRSHIP 2 partners to identify, address and document challenges.

2.3 Shared latrine use

The National CLTS Guidelines, which were introduced by the Ministry of Rural Development (MRD) in 2014, define an Open Defecation Free (ODF) village as one where:

a) 100% [of households] do not practice open defecation (OD) and at least 85% have access[7] to [a] functional improved latrine (meaning there are shared latrines)
b) All households dispose of infant faeces into owned and shared latrines
c) There is no evidence of human excreta in the village environment, and
d) Community has formulated and enforces informal or formal actions against open defecation.

The practice of two or more households sharing a latrine is implicit in the Ministry of Rural Development's Open Defecation Free (ODF) village certification criteria. However, to date there has been limited research into shared latrine use in Cambodia.

The practice of two or more households sharing a sanitation facility is implicit in the above ODF certification criteria. However, to date there has been limited research into shared latrine use in Cambodia.

2.4 Shared latrine research, classifications and debate

Globally, approximately 600 million people use a shared latrine (WHO & UNICEF, 2017) (2015 data). Latrines that are shared between two or more households are generally thought to be less clean, less hygienic, and more difficult to access than latrines which are used (exclusively) by a single household (WHO & UNICEF, 2006). When multiple households share a latrine, the likelihood of excreta being present outside the toilet pan is higher, which increases the risk of infectious disease transmission (Heijnen et al., 2014 in USAID, 2018). If shared latrines are unclean and/or challenging to access, people may be less likely to use the latrine or to exclusively use the latrine; instead they may open defecate (Singh & Balfour, 2015 in USAID, 2018). This raises questions around the sustainability of shared latrine use and concerns about slippage (Günther et al., 2011; Sinha, 2017; USAID, 2018). Concerns about the privacy and safety of shared latrines have also been highlighted (WHO & UNICEF, 2006).

The WHO and UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP) classifies improved latrines that are shared between two or more households as a "limited" service (Figure 5) because the likelihood of excreta being present is thought to be higher if multiple households are sharing a latrine (WHO & UNICEF, 2017). Safely managed facilities are defined as those which hygienically separate excreta from human contact.

[7] In this context CRSHIP interprets 'access' as household ownership of a latrine.

Figure 5. JMP latrine classifications (Sanitation ladder) (WHO & UNICEF, 2017)

SERVICE LEVEL	DEFINITION
SAFELY MANAGED	Use of improved facilities that are not shared with other households and where excreta are safely disposed of in situ or transported and treated offsite
BASIC	Use of improved facilities that are not shared with other households
LIMITED	Use of improved facilities shared between two or more households
UNIMPROVED	Use of pit latrines without a slab or platform, hanging latrines or bucket latrines
OPEN DEFECATION	Disposal of human faeces in fields, forests, bushes, open bodies of water, beaches or other open spaces, or with solid waste
Note: improved facilities include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs.	

However, some environmental health researchers, academics, and practitioners have argued that shared latrines can be clean and hygienic and represent a financially, pragmatically, and socially viable solution (particularly in the short-term) for households that would otherwise be unable to access safely managed latrines (Massa et al., 2017). The JMP acknowledges that cultural practices and socio-economic constraints may mean that shared latrine use is the best short-term option in some low-income, highly-populated urban areas; however, it does not extend that consideration to rural areas (WHO & UNICEF, 2017).

3.0 METHODS AND EXECUTION

3.1 Overview

An applied qualitative research approach was used to develop an initial, nuanced understanding of shared latrine use in ODF-certified villages in rural Cambodia. The themes, patterns, and preliminary insights from this cross-sectional research are designed to increase sectorial understanding of shared latrine use.

The use of purposive (or non-probability) sampling and the limited sample size mean that the findings cannot be — and are not intended to be — generalised to the broader Cambodian population. While conclusive or causal statements about what is driving shared latrine use cannot be made, this research does provide grounded, credible, case-focused information that answers the primary research questions. Findings can be used to help build a more nuanced understanding of shared latrine use, and users, in rural Cambodia.

To develop a stronger understanding of shared latrine use in rural Cambodia, Causal Design's research team:

- Scanned relevant literature and data sets
- Led consultations with select rural WASH sector practitioners
- Facilitated group interviews with village leaders and sanitation focal points from select ODF-certified villages
- Facilitated semi-structured, in-depth interviews with shared latrine using household members and
- Conducted observations of shared latrine using household clusters (focused on latrine infrastructure, household structures and surrounds, rather than on behaviours).

Data analysis was informed by Miles, Huberman and Saldaña's (2014) *interactive qualitative analysis* method and Hsieh and Shannon's (2005) *directed content analysis* method. Both methods provide pragmatic and flexible procedures for methodical narrative data analysis. Data analysis focused on gaining an informed, in-depth understanding of who is using a shared latrine and why, within particular latrine household and clusters. Analysis involved data preparation, collection, and transformation, followed by iterative data reduction, display and conclusion drawing, and verification (Miles et al., 2014).

Causal Design approached this research from an open, non-pejorative perspective. That orientation was of particular importance given the limited research on this topic. While latrine sharing may be associated with poverty status and disadvantage, it could also be driven by broader social, geographical, and economic factors, such as proximity to neighbours, close relationships to extended family, or household income management decisions.

3.2 Sampling

Causal Design utilised a purposive sampling approach to identify relevant latrine sharing household clusters. This non-probability sampling approach is appropriate since this research is intended to provide initial, relevant and in-depth information on shared latrine users, their motivations for sharing, and sanitation practices. Purposive sampling is common in exploratory research projects of this nature where the primary objective is to identify information-rich cases (in this case, household clusters) that can provide credible, useful information to answer specified research questions (Patton, 2015).

Given the sampling approach and sample size, findings are not able to be — and are not intended to be — generalised to the broader population; the sample is not proportionally representative. However, as noted in Section 3.1 this sampling approach did position the research team to identify, interview and observe a variety of latrine-sharing households, and provides useful, credible information that answers the primary research questions.

This research targeted households who were:

a) *Sharing* at the time their village was certified as ODF and are *sharing now*, and
b) *Not sharing* at the time their village was certified as ODF but are *sharing now* (Figure 6).

Figure 6. Household sampling focus

Previous latrine arrangement	Current latrine arrangement
Share	**Share**
Not share	**Share**
Share	Not share
Not share	Not share

Interviews and observations focused on households who are currently sharing a latrine

This sampling focus meant that Causal Design did not seek to interview households who previously shared a latrine but no longer share (either because they have built their own latrine or have reverted to OD) or households who have never shared a latrine.

We used a two-phased sampling approach, first selecting six target ODF-certified villages, and then selecting four latrine sharing clusters within each of those villages.

3.2.1 Village selection

Casual Design and Plan International staff selected **six ODF-certified villages** in which shared latrine use was recorded at the time of ODF certification (based on CRSHIP certification data). Those six villages included a mix of

villages that were ODF-certified between 2015 and 2018.[8] This approach was adopted to ensure the sample included villages with some household clusters who had been sharing a latrine for several years, as well as some that have only been sharing for a shorter period of time. (This sampling approach assumed that at least some sharing was likely to be driven by village-level ODF efforts.) Selecting villages that were ODF-certified at various points in time enabled exploration of latrine sharing sustainability and analysis of whether behaviours, arrangements and challenges vary based on the how long sanitation facilities have been shared.

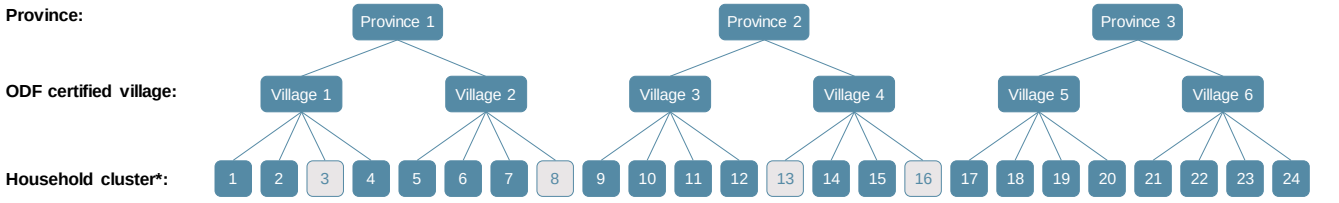
More detail on village selection, and the rationale behind sampling decisions is provided in Appendix 1.

3.2.2 Latrine sharing cluster selection

Causal Design's research team visited six ODF-certified villages across three provinces: Svay Rieng, Kampong Chhnang, and Kampong Speu. Within each target village, the research team met with village leaders (including the Village Chief and Deputy Village Chief) and local sanitation focal points. Those interviews were used to develop a high-level understanding of the village and their sanitation progress and plans. Village leaders and the research team together developed a village map or reviewed and updated an existing village map. That map was then used to identify households that share a latrine. The research team then selected **four household clusters** (i.e. groups generally comprised of between two and four households) that reflected the major themes or sharing structures that were identified during the mapping exercise. Causal Design initially intended to identify two household clusters where families are related (*familial clusters*) and two household clusters where non-family members share a latrine (*non-familial clusters*) within each village. However, in some villages no non-familial sharing was apparent. The research team then visited the selected household clusters to check their interest and availability and scheduled a time for an interview later that day. (If a household was not available, an alternate sharing cluster that had been identified through the village mapping exercise was visited.)

In-depth interviews and observations were conducted across 24 sharing clusters. Where possible, Causal Design sought to interview **one person from each of the households that share a latrine**. For example, both an adult member of the household that hosts or owns the latrine, and then an adult member of each of the households who share that latrine. The number of households that share a latrine varied from cluster to cluster (see Section 4). In total, **51 people from 44 households were interviewed** — including a mix of latrine 'hosts' (latrine owners) and 'sharers' (non-owners who regularly use a host's latrine). While most latrine sharing cluster members were interviewed individually, in some cases a group interview (with multiple co-hosts, hosts and/or sharers) approach was adopted, as household members expressed a preference for that approach.

Figure 7. Sample composition – 24 household clusters across six rural villages in three provinces



* The number of households within a sharing cluster varied. Four household clusters identified by village leaders as sharing a latrine with other households and were instead practicing OD were also interviewed and observed.

3.3 Data collection methods

Causal Design's research team conducted a **desk-top review** of relevant shared-sanitation research, Cambodian rural sanitation strategies, plans and guidelines, and available shared latrine access data, including CRSHIP 2 Monitoring and Evaluation (M&E) and Disaggregated Data Gathering (DDG) data.

[8] The initial research design sought to incorporate villages that had been certified in 2013 or 2014. However, when the research team visited two villages recorded as certified during that period, village leaders indicated that ODF certification had occurred much more recently. Interviews and observations proceeded as planned.

The research team led targeted **consultations with select WASH practitioners** and researchers from MRD's Department of Rural Health Care, WaterShed, iDE, SNV, Plan International, and Aquaya Research. The purpose of those consultations was to establish practitioners' current understanding of who is using shared latrines and why households might be choosing to do so, as well as to understand the broader sanitation and health challenges that may be associated with shared latrine use. Those interviews were also used to identify relevant (grey or published) research or data on shared latrine use in Cambodia and to refine the focus of this research.

Group interviews with village leaders, including the Village Chief and Deputy Village Chief and local sanitation focal points, were used to develop a high-level understanding of six ODF-certified villages and their sanitation progress and plans. Village leaders and the research team together developed a village map or reviewed and updated an existing village map. That map was then used to identify households that share a latrine, and discuss relationships between sharers, as well as factors that may be driving shared latrine use. (As outlined in Section 3.3, the research team also used those interviews to identify and select latrine sharing household clusters for interview and observation.)

Semi-structured, **in-depth interviews with shared latrine using household members** and **observations of shared latrine using household clusters** from six ODF-certified villages were the core data collection methods. Having prepared interview guides, obtained necessary research permissions and provided an orientation to the field research team, Causal Design conducted semi-structured, in-depth interviews with shared latrine using household members from six ODF-certified villages. Most latrine sharing cluster members (hosts or sharers) were interviewed individually, though in some cases a group interview (with multiple co-hosts, hosts, and/or sharers) approach was adopted, as household members expressed a preference for that interview format. Interviews were designed and facilitated to address key research questions and gather relevant contextual information.

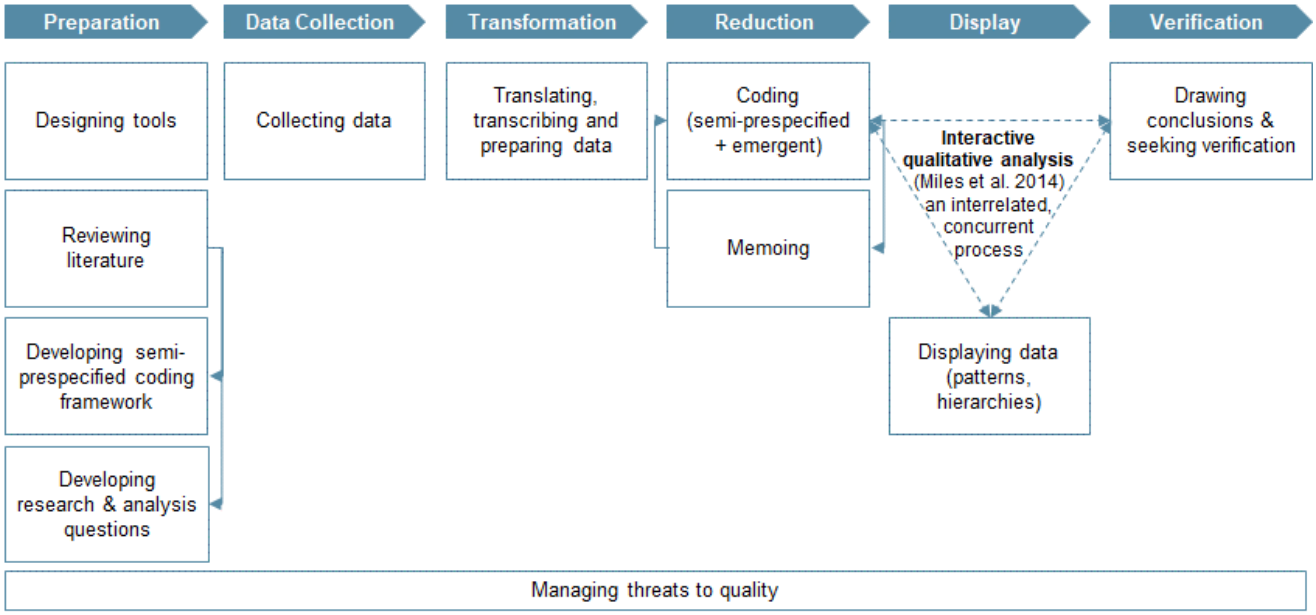
While visiting households to conduct the above interviews, the research team also conducted observations of shared latrine-using household clusters. An observational checklist was used to collect information on the type, accessibility, cleanliness and hygiene, privacy, and safety of latrines. Basic maps of latrine sharing household clusters were sketched and each household's proximity to the latrine were also recorded.

3.4 Data analysis and interpretation methods

Data analysis was informed by Miles, Huberman and Saldaña's (2014) *interactive qualitative analysis* method and Hsieh and Shannon's (2005) *directed content analysis* method. Both methods provide pragmatic and flexible procedures for methodical and rigorous narrative data analysis to develop and extend knowledge of a phenomenon (Hsieh & Shannon, 2005; Punch, 2009).

Analysis focused on gaining an informed, in-depth understanding of who is using a shared latrine and why, within particular household clusters. Analysis began in the field, as researchers recorded emergent ideas and patterns. The research team then sought to confirm (or disconfirm) those themes or patterns as interviews and observations continued. Systematic analysis occurred following fieldwork. Qualitative analysis involved data preparation, collection and transformation, followed by iterative data reduction, display and conclusion drawing and verification (Figure 8) (Miles et al., 2014).

Figure 8. Project execution



Further detail on data analysis methods is provided in Appendix 2.

FINDINGS AND INTERPRETATION

4.0 LATRINE SHARING: PREVALENCE AND PRACTICE

Key insights

- **A notable proportion (8-15 percent) of households in the six focus ODF-certified villages do not have their own latrine and are sharing another household's latrine on a regular basis.**
- **There was evidence of occasional or exclusive open defecation in each of the six focus ODF-certified villages. Household open defecation rates varied between 1 and 10 percent.**
- **Sharing clusters are commonly comprised of two households; however, in some instances one latrine is being shared between three or four different households.**
- **The number of regular latrine users within a sharing cluster ranged from five to twelve people. Many latrine hosts and sharers thought that was too many users for one latrine, and that each household should have their own latrine.**

4.1 How many households in target villages are sharing one latrine?

Across the six ODF-certified villages that were the focus of this research, a notable proportion of households do not have their own latrine and are sharing another household's latrine on a regular basis. Latrine sharer rates varied from 8 to 15 percent.

Table 1. Proportion of households in select ODF-certified villages who do not own a latrine and are sharing (using) another household's latrine on a regular basis

Province	Village	Year ODF Certified	# Households (HHs)	# Clusters	# Sharers (HHs)	% Sharers (HHs)
Kampong Chhnang	Village 1	2018	182	18	22	12%
	Village 2	2018	100	8	8	8%
Kampong Speu	Village 3	2016	118	16	18	15%
	Village 4	2015	89	9	11	12%
Svay Rieng	Village 5	2017	116	9	10	9%
	Village 6	2018	213	12	16	8%

As noted in Section 2.3, The National CLTS Guidelines define an ODF village as one where 100 percent of households do not practice open defecation and at least 85 percent have access to a functional improved latrine. Although all villages fell within the 15 percent sharing "limit" implied in the aforementioned guideline, in each of the six focus ODF-certified villages there was also evidence of occasional or exclusive open defecation. Household open defecation rates varied between 1 and 10 percent across the six ODF-certified villages visited. As part of a village mapping exercise, in five of those six villages, village leaders or sanitation focal points identified households that do not have a latrine and regularly practice open defecation. In the remaining village (Village 4), no households were described by leaders as practicing open defecation; however, two of the four latrine sharing household clusters that were identified by village leaders had never shared a latrine on a regular basis and instead open defecate most or all the time.

Table 2. Proportion of households in selected ODF-certified villages who do not own a latrine and practice open defecation (OD) on a regular basis

Province	Village	Year ODF Certified	# Households (HHs)	# HHs OD (Exclusive + Occasional)	% HHs OD (Exclusive + Occasional)
Kampong Chhnang	Village 1	2018	182	6	3%
	Village 2	2018	100	1	1%
Kampong Speu	Village 3	2016	118	12	10%
	Village 4	2015	89	NA but at least 2[9]	NA but at least 2%
Svay Rieng	Village 5	2017	116	2	2%
	Village 6	2018	213	6	3%

External data on the proportion of rural Cambodian households who share a latrine is limited. However, iDE's Sanitation Marketing Scale Up research (2018) indicates that the proportion of households who share a latrine could be as high as 23 percent. Their multi-year survey initiative indicates that the proportion of households who share a latrine with another household has increased over time, from 8 percent in 2014, to 15 percent in 2016, and 23 percent in 2018. This appears to indicate that more households may be gaining access to a latrine through latrine sharing.

[9] In Village 4, no households were described by leaders as practicing open defecation; however, two of the four latrine sharing household clusters that were identified by village leaders had never shared a latrine on a regular basis and instead open defecate most or all the time. It is possible that there are other, unreported instances of households open defecating in this village.

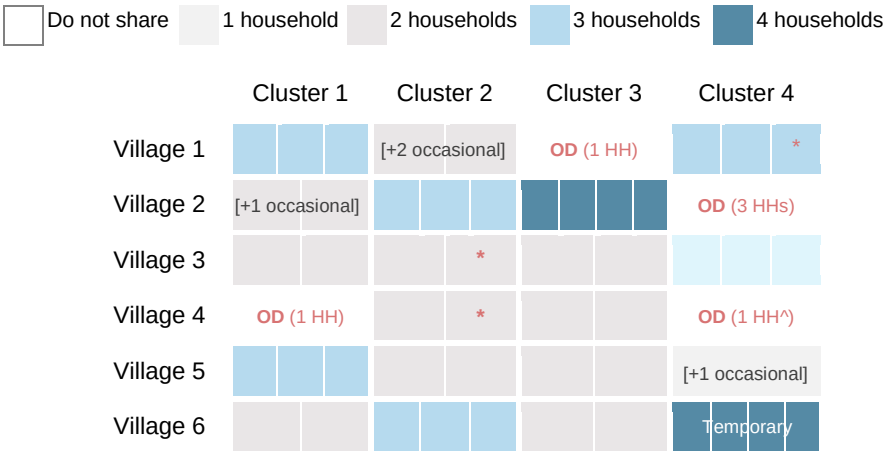
4.2 How many households are sharing one latrine?

Sharing clusters are commonly comprised of two households. However, within each of the six selected ODF-certified villages there were reported instances of more than two (i.e. three or four households) sharing one latrine.

The research team interviewed and observed four latrine sharing household clusters within each of the six selected ODF-certified villages. Among the 24 sharing clusters:

- Four were not actually sharing a latrine with other households and were instead open defecating *(OD cluster)*
- One shared a latrine with one other household on an occasional basis only.[10]
- Eleven shared a latrine with one other household (*2 household cluster*)
- Six shared a latrine with two other households (*3 household cluster*)
- Two shared a latrine with three other households (*4 household cluster*) (Figure 9)

Figure 9. Number of households sharing a latrine on a regular [or occasional] basis (n=24 clusters, 54 households) [11]



^ Household does not have a latrine and most members open defecate all or most of the time; however, one member occasionally shares another household's latrine during the day (limited hours).

While it should be noted that larger latrine sharing clusters (i.e. comprised of three or more households) were intentionally over-sampled in this research project to explore a diversity of sharing models and dynamics, there is clear evidence that some latrines are being shared by three or four different households. This finding challenges the assumption voiced by some WASH sector practitioners that no more than two households ever share a latrine on a regular basis.

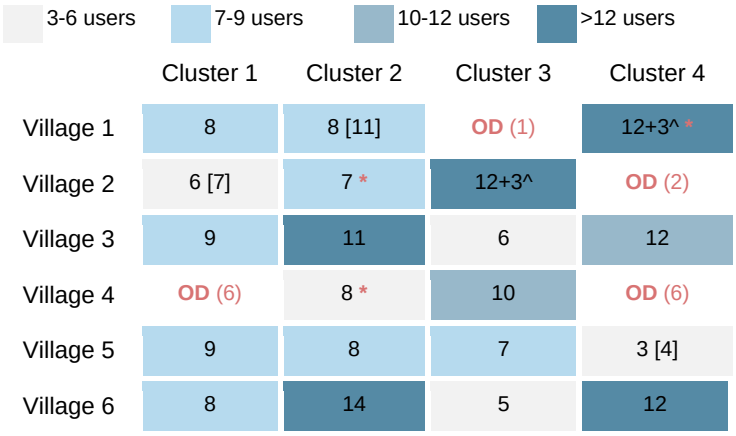
4.3 How many people (users) are sharing one latrine?

The number of regular latrine users within a sharing cluster ranged from five to twelve people (**Figure 10**).

[10] In two other instances hosts shared with an additional household on an occasional basis when they returned to visit the village from their normal place of work or residence. Those *occasional sharers* usually visited three or four times per year, often during major holidays. Both the other two instances of occasional sharing are counted here as a '2 household cluster'. In one case two households shared for most of the year, and then two other households would occasionally share. In the other case, two households shared for most of the year with one additional household sharing during holiday times.

[11] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Figure 10. Number of people per cluster using a latrine on a regular [or occasional] basis (n=24) [12]



^ = household members who are not (yet) latrine users, such as a baby or young child.

While there were a high number of users within clusters comprised of four households (>12 users), the number of latrine users did not vary substantially between clusters comprised of two or three households. In sampled three household clusters the number of users ranged from 7-14 users, and within two household clusters there were from 5-11 users. (A heat map shaded by household cluster size is provided in Appendix 3.)

When latrine hosts and sharers were asked an open-ended question about how many people would ideally share one latrine, many suggested that between 3-5 users would be ideal and 8-10 users would be the maximum limit or too many users. Many respondents (at least 9 clusters) also added that each household or family should have one latrine. In Cambodia the average household size is 4.6 people, and 43 percent of households have 4-5 members; the ideal user limit identified by respondents broadly mirrors those figures (UN, 2017).

A substantial proportion of respondents do not think that sharing with many people is ideal:

> *"One household, one latrine."* (Sharer, V3_C1_A_299)[13]

> *"One household with four members. With too many people the latrine will be dirty."* (Host, V4_C3_A_200)

> *"With my current members [6 people], I don't find it difficult yet*." (Host, V3_C3_A_288)

One respondent offered an alternative perspective, stressing that the nature of the relationship between sharers was more important than the number of people sharing:

> *"There are 12 people in my household. It is convenient to use. [It is important for sharing households to be] harmonious like at the three houses here. Some houses, only five people share, but they have conflict because only some members clean and some don't.* (Co-host, V3_C4_A_191-3)

Interview respondents highlighted that sharing among many members either was — or would be — difficult:

> *"Regarding sharing, if we share among many people, it would be difficult. If we only share with one or two members, there is no problem."* (Host, V5_C2_A_112)

Respondents thought that sharing a latrine among many users would make it more difficult to access the latrine without waiting, and would also mean the latrine may be less clean:

[12] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate. (Number of household members provided in parenthesis.)
[13] Throughout this report respondents' transcribed responses are referenced using this format which indicates the village, cluster and interview transcript line reference.

"Anyway, sharing among fewer members is better than sharing among many members. Sharing with many members makes the latrine not hygienic, not clean… Sharing with many members like me, four families, is not good. We only have a place to defecate and take a bath. However, it is not convenient or very clean. It is not the same as sharing among fewer members. (Host, V6_C2_A_221)

"5-7 people [is too many users for one latrine]. Sometimes, multiple people want to defecate at the same time." (Host, V5_C4_A_143)

"I think [6 people] it is too many because people keep going in and out, and we have to wait." (Sharer, V6_C1_B_188).

5.0 CHARACTERISTICS AND RELATIONSHIPS

Key insights

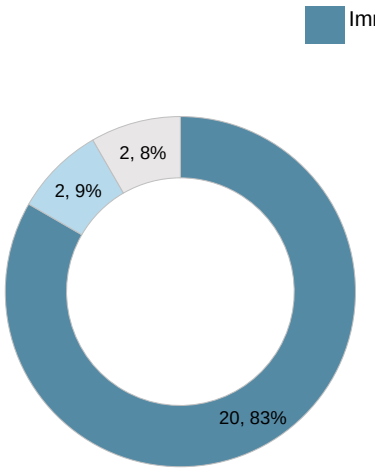
- **Hosts were much more likely to share a latrine with close family members (i.e. children, grandchildren, parents, or siblings) than more distant relatives or non-relatives**.
- **Only two hosts shared their latrine with non-relatives; in both those cases sharers were older people who lived nearby. Other forms of non-relative latrine sharing appears to be rare**.
- **Reported non-relative sharing may sometimes mask exclusive open defecation practice.**

5.1 What is the relationship between latrine hosts and sharers?

Hosts were much more likely to share a latrine with close family members (i.e. children, grandchildren, parents, or siblings), rather than more distant relatives or non-relatives.

Among the 24 clusters studied in-depth, most hosts were sharing their latrine with close family members, such as a child, parent, or sibling (20, 83 percent) (Figure 11).

Figure 11. Relationship between latrine host and sharer (n=24 relationships, OD clusters excluded)

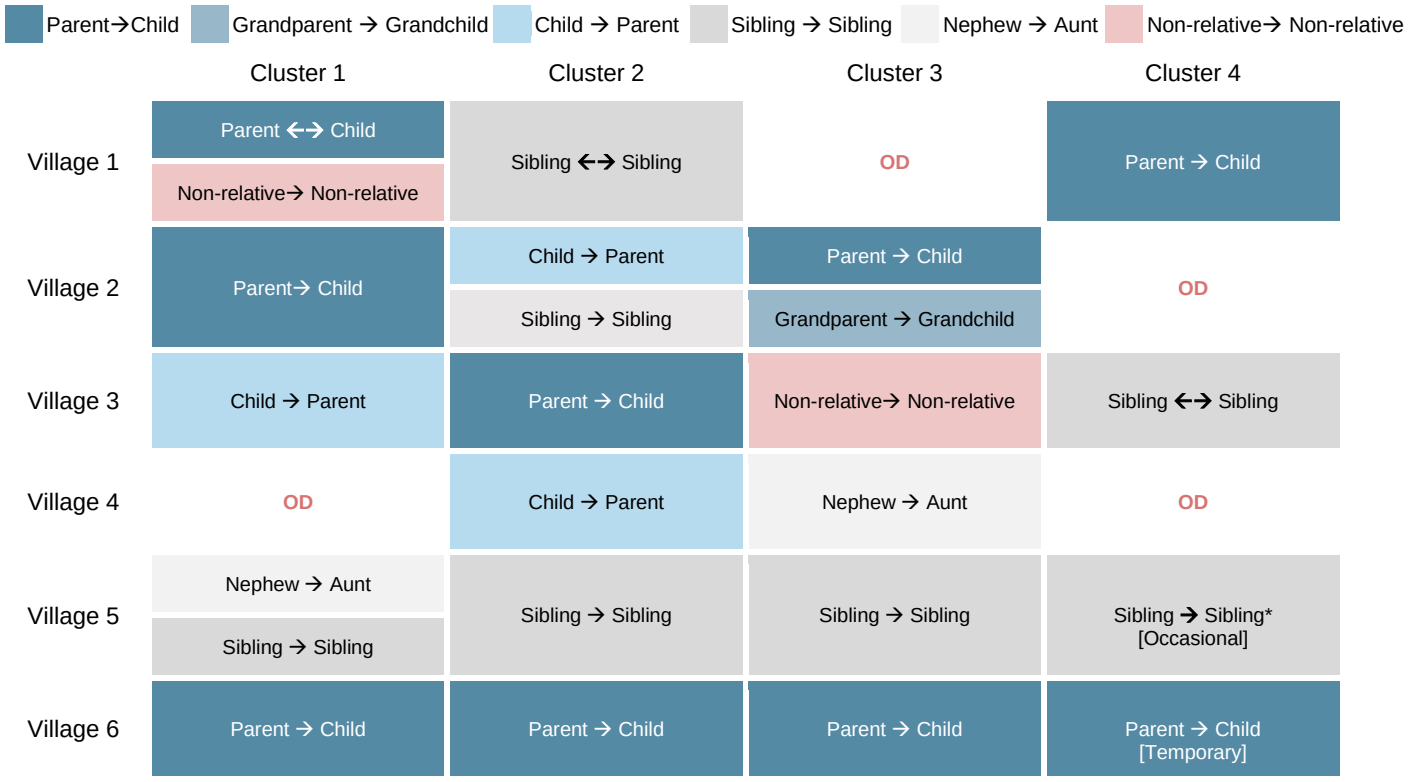


Relationship between Host and Sharer	#	%
Immediate family	**20**	**83%**
Parent → Child	9	38%
Sibling → Sibling	7	29%
Child → Parent	3	13%
Grandparent → Grandchild	1	4%
Extended family	**2**	**8%**
Nephew → Aunt	2	8%
Non-relatives	**2**	**8%**
Non-relative→ Non-relative	2	8%
Total	**24**	**100%**

Only two hosts shared their latrine with non-relatives; in both those cases sharers were older people who lived nearby.[14] Other forms of non-relative latrine sharing appears to be rare.

Four of the 24 clusters identified by village leaders were not actually sharing a latrine with other households; they were open defecating. In three of those four instances, those reported sharing clusters had been described as non-relative sharers. This indicates that reported non-relative sharing may sometimes mask exclusive open defecation practice.

Figure 12. Nature of relationship between latrine hosts and sharers (n= 24 relationships, OD clusters excluded)



Information provided by village leaders and sanitation focal points as part of a village mapping exercise also indicates that most hosts are sharing with immediate family members. Immediate family sharing accounted for 73 to 100 percent of sharing relationships across each of the six target villages (Table 3). However, there is considerable variation in the specific relationship between hosts and sharer (i.e. Parent→Child. Child→Parent, Sibling→Sibling). In half of the six target villages, no non-relative latrine sharing was identified; in the remaining three villages non-relative sharing was less than 13 percent.

[14] In one of those cases the co-hosts shared with an older woman who was single, landless, and poor. In the other case, the host described the older couple who lived on her land and shared her latrine as being like "adopted parents."

Table 3. Nature of relationship between latrine hosts and sharers among village leader-identified latrine sharing households (n= 6 ODF-certified villages)[15]

Village	# HHs	# Latrine sharing clusters	# Sharers (HH)	% Sharers	% Share with immediate family	Parent → Child	Child → Parent	Sibling → Sibling	Niece/ nephew →Aunt	Aunt → Niece/nephew	Non-relative → Non-relative
1	182	18	22	12%	**91%**	32%	23%	36%	5%	-	5%
2	100	8	8	8%	**88%**	25%	25%	38%	-	-	13%
3	118	16	18	15%	**94%**	61%	17%	17%	-	6%	-
4	89	9	11	12%	**73%**	9%	36%	27%	9%	9%	9%
5	116	9	10	9%	**90%**	30%	20%	40%	10%	-	-
6	213	12	16	8%	**100%**	94%	-	6%	-	-	-

6.0 SHARING DURATION AND MODELS

Key insights

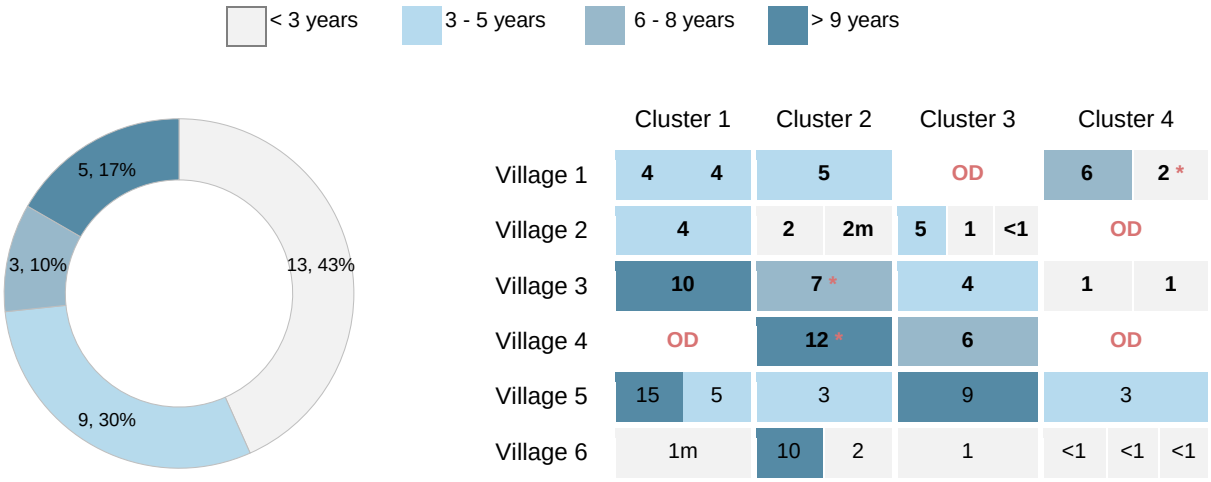
- **Households have been sharing a latrine for between 1 month and 12 years. Approximately one-quarter of sharers had been sharing a latrine for more than 6 years.**
- **In most clusters, sharing pre-dates village ODF certification**.
- **In most cases, sharing arrangements had not been *planned*; sharing arrangements *emerged* over time, or households had *transitioned* to a latrine sharing model over time (i.e. parents had built a latrine for their household only and then their children had grown up and moved into a separate house nearby but continue to use the latrine).**
- **Households who had *planned* to share a latrine were the most satisfied with their sharing arrangement.**

6.1 How long have households been sharing a latrine?

Sampled households had been sharing a latrine for between 1 month and 12 years. Of the 30 sharers, approximately one-quarter had been sharing a latrine for more than 6 years. The remaining three-quarters of sharers had been using someone else's latrine a shorter period; 43 percent of households (13) had been sharing for less than 3 years and 30 percent of households (9) had been sharing a latrine for 3 to 5 years (Figure 13).

[15] The research team did not identify any discernible differences or potential drivers between villages with higher and lower proportions of sharers.

Figure 13. Latrine sharing duration in years, unless noted (n= 24 clusters, 30 sharers) [16]

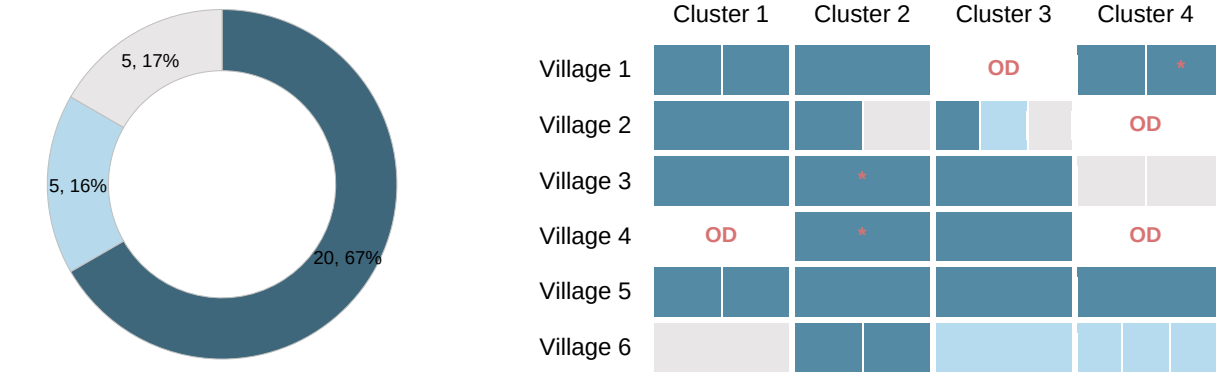


This challenges the assumption, expressed in some WASH sector consultations, that latrine sharing is usually or always a short-term solution.

Hosts who shared their latrine with two or more households did not always begin sharing with those households at the same time. Within the eight sharing clusters comprised of either three or four households, more than half the hosts had been sharing with different households for varying durations. For example, in Village 6 Cluster 2, the host had shared with one household for ten years and another household for just two years. (There was a notable disparity in sharing duration within each of those instances.) Three hosts had shared with all sharing households for the same period of time.

Of the 30 sharers, two-thirds had been sharing a latrine at least 12 months prior to ODF certification in their village. Of those long-term sharers, many had been sharing for significantly longer than that. Five sharers had begun sharing within 12 months prior to ODF-certification, which *may* have been associated with village efforts to reach ODF-certification status. The remaining five sharers had commenced sharing after certification.

Figure 14. Map of sharing prior to, at the time of, and after ODF certification (n= 24 clusters, 30 sharers) [17]

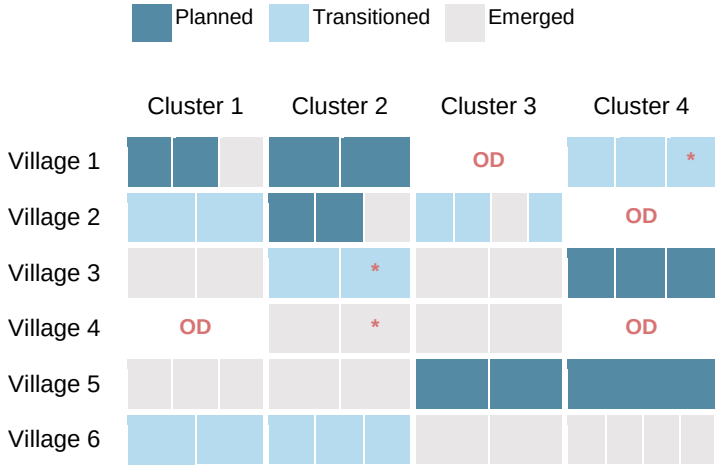


[16] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.
[17] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

6.2 Was sharing planned? How did sharing come about?

In three-quarters of clusters, sharing arrangements had emerged/evolved or households had transitioned to a latrine sharing model over time. In the remaining quarter of cases, sharing had been planned at the time the latrine was built (Figure 15)

Figure 15. Planned, transitioned and emergent sharing models (n=24 clusters, 54 households, 30 sharers) [18]



Planned: Seven sharers across six clusters had planned to share a latrine. Those households intended for the latrine to be shared by two or more households. In many cases co-hosts or hosts and sharers made a financial or in-kind (materials or labour) contribution to the construction and ongoing maintenance of the latrine. In two cases, the larger number of expected latrine users was considered and incorporated into the latrine design.

Transitioned: Nine sharers across six clusters had transitioned to a sharing model. This typically occurred when one host had built a latrine for their household, and then their children had grown up and moved into a separate house nearby (e.g. next door or on their parent's block of land).

> *"I built this latrine since she was small. She was living with me; she's used this latrine since then."* (Host, V1_C4_A_30)

> *"My daughter has been married for four years. Before she got married, she lived with me and used this latrine as well."* (Host, V2_C1_A_124)

Emerged: Fourteen sharers across eleven clusters used a latrine that the host did not intend to share with their household; sharing emerged over time.[19] After the host had built the latrine, the host either invited the sharer's household to use the latrine on a regular basis (*host invited*) or the sharer approached the host and asked whether their household could use the latrine (*sharer requested*). In one case, a sharer neither asked or was invited to use a latrine; they simply started using it.

> *"I didn't think [about my adoptive parents sharing the latrine]. But after building, I told them that it is difficult for you to go to the forest, please come to use my latrine."* (Host, V3_C3_A_118)

> *"Before having the latrine, we all defecated in the open. After I built the latrine, they came to use it and I didn't send them away.* (Host, V5_C1_A_44)

> *"I built it for my house only, but after [I] built [it] my younger siblings asked to use it."* (Host, V4_C2_A_55)

[18] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.
[19] This includes three sharers who are in a temporary sharing arrangement as they each upgrade their homes and replace their old latrines.

"I asked them to use the latrine after they built it." (Sharer, V5_C1_B_50)

Four of the six clusters who planned to share a latrine were siblings. By definition, the six clusters who transitioned to sharing a latrine are comprised of parent(s) and their child(ren). In three other clusters, parents shared with their children as part of a planned or emergent sharing model. (Heat maps showing those patterns are provided in Appendix 3.)

7.0 FACILITATING FACTORS

Key insights

- **Latrine sharing is motivated or facilitated by geographical proximity and space limitations, (familial) relationship, and the life stage of sharers. Disadvantage, poverty and limited financial resource availability due to substantial recent investments were also facilitating factors. Community pressure, as well as host's values and beliefs are sometimes motivating latrine sharing arrangements.**
- **For hosts, sharing is often a pragmatic, altruistic, and considered decision. Sharing is conditional; hosts share with specific households but indicated that they were neither interested nor open to sharing with other households, particularly non-relatives, on a regular basis.**
- **All households who lived further than 50 metres away from one another did not share a latrine or did not share a latrine exclusively; those households were open defecating.**

7.1 Why are households sharing a latrine?

Households tend to share a latrine for a range of reasons:

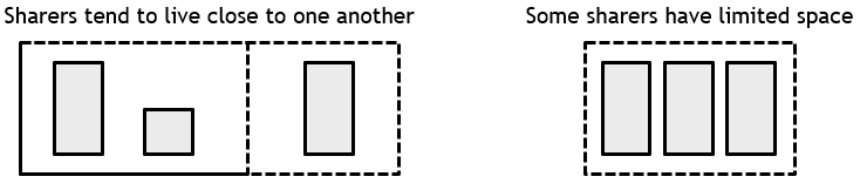
- **Geographical proximity** – Hosts tend to share their latrine with households who live next door to them or on the same plot of land. In some cases, there is insufficient space to build a latrine for each household.
- **Relationship** – Hosts tend to share their latrine with close family members (i.e. children, grandchildren, parents, or siblings).
- **Life stage of sharers** – Hosts tend to share their latrine with sharers who have young children and are in the process of establishing their own household, and/or with older people.
- **Disadvantage** – Some sharers experience multiple forms of disadvantage. Some sharers are older, widowed or single, single-household occupants. Other sharers experience chronic or significant illness or a functional disability. These factors can both facilitate, and on occasion limit, sharing.
- **Poverty** – Some sharers are experiencing poverty and are unable to build a latrine for their household only.
- **Limited financial resources <u>at this time</u>** – Some sharers have limited financial resources available due to substantial recent investments, such as a house.
- **Community pressure –** A few hosts share their latrines because of direct or indirect community pressure to do so.
- **Intrinsic motivations and beliefs** – Some hosts emphasised empathy, pity, a sense of responsibility, and their desire to be a positive role model as reasons why they share their latrine.

7.1.1 Geographical proximity

Hosts tend to share with people who live close to them. Almost all "actual" sharers live next door to the latrine host or on the same plot of land.

"People who live in the same plot of land or within one fence have no problem [sharing]. However, those who live in separate fenced areas will build latrines." (Village leader)

Figure 16. Sketch of sharer proximity



Some sharers live close together on a relatively small plot of land and do not have enough space to comfortably build an additional latrine (7 households across 5 clusters):

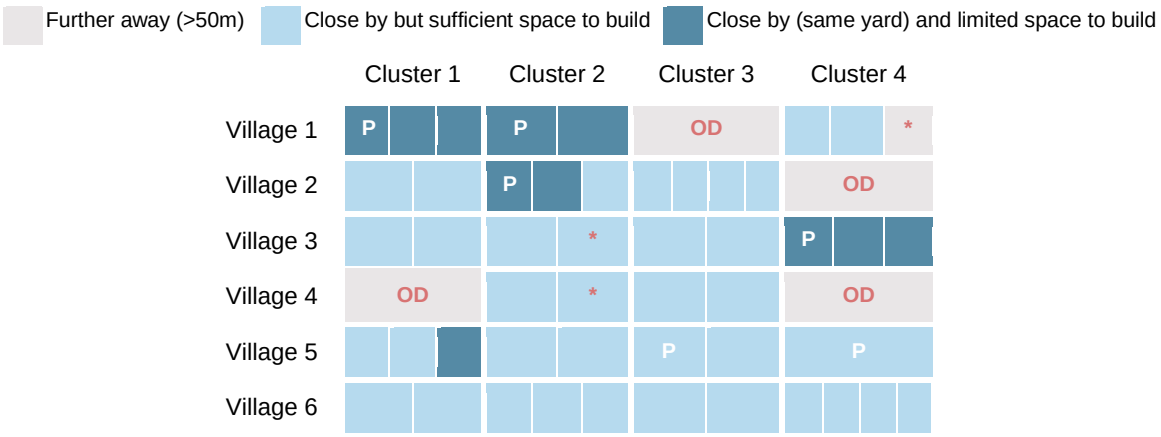
> *"We can afford to build another latrine, but we won't because the space is too small. Just one latrine is enough."* (Co-host, V3_C4_A_71)

> *"According to my heart, I want one latrine for each house. But we do not have land. This area at the back is reserved for storing rice straws, five or six piles of rice straws… And that place is too close to the well."* (Co-host, V1_C2_A_69, 255)

All but one of those five clusters had a *planned* sharing arrangement (i.e. had intended for the latrine to be shared by two or more households, and co-hosts, hosts, and sharers had made a financial or in-kind contribution to the construction and ongoing maintenance of the latrine.)

All households who lived further than 50 metres away from one another did not share a latrine or did not share a latrine exclusively (i.e. all household members at all hours of the day and night); those households were open defecating (Figure 17).

Figure 17. Proximity to host's latrine and limited space to build an additional latrine by household and cluster, with text overlay showing planned sharing arrangement (P) (n= 24 clusters, 54 households, 30 sharers) [20]



7.1.2 Relationship

Familial relationship

As noted in Section 5.1, hosts tended to share a latrine with close family members (i.e. children, grandchildren, parents, or siblings). When asked why they shared a latrine, many hosts emphasised their relationship with sharers as a reason that they decided to — and continue to — share a latrine:

> *"We are mother and children, so I let them use it."* (Host, V1_C4_A_76)

[20] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

"Because she is my own daughter…" (Host, V6_C3_A_61)

"She has the familial relation to me, and she doesn't have [a latrine]." (Host, V5_C2_A_221)

A host who was not related to the older couple with whom she shared a latrine likened the sharers to family:

"I don't mind them using the latrine because I think of them as my own parents…[T]hey don't want to be dependent on me. However, I still protect them, take care of them, and love them." (Host, V3_C3_A_126)

Some respondents also mentioned that they used a family member's latrine because they did not think other people would allow them to use their latrine on a regular basis:

"I share with my brother. For other people who are not related to us, they won't allow us to share their latrine." (Sharer, V4_C2_B_128)

"If we don't use our sibling's latrine, how can we ask other people [for a] latrine to use?!" (Sharer, V1_C4_A_172)

"I will use my mother's latrine, not someone else's because they would not allow me to." (Sharer, V1_C4_B_148)

Many latrine hosts and sharers, village leaders, sanitation focal points, and WASH practitioners reflected that sharing with non-family members was uncommon — and in some instances insisted it would never occur:

"No, there aren't [non-relative sharers]. We only have children and parents share latrine. People who are non-related would share only for short time [maximum half a month]." (Village leader)

"Non-related / non-family members rarely share [a] latrine." (Village leader)

"Even if someone is very miserable, they will try to build their own latrine. Those who are sharing, they share because it's their sibling or relative's latrines." (Village leader)

Multiple respondents said that non-relatives would usually "not dare to ask" to use a non-relative's latrine on a regular basis as it would be odd or inappropriate to do so. Village leaders also reflected that they would not allow non-relatives to use their latrine regularly due to concerns about health and the cleanliness of sharing a latrine, the potential for conflict, and the perception that there were additional expenses associated with sharing:

Health:	*"I'm afraid of getting contagious diseases. If someone from outside, who I don't know, asks to use the latrine, I don't want to let them use the latrine. If they insist, I will let them use, but I will clean the latrine with soap afterward. I'm afraid that they have diseases."* (Host, V5_C2_A_223) *"[I'm] afraid of contamination of diseases, either from them to our family member or vice versa."* (Village leader)
Cleanliness:	"*Some members take care of the latrine, while others don't."* (Village leader)
Potential conflict:	*"Because when sharer defecates and forgets to pour water into the pan, the host will curse, and they will have a quarrel."* (Village leader) *"People also don't share latrine because sometime valuable thing is left unintentionally inside the latrine. People don't want to be accused of stealing. Sometime stealing could happen on purpose."* (Village leader)
Resource use:	*"[Would] have to spend more on the water and electricity bills."* (Village leader)

While non-relative sharing is rare, it does still occur. As outlined in Section 5.1, in half of the six target villages, no non-relative latrine sharing was identified by village leaders; in the remaining three villages non-relative sharing was less than 13 percent. Among the 24 clusters studied in-depth (household interviews and observations), only two hosts shared their latrine with non-relatives; in both those cases the sharers were older people who lived nearby.[21] Other reported non-relative sharers were found to be open defecating.

Closeness of relationship

In a limited number of clusters, sharing households had a particularly warm, close relationship. This was evident in two of the three clusters who had a planned, co-host latrine sharing arrangement. In these two instances siblings lived in close proximity to one another and were friends as well as family. One co-host described the relationship between sharing households:

> *"The four households here are my female siblings. We love each other very much. We can borrow/take each other's rice and drinking water, salt, and prahok. We always forgive each other."* (Co-host, V1_C2_A_60)

In a joint interview, co-hosts from the other cluster — where this dynamic was particularly pronounced — shared their view on the importance of a good relationship between households that share a latrine:

> *"If all the households get along very well, and have the same heart, they can share like us."* (Co-host, V3_C4_A_187)

> *"Some people get angry and mind each other when [they] share. People have to be harmonious to each other in order to share."* (Co-host, V3_C4_A_188)

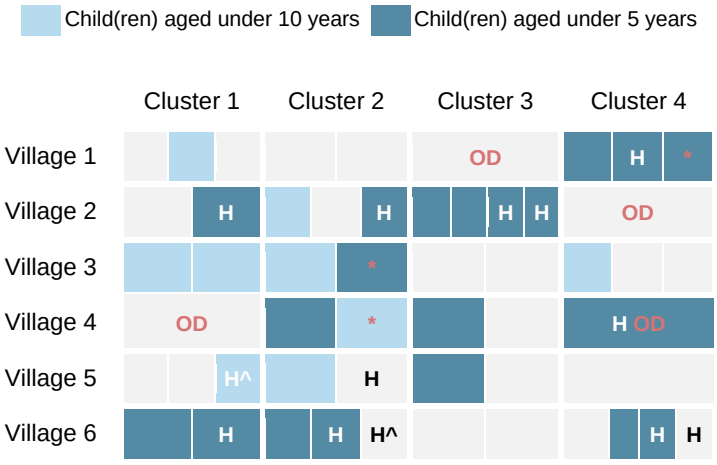
7.1.3 Life stage

Hosts appear to be sharing their latrine with sharers during two specific life stages. Hosts frequently shared a latrine with families with young children who were in the process of establishing their own household, and with older people.

Establishing households, often with young children

Hosts often shared a latrine with their (young) adult children, grandchildren, or a sibling who was building a new house of their own, or had built a new house in the last few years (Figure 18). Many of those sharers had recently married, had young children of their own and were struggling financially.[22]

Figure 18. Households with one or more children aged under 10 years, with text overlay showing households who are currently building or have recently built a house (H) or are living in a transitional (short-term) house (H^) [23]



[21] In one of those cases the co-hosts shared with an older woman who was single, landless and poor. In the other case, the host described the older couple who lived on her land and shared her latrine as like her adopted parents.
[22] As noted on the following pages, the financial constraints associated with building a new home combined with raising young children – particularly where that meant only one adult in a household was working – made it difficult for some sharers to save for, or afford, a latrine.
[23] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Both hosts and sharers suggested that there were particular financial constraints — and competing priorities — that meant that sharing was a pragmatic option during this life phase:

> *"I just moved out recently. And I ran out of money when building this house."* (Sharer, V6_C1_B_50)

> *"[Sharing with my parents] is beneficial because currently I don't have money. I have time to save up the money."* (Sharer, V2_C1_B_13)

> *"The children don't have the ability to build latrines yet; that's why we still share the latrine."* (Host, V2_C3_A_103)

> *"They [my children] can share it with me. When they have enough money, they can build their own one."* (Host, V1_C4_A_86)

> *"My children still don't have much money, so they come to defecate at my house."* (Host, V6_C2_A_74)

Some female respondents with young children spoke about it being difficult to save for, or afford, a latrine as only one adult in their household was working:

> *"Frankly speaking, during this time that I just gave birth, only my husband work. I myself don't have enough to eat..."* (Occasional sharer, V1_C4_B_244)

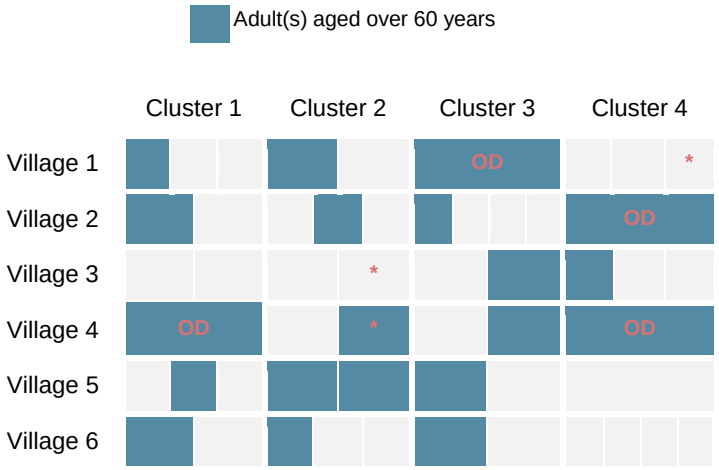
> *"I used to work but now I stopped… I stopped working when I was 5-months pregnant."* (Sharer, V3_C2_B_44-6)

> *"It is difficult as I don't have money now. I plan to stop having more children and start to work to earn money."* (Sharer, V3_C2_B_160)

Older people

There were several adults aged over 60 years living within both host and sharer households (Figure 19). In five clusters, hosts shared a latrine with an older person.

Figure 19. Households with adult(s) aged over 60 years [24]



Some hosts explicitly referenced a sharer's age as a reason why they share their latrine with that sharer:

> *"I let them share because they are old. If they build a latrine, no one will help them take care of the construction process."* (Host, V3_C3_A_174)

[24] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

In a separate interview, the sharer within that cluster expressed that they did not intend to build a latrine because they were older:

> *"We are old; we don't need to build latrine; we will die soon."* (Sharer, V3_C3_B_52)

7.1.4 Disadvantage

Disadvantage appears to be motivating at least some households to share a latrine. While both hosts and sharers experienced forms of potential disadvantages, a significant number of sharers experienced multiple and intersecting forms of disadvantage. Sharers variously experienced chronic illness or illness impacting their life and livelihood and were widowed or single/unmarried members of single occupant (and often female headed) households. Additionally, some sharers were elderly and/or poor.

When conducting observations, some of the wealth (and status) distinctions between host's and sharer's households were visually apparent. Some hosts lived in large, elevated houses made of good quality materials, whereas some sharers lived in much simpler, smaller, less elevated huts or houses within the same yard.

Multiple, intersectional disadvantage

When asked why they shared a latrine, some hosts described or articulated multiple (and often intersecting) considerations of disadvantage as motivating their decision to share:

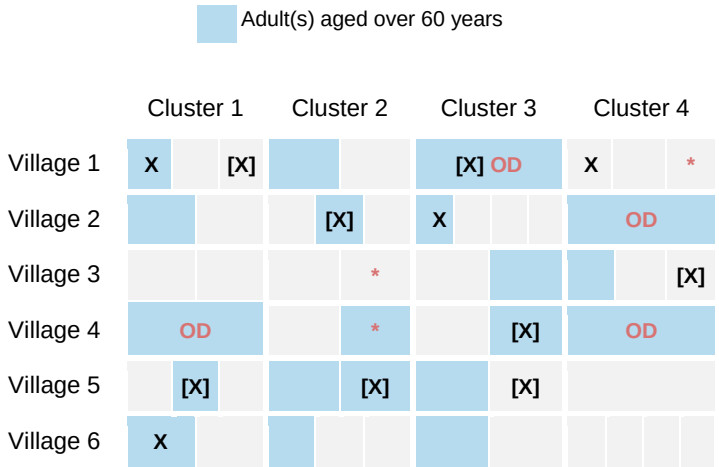
> *"The first reason is she is old. Second, she is a woman. It's difficult for her to defecate in the open especially at night. If she has a big house [and was rich], I would tell her to build a latrine. But she lives alone and has no family. Also, she doesn't have money to build it as it costs at least 1,000,000 riels for the normal latrine."* (Host, V5_C1_A_50)

> *"I help her because she is alone… She is sick a lot. She doesn't have money to build a latrine."* (Co-host, V1_C1_A_157-9)

Widowed or single/unmarried + Sole household occupant (+ Sex + Poverty)

In seven clusters, a host shared a latrine with a person who was widowed or single/unmarried. In all of those cases, that sharer lived alone. All except one of those sharers were female. Four of those seven sharers were aged over 60 years, with another two sharers aged 55 years or older (Figure 20).

Figure 20. Households with adult(s) aged over 60 years, with text overlay showing households with member(s) who are widowed or single (X) and belong to single-occupant households ([X]) [25]



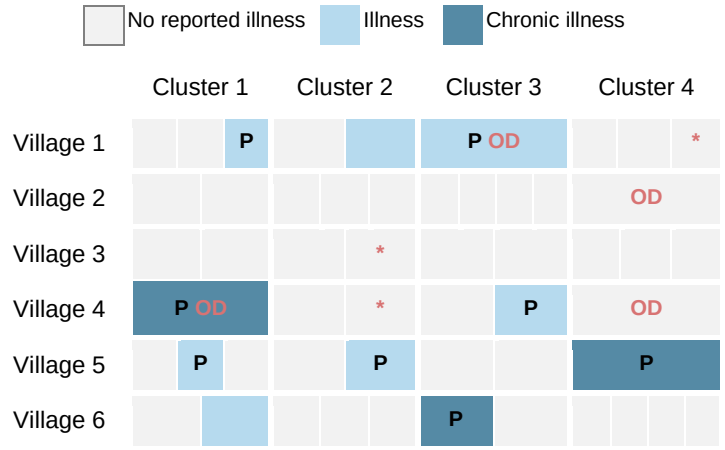
Additionally, five of those seven sharers experienced poverty, and four were experiencing illness. Of the seven sharers who were widowed or single/unmarried, four had a difficulty/disability.

[25] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Illness + Poverty

Eight sharing clusters (as well as two other households who open defecate) described a household member as experiencing chronic illness, such as HIV/AIDS or tuberculosis, or as having been considerably affected by recent significant or prolonged sickness. In most of those cases (seven clusters) the host and/or sharer named illness as a reason that they share a latrine. Six of the eight households who experienced illness (as well as the two households who open defecate) were also poor (Figure 21).[26]

Figure 21. Any household member with a chronic illness, or illness that has affected ability to build their own latrine, with text overlay showing households classified as poor (P) [27]



The cost of medicine and the inability to work (or work as much) due to illness meant some sharers had not been able to build their own latrine:

> *"She would have a latrine, if she hasn't been sick. She sold [property] to treat her illness."* (Host, V5_C2_A_326)

> *"There is only one reason [I defecate in that latrine] that is money as I spend it for the medicine… I don't have enough money to build my own one."* (Sharer, V1_C1_B_16-20)

> *"I don't have money. The salary that I get from my children is just a small amount for treating my sickness and for food."* (Sharer, V4_C1_B_58)

> *"Yes [I work], but it is just enough for buying the medicine."* (Sharer, V1_C1_B_156)

A sharer who had stopped working due to illness, but plans to build her own latrine within the next two years, describes the impact her illness had:

> *"My illness consumed everything. I have been sick for two years and a half. I spent [US] $2000, which was all the money that I had. I sold rice field[s]. I've just been better from the sickness lately."* (Sharer, V5_C2_A_328)

She also highlighted how her illness affected her financial independence and ability to earn:

> *"[My family] gave money to me… just enough to buy food to eat. I have not had any other income since the past two years and a half. Before that I sold snacks and could buy food for myself to eat. Now I only have money from [family]."* (Sharer, V5_C2_A_410)

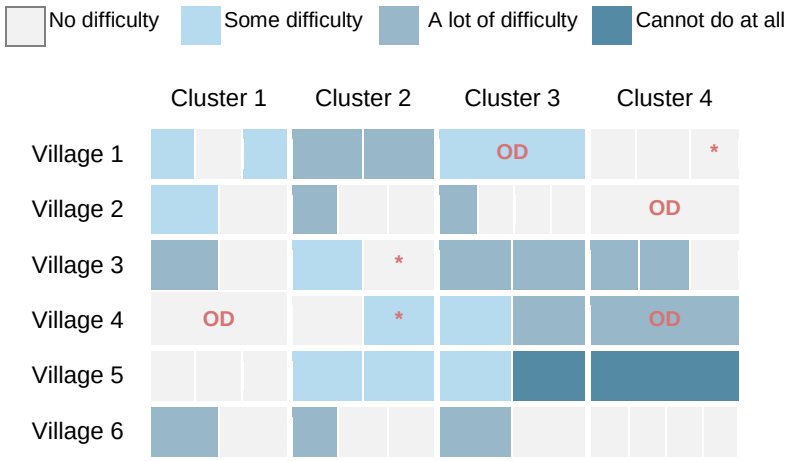
[26] Poverty status is based on ID Poor 1, ID Poor 2 classification and/or assessment of qualitive responses on food availability, household assets, and income over the previous 12 months.
[27] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Functional disability

Approximately eighty percent of household clusters have one or more household members who experience at least some difficulty seeing (even if wearing glasses), hearing (even if using a hearing aid), walking or climbing steps, and/or remembering or concentrating (19 out of 24 clusters).

Of the 26 households who experience at least some difficulty or functional disability, 17 are latrine hosts or co-hosts; only 7 are latrine sharers. Two other households with members who have difficulty seeing, hearing, walking or remembering do not share a latrine; they open defecate (Figure 22).

Figure 22. Any household member with any difficulty (if multiple disabilities, shading reflects most severe difficulty) (n=24 clusters, 54 households) [28]



Only one sharing cluster mentioned disability as a reason why their households share a latrine:

> *"[W]e share the latrine with him because he has blindness in both eyes. If we don't let him use the latrine, he will defecate in the open… After he uses the latrine, we who can see can clean it."* (Host, V5_C3_A_76)

> *"I am a person with disability. I can find my way here because I am used to it. I can live because my younger sister feeds me. I also share the latrine at her house for defecating. I am dependent on her to live. I can only walk to the place that I've been before*." (Sharer, V5_C3_B_1)

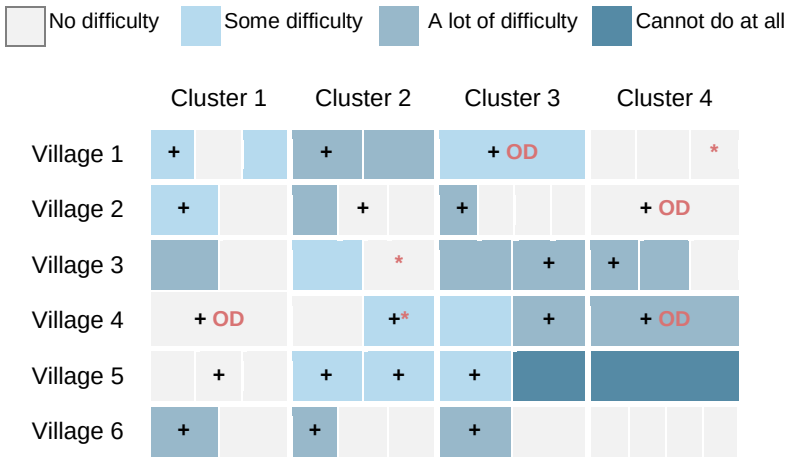
Other hosts and sharers referenced their own or another household member's disability when discussing latrine access and use, and as a reason they would like to have their own latrine.

Over 60 percent of households with at least one member who experiences a difficulty (a functional disability) had a family member aged over 60 years (16 of 26 households with a disability). As one respondent noted:

> *"Usually older people face more difficulties."* (Sharer, V5_C3_B_141)

[28] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

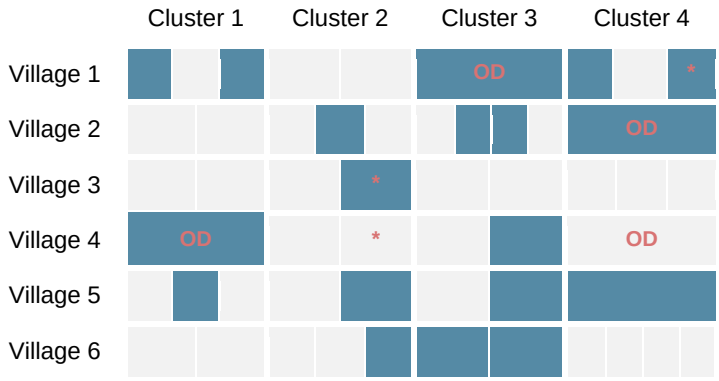
Figure 23. Any household member with any difficulty, with text overlay showing households with adult(s) aged over 60 years (+) (n= 24 clusters, 54 households) [29]



7.1.5 Poverty

Over 60 percent of clusters (15 of the 24) include at least one household who identified as ID Poor 1 or ID Poor 2 [30], or was classified as poor based on analysis of their qualitative responses to questions focused on sufficient access to food, household assets, and household income over a 12-month period. In most of those clusters, it was the sharer household who was poor (11 of 15 clusters). Additionally, three of the four households who open defecate are poor.

Figure 24. Poverty status (n=24 clusters, 54 households) [31]



For those households, poverty was named as a reason why they shared a latrine and had not build a latrine for their own household. As noted earlier, poverty was often associated with other forms of disadvantage:

> *"I really want to build a latrine for my daughters, but I really don't have the ability. The hut that we are living in is very old; it could be blown by the wind…"* (Occasional sharer, V1_C4_B_1)

> *"I don't have money to build it; that's all."* (Sharer, V5_C1_B_58)

[29] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.
[30] The Cambodian Government's identification system for the poor categorises individuals as ID Poor 1 (very poor) and ID Poor 2 (poor).
[31] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

"Frankly speaking, I didn't contribute even 100 riels to the latrine because I don't have money." (Sharer, V5_C3_B_28)

*"They want to [have their own latrine], but **they have nothing,** so they are trying hard now. I don't know when they will have the ability to build the latrine."* (Host, V6_C3_A_183)

Poverty was also a recurring experience among households who open defecate:

"We defecate in the open because we don't have money to build the latrine." (OD, V4_C1_B_10)

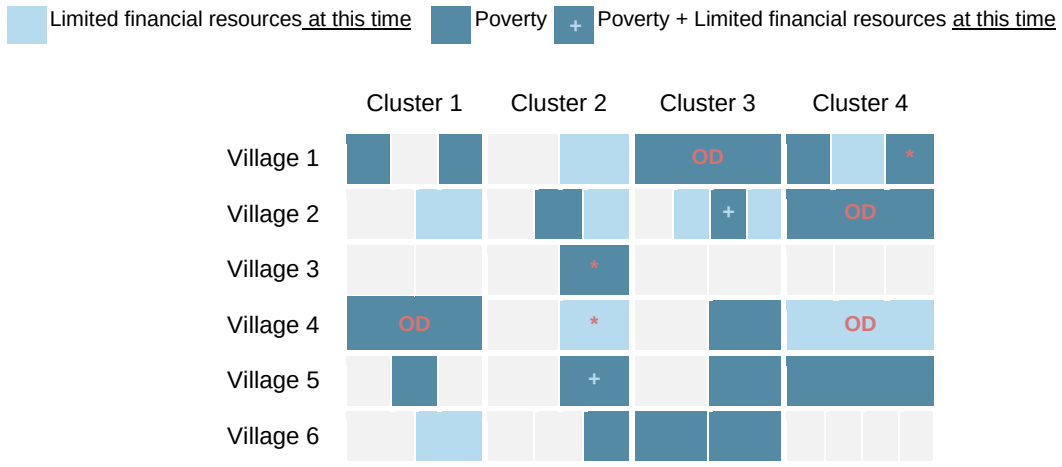
Recent analysis of CRSHIP's Disaggregated Data Gathering (DDG) dataset indicated that poverty seems to drive most of the variance in access to latrines in sampled rural Cambodian communities; access rates were consistently low for individuals within the dataset who were identified as ID Poor 1 or 2, or PVSAM Poor (Causal Design, 2019).[32]

7.1.6 Limited financial resources at this time

Financial constraints appear to be a substantial motivator for latrine sharing. Households within 20 out of 24 clusters had limited financial resources at this time due to a significant recent investment (9 clusters), and/or were poor (15 clusters).

All 10 households (across 9 clusters) identified as having limited financial resources at this time were sharers rather than hosts.

Figure 25. Poverty status + limited financial resources at this time (n=24 clusters, 54 households) [33]



Many of the households who had limited financial resources to build their own latrine at this time had built a house within the last few years, or were currently building, or about to begin building, a new house (and would then move away from interim or transition housing):

"[H]e has to pay off the construction materials for building his new house." (Host, V6_C2_A_84)

In contrast to responses from respondents who were poor, sharers who had limited financial resources at this time — and their respective hosts — often emphasised their intent to build a latrine, describing it as being "just a matter of time":

"[My sister] just spent the money to build the house. She ran out of money and needs time to save up money." (Host, V5_C2_A_73)

[32] WaterAid Cambodia and Plan International Cambodia recently engaged Causal Design to analyse an existing CRSHIP Disaggregated Data Gathering (DDG) dataset to understand whether — and if so, how — access to latrines, handwashing facilities and clean drinking water in rural Cambodian villages varies based on potential disadvantage.

[33] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

"In the future when my children have money, I plan to get them to build latrines. It is just a matter of time. Now one house has one latrine. The child in that house has razed the ground and grew vegetable at another plot of land. He plans to move there either this year or next year." (Host, V6_C2_A_82)

"[Sharing with my parents] is beneficial because currently I don't have money. I have time to save up the money." (Sharer, V2_C1_B_130)

"I cannot afford to build it yet." (Sharer, V6_C1_B_130)

"We are sharing because I don't have the ability to build own latrine yet. If I have ability, I will build my own private latrine." (Sharer, V4_C2_B_122)

The sanitation ladder concept that is common in some countries is generally thought not to be applicable in Cambodia; households will tend to delay purchasing a latrine until they can afford their preferred pour flush latrine (IDS, 2016). However, in the above instances, latrine sharing appears to be serving as a step or rung on the sanitation ladder — viewed as better than open defecation and a short to mid-term sanitation solution as households save for their own latrine.

7.1.7 Not a priority

Few, if any, households appear to be sharing simply because the latrine sharing situation is working for them, and/or because building a latrine is not a priority.

7.1.8 Community pressure

In a few instances, households described direct or indirect community pressure and expectations as a factor that motived them to share. As two sharers explained:

"There was a meeting in the village about sanitation, so my daughter said come to use my latrine; don't open defecate." (Sharer, V2_C2_A_102)

"I always use the latrine. When I first came to live here, I wanted to go open defecate. They told me to use the latrine." (Sharer, V4_C3_A_135)

In one cluster, latrine sharing had been initiated (or at least strongly encouraged) by a village leader:

"The village chief was very happy that I built the latrine… He asked for them to share the latrine with me [as] she is my own daughter and the two houses are close." (Host, V6_C3_A_171)

7.1.9 Intrinsic motivations and beliefs

Intrinsic motivations and beliefs also appear to be contributing to the decision to share a latrine. Some hosts emphasised empathy, pity, a sense of responsibility, or their desire to be a positive role model as reasons why they shared. Shame, which was generally linked to other people's views or perceptions, was also a factor.

Sense of responsibility or empathy:	Interviewer: *"Would you like to use this latrine just among your household members?"* Host: *"**How about the other two households, where will they go to defecate? How can I just ignore them?**"* (Host, V5_C1_A_192-3)
Pity:	*"They had some money and built this latrine. They [allow] me to use it for defecating and bathing so that I don't have face with difficulty… **They feel pity for me that's why they allow me to share their latrine**."* (Sharer with a disability, V5_C3_B_28)
Pity (cont.)	*"I built [the latrine] for this household's members only. However, **I felt pity for my daughter,** so I told her to come to use my latrine."* (Host, V6_C3_A_63)

Reputational considerations or shame:	*"If I don't [share], my grandchildren will open defecate. I don't want to have my grandchildren's faeces around the house because it is not hygienic. I let them share, and we just have to clean the latrine.* ***I also don't want villagers to say that I don't share latrine with my own grandchildren****."* (Host, V6_C2_A_99) *"I told her not to open defecate at the rice field* ***because it causes shame***." (Host, V6_C3_A_63)
Disgust:	*"I love [my] latrine. I don't let my children go to open defecate because* ***I feel disgusted****."* (Host, V6_C3_A_145)
Desire to be a positive role model to family:	*"I won't live forever.* ***I want the children to get used to the latrine so that when I die, they will build their own latrines****."* (Host, V2_C3_A_160) *"My grandchildren don't have a latrine to use yet, and I can't let them go to open defecate because they can get contamination diseases****. It is a good habit****. Having a latrine to use prevents us from diseases, and members have good health."* (Host, V6_C2_A_134)

7.1.10 Sanitation or health

While many respondents articulated the sanitation and health benefits of using a latrine in the course of their interview, only a few mentioned it as *a reason* why they shared a latrine on a regular basis. The following exchange was atypical:

> Interviewer: *"Why do you share your latrine with her?"*
> Host: *"Because she doesn't have a latrine, and I want us all to have good hygiene."* (Host, V5_C2_A_110)

8.0 LATRINE TYPE AND QUALITY, WASTE STORAGE AND DISPOSAL

Key insights

- **All of the 20 clusters who share a latrine on a regular basis had a pour flush latrine.**
- **Latrine shelters or above-ground structures were generally of good quality and users found the latrine to be sufficiently private, comfortable and safe.**
- **Only two clusters had deliberately designed their latrine (including the below-ground structure) for sharing.**
- **Some clusters had already had to empty their latrine pit and had continued sharing a latrine after that time. There was no evidence that hosts intend to stop sharing once the pit is full or that had been, or would be, a catalyst for sharers to build their own latrine or revert to open defecation.**
- **Some households had already disposed of faecal sludge in an unsafe way; other respondents planned to dispose of waste in a manner that will not protect community members from pathogen exposure.**

8.1 What type of latrines are being shared? What is their quality?

As noted in Section 2.4, the JMP define improved sanitation facilities as those that hygienically separate excreta from human contact (WHO & UNICEF, 2017). The JMP specify that a *safely managed sanitation service* must meet the following three criteria:

1. People use an improved sanitation facility (which include flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets and pit latrines with slabs)
2. People use a facility that is not shared with other households, and
3. Excreta should either be (a) treated and disposed of in situ, (b) stored temporarily and then emptied, (c) transported and treated off-site, or (d) transported through a sewer with wastewater and then treated off-site.

As such, the JMP classifies improved latrines that are shared between two or more households as a *limited sanitation service*. If the first and second of the above criteria are met but excreta from improved sanitation facilities are not safely managed, then people using those facilities will be classed as having a *basic sanitation service* (WHO & UNICEF, 2017). This means that even if sampled households ceased sharing, household members would be classified as having access to a basic service, rather than a safely managed service, due to the waste treatment practices respondents described.

8.1.1 Latrine type, below-ground structure and waste storage

Most households are using an improved latrine. All of the 20 clusters who share a latrine had a pour flush latrine (with water seal).

In all except one cluster, faecal waste was stored in an offset pit. Most clusters had lined latrine pits with between three and six concrete rings; three clusters (including two planned, co-host clusters) had a larger waste storage with eight or nine concrete rings. Where there were six or more rings, those were generally spread across two pits. In two cases, cluster members had designed the latrine's below-ground structure cognisant of the larger user load associated with sharing. A co-host, who had planned to share a latrine, explained how their latrine was deliberately designed for sharing:

> *"[We intended to share], that's why we put more rings. The rings are in twin pits… Four rings in each side so eight rings in total…I asked the mason, how many rings should I use for all these households? They said I should put eight rings. For these five years, it has never become full or cannot flush."* (Co-host, V1_C2_A_49-52, 62)

One-quarter of clusters (5 clusters) had a pit that was unlined or not fully enclosed. This is not necessarily problematic as safe treatment and disposal depends on soil characteristics, water table and proximity to drinking water source. Sometimes pits had not been enclosed as part of the initial design and sometimes household members had intentionally made a hole in concrete rings:

> *"Before this latrine could not flush. I dug the ground nearby the rings and made a hole in the ring [using a hoe] so that the waste can go through the hole. It could not flush a couple times during the first half year. But since I made the hole in the ring, it's never happened again."* (Host, V2_C3_A_94)

> *"I used the brick to build the pit so the liquid/water can sip out. The pit size is 1m*1m*2m. I put gravel at the bottom of the pit. However, it is not sealed at the bottom*." (Host, V5_C4_A_118)

> *"I put 3 rings nearby the tree so it will be absorbed by the tree in the dry season. There is no seal at the bottom. I dug another hole to and connect the two pits with a pipe/hose."* (Host, V5_C1_A_161)

One household explained how their pour flush toilet discharged to a nearby pond where they grow vegetables for their pigs:

> *"The [3 ring] pit is connected to the pond where I grow morning glory and trakeat [vegetable]. The [waste] flows into the pond [via a pipe from the middle ring]. The pond is a big storage. It is deep... We feed the vegetables to the pigs. But the vegetables are not for people."* (Host, V6_C2_A_163-170)

8.1.2 Waste disposal / faecal sludge management (FSM)

Four clusters had already had to empty their latrine pit and had continued sharing a latrine after that time. There was no evidence that hosts intend to stop sharing once the pit is full, or that had been, or would be, a catalyst or immediate

prompt for sharers to build their own latrine or for open defecation slippage. At the time of interview, there was one household that reported a near-term need to empty their latrine — along with low satisfaction with sharing. That low satisfaction may have been influenced by the belief/perception that the pit had filled quickly because there were many regular users and occasional guests.

Some households had already disposed of waste in an unsafe way. When asked what they had done with the waste that was pumped out, respondents replied:

> *"We pump[ed] it out during the flooding season. We let it flow with the water current."* (Host, V5_C2_A_494)

> *"[I]n the rainy season…. I did it by myself. It is just liquid, and it flows with the flood water current."* (Host, V5_C3_A_361)

> *"My husband… scooped the waste out and put it in the rice field…two times… My husband used the metal bucket to carry the waste to the rice field. Yes, we put ashes [in the waste before disposing of it]."* (Host, V6_C1_A_382-396)

Several other respondents indicated that their future intention to dispose of faecal sludge in a manner that may not be safe or sanitary:

> *"If it is full, we can pump it out to the rice field as a fertilizer for the paddy."* (Host, V5_C4_A_118)

Respondents' descriptions of (potentially) unsafe faecal sludge management are of concern as appropriate management of faeces throughout the entire sanitation chain is "essential to protect communities and children from pathogen exposure" (WHO & UNICEF, 2017). However, it is unclear from this research whether households that share a latrine are any more likely to dispose of waste unsafely than households who have latrine for their household only. While the higher user load associated with sharing a latrine *may* mean that sharing households need to empty their pit on a more regular basis than non-sharers, the research team hypothesise that the FSM practices described by respondents may reflect waste disposal methods that are common in rural Cambodia.

Users who previously open defecated were often confident and proud that they are using (what they perceive as) a good quality, sanitary latrine. However, if a latrine is being emptied in an unsafe way, this means the environmental sanitation status of some systems is poor. The mismatch between a user's understanding of the sanitation of their defecation practice and health risks is itself of concern (IDS, 2016).

8.1.3 Shelter structure

Latrine shelters or above-ground structures were generally of good quality. All had four concrete or brick walls. Most had a roof made of galvanised steel; however, two of the latrines that were observed did not have a roof. Respondents from both of those clusters reported using their latrines even when it rained, but said it was more difficult to access and less comfortable to use at those times. Most latrines had a substantial, functioning door able to be locked from the inside. One latrine did not have a door, but the co-hosts intended to build or replace that door within the next 12 months. In the interim, that cluster was using a temporary (though inadequate and potentially hazardous) galvanized steel cover. The host explained that they deliberately left their sandals outside the door so that other users knew that someone was occupying the latrine:

> *"We put the shoes as a sign... If someone is using the latrine, he/she will put a sign which is his/her shoes, meaning not to let other people go in. Other members pull the zinc piece closed."* (Co-Host, V1_C2_A_214, 283)

8.1.4 Privacy, comfort and safety

Almost all respondents felt that the latrine they used was sufficiently private, comfortable and safe. No respondents said that they could be seen while using the latrine. While several respondents said that other people could hear

them when they were using the latrine as it was close to a house or near a common area, that was not a problem for them: [34]

> *"Everyone makes that noise, not just me."* (Sharer, V2_C2_A_288)

> *"They can hear when they walk pass the latrine and also when we have diarrhoea."* (Sharer, V5_C1_B_166)

Almost all latrine users that were interviewed thought their latrine was sufficiently comfortable, variously remarking that it was cool and did not smell. Shared latrine hosts and sharers generally felt very safe or safe using the shared latrine during the day or night. Many latrines were equipped with a solar or electric light, and respondents often remarked that being able to turn on the light helped avert their fears of snakes and centipedes. A few older respondents mentioned accessibility concerns, indicating that they were afraid that the might trip over on the way to the latrine at night (see Section 9.2.1).

9.0 LATRINE ACCESS AND USE

Key insights

- **Both hosts and sharers said that all household members, including children and elderly people, could *access* the latrine to urinate or defecate at any time during the day or night.**
- **Most school-aged children and adults living within sharing clusters always *used* a latrine to defecate, and usually to urinate, when they were at home.**
- **Latrine use was much lower among young children. Both the place of defecation for infants and young children, and waste disposal practices, present sanitation and environmental health challenges**.
- **There were multiple observations and reports of children's faeces in a central location in the yard, proximate to a house.**

9.1 Who can access the latrine, and when?

Both hosts and sharers said that all household members, including children and elderly people, could access the latrine to urinate or defecate at any time during the day or night. No latrines were locked from the outside:

> *"They can access it both day time and night time."* (Host, V5_C3_A_157)

> *[T]hey can access it anytime. When we stop using it, we turn off the light and close the toilet door but [do] not lock [it]. We only lock it from the inside."* (Co-host, V3_C4_A_124-7)

> *"They can access [it] anytime they want."* (Host, V5_C1_A_113, 117)

9.2 Who is using the latrine, and when?

9.2.1 Adults and school aged children

Most school-aged children and adults living within sharing clusters always used a latrine to defecate when they were at home.

As outlined in Section 4.2, four households that village leaders identified as belonging to a sharing cluster had never shared a latrine; they open defecate.

[34] Only one respondent indicated they felt shy when that occurred (C1_V6_154)

Although hosts and sharers said that they were permitted to access the latrine at any time, several members within sharing households did not always use the latrine or did not use the latrine at all. This appears to be driven by accessibility and, in one case, by preference:

Not always using a latrine because of access or accessibility challenges

One household sometimes shared a host's latrine during the day. That sharer lived approximately 200 metres away from the host's latrine; while most members of the household would travel to use the latrine during the day, at night they did not:[35]

> *"If my children and I come here, we go to defecate in the latrine. But if we are at home, we don't use a latrine. I use the hoe to dig the ground… in the rice field [at the side of the house]."* (Sometimes sharer, V1_C4_B_22-24, 34)

> *"[We use a defecating pot] when my children are sick and cannot walk to the back. Or when it is dark and they cannot go to the back. We will dig the ground and bury the faeces later. [I also use the pot] at night. It's dark; I cannot go outside."* (Sometimes sharer, V1_C4_B_106-8)

In a different cluster, a sharer from a single-occupant household did not use the latrine at night because it was difficult for her to make her way over the bumpy path to get there:

> *"[At night] it is dark and I'm afraid that I would fall into one of the ground holes. Therefore, I use the pot to defecate, and cover it with a cloth at night. In the morning, I empty the pot [in the latrine]."* (Sharer, V5_C2_A_187)

With that expectation, all people with a physical disability or difficulty reported always using the latrine when they were at home.

Not using a latrine due to preference

One member of a sharing household, who described himself as "an old person, [an] ancient person" did not use the latrine during the day as he finds open defecating to be more comfortable and quieter — and believed it was more hygienic — than defecating in a latrine:

> *"Actually, [during the day] I never use the latrine. I go to defecate in the forest where I bring the cow to eat grass." "[I] can bring the hoe or sometimes defecate right on the ground. No problem as long as I walk far away. I go to defecate far away in the forest not around here or around the house."* (OD / sometimes sharer, V4_C2_B_90-94)

He used the host's latrine if he needed to defecate at night time, perhaps referencing the nationally broadcast 'Snakes' television commercial (aimed at preventing open defecation and persuading people in rural areas to use a latrine) (Cambodian Ministry of Health & 17 Triggers, n.d) as a reason he did so:

> *"At night I use the latrine. At day time I open defecate…At night I don't dare to go defecate because I'm afraid of snakes and centipedes. Like in the TV — someone didn't use a latrine and the snake was chasing after him."* (OD / sometimes sharer, V4_C2_B_110-4)

Interestingly, that person quite articulately described faecal contamination pathways, linking sanitation to human health:

> *"Defecating around the house is not hygienic. That can cause people to become sick… [with] diseases such as diarrhea or cholera, if don't go to the hospital in time [that] can cause death. Cholera [is] caused by the flies sitting on the rice, or food that is not hygienic*." (OD / sometimes sharer, V4_C2_B_114-6)

[35] One adult within that household rarely used the host's latrine.

Many respondents said that when adults within their household were ill, they would often still try to use the latrine. Alternatively, they would defecate in a chamber pot and then either dispose of it in the latrine or throw it or bury it at the back of their house or in a nearby field.[36]

As is acknowledged within the Cambodian rural WASH sector, adults who use a latrine at home sometimes open defecate when working in their fields or when travelling to other locations for work. Many respondents were quite forthcoming about this:

> *"When I go to the rice field, I defecate there. But if I am home, I only defecate in the latrine."* (Co-host, V1_C2_A_104)

> *"If we are in the field, we will defecate there."* (Host, V4_C3_A_127)

> *"If the field is near home I will come back, but if it's far I don't…We have [some] rice fields nearby home."* (Sharer, V1_C4_A_135)

> *"[During] harvesting and planting seasons… if want to defecate, [I] defecate at the rice field for sure."* (Co-host, V1_C2_A_150)

A few respondents described household members travelling home to use the latrine if they needed to defecate during the day. Other respondents said that they used latrines at their workplace or asked (and sometimes paid) to use a latrine where they were working:

> *"My [30-year-old] niece, if she goes to harvest the rice and want to defecate, she will ride the bicycle back to come to defecate at home."* (Co-host, V1_C1_A_107)

> *"[A]t the market when I go to sell fish, I will ask to use the latrine at people's houses there."* (Co-host, V1_C2_A_112)

> *"My daughters work in the factory, so they use the latrine there. The son-in-law use the one at his workplace…When they are home in the evening, they use the latrine here."* (Host, V4_C3_A_43)

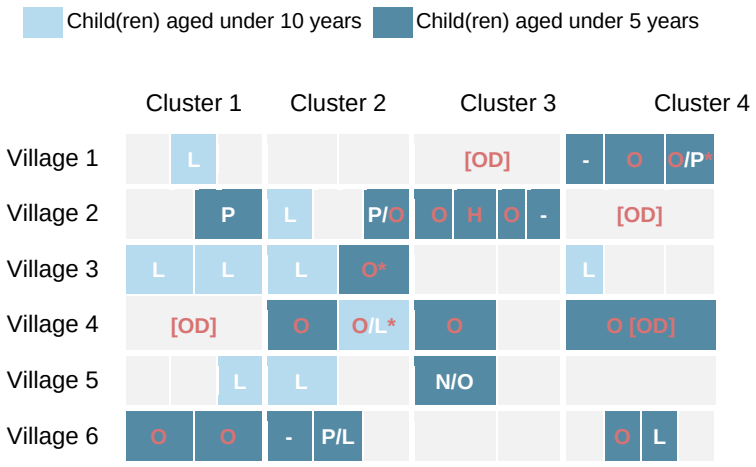
9.2.2 Infants and young children

While most school-aged children and adults within latrine sharing clusters reported always using a latrine, latrine use was much lower among young children. Both the place of defecation for infants and young children, and waste disposal practices, present sanitation and environmental health challenges.

Twenty (20) households (across 12 clusters) have one or more children aged under 5 years. Among the 17 households for which information about young children's defecation and waste disposal was gathered, at least one child from 13 households usually open defecate anywhere in their yard (12) or defecate into a pre-dug hole (1) (**Figure 26**). In most (10) of those households, an adult would then pick up the faeces with a hoe or shovel and bury it in the yard, or in a nearby field. Only one household said they disposed of those faeces in the latrine. One other household threw the waste onto someone else's field. When used, nappies were also buried. In the three households where children aged under 5 used a pot or potty to defecate, an adult then disposed of their faeces in the latrine.

[36] Information on where pots were then emptied was not gathered during all interviews. Approximately half of available responses indicate waste was disposed in the latrine, and half indicate it was buried or thrown away.

Figure 26. Place of defecation for child(ren) aged under 10 years indicated with text: Latrine (L), Open defecate anywhere in yard (O), Open defecate in a pre-dug hole (H), Pot/Potty (P), Nappy (N)[37]



Child open defecates in yard, faeces then buried:	*"She uses the latrine. The small children [5 and under] defecate on the ground. Then we dig and bury the faeces in the ground... [in] the backyard."* (Host, V4_C3_A_27-37) *"[The children aged 7 and under] defecate in the open and we bury it… at the back of the house. I use the hoe*." (Sharer 1, V3_C2_B_140-4) *"[This child defecates] on the ground… I dig the ground and bury it."* (Sharer 2, V3_C2_B_22) *"I tell [5-year-old son] to go to the latrine… But sometimes he defecates in the open and we have to pick the faeces after him… [We] bury it." "We have both a shovel and hoe."* (Sharer, V1_C4_A_38-41, 150)
Child open defecates in yard, faeces then thrown away (not buried):	*"This [2-year-old] girl defecates everywhere. I have to pick the faeces after her… [and throw it on] the rice field. Sometimes, in the latrine."* (Sharer, V4_C2_A_13) *"He/she defecates on the ground around the house… I throw it away at the rice field to the South… It is someone else's [field]."* (Sharer, V6_C1_B_12)
Child defecates in nappy, gathered then buried:	*"[The baby] uses the nappy… I put them in one place and bury them later."* (Sharer, V1_C4_B_86-8)
Child defecates in pot, then disposed of in latrine: (Note mixed disposal method.)	*"[The youngest child] defecates in the pot. The faeces are then emptied in the latrine. [She sometimes also defecates in the yard] and we move the faeces to bury."* (Sharer, V2_C2_A_176-8)

[37] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate. (-) = information not available.

Analysis of CRSHIP's DDG dataset also indicated that children living in rural Cambodia have more limited access to latrines than adults (Causal Design, 2019).[38]

While visiting three household clusters, the research team observed children's faeces in a central location in the yard, proximate to a house, indicating that in at least some cases faeces is not being disposed of promptly.

The reason why many households choose to bury faeces, rather than dispose of faeces in a latrine, is not clear. One respondent explained her rationale for burying children's faeces, rather than disposing of it in the latrine:

> *"[T]he kid doesn't defecate in the defecating pot like adult people who are sick. He defecates on the ground so when I pick the faeces there are some dirt come with it. It is not good to bring the faeces with dirt to dispose in the latrine because it makes the latrine unclean."* (Host, V6_C1_A_380)

It is also unclear whether the defecation and disposal practices of young children described above are any more likely to occur within households who share a latrine than in households who have a latrine for their household only. The practices described above *may* reflect child defecation and disposal practices among children living in rural areas more broadly. IDE's Sanitation Marketing Scale Up research found that over half (51 percent) of respondents report never or almost never disposing of infant faeces in the latrine; only 21 percent of respondents disposed of infant faeces in the latrine always or almost always (iDE, 2018).

The defecation practices of infants and young children described by respondents (and observed by the research team) are problematic as unsafe disposal of children's faeces can pose a greater health risk than adult's faeces. Children's faeces can be more infective/communicable than adults' faeces, and given their likely proximity to the household environment, can present a significant health risk (Miller-Petrie et al., 2015).

Among sampled latrine sharing clusters, children appear to be using a latrine most or all of the time from around five or seven years:

> *"[The 7-year-old defecates in] my mother's latrine…Once in a while when we are careless, she [open defecates]. I blamed her when I saw her do that."* (Sharer, V3_C2_B_18-20)

> *"[The 5-year-old] uses [the] latrine often. [It's] only when he needs to defecate urgently, like having diarrhea, that he open defecates."* (Host, V4_C2_A_73)

A contrasting situation was provided by one respondent who described a two-year-old family member's preference for using a latrine:

> *"This small one also asks us to bring him to the latrine. At night he uses the defecating pot, and we empty it in the latrine. [During the day] he asks to use the latrine because he is used to taking bath inside the latrine. It feels cool in there, so he also asks to go to the latrine for defecating."* (Host, V6_C2_A_18)

While that was an outlier within the sample, it been included here due to its potential for inclusion in sanitation marketing or behavioural change campaigns.

[38] WaterAid Cambodia and Plan International Cambodia recently engaged Causal Design to analyse an existing CRSHIP Disaggregated Data Gathering (DDG) dataset to understand whether — and if so, how — access to latrines, handwashing facilities and clean drinking water in rural Cambodian villages varies based on potential disadvantage.

10.0 ROLES AND RESPONSIBILTIES: CONSTRUCTION, MAINTENANCE AND CLEANING

Key insights

- **In most sharing clusters the latrine belongs to, and is the responsibility of, the host or owner. The host had paid for and built their latrine and was usually responsible for ongoing maintenance and repair costs.**
- **While hosts and sharers contributed to cleaning, a female member of the host household was primarily responsible for cleaning the latrine regularly.**
- **In the three instances where a latrine was co-hosted (co-owned), those costs and responsibilities were shared; each household contributed to building, maintaining, repairing, and cleaning the latrine.**
- **Restrictions are not placed on sharers' use of the latrine; however, some hosts provided guidance or reminders about cleaning and handwashing.**

10.1 How is sharing structured and managed?

In most sharing clusters, the host or owner had financed and built their latrine. Hosts were generally responsible for ongoing maintenance and repair costs. While hosts and sharers contributed to cleaning, a female member of the host household was primarily responsible for cleaning the latrine regularly. In the three instances where a latrine was co-hosted (co-owned), those costs and responsibilities were shared; each household contributed to building, maintaining, repairing, and cleaning the latrine.

10.1.1 Who built the latrine? Who contributed to labour and cost?

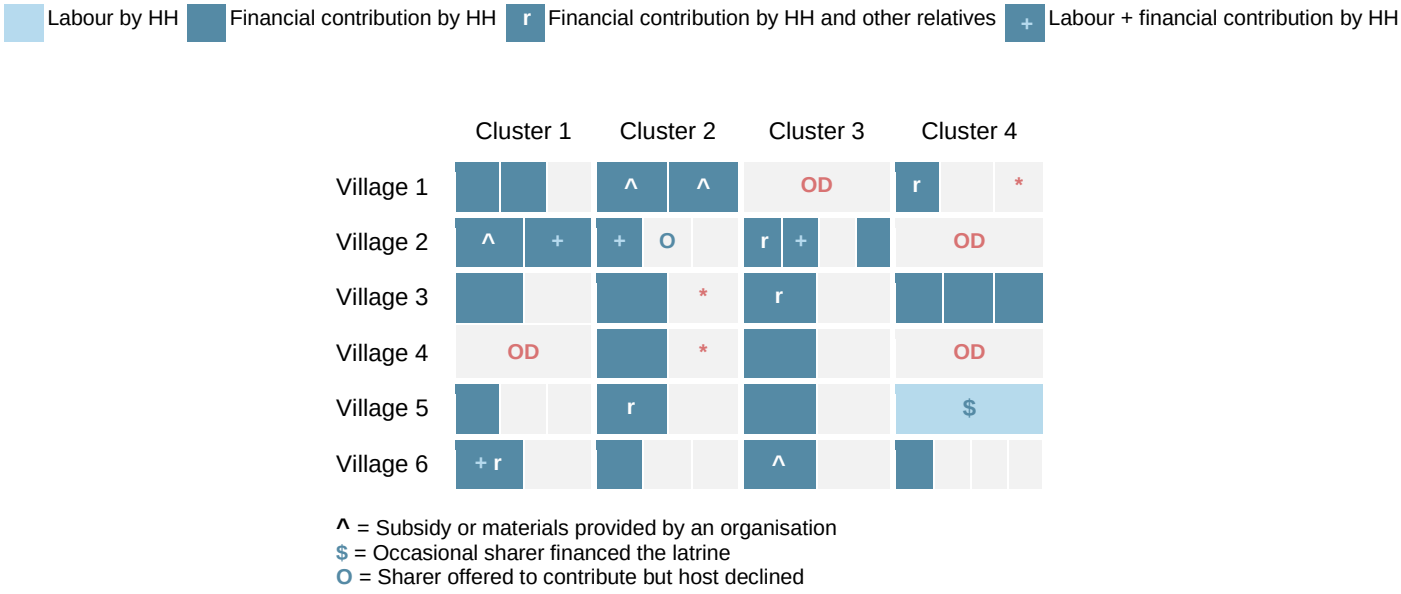
In most clusters, the latrine host or owner had financed and built their own latrine. Sharers tended not to have contributed to the costs or labour associated with building the latrine (Figure 27):

> *"It cost $500…. Me and my husband were the household head, so we paid."* (Host, V4_C3_A_73)

> *"I bought the building materials and I built it by myself. I paid for it."* (Host, V5_C1_A_52)

> *"My son-in-law built this latrine by himself. He can fix it if it is broken. And for the material such as cement, he can pay for it…"* (Sharer, V2_C2_A_124)

Figure 27. Households who contributed to the labour and cost of building the shared latrine (n=24 clusters, 54 households) [39]



Five hosts said that other (non-sharing) relatives had made a financial contribution that helped them to purchase, install, and build the latrine and/or latrine shelter.

> *"Me and my husband [planned the latrine]. We also asked the mason to calculate… All my children [helped cover the $300 cost]."* (Host, V5_C2_A_134-6)

> *"[It was built] 12 years ago… [we used] our money and money from our children who were working."* (Host, V1_C4_A_54)

In five clusters, sharers had made a financial contribution to the latrine's construction. That occurred in all three clusters where a *planned* latrine co-ownership arrangement was in place:

> Co-host 1: *"I contributed the pan, rings, pipe. That house [Co-host 3] contributed $50."*
> Co-host 2: *"I covered the labour, the bricks, and the roof."* (V3_C4_A_75-77)

> *"All the four households shared the cost… We also bought beer for the mason's team to drink. I don't know how much it cost, but we determined to share [it]."* (Co-host 1 & 2, V1_C2_A_26, 79-80)

Additionally, two sharer households had contributed to the cost of the latrine when they were living with their parents, and then *transitioned* to a sharing model when they built their own house nearby:

> *"At that time, my children were not married yet, so they contributed the money. My niece/nephew live in the USA also contributed some money when he/she visited our house. He/she gave me $100 or $50. I saved the money over a couple years. I also sold animals that my children raised."* (Host, V2_C3_A_53)

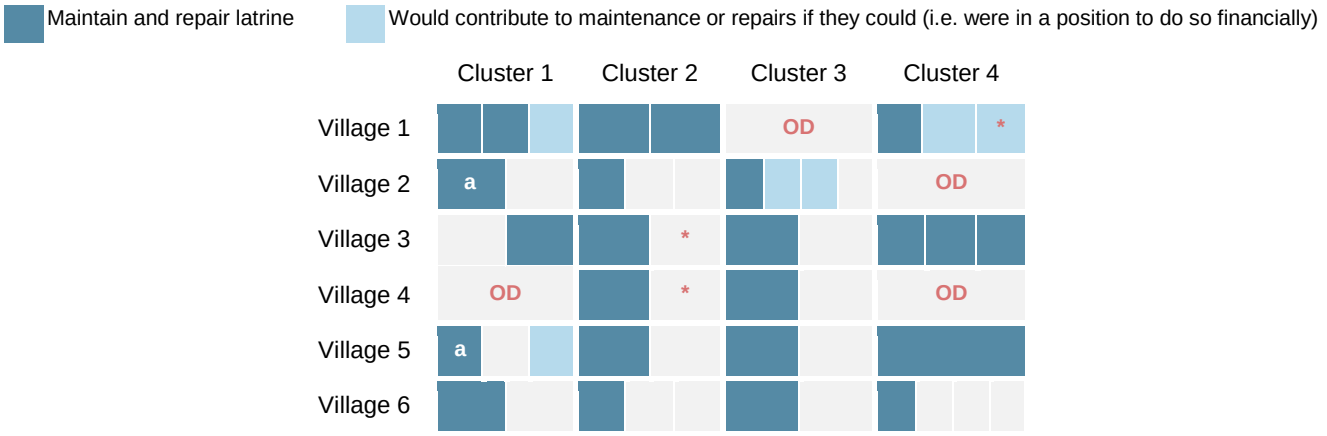
The above responses also serve as reminders that for some households a latrine represents a substantial financial investment. In Cambodia, as with other jurisdictions, installation of an improved latrine and superstructure can easily exceed a rural household's monthly income (Trémolet et al., 2010 in USAID 2018).

[39] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

10.1.2 Who maintains or repairs the latrine? How is that managed?

Most hosts covered the day to day expenses such as cleaning products and electricity. Hosts were also primarily responsible for maintenance and repairs (Figure 28).

Figure 28. Households who contributed to the labour and cost of maintaining and repairing the shared latrine (n=24 clusters, 54 households) [40]



a = Would not ask but would accept contributions from sharers

Many hosts emphasized their role as latrine owner, or household head, when explaining that they were responsible for maintaining and repairing the latrine:

> *"I own the latrine and manage it… I let the other members use it. If it is broken, we will fix it. If it becomes full, we will empty it."* (Host, V4_C3_A_104)

> *"I pay for it. It's my latrine so I cannot ask other people pay for [repairs or materials]. That is not appropriate."* (Host, V5_C1_A_151)

> Researcher: *"Who is responsible for maintenance and fixing the latrine when it is broken?"*
> Host: *"That's me who is the head of the household…. No outsider will pay for us."* (Host, V5_C3_A_192-4)

> *"I am responsible for paying for the water and electricity bills. My children still don't have much money, so they come to defecate at my house…"* (Host, V6_C2_A_74)

Some sharers said that they would like to make a financial or in-kind contribution to repairs if they were in a financial position to do so:

> *"I would contribute some money if I had money."* (Sharer, V1_C1_B_34)

Some hosts indicated that they would be open to, or would like, sharers to contribute to those costs, but would not ask them directly:

> *"I will buy [a new roof] on my own but if my children want to help, it would be fine. I was about to use the old zinc, but I reckoned, [an] old roof doesn't look nice with the new latrine shelter."* (Host, V2_C1_A_74)

> *"I won't [ask]. However, if once I buy the materials and they want to contribute, I will accept that."* (Sharer, V5_C1_A_167)

[40] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Financial resource availability was repeatedly mentioned. Sometimes hosts said that it would depend on who had money at that particular time. A few sharers indicated that they would not be asked to contribute because they did not have the means to do so:

> *"I would ask the children as well. If they have money, they will help. And if I have the ability to cover for it alone, I will."* (Host, V2_C1_A_264)

> *"They don't ask me to share [costs] because they know that I live alone."* (Sharer, V5_C1_B_144)

In planned arrangements, latrine co-hosts indicated that they shared, or would share, the cost of repairs:

> *"We will share the money. Everyone."* (Co-host, V3_C4_A_79)

> *"It has never broken [but] my son and I will pay for fixing it… [the amount we contribute] depends on whether I'd have money or not. If my son has more money, he would pay more."* (Co-host, V1_C1_A_86-88)

10.1.3 Who cleans the latrine? How is that managed?

Both hosts and sharers emphasised that people across different households helped clean:

> *"Everyone cleans. For example, [if] I see anywhere [is] not clean, I pour water on it, brush, and wash it."* (Sharer, V2_C1_B_161)

> *"All my children are clean. In the morning if they go in the latrine and see that it is not clean, they will clean it."* (Host, V2_C3_A_111)

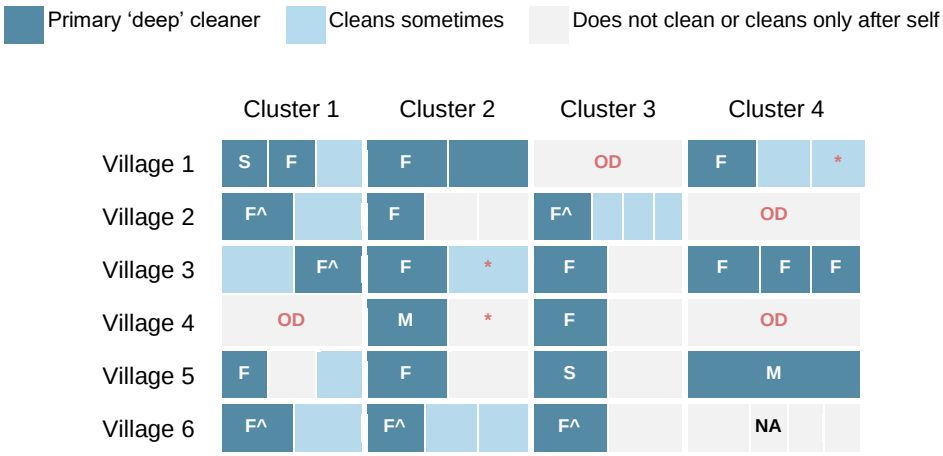
> *"The person who uses the latrine, cleans it."* (Sharer, V3_C1_A_185)

However, when probed as to who, if anyone, cleaned more regularly respondents almost always identified or named a female member of the host's household. 18 of the 22 identified primary cleaners were women (82 percent):

> *"My daughter [who lives with me]. She cleans the latrine with soap…every 1-3 days."* (Host, V6_C3_A_123)

> *"My daughter… is responsible for cleaning the latrine. She doesn't wait for the two younger siblings [who] live in the other two houses to come clean. She just does it."* (Host, V6_C2_A_74)

Figure 29. Households who were primarily responsible for, or contributed to, cleaning, with text overlay indicating Female (F), Male (M) or Female and Male (S) primary cleaner (^ = does not have paid employment) [41]



[41] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Often the primary cleaner did not have paid employment, and either they or another cluster member stated this as the reason they did more cleaning. In the one cluster where a sharer (not the host) was primarily responsible for cleaning, the same explanation was offered:

> *"We all use [the latrine], but since I stay at home, I clean it regularly… My daughters buy the materials for use in the latrine. I am responsible for cleaning the latrine every 2 or 3 days."* (Host, V3_C3_A_140)

> *"I clean the latrine, the pan, and the slab. I tell my children how to clean it…. [T]hey always go to work. Only I stay at home, so I clean the latrine [every day]. The children, they just use the latrine to defecate and go to work."* (Host, V6_C1_A_207-211)

> *"Since I stay at home, I clean the latrine. My children go to work."* (Sharer, V3_C1_A_80)

It is likely that the above findings reflect broader trends of women bearing primary responsibility for cleaning across households in rural Cambodia.

A few sharers that used the latrine regularly stated that they rarely or never cleaned it:

> *"I never help with cleaning. When I go to use the latrine, I pour the water to clean the inside of the latrine."* (Sharer, V5_C2_A_297)

> *"I clean it occasionally, when I have free time."* (Sharer, V6_C1_B_110)

Only one host voiced his frustration about the cleaning burden his household bore:

> *"They use the latrine, but they don't help clean it… We clean here, but the latrine is not clean because they come to use [it]. Some people wear shoes in the latrine."* (Host, V4_C2_A_45)

Co-hosts shared cleaning responsibilities. In two clusters, that responsibility was split evenly. In the other cluster, all households took the initiative to clean, and did so regularly, but one household member cleaned the latrine on a more regular basis:

> *"We together help with cleaning, [if] someone uses it; he/she cleans it."* (Co-host, V3_C4_A_83)

> *"There is no schedule for cleaning or people responsible for cleaning. Those who use it, clean it… But my sister here cleans the latrine more often."* (Co-host, V1_C2_A_73-77)

10.1.4 What restrictions are there on shared latrine use?

All hosts and sharers stated that any household member could access the latrine at any time of the night and day, and indicated that there were no restrictions associated with use:

> *"I don't restrict anybody."* (Host, V6_C3_A_117)

A few respondents added that they had spoken agreements, or had given reminders, about cleaning and handwashing:

> *"We don't have any written restrictions, but we have spoken with each other that we mustn't wear shoes into the latrine. In addition, there is soap in the latrine so after defecating, we have to wash our hands with soap to keep good hygiene. Everyone knows and follows it."* (Host, V5_C3_A_173)

> *"I told the members to help clean it. After defecating, flush the water to make it clean and avoid bad smell."* (Host, V5_C1_A_129)

> *"I just told them to clean the latrine and wash their hand with the soap there after defecating to prevent themselves from germs."* (Host, V2_C1_A_248)

"My mother, she tells us to clean after we use the latrine and when the latrine is dirty. Brush and clean it." (Sharer, 2_C3_B_193-5)

"I told all my children and grandchildren, both big and small, the one [who] uses the latrine must clean it. None of us here is the servant… it is best for the members to clean it when they use it." (Host, V6_C2_A_112)

While latrine sharers could use the latrine to defecate at any time of the night or day, most sharers did not use the latrine to bathe or to wash clothes. This was a key area in which hosts' and sharers' use of a latrine differed:

"…they only share the latrine for defecating; they don't bath in the latrine. They bathe at the well. Only members from my house bathe inside the latrine." (Host, V5_C1_A_171)

"Actually, I take a bath outside the latrine. I only use the latrine for defecating and pee." (Sharer, V5_C3_B_34)

"The [older sharers] use it for defecating. They don't shower inside. They take a bath in the stream at the back." (Host, V3_C3_A_144)

As noted in Section 11.3, some sharers said that a benefit of having a latrine for their household only would be the ability to use the bathroom for bathing.

11.0 BENEFITS AND CHALLENGES

Key insights

- **Many hosts and sharers reflected that "there are no benefits" to sharing a latrine beyond a sharer not having to open defecate.**
- **Many hosts and sharers highlighted the sanitation or hygiene benefits of sharing and linked those to broader health outcomes. Some hosts emphasised the ability to help others who did not (yet) have a latrine as a benefit.**
- **Both hosts and sharers emphasised that sharing a latrine with another household is "not easy". Challenges included: difficulty accessing a latrine because other people were using it, cleanliness, increased resource use, and the (perceived or real) concern that hosts were not happy to share their latrine.**

11.1 What are the benefits of sharing a latrine?

Latrine sharing can represent a good short- to mid-term sanitation solution. It can provide people who do not otherwise have access to a latrine — and who would (most likely) practice open defecation — with a safe and hygienic latrine. However, many hosts and sharers reflected that "there are no benefits" to sharing a latrine beyond a sharer not having to open defecate, and the associated health and sanitation benefits.

11.1.1 No benefits

When asked what benefits there were to sharing a latrine, hosts and shares responded by saying:

*"There is **no benefit.** We only share it because we don't have a latrine." "But if we don't share with them and go to open defecate, we will get diseases."* (Sharer, V6_C1_B_78, 80)

*"There are **no benefits**… As they don't have latrine, I **let them** use it. The only benefit is decreasing sickness. Because open defecate can cause diarrhea."* (Host, V5_C1_A_106-9)

"Nothing." (Sharer, V3_C2_B_74)

*"**No benefits**. My children just agreed to share because this house doesn't have a latrine yet."* (Sharer, V4_C2_B_120)

*"There is **no benefit** in sharing the latrine. We only share now because we are in need of renovating the latrine. Not everyone is healthy. Some people are ill. We are cautious; if one of the latrine users is ill, he/she can spread the disease to the members."* (Host, V6_C4_A_133)

This response was also echoed in WASH sector consultations. One rural WASH practitioner highlighted that a push for people to share a latrine may mean that resources (time, energy, and effort) could alternatively be invested into supporting households to build a latrine and, in turn, ensuring villages sustainably reach ODF targets and total latrine coverage.

11.1.2 Health

Many respondents highlighted the sanitation or hygiene benefits of sharing and linked those to broader health outcomes. References to faecal transmission pathways — particularly through flies and fields — were quite common:

"It is hygienic to my family and other families living around. Open defecation is dirty and causes flies to transmit diseases… It also protects our family's health, less sickness." (Host, V2_C1_A_217-9)

"In my opinion, sharing a latrine brings sanitation and good health. We don't have to go to open defecate which affects the hygiene of our living and causes various diseases." (Host, V5_C3_A_144)

"It reduces the chance that we open defecate." (Sharer, V4_C2_B_124)

"It makes the house clean and hygienic." (Host, V4_C3_A_153)

11.1.3 Supporting another household to use a latrine

Some hosts emphasised the ability to help others who did not (yet) have a latrine as a benefit:

"We can help each other; for example, if one doesn't have enough money to build latrine alone…" (Co-host, V1_C1_A_157)

"It is a benefit for my children not to defecate in the open since they don't have their own latrine." (Host, V6_C1_A_159)

11.1.4 Health + Supporting another household to use a latrine

Many responses referenced both health and being able to support households who would otherwise not have access to a latrine as dual benefits of sharing:

"[Sharing] has benefit because when we share, my children who don't have the ability to build latrine also can use [a] latrine… If they open defecate, it will be dirty. There is a smell. Since they live around me, I can't just ignore all these. Also, it could cause diseases. [When] there is no hygiene, flies will sit on the food. When we eat the food, we will become sick." (Host, V2_C3_A_144)

"The first benefit is that the faeces don't spread out. Secondly, for people who don't have money like me can also use a latrine… When we have good sanitation, our health is also good." (Sharer, V1_C1_B_75-7)

"I think it is hygienic if we use latrine. People who don't have money to build their own latrine can share." (Host, V2_C1_A_120)

11.1.5 Saving money

Only one sharer, who had shared their sibling's latrine for five years, acknowledged that using another household's latrine meant they didn't have to spend money on their own latrine or upkeep:

"For me, since I haven't built a latrine here, I could save more money [laughter]." (Sharer, V5_C1_C_80)

11.2 What are the challenges of sharing a latrine?

Both hosts and sharers emphasised that sharing a latrine with another household is not easy:

"People share the latrine because they have no money. Otherwise, they would not. I recommend people to build a separate latrine for each house because ***it is not easy to share*** *no matter why it is that they are sharing."* (Host, V5_C1_A_221)

"Using other people's [latrine] is ***not easy.*** *Even it's fine with the sibling, how about the in-law?"* (Sharer V2_C2_A_266)

*"****It's really difficult [to share].*** *I'm afraid that my younger sibling minds. I don't have money; if I do, I will build my own latrine."* (Sharer, V5_C2_A_116, 404)

The inability to access a latrine because other people were using it, cleanliness, and increased resource use, as well as the (perceived or real) concern that hosts were not happy to share their latrine, were all named as challenges.

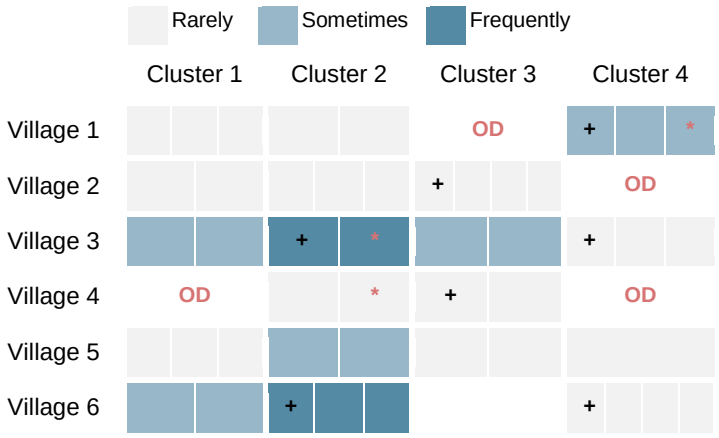
11.2.1 Difficulty accessing the latrine when other people are using it

Both hosts and sharers highlighted the difficulty of being unable to access the latrine when they wanted to use it, as it was occupied by someone else:

"The problem is when we want to use the latrine while the other is using it at the same time, as we have only one latrine." (Host, V6_C1_A_165)

"It is difficult to share. We have to wait sometimes." (Sharer, V6_C1_B_134)

Figure 30. Clusters who have difficulty accessing the latrine because someone else is using it, with text overlay showing clusters with 10 or more latrine users [42]



In most clusters, people faced that challenge on a rare or infrequent basis. Some of those households highlighted that this was because there were not many latrine users within their cluster:

"So far no problem. It rarely happens that two people need to defecate at the same time. Some members defecate in the morning and some at noon." (Host, V5_C3_A_179)

"As I have a small family, there is no problem to access the latrine." (Host, V2_C1_A_254)

[42] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

"We only share with a few members; never have bad traffic." (Sharer, V2_C1_B_159)

Respondents from five different clusters mentioned this happened a few times per a month. In two clusters, which had 11 and 14 regular users respectively, that challenge occurred much more frequently:

"One of the difficulties is when more than one person wants to go to defecate at the same time." "As we share only one latrine with 14 people, we face [this] difficulty. One member wants to defecate, the other one wants to bathe, and so on." (Host, V6_C2_A_136-8)

Most respondents said that when they encountered that situation, they waited and/or encouraged the other person to hurry up:

"I will wait. No problem. In case I want to go in urgently, I will let the people inside know to come out quickly." (Host, V2_C1_A_256)

"I waited until the person finish. I don't go open defecate… at the banana bushes." (Co-host, V1_C2_A_242)

"*[I]f we know that someone is inside, we will wait."* (Host, V2_C3_A_189)

"[W]e can wait. Not everyone wants to go to defecate at the same time. Sometimes, I wait for my grandchildren just for a moment in the morning." (Host, V2_C3_A_191)

A few sharers had a "backup" latrine; they would use another household's latrine when they need to defecate but their own shared latrine was occupied:

"I wait. If I cannot, I go to ask [to use] the other neighbour's latrine." (Sharer, V1_C1_B_90)

"I go to use the latrine at my grandmother's house." (Sharer, V6_C1_B_106)

Only one respondent described reverting to open defecation when they found someone else was in the latrine:

"If I can wait, it is fine. But, if can't wait, I will grab hoe to dig the ground." (Host, V1_C4_A_194)

People primarily faced "traffic jams" in the morning, a time of day when everyone was home, people often needed to defecate, and were also busy preparing to go to work:

"It is difficult as there are many members [using the latrine], especially in the morning." (Sharer, V3_C2_B_76)

"Yes, in the morning, when my two children have to go to work. They go in at about 5 am, one and then another. Sometimes, I have to make them use the latrine quickly because I needed to use it as well… The rest of the day, the latrine is free." (Host, V3_C3_A_190-6)

11.2.2 Cleaning or cleanliness

The cleanliness of shared latrines is underscored within the shared latrine literature, both because an unclean latrine means there is a higher likelihood of people coming into contact with excreta (WHO & UNICEF, 2017) and because if shared latrines are unclean — and therefore unappealing — people may be less likely to use the latrine or to exclusively use the latrine (Günther et al., 2011; Sinha, 2017).

For most respondents — including those who were responsible for cleaning the shared latrine all or most of the time — neither the cleanliness of shared latrines, or the labour associated with cleaning a shared latrine was named as a significant challenge or concern. There was only one cluster where the host stressed the burden of cleaning and dissatisfaction with the cleanliness of his latrine. He returned to that theme on several occasions throughout the interview:

Host: *"[I]t is dirty because we share with many members, and they don't clean."*
Researcher: *"Who is responsible for cleaning?"*

Host: *"Me, but since we share with many members, I alone [am] not enough."* (Host, V4_C2_A_137-9)

"I'm not happy that people who use this latrine don't take care and clean it. It's dirty." (Host, V4_C2_A_171)

In a few other cases respondents indicated that cleanliness would be an advantage of having their own latrine, or hinted that they took on a greater responsibility for cleaning than other users (but this was not emphasised as a significant challenge or issue):

"If my children have their own latrine, they can use their latrine and clean it by themselves." (Host, V6_C1_A_245)

"Yes, I would like to [have a latrine used only among my household], so that there are no children use the latrine, which would make it dirty. Children don't clean well." (Host, V6_C3_A_175)

Latrines were generally clean. None of the observed latrines had any trace of faecal matter outside the pan, and no flies or mosquitos were seen. Most latrines had no strong smell; only one had a strong odour. In approximately half of the observed latrines there were some traces of faecal matter in the latrine pan (but never outside), but all had been flushed. Two latrines had very limited stored water available inside the shelter.

11.2.3 Pit fill at faster rates

In some consultations, WASH practitioners voiced concerns that a greater number of regular latrine users would cause pits to fill at faster rates, and may lead to slippage, threatening ODF sustainability. (It should be noted that other practitioners highlighted that they thought this would rarely occur, since once people become accustomed to using a latrine — including someone else's latrine — on a regular basis they would be highly unlikely to open defecate.)

However, this challenge of latrine pits filling more rapidly was rarely mentioned by shared latrine users. Only a few hosts, including one whose pit was full and needed emptying at the time of interview, highlighted that as a challenge:

"[Sharing] makes the pit become full fast." "The pit is full and there is smell to the house." (Host, V4_C3_A_155, 159)

"Everyone in the house use the latrine. The latrine [pits] is full now. I have not emptied it yet. Many people use it." (Host, V4_C3_A_21)

"[It was emptied] last year. I expect to have the pit emptied one time per year because now many people are using it." (Host, V1_C4_A_184)

Most households did not see it as a challenge:

"If the pits become full, we will empty them." (Co-host, V1_C2_A_266)

11.2.4 Resource use

A few respondents mentioned the higher water consumption associated with latrine sharing, but for most of those respondents, it was the day-to-day labour of filling water, rather than water resource availability or cost that was a concern:

"It consumes a lot water. For example, with my 4 family members, it consumes one bucket of water per day. If 4 more people use the latrine, it consumes 2 buckets of water." (Host, V5_C1_A_110)

"It is just a small problem when there is no water in latrine because the person who use it before don't refill it... It happens once in a while. I know that my children are busy working more than me." (Host, V2_C1_A_234)

11.2.5 Concern that hosts are not happy to share their latrine

Some sharers voiced their concern that the latrine host was not genuinely happy with the latrine sharing arrangement or that they were a burden:

"As a mother I feel some difficulties. It would be okay if they just share among their siblings, but how about the in-law; I'm afraid that they mind…" (Sharer, V2_C2_A_144)

"…Actually, [sharing] it's not always no problem. I've heard some words, but I since I don't have [money to build latrine], I just tolerate." (Sharer, V4_C2_B_157)

"I [would be] happy if I have my own latrine. I will not make [a] difficulty to my mother and my sisters. I can take care of my own latrine." (Sharer, V2_C3_B_231)

Another respondent, who tended to use her parent's latrine during the day, described the guilt she felt about that arrangement:

"I don't have the ability to help with anything, I feel guilty. If I tell my children to come to defecate here, I feel guilty." (Sometimes sharer, V1_C4_B_146)

11.3 What would be the benefits of having a latrine for one household only? Why would hosts and sharers like their own latrine?

Although only some sharers had a clear and realistic plan to build a latrine, almost all sharers would like their own latrine. The two exceptions to that are co-hosts who do not have sufficient space to build a latrine, and some elderly people for whom building a latrine is not a priority in their current phase of life.

Sharers repeatedly emphasised convenience, ease of accessibility, and ability to bathe privately as the reasons they would like to have a latrine for their household only. Some (though fewer) sharers and hosts also expressed that they would value the autonomy or independence of having their own latrine:

Convenience / ease of accessibility:	*"Own[inga] a latrine is convenient, no difficulty. Don't have to walk far, closer to home..."* (Sharer, V2_C1_B_109) *"If I have my own latrine, it is more convenient, closer."* (Sharer, V3_C1_A_93) *"For people who have latrine, they can go to defecate quickly."* (Sharer, V4_C1_B_142)
-At night:	*"It [would be] easy to access at night as I would build it closer to my house."* (Sharer, V5_C1_B_154) *"It [would be] closer to home, easy to go at night time."* (Sharer, V2_C1_B_94) *"[I]t is convenient for night time."* (Sharer, V1_C1_B_131) *"[At night, I would pee] in the latrine. No need to use the pot."* (Sharer, V1_C4_A_218)
-As household members age:	*"It would be more convenient for me when I'm getting older."* (Sharer, V5_C3_B_137) *"I want to have my own latrine just for my husband and myself when we get old."* (Host, V6_C1_A_239)
Ability to bathe:	*"I can use it to bathe at any time."* (Sharer, V1_C1_B_131) *"Convenient to shower inside and defecate. Can shower naked. Otherwise, cannot wash the body thoroughly."* (Sharer, V2_C2_A_302)
Independence and autonomy:	*"I'd prefer to have my own latrine, since I got married and have my own children."* (Sometimes sharer, V1_C4_B_144)

	*"To make it convenient for me to use **and to live my life,** I have to have one latrine at my house… For the current latrine, I have to walk from my house. It is not easy; I have to touch things to find my way."* (Sharer with a disability, V5_C3_B_137)
Eased cleaning burden (for self or others):	*"It is more convenient than sharing. It's doesn't cause difficulty to my mother. She is tired because my child doesn't clean."* (Sharer, V1_C4_A_216) *"If my children have their own latrine, they can use their latrine and clean it by themselves."* (Host, V6_C1_A_245)

Those themes of convenience and ease and speed of accessibility were also echoed by households who were open defecating all or some of the time. The ability to bathe was also mentioned:

> *"For people who work such as my sisters, they don't have to hurry when they wake up because they don't have to walk to the West. They can take their times. If don't have a latrine, they need to get up early and it can make them late for work. If we have a latrine, they can bath inside, and we don't have to go defecate to the West. They won't be late for work, be blamed or cut on the salary. For me, it [would] not make me late for school if I have latrine."* (OD, V4_C1_B_144)

However, for those who were open defecating, safety and security was of particular concern. An 18-year-old female, whose father had also expressed his concerns about there being "many drug users and cases of rape" described the challenges of open defecation:

> *"For me, I don't like it. As I am a girl, I am afraid because it's quite far. And as we know that the current society is not very good. We don't know what will happen. But I still have to go since I don't have my own latrine. We also plan to build the latrine but now we don't have money; maybe in the next 1 or 2 years."* (OD, V4_C1_B_129)

When asked to clarify what she was afraid of, she continued:

> *"First, as we know that a lot of people in our society use drugs, so I am afraid of bad people. We cannot foresee what's going happen. It is easy if we have our latrine as we don't need take time to go far to defecate. And we don't [need to be] afraid because it's already close to the house. When we go to the back or forest, we [are] also afraid of some animals, but the most is people."* (OD, V4_C1_B_133)

That young woman felt more afraid during the day:

> *"It is even more unsafe during the day because it is very quiet. I [don't] dare to go to the field alone."* (OD, V4_C1_B_149)

Though not mentioned as a benefit of having a latrine for one household only, the themes of privacy and safety were also raised throughout interviews with hosts and sharers, particularly by parents of girls or young women:

> *"Having a latrine is very good for women. [She] can be seen if she goes to defecate in the open."* (Male host, V5_C4_A_137).

> *"I am afraid of bad people who might have bad intentions [for] my daughters when they go to use the latrine at night. I reminded them not to stay [a] long time in the latrine at night."* (Female host, V3_C3_A_270)

> Sharer: *"They are girls, so they don't go to open defecate."*
> Researcher: *"Why don't they open defecate?"*
> Sharer: *"As you know, it is not good for girls. Something bad could happen."* (Male sharer, V5_C1_C_64-66).

Other interviews mentioned that latrines had "more importance to women" and made it easier for women to defecate:

"For women it's difficult; they are not like men. Men can dig the ground no problem. For women it is difficult." (Male sharer, V2_C3_B_160)

The themes of convenience and ease of accessibility (generally, at night and as household members age), the ability to bathe and the greater independence and autonomy associated with a household owning their own latrine could be integrated into sanitation marketing messages targeting current sharers. It is recommended that the themes of safety and security be sensitively used in "last mile" sanitation marketing or behavioural change campaigns. The respondents (particularly those from households whose members open defecate) who cited the above concerns were already acutely aware and afraid of those (real or perceived) safety risks and wanted to build a latrine but did not have the financial resources to do so.

12.0 SATISFACTION

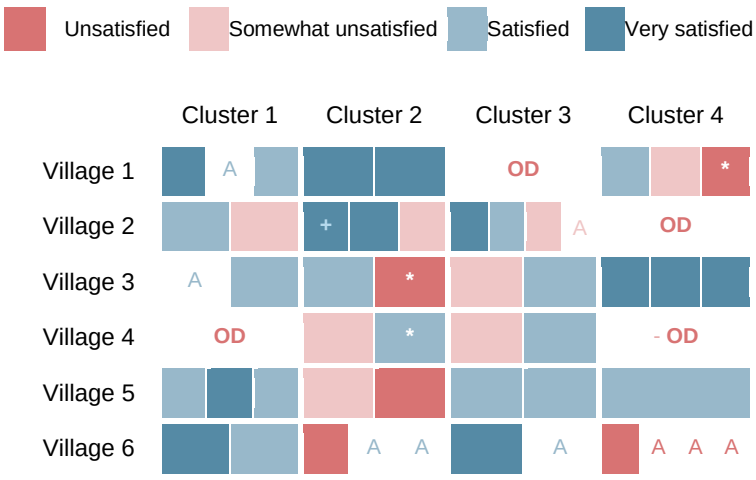
Key insights

- **Sharing clusters should not be seen as homogenous groups. Satisfaction levels varied greatly both within and between different latrine sharing clusters.**
- **Satisfaction levels were higher among hosts and users who had planned to share a latrine.**
- **Satisfaction levels were also high among households that included member(s) who were aged over 60 years, were widowed or single, and/or were ill.**
- **Satisfaction levels were lower among clusters with a high number of users.**
- **Most households who were building, about to build, or had recently built a house were unsatisfied or somewhat unsatisfied with their sharing arrangement.**

12.1 How satisfied are hosts and sharers with the latrine sharing arrangement? What appears to influence satisfaction levels?

Satisfaction levels varied greatly within and between different latrine sharing clusters (**Figure 31**).

Figure 31. Satisfaction with sharing arrangement, with text overlay showing assumed (but not known) satisfaction based on interviews with other cluster members (A) [43]



[43] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

Satisfaction levels were lower among clusters with a higher number of users. All five clusters who had 12 or more users included at least one household that was unsatisfied or somewhat satisfied with the sharing arrangement. That pattern broadly holds true among households with ten or more users. At least one household within six of the seven clusters with ten or more users was unsatisfied or somewhat satisfied with the sharing arrangement.

There is a relationship between satisfaction and sharing model. All hosts and users who had **planned** to share a latrine were either satisfied or very satisfied with that arrangement (12 households across 6 clusters). Host and users who planned to share, and had co-financed, co-built and/or co-maintained facilities were more satisfied than other sharers.

Two-thirds of clusters who had **transitioned** to sharing, included a household which was unsatisfied or somewhat satisfied with sharing (4 of 6 clusters). Hosts within transition sharing arrangements were generally more satisfied with that arrangement than sharers.[44] In five out of the six transition clusters, children (sharers) were less satisfied with that arrangement than their parents (hosts).[45] (Three of the five households who were not satisfied were in transition arrangements.)

Relatedly, most households who were building, about to build, or had recently built a house were unsatisfied or somewhat unsatisfied with the sharing arrangement (5 of the 7 households for which data is available.) (The two who were satisfied were both living on a family member's land but had plans to build on another plot of land, and no intention of building a latrine where they currently lived). This reflects the notion that among *transition* sharers and those that are planning or currently building their own latrine, latrine sharing is seen as a less than ideal, interim arrangement.

Just under two-thirds of clusters where sharing had **emerged** over time[46] included sharers who were unsatisfied or somewhat unsatisfied with the arrangement (7 of 11 clusters). There was a greater discrepancy or divergence in household satisfaction ratings among hosts and sharers within this group. Two of the five households who were unsatisfied were in emergent sharing arrangements.

Satisfaction levels were also high among households that included member(s) who were aged over 60 years, were widowed/single and/or were ill. All except two households with a person aged over 60 years (host or sharer) were satisfied or very satisfied with the arrangement. All except one of the households that included a person who had been widowed or was single was satisfied or very satisfied with the sharing arrangement. Similarly, all except one of the households with a host or sharer who was ill or chronically ill said they were satisfied or very satisfied with the sharing arrangement. Reported satisfaction among the above groups may reflect both respondents' knowledge that they would be otherwise unable to afford a latrine of their own and different priorities (including prioritisation of family and 'next life' preparations) among those nearing the end of their life.

There were no clear patterns in terms of satisfaction based on the nature of relationship between hosts and sharers, or on duration of the sharing arrangement.

Five of the seven clusters where at least one respondent described having difficulty accessing the latrine as someone else was using it (either sometimes or frequently), included someone who was unsatisfied or somewhat satisfied with sharing. This suggests that this challenge may be associated with satisfaction. No other clear patterns based on challenges faced by latrine users were identified.

[44] By definition, the six clusters who transitioned to sharing a latrine are comprised of parent(s) (hosts) and their child(ren) (sharers). Three clusters where parents shared with their children as part of a planned or emergent sharing model.
[45] In the three other clusters where parents shared with their children as part of a planned or emergent sharing model, satisfaction data for all households is not available.
[46] Sharers who had not pre-planned to share a latrine but either were invited to use a latrine by a host or themselves asked to use a latrine on a regular basis after it was built.

13.0 FUTURE INTENT

Key insights

- **Most sharers and hosts would prefer to have their own toilet; however, only one-third of sharers have a realistic plan to build their own latrine within the next two years.**
- **The prolonged period for which many clusters have already shared a latrine — and number of sharers who do not have clear plans or set timeframes for building their own latrine — challenges the assumption voiced by village leaders and in WASH sector consultations that sharing is a short-term option.**

13.1 What are the future intentions of households who are currently sharing a latrine? Do households plan to continue sharing? How long do they anticipate sharing? What steps are they taking to do so? What barriers are they facing?

Approximately one-third of sharers plan to build their own latrine within the next two years; the remaining sharers either hoped to build a latrine within the next 12 or 24 months but had no clear plan for doing so, or never intend to build their own latrine (**Figure 32**). Only one co-host or host plans to build a new latrine soon.

Figure 32. Plan to build own latrine (n=24 clusters, 54 households, 25 sharers) [47]

Of the one-third of sharers who **plan to build their own latrine within the next two years**:

- Four households, across just two clusters, were currently building a latrine or had realistic plans to do so within 6 months.
- Two other households had realistic plans to build a latrine within the next 12 months.

[47] OD = all household members exclusively open defecate; * = one or more household members frequently open defecate.

"[My] son will definitely build a latrine...." (Sharer 1, V2_C2_A_136)

"For my latrine, I would like to build the same shelter, but sitting pan, pour flush. Sitting pan is more convenient for my daughter to use. For me, I am fat so I cannot squat easily with the big belly. I am also tall, sometimes I could hit the wall." (Sharer 2, V2_C2_A_282)

- Three households across three clusters had realistic plans to build a latrine within the next 24 months.

  "I want to build it. I will raise the ground at the other land and build latrine before the house… I want to pay about 1 million riels for the latrine… I want to build good latrine, but I can only afford the one like my brother's." (Sharer, V5_C1_C_133-9)

The remaining two-thirds of sharers either **hoped to build a latrine within the next 12 or 24 months but had no clear plan for doing so**, or **never intend to build a latrine**:

- Three households across three clusters hoped to build a latrine within the next 12 months but had no clear plan for doing so.

  "I'd like to build my own. It is more convenient. Maybe in the next year." (Sharer, V2_C1_B_167)

- Ten households across six clusters would like to have their own latrine but had no realistic plan to build a latrine within the next 24 months.

  "If I have enough money, I will [consider building my own latrine] but now I don't yet have any plans as I am still sick." (Sharer, V1_C1_B_154)

- Three households never intend to build a latrine.

  "I will share this latrine with them forever." (Sharer, V5_C3_B_179)

  "We are old; we don't need to build latrine; we will die soon." (Sharer, V3_C3_B_52)

Two of the four households that open defecate hoped to build a latrine within the next 12 or 24 months but had no clear plan for doing so; the other two have no intention of building a latrine (One household prefers open defecating and would not build or use a latrine even if they had money or were given one, the other household *may* share with another household once they finish contracting their house and build a latrine.)

No co-hosts plan to build their own latrine; they plan to continue sharing. As one explained:

"We can afford to build another latrine, but we won't because the space is too small... one latrine is enough." (Co-host, V3_C4_A_71)

Only one host plans to build a new latrine; all households in that cluster are renovating their houses and replacing their (old) latrines within the next 6 months. That cluster sees sharing as a short-term or temporary solution. While other hosts and co-hosts discussed latrine improvement plans, none of them plan to build a new latrine for themselves in the next two years. Only one or two hosts mentioned plans to build a latrine for a sharing household; that was almost always seen as the responsibility of sharers.

Hosts were generally open to continuing to share their latrine if they saw it was needed:

"In the future when my children have money, I plan to get them to build latrines. It is just a matter of time. Now one house has one latrine. The child in that house has razed the ground and grew vegetable at another plot of land. He plans to move there either this year or next year." (Host, V6_C2_A_82)

Hosts were particularly willing to share with older people, or with people who were physically disabled, and did not anticipate that older people would build a latrine:

"It's forever for my aunt if she still doesn't have a latrine. And that household, they will build their own latrine when they move to the new house." (Host, V5_C1_A_219)

"If I don't have money to build a latrine for him, I will share this latrine with him forever." (Host, V5_C3_A_243)

Both the prolonged period for which many clusters have already shared a latrine, and number of sharers who do not have clear plans or timeframes for building their own latrine, challenges the assumption voiced both by village leaders and in WASH sector consultations that sharing is a short-term option.

Sustained and targeted approaches will likely be required to encourage households to build a latrine for their household only. Most households within this sample earn more in the dry season than in the wet season. If that is reflective of a broader trend among rural Cambodian households, there may be value in timing behavioural change campaigns, sanitation marketing efforts or other programme interventions focused on building latrines to align with that season.

14.0 INSIGHTS AND IMPLICATIONS

The following table presents recommendations for CRSHIP partners and other interested rural WASH sector practitioners. Key insights or findings from this study are provided to contextualise each recommendation.

Table 4. Recommendations with supporting insights

Key Insights	Recommendation
There was evidence of occasional or exclusive open defecation in each of the six focus ODF-certified villages, with rates varying between 1 and 10 percent. Non-relative latrine sharing appears to be rare — and may sometimes mask exclusive open defecation practice. Almost all 'actual' sharers lived next door to the latrine host or on the same plot of land. All households who lived further than 50 metres away from one another did not (exclusively) share a latrine; they were open defecating.	➔ **Incorporate a rapid-assessment tool into the ODF verification process to help distinguish between 'reported' and 'actual' cases of latrine sharing.**
Most sharers and hosts would prefer to have their own latrine; however, only one-third of sharers have a realistic plan to build their own latrine within the next two years. In most cases, sharing arrangements had not been planned; sharing arrangements emerged over time, or households had transitioned to a latrine sharing model over time. Sharers who had limited financial resources at this time due to substantial recent investments (usually building a home) often emphasised their intent to build a latrine, describing it as being "just a matter of time". Sharers repeatedly emphasised convenience, ease of accessibility, and ability to bathe privately as the reasons they would like to have a latrine for their household only. Some (though fewer) sharers and hosts also expressed that they would value the autonomy or independence of having their own latrine.	➔ **Ensure sustained sanitation messaging continues post-ODF certification. Encourage new home owners and current latrine sharers to aspire to have a latrine for every household and support local authorities to mandate latrines in new homes.** Additionally, sanitation marketing campaigns should reflect the reasons latrine sharers would like to have a latrine for their household only — including convenience, ease of accessibility (at night and as people age), the ability to bathe privately, as well as household autonomy and independence.

Key Insights	Recommendation
Households share a latrine for a range of reasons, namely: • Geographical proximity (and space limitations) • (Familial) relationship • Life stage of sharers • Disadvantage • Poverty • Limited financial resources at this time • Community pressure, and • Intrinsic motivations and beliefs.	➔ **Recognise the diversity of motivations for sharing a latrine; sharing clusters should not be seen as a homogenous group.** Households share a latrine for different reasons – and differentiated (or nuanced) programming and policy responses are required. *Where sharing is motivated by poverty or disadvantage:* ➔ **Consider incorporating partial, targeted hardware subsidies into sanitation and hygiene programmes as a means of ensuring the poorest and most disadvantaged households can own, access and use a latrine.** Consider extending subsidy coverage to households with member(s) experiencing chronic illness, such as HIV/AIDS or tuberculosis, or who have been considerably affected by recent significant or prolonged sickness because these people may face substantial barriers to owning their own latrine and may find other households are unwilling to share their latrine as an interim sanitation solution.[48] ➔ **Contextualise messages and approaches used in 'last mile' efforts recognising that some ID Poor and disadvantaged households genuinely cannot afford a latrine.** Mass sanitation marketing and behaviour change approaches (particularly those centred on community pressure and shame associated with open defecation) are unlikely to be effective given financial barriers faced by some latrine sharers and may also (inadvertently) contribute to further marginalisation or stigmatisation.
Latrine hosts and sharers — as well as rural WASH practitioners — emphasised latrine sharing as a pragmatic short- to mid-term solution. Most sharers and hosts would prefer to have their own latrine. Sharing is considered and conditional; hosts share with specific households but indicated that they were neither interested nor open to sharing with other households, particularly non-relatives, on a regular basis. Many latrine hosts and sharers thought that their latrine was being used by too many users, and that each household should have their own latrine. Many hosts and sharers reflected that "there are no benefits" to sharing a latrine beyond a sharer not having to open defecate.	➔ **In guidelines and programming, consider latrine sharing as a step or rung on the sanitation ladder — a short to mid-term sanitation solution as households save for their own latrine.** All households with sufficient space to build a latrine for their household should be encouraged to do so; 100 percent latrine coverage is desirable.

[48] The cost of medicine and the inability to work (or work as much) due to illness meant that sharers who experienced illness (as well as two households who open defecate) had not been able to build their own latrine. However, various respondents also indicated that their household would be reluctant to share a latrine with members of another household who were ill or chronically ill, based on (sometimes scientifically-unfounded) concerns of contamination.

Key Insights	Recommendation
Both hosts and sharers emphasised that sharing a latrine with another household is “not easy”. Challenges included: difficulty accessing a latrine because other people were using it, cleanliness, increased resource use, and (perceived or real) concerns that hosts were not happy to share their latrine.	
Sharing is not always a short-term solution; over one-quarter of sharers had been sharing a latrine for more than six years. Almost all ‘actual’ sharers lived next door to the latrine host or on the same plot of land. Some sharers live together on a relatively small plot of land and do not have enough space to comfortably build an additional latrine. Latrine sharing appears to work best when households had planned for the latrine to be shared by two or more households and co-hosts or hosts and sharers had made a financial or in-kind contribution to the construction, ongoing maintenance and cleaning of the latrine.	*Where sharing is motivated by insufficient space to build another latrine:* ➔ **Consider developing guidelines for households who do not have enough space to comfortably build a latrine and for whom latrine sharing may represent a longer-term solution.** Provide guidance on how to intentionally design a latrine to be shared – such as including a larger waste storage pit to account for the larger user load associated with sharing, and separating bathing and latrine areas to reduce “traffic jams” during peak times of the day. Additionally, guidance should encourage households to discuss roles and responsibilities, and the ways that members of different households can contribute to latrine construction, maintainance and cleaning (financially or in-kind). Doing so may proactively address some of the barriers faced by hosts and sharers over time.
This study focused specifically on shared latrine use and dynamics. However, two key recommendations on broader sanitation themes emerged from this research. The six ODF-certified villages visited are not meeting all of the MRD’s National CLTS Guidelines for ODF villages. Within each of the six ODF-certified villages that were the focus of this research, there was evidence that some households, or household members, are open defecating on an exclusive or regular basis. Households are often not disposing of infant faeces into latrines and there is evidence of human excreta within village environments.	➔ **Plan for ongoing ODF monitoring and re-verification, as well as continued sanitation interventions, to ensure current ODF levels are maintained and enhanced.** ➔ **Promote hygienic infant faeces disposal and encourage age appropriate potty and latrine use.**

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16.0 APPENDICES

Appendix 1 - Village selection criteria

The six focus ODF certified villages were selected based on the following criteria:

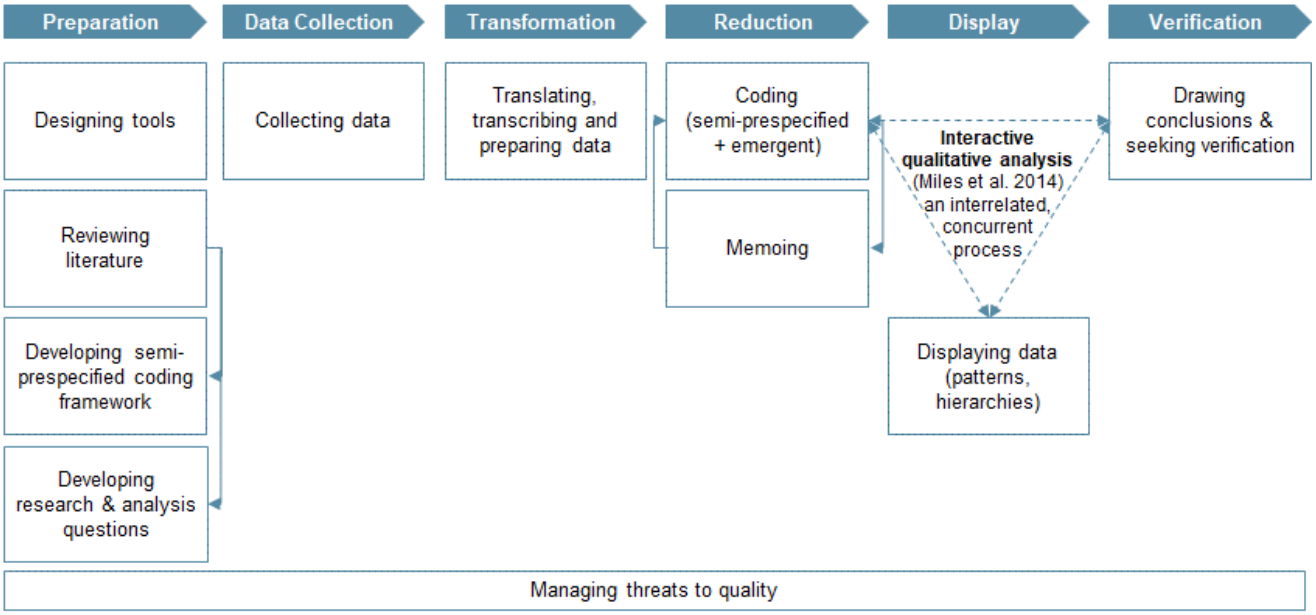
Village Selection (Sampling) Criteria	Underlying Rationale:
1. A mix of CRSHIP target villages that were ODF certified: • Early in CRSHIP 1 (2012-2014) • Late in CRSHIP 2 (2015-2016), and • During CRSHIP 2 (2017-2018).	To ensure the sample included villages with household clusters who had been sharing latrines for several years, as well as some that had only been sharing for a shorter period of time. To allow us to explore latrine sharing sustainability and understand whether behaviours, arrangements and challenges vary based on the how long sanitation facilities have been shared. (This sampling approach assumed that at least some sharing was likely to be driven by village-level ODF efforts. As outlined in Section 6.1, in most clusters sharing pre-dated village ODF certification. Sharing *may* not be associated with village efforts to reach ODF-certification status.)
2. Only villages for which an ODF certification date was available 3. Only villages with a Sanitation Access Rate below 90 percent at the time of certification 4. Only villages where there are 90 or more households.	To maximise the likelihood that the research team found households that were sharing a latrine in sampled villages, and willing to participate in the research project.[49] Given the limited data available on latrine sharing prevalence this approach was adopted to maximise research resources. As the research team was intentionally seeking instances of latrine sharing to explore characteristics and dynamics (rather than statistical prevalence) this was seen as an appropriate, pragmatic decision.
5. Only villages that had at least 15 percent shared latrine use at the time of CLTS triggering.	To maximise the likelihood that the research team found households that were sharing a latrine in sampled villages. Note: This criterion only applied to CRSHIP 2 villages as equivalent data for CRSHIP 1 villages was not readily available.
6. A mix of villages that had worked with different CRSHIP Implementing Partners.	To incorporate diversity and engage broader stakeholder groups in the research project.
7. Only villages that were not in the province where an ODF sustainability study was simultaneously being conducted.	To avoid potential confusion among respondents, and limit over-research of particular populations, Causal Design's research team did not visit villages in Kampong Cham as The Aquaya Institute was conducting field research for the Water, Sanitation, and Hygiene Partnerships for Learning and Sustainability (WASH PaLS) project at a similar time.

[49] Both ODF certified villages with very high Sanitation Access Rates (>90 percent) and villages with less than 90 households were excluded

Appendix 2 - Data analysis methods

Qualitative analysis involved data preparation, collection and transformation, followed by iterative data reduction, display and conclusion drawing and verification (Miles et al., 2014).

Figure. Project Execution



Preparation, Data Collection and Transformation

Interview and observation guides were developed based on key research questions as well as relevant literature and resources. A high-level coding framework was established to frame initial coding.

With each participant's permission, researchers recorded interviews. Those audio recordings were then translated from Khmer into English and transcribed in full. (Simultaneous English translation was also provided while in the field.) Additionally, researchers took written notes and mapped the layout of latrine sharing clusters.

Reduction, Display, and Verification

Data reduction (or condensation) involved reviewing, selecting, and abstracting data using concurrent **coding and memoing** (Miles et al., 2014). Codes (or tags) were used for data retrieval and categorisation and as basis for later pattern identification and analytical summation (Miles et al., 2014). Memos (or notes) were used to note theoretical and substantive ideas, as well as the "fleeting and emergent" reflections and questions that arose during coding (Miles et al., 2014, p.93; Böhm, 2004). The analyst followed Glaser's (1978) advice to stop coding and "record all ideas, as they happen" (p.83). The analyst noted personal reflections on narratives, what respondents seemed to be stressing or emphasising, any doubts about interpretation, and ideas to further pursue.

Throughout analysis, iterative **data displays**, including genograms (family/relationship maps), text summaries, and matrix displays were used to organise and interpret data. As is presented in this report, heat maps were used as a means of examining commonalities and differences within and between households and sharing clusters. Data was re-examined using insights and questions that emerged during analysis (Frambach, van der Vleuten & Durning, 2013).

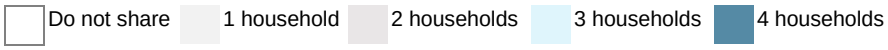
Conclusion drawing and verification was also iterative. Initially recurring themes and patterns were noted, but those tentative conclusions were held lightly, "maintaining openness and scepticism" (Miles et al., 2014, p.13). Codes, memos and exemplifying quotes were reviewed, and the analyst intentionally followed up on surprises by seeking negative evidence or instances where what she was purporting did not hold up. Reviewing frequency of

themes was useful for checking that observations were representative of the analysis and that vivid or interesting information did not overweigh recurring but less striking information (Hsieh & Shannon, 2005; Miles et al., 2014).

Verification involved self-reflection, coding checks, and a review of memos. Records on key analysis steps, assumptions, and decisions were also used as a basis for professional reflection and planning, as well as a means of enhancing the confirmability and accuracy of findings (Frambach et al., 2013).

Appendix 3 - Supplementary heat maps

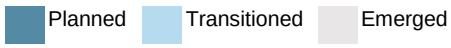
Figure. Number of people per cluster using a latrine on a regular [or occasional] basis



	Cluster 1	Cluster 2	Cluster 3	Cluster 4
Village 1	8	8 [11]	OD 1	12+3*
Village 2	6 [7]	7	12+3*	OD 2
Village 3	9	11	6	12
Village 4	OD 6	8	10	OD 6
Village 5	9	8	7	3 [4]
Village 6	8	14	5	12

* = household members who are not (yet) latrine users, such as a baby or young child.

Figure. Planned, transitioned, and emergent sharing models with text overlay showing Sibling ←→ Sibling or Sibling → Sibling relationships (n=24 clusters, 54 households, 30 sharers)



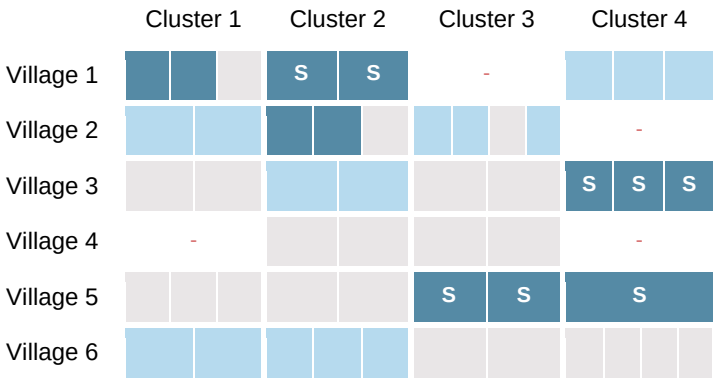


Figure. Planned, transitioned, and emergent sharing models with text overlay showing Parent → Child relationships (n=24 clusters, 54 households, 30 sharers)

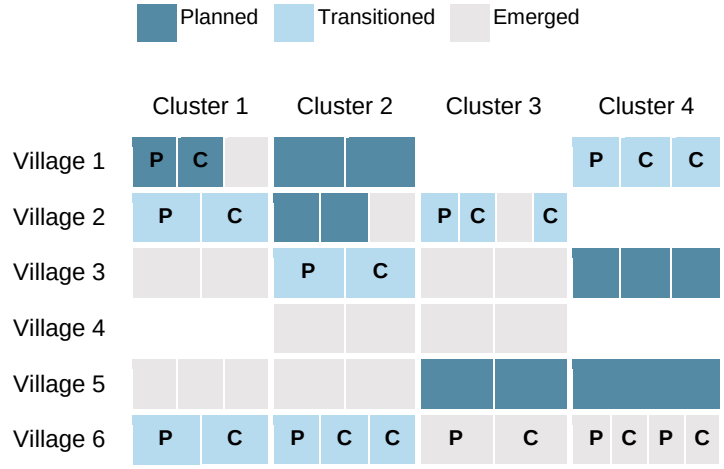


Figure. Any member of the household has difficulty seeing [S], hearing [H], walking [W], remembering or concentrating [R] (n=24 clusters, 54 households)