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39th WEDC International Conference, Kumasi, Ghana, 2016**ENSURING AVAILABILITY AND SUSTAINABLE MANAGEMENT
OF WATER AND SANITATION FOR ALL****A study on scaling up latrine and human excreta
management in rural communities of Afghanistan***Dr. Betman Bhandari, Dr. Shir Ahmad Safi & Engr. M. Azeem Barat (Afghanistan)***BRIEFING PAPER 2384**

The overall objective of the study was to identify the trends of scaling up latrine construction and excreta management in rural communities of Afghanistan. A total of 418 households were visited and interviewed and 30 focus group discussions were conducted. The study found that a total of 93.6% of the households had some form of a latrine, of which 47.5% of the latrines were improved and newly constructed since 2010 and only 42% the observed latrines were hygienic or safe. Ninety per cent of the interviewees said that all members of the family are using the latrine all the time. Seventy percent of latrine owners bury excreta nearby lands or yard for awhile and then use it as fertilizer. Trends of latrine scaling up were occurred more in IDPs and returnees settlements.

Introduction

Danish Committee for Aid to Afghan Refugees (DACAAR) is an apolitical, non-governmental, non-profit development and humanitarian organization that has been working to improve the livelihoods of the Afghan people since 1984. Approximately 10 million Afghans across 29 of Afghanistan's 34 provinces have benefitted from DACAAR's development and humanitarian activities since its establishment. Despite the innovation brought in Afghanistan about creating an enabling environment and advocating the sanitation coverage at the national level, improvement hardly goes beyond 39% at the national level and 27 % in rural areas (ALCS Report 2014). Understaffing and poor capacity at the Ministry of Rural Rehabilitation and Development (MRRD) on a sub-national level, as well as insufficient donation and inadequate political will are among the most deferring factors against scaling up of sanitation and ensuring universal coverage. Poor public awareness about the link between sanitation and health is another gap at the community level (MRRD Country Paper, 2015).

Over the past 15 years – according to international standards (WHO/UNICEF JMP, 2015) improved sanitation coverage in rural Afghanistan is 27 per cent, while improved drinking water supply coverage in rural areas is 47 per cent. In 2014, the Afghanistan Living Conditions Survey (ALCS, 2014) ninety per cent of Afghanistan's population that practise open defecation live in 17 provinces. The practice of open defecation is strongly correlated with stunting prevalence (Schmidt, 2014). Increasing access to water infrastructure and improving latrine coverage is not enough to efficiently fight diarrheal disease. According to Cairncross et al. (2010), access to improved sanitation can reduce diarrhea by 36% while improving water supply reduces it by 21% and the adaptation of single new hygiene behaviour such as hand-washing with soap can reduce diarrheal incidence by up to 48%. According to the ALCS 2014 and 2013 National Nutrition Survey, seven of the ten highest stunting and open defecation prevalence provinces overlap. Moving people from open defecation to using improved sanitation has a 36 per cent impact on the reduction of childhood morbidity of diarrhoeal diseases.

In partnership with CAWST, Canada, one of DACAAR's key programs is as a Water Expertise and Training Centre (WET Centre) which provides water, sanitation and hygiene (WASH) related training to WASH stakeholders and technical consulting to newly forming or existing WASH implementers. DACAAR WET Centre conducts studies on existing WASH technologies and practices as well as piloting and testing new technologies in order to find gaps and recommend measures for the improvement.

The overall objective of the study on Scaling up Latrine and Human Excreta Management in Rural Communities of Afghanistan was to identify the trends of scaling up latrine construction in DACAAR WASH project areas, which were completed between 2010- 2012, and to identify the human excreta management practices of emptying latrines.

Objectives of the study

1. To identify scaling up latrine in rural communities

DACAAR including other INGOs and NGOs had a practice to construct one public water point for a group of 15-30 families and three demonstration latrines on subsidized-base for three selected families in the group under the water, sanitation and hygiene (WASH) programme. DACAAR assumed that based on their health and hygiene promotion program along with water supply project, community people who don't have latrine yet latrines will gradually build their own latrine in an increment ways, copying the DACAAR's model, or other sanitary latrine technology. The number of the latrines which were improved or newly constructed was based on question of how many households had existing latrine and how many households improved or constructed new latrine after DACAAR's project completion. It also indentified the type of latrines existing in community in order to know whether they were sanitary or not.

2. To identify excreta management in rural communities

The second objective of the study was to identify the current practice of human excreta disposal, whether it was disposed safely or not. Therefore, the leading question was how excreta would be managed once the latrine was full.

Methodology

1. Data collection

The study took place from May 11 to June 3, 2015 and data were collected from 30 randomly selected villages out of 15 districts in five regions of Afghanistan. These sites were chosen because DACAAR had SIDA, ROI, ECHO, SDC funded water, sanitation and hygiene projects in the mentioned locations.

2. Sampling strategy

The households for the study were selected through a three-step process:

- DACAAR provided a list of all water points improved in five regions (Balkh, Faryab, Kabul, Nangarhar, and Takhar) during 2010, 2011 and 2012.
- Two districts were randomly selected in each region from the given list.
- Three villages were randomly selected in each district from the given list with village ranging for 15-30 households.
- All of the households in a village were interviewed and the latrines were observed for its types and criteria of safety.

All households in the selected villages were visited and interviewed to identify the types and quality of latrines constructed in the surveyed village. Male and Female enumerators organized a focus group discussion meetings separately with key male and female beneficiaries to know the motivation factors for building new latrines, their experiences in using latrines and handling practices of human excreta in the communities.

3. Data analysis and reporting

Simple calculation and simple excel sheet was used for data entry and analysis. The results are presented in percentages to visualize the results more effectively. The report was produced in Kabul by the DACAAR WET Centre.

Results of interviews

1.General information

A total of 418 households were visited and interviewed and 30 focus group discussions were conducted in 30 villages, 15 districts and five regions of Afghanistan from May 11 to June 3, 2015, of which 391 (93.6%)

of the household had some form of a latrine. A total of 391 of the existing latrines were visited and observed for checking the criteria of an improved and safe latrine. A safe or hygienic latrine in the context of Afghanistan is one which does not contaminate the surrounding environment and water sources, does not produce bad odour and give ugly sights and does not act as a breeding source for flies and mosquitoes.

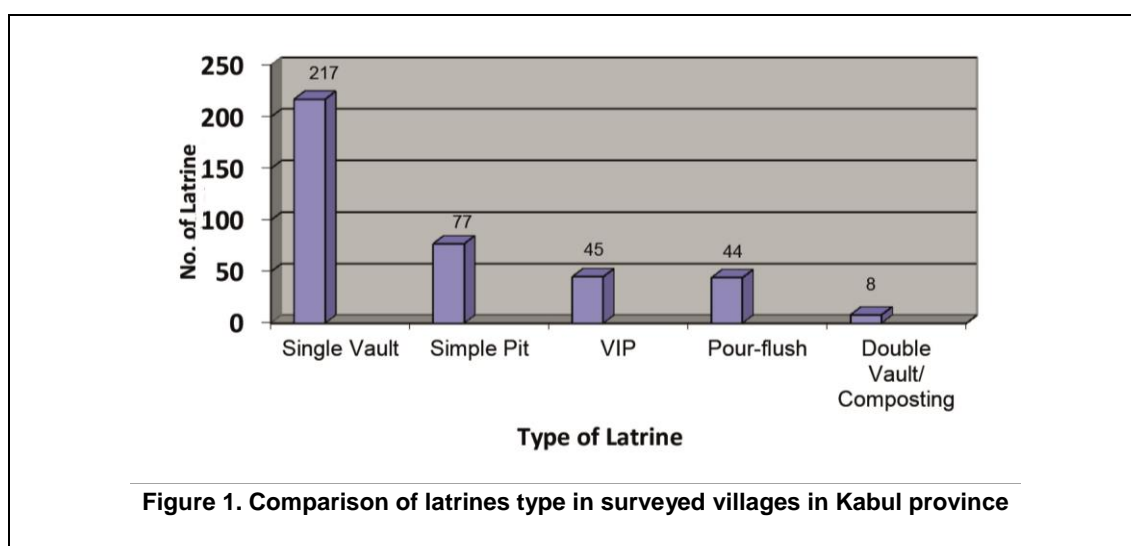
The results showed that on average 6.4% of the people in all the selected villages still practice open defecation compared with the JMP update report of 2015 on sanitation which stated that open defecation occurs in 17% of rural communities, and 13% on national level. It is worth mentioning that our findings on sanitation represent the surveyed villages not the whole country, therefore the situation in those particular villages would be better than other villages in the country.

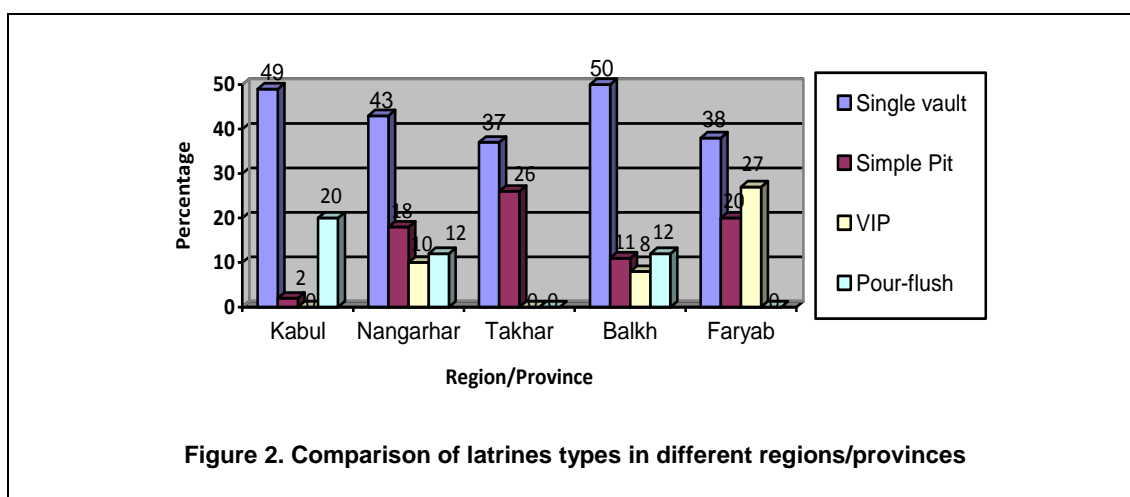
2. Coverage and trends of scaling up latrine

Afghanistan government has a strategy to declare open defecation free country by the end of 2025. Based on current sanitation and hygiene promotion approach, a total of 93.6% of the households had some type of latrine, of which 47.5% of the latrines were improved and newly constructed since 2010. Only 42% the observed latrines were hygienic or safe, and have therefore not contaminated the environments or underground water and no flies were observed in these latrines. Most of the latrines were only improved in host communities, while latrines were both improved and newly constructed in internally displaced people (IDP) and returnees' settlement with some support from NGOs, government and by the communities themselves as well. It is worth mentioning that replication occurred more in Kabul (57%) and Nangarhar (53%). Many returnees and IDP built their new houses with latrines. It reflects that all the newly built houses had mostly pour-flush, simple pit latrine, ventilated improved pit latrine or single vault latrine.

3. Types of observed latrines

In Kabul, the surveyed villages, most of the latrines were single vault latrine 217 (55.5%), simple pit latrine 77 (19.7%), ventilated improved pit latrine 45 (11.5%), pour-flush latrine 44 (11.3%) and double vault (composting) latrine 8 (2%). Figure 1 below illustrates the comparison of types of latrines in surveyed villages. Most single vault latrines (latrines with single excreta storage chamber build above ground level) were not safe as human excreta flowed and leached from the vault, especially those latrines which were made by community in the traditional way. Many villagers have a preference for pour-flush latrines. It was noticed that simple pit latrines and ventilated improved pit latrines cause no contamination of ground water or the ambient environment. Some of the interviewees who had agriculture land recommended the single vault latrine and they said they use the human excreta as fertilizer for their agricultural lands and gardens.





As illustrated, that single vault latrines are more common in all five regions, while pour-flush latrines are somewhat common in big provinces such as Kabul, Nangarhar and Balkh. The second somewhat common latrine in all regions was simple pit latrine, while ventilated improve pit latrines are common in Faryab, Balkh and Nangarhar. Double vault latrines (composting latrines) were only found in 2% of cases in Kabul.

4. Human excreta management

Seventy percent of people who had agriculture lands had a single vault latrine (latrine with single excreta storage chamber build above ground level) and said that when their latrine gets full, they empty it and cover the excreta with ash or earth. They bury or dump the excreta on nearby vacant lands for a while and then use it as fertilizer. However in 25% of the cases, those who had single vault latrines and did not have their own agricultural lands, said that they mix the excreta with soil and throw it into a far away public vacant place. A few (5%) of others stated that someone comes to collect the excreta for their lands, which was only practice in Kabul.

On the other hand, all villagers who had a pit or VIP latrines follow the practice of covering with earth and digging another pit once the original latrine pit gets full. All of the owners of the pour- flash latrine stated that they call a truck, which is equipped with a suction pump to empty the latrine pit. When children defecate in yards, 65% of them said that they collect it safely and throw it into the latrine. One third of them (29%) said that they throw it into open spaces and 6% of them bury excreta inside the yard.

It is worth mentioning that human excreta management and disposal of excreta of children and adult was similar in all five regions with the exception of Kabul. People who had agriculture lands collected excreta from the single vault latrines of people in Kabul who had no agriculture land.

5. Use of latrine and user knowledge

Most of the people (90%) interviewed said that all members of the family use the latrine, but sometimes (10%) when the male are at the work in the field, they practice open defecation.. In 85% of the cases, the latrine is convenience for all members of a household to use. However, 15% of surveyed households mentioned that it was difficult for the elderly, children, sick people and pregnant women to use the latrines as in some places vault latrines have been constructed at high elevations, especially in the east region where people have big compounds with high fences and walls.

6. Motivation for latrine construction

Three quarter (70%) of the male villagers and 85% of female interviewed said that their reason of building a latrine was for privacy, to obey the command of Islam as cleanliness is a part of faith, for environmental cleanliness, less flies and smell, and also for guest from cities who find latrines easy and convenient to use for all family members. One fifth (20%) of the villagers (male and female) mentioned that prevention of disease and microbes was a prime motivation. One-tenth of surveyed population mentioned that demonstrations latrines had positive effect in the community and impressed them. They were further impressed by Pakistani and Iranian practices when they used to live as a refugee. Adaptation of cultural

practices using the excreta as fertilizer, health benefits and the lack of open space to do open defecation are the major motivation factors.

7. Recommended latrine type

Most of the interviewees recommended pour-flush latrine (54.5%), ventilated improve pit latrine (17.5%), simple pit latrine (16%), and single vault latrine (12%). People who were living in internally displaced camps (IDP) and returnees' settlements and who had no agricultural lands recommended the pour-flush latrine, ventilated improved pit latrine and simple pit latrine respectively. On the other hand, fewer people who had agricultural land and yard outside recommended the single vault latrine.

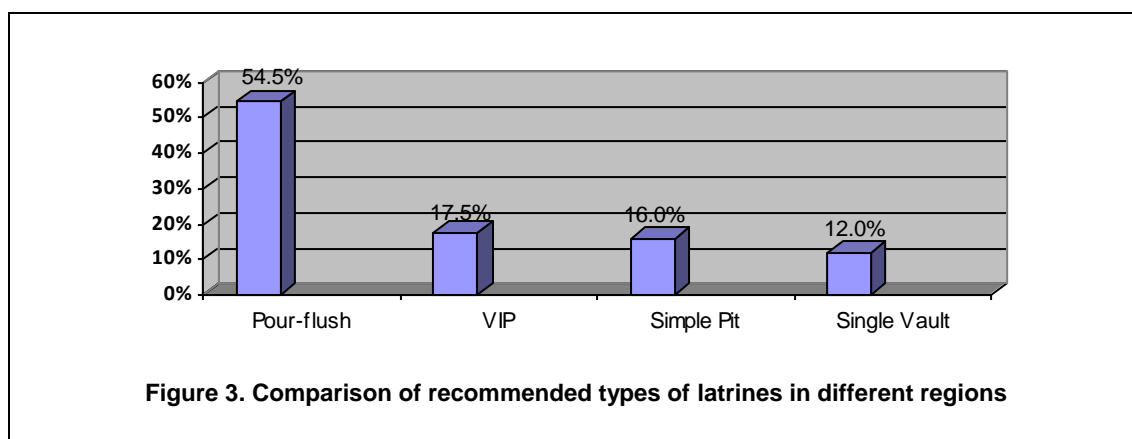


Figure 3 illustrates the recommended types of the latrines by all interviewees in the five regions, and which were aligned with the recommended latrine types by the Ministry of Rural Rehabilitation and Development (MRRD). It also revealed that people understood the benefit of hygienic latrines, but due to abject poverty, they cannot afford to construct such hygienic latrines for themselves.

Discussion and conclusion

Most people had some types of the latrine; however, most of the latrines were unsafe. The trend of scaling up of the latrines has occurred more in IDPs and returnees' settlements. Improved and new constructed latrines in the study areas were simple pit latrines, ventilated improved pit latrines, pour-flush latrines and single vault latrines. Most of the interviewees recommended a pour-flush latrine, ventilated improved pit latrine or simple pit latrine. The human excreta management and excreta disposal practice of children and adult was more similar in all five regions, with few differences in big provinces such Kabul, Nangarhar and Balkh.

It is worth mentioning that scaling up latrines happened due perceived needs and other several motivating factors, not because of the demonstration latrine built by DACAAR and other NGOs. People completely understood the types of hygienic latrines; however, they could not prioritize to build hygienic latrine for their families. Therefore it is necessary to conduct research on cheaper options of latrines which should be affordable for poor families.

Lessons learned

1. Replication and scaling up of latrines by communities is not only taking place due the effect of building demonstration latrines but also due to perceived needs and other several motivating factors.
2. The trend of replication and scaling up of the latrines has occurred more in IDPs and returnees settlements as returnees bringing their experiences mostly from neighbouring countries mainly Pakistan and Iran.
3. The replication of single vault latrine (a traditional type) was high. Most of these latrines were not safe as human excreta flowed and leached from the vaults to streets, especially those latrines which were made by the community in the traditional way. Emptying and transport of untreated excreta from these single vault latrines has health risk and pollute the ambient environment.

Recommendations

1. Do not promote construction of single vault demonstration latrines as such latrines are not hygienic and safe based on the study and according to Afghanistan Ministry of Rural Rehabilitation and Development (MRRD).
2. Promote and construct EcoSan (composting and dehydrating) and other types of safe latrines in public places such as mosques and public gathering places (rather than in households) to be seen and used by people all the time, to be in conformance of the people suggestion and to be highly hygienic latrine model. An operation and maintenance committee to be established to follow up the maintenance of the demonstration latrines.
3. Create demand through participation and triggering process and promote the supplies of sanitary latrine construction materials at the local level. Community Led Total Sanitation approach with a monitoring support from the related government would be viable to keep village clean and healthy.
4. Establishment of Hygiene and Sanitation Committees comprising influential members in the targeted villages, and their involvement in hygiene and sanitation issues from the beginning of the project to follow up the hygiene and sanitation after project completion are important issues to be considered. In a rural community, designated committee for hygiene and sanitation is lacking. The committee should be trained and equipped with information, education and communication (IEC) materials to be used for awareness and promotion afterwards. Returnees from Pakistan and Iran are the early adopters and early majority; therefore, mobilize those people to bring awareness on improved sanitation and hygiene. It would be better to coordinate with Community Development Committee (CDC), lowest government administration unit to conduct different hygiene and sanitation awareness events.

References

- CAIRNCROSS, S., HUNT, C., BOISSON, S., BOSTOEN, K., CURTIS, V., FUNG, I. & SCHMIDT, W.F. (2010). Water sanitation and hygiene for the prevention of diarrhoea. *International Journal of Epidemiology*, 39, 193-205.
- Central Statistic Organization, Afghanistan (2014). *The National Risk and Vulnerability, Afghanistan Living Conditions Survey Report*, Kabul, Afghanistan.
- JMP Report (2015). JMP, WHO/UNICEF Joint Monitoring Program (JMP) for Water Supply and Sanitation; http://www.wssinfo.org/documents/?tx_displaycontroller%5btype%5d=country_files
- Ministry of Rural Rehabilitation development (2015). Afghanistan country paper presented in the sixth South Asian Conference on Sanitation (SACOSAN VI) held in Dhaka, Bangladesh from 11-13 January 2016.
- Schmidt, C. W., (2014). *Beyond Malnutrition: The Role of Sanitation in Stunted Growth*, Discover Magazine, Science, and Nature Medicine, Volume 122. Portland, USA.

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