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TRANSFORMATION TOWARDS SUSTAINABLE  
AND RESILIENT WASH SERVICES

**Sustainability of ODF in Nepal**

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*Nepal made a remarkable progress in increasing sanitation coverage from 43% in 2010 to over 95% in 2017 with 45 of 75 districts achieved Open Defecation Free (ODF) status. Effective government leadership, creation of enabling environment through development and operationalization of operationalization of Sanitation and Hygiene Master Plan, strong sector coordination at all levels, and transformation of sanitation promotion to sanitation social movement are the major success factors. In order to assess the sustainability of ODF, a study was conducted in 2016 covering 2,100 households from seven districts. The study showed that 96.5 % of households were using toilets while the remaining 3.5% were defecating in open. The study confirms creation of new social norms which contributed to uptake and use of toilets at large scale. The study also identified major areas for improvement and proposes critical recommendations to address them. Major findings from the study are presented in this paper.*

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**Background**

The concept of Open Defecation Free (ODF) zone started in Nepal with introduction of Community Led Total Sanitation (CLTS) approach in 2004. Unlike targeting individual households for toilet construction under traditional approach, CLTS triggered collective action at community level to eliminate open defecation, and achieve ODF status often provoking strong emotions such as shock, disgust, shame, and dignity etc. In line with CLTS approach, Nepal pioneered and promoted School Led Total Sanitation (SLTS) approach to promote sanitation in 2005 with support from UNICEF. SLTS approach aimed at developing school as a model place in sanitation through achieving ODF status in School Catchment Area (SCA). SLTS approach adopted CLTS approach of triggering and other indigenous tools promoted by the Basic Sanitation Package (BSP), School Sanitation and Hygiene Education (SSHE) Programme, and Nepal Sanitation Action Week (NSAW) campaign. Hence, the ODF movement was established in Nepal together with CLTS and SLTS interventions. Afterwards, the concept of Community Led Total Behavioural Change in Hygiene and Sanitation was also introduced for stimulating sustainable behavioural change. All these initiatives led to increase of sanitation coverage to 43% in 2010 from 27% in 2000.

The 2009 diarrheal epidemic in some of the hilly districts in the Mid-Western Development Region of Nepal triggered multi-stakeholder approach for sanitation promotion whereby all sector stakeholders joined their hands together, made consensus and showed their commitment to promote sanitation and accordingly aligned their efforts to accelerate comprehensive sanitation package. The government of Nepal then formulated the Sanitation and Hygiene Master Plan (SHMP) in 2011 where the roles of all sector stakeholders were identified, mechanism for promoting sanitation was proposed such as triggering, reward/recognition, localization of support mechanism amongst others. It then developed leadership capacity of the local bodies, partnership with development actors and ownership of the communities. This then transformed the sanitation promotion into sanitation social movement rooted in health, dignity and development which accelerated progress on sanitation exponentially to 68 % in 2013 from 43 % in 2010.

The second Joint Sector Review (JSR) held in 2014 focused on promoting and sustaining ODF in Nepal. One of the issues identified later was the failure of certain families to maintain their toilets, and build new toilets when migrating and splitting from the main family. Therefore, the sector decided to conduct study on sustainability of ODF in 2016 targeting those districts which had achieved ODF status at least three years

ago i.e., by end of 2013. This paper shares major findings from the sustainability study led by the government with financial support from UNICEF Nepal. This study particularly considered dimensions of sustainability from institutional, social, technical, financial and environmental perspectives. It also attempted to assess whether there were new social norms created because of sanitation social movement. The study also looked at factors contributing to maintaining and use of new toilets and identified gaps and lessons learned to further improve sanitation programming.

### **Approach / methodology**

The ODF sustainability study applied a cross sectional quantitative and qualitative study design. Quantitative sides of the study focused particularly on the toilet installation, maintenance and hand washing with soap elements while the qualitative tools emphasized on the financing, institutional, structural, technical, and environmental aspects of the sanitation social movement.

Five districts that were declared ODF zone by 2013 were taken as a sample for the study- one each from each of the five development regions. In addition, two districts namely Bhaktapur and Rautahat were also included in the sampled districts: one (i.e., Bhaktapur from earthquake affected districts, which was declared ODF in 2013 and another one i.e., Rautahat district from Terai region which was not declared ODF but 12 VDCs were declared ODF) in the sample district respectively. A total 2,100 households were randomly selected to measure the ODF sustainability status from these seven districts. In addition, information regarding social norms was collected from the one fourth (517) of the sampled households. A total 278 key informants were interviewed from districts and VDC level key stakeholders. Likewise, 70 focus group discussions were conducted with members of the communities who were not selected for the household interview in this study. Moreover, nearest schools/VDC/Municipality offices/health centers from the selected cluster were observed and interviewed.

### **Key results and discussions**

#### **Access, type, use of toilet, and handwashing practices**

Overall summary of major findings from the study related to ownership, use, cleanliness status, and presence of handwashing station (with water and soap available) is presented in Table 1 for all major castes/ethnic groups. In this study, cleanliness of toilet is classified into three categories namely very clean, clean and dirty. Very clean toilets are referred to those toilets which are maintained hygienically well with no human excreta seen outside and inside the pan, and no odour. Clean toilets are those where faeces (visible faeces particles) are seen inside the pan but no faeces seen outside (the periphery of toilet) and it appears neat and clean and no smell is observed. However, dirty toilets are those with foul smell and faeces are seen all over the toilet (outside and inside the pan). Hand washing station in this survey was defined as the place where there is access of water supply and hand washing soap which includes modern hand washing basins with soap and water supply piped in, simple cemented area with a water tap and soap is placed and a separate place where soap and water bucket with tap is kept.

As can be seen from the Table 1, 87.4 % of the households (on average) had their own toilet while 9.1 % had shared toilet and 3.5% households were practicing open defecation. Ownership of individual toilet was highest (93.8%) amongst Brhamin/Chhetri caste while it is lowest (79.9%) amongst Janajati caste. On the hands, Janajatis had highest proportion of shared toilets (about 18%) as compared to lowest of 3.8% for Madeshi caste group. Altogether 96.5% of households have toilets (both individual and shared) with 97% of this being improved toilets. Open defecation rate was highest (8.3%) amongst Dalits and lowest (1.4%) among Newar. Open defecation rate at district level varied from 0.0% to 8.1% (e.g., Achham district). Dalits have the highest proportion of dirty toilets (41%) as compared to the lowest of 13% amongst Janajati against the national average of 20%. Dalits have the lowest proportion of handwashing station (37%) while it is 89% for Brhamin/Chhetri caste. It should be noted that Dalits are the lowest class caste group (so-called untouchable) in Nepal and most marginalised with high poverty rate and low literary rate. Relatively poor performance on sanitation and hygiene practices for Dalits could also be attributed to their poor socio-economic conditions. The major findings from this study suggest prioritization of sanitation programmes amongst others to meet the specific needs of Dalit communities.

As far as handling of child faeces is concerned, about 70% of the households didn't have any under-five child. Of those who had under five children (about 30%), huge majority (87%) dropped the faeces in the toilet while 4% safely buried the faces. The remaining 9% used different disposing methods which were not

hygienic. Majority of the respondents (93%) reported that menstruating women were allowed to use toilet in their households/community. It was notable that 40% in Achham district reported restricting/or not allowing menstruating women to use toilets.

Caste / ethnicity	Toilet use (%)		% of households practicing open defecation	Toilet Cleanliness Status during the survey (%)			% of household with handwashing station (with water & soap available)
	Own	Shared		Very clean	clean	dirty	
Newar	91.4	7.2	1.4	9	75	16	88
Janajati	79.9	18	2.1	11	76	13	66
Brhamin/Chhetri	93.8	3.9	2.3	14	70	15	89
Madeshi	91.4	3.8	4.8	1	78	21	51
Dalits	84.5	7.2	8.3	6	53	41	37
<b>Total</b>	<b>87.4</b>	<b>9.1</b>	<b>3.5</b>	<b>10</b>	<b>70</b>	<b>20</b>	<b>69</b>

The study also revealed that about 87% household members washed their hands after defecation/urination while 82% washed their hands before eating food. Majority of the respondents (79%) showed a bar soap that they used for hand washing purpose. Handwashing with soap and water prevailed at about 84% followed by with water only (10%) while 5% used ash with water and 0.1% used Dettol. Thus, it can be the prevalence of handwashing practice remained much higher than the availability of proper handwashing station (69% on average) suggesting effectiveness of sanitation and hygiene promotion programmes.

### **Motivating factors to construct toilet**

Health concerns, feeling of shame, disgust or pride, children's initiation, matter of privacy, security, convenience, comfort, and local code of conduct were the major motivating factors for building toilet and sustaining ODF. Furthermore, participants also mentioned that these factors also drove the respondents to construct toilet for the first time and continue its use. Key informants said that their children requested and motivated to practice sanitation and hygiene. More than half of the respondents (56%) had a feeling of shame on his/her neighbor constructing a toilet before them. It is remarkable to note that almost the entire respondents (99%) reported pride in having a toilet motivated them to continue to use and maintain it. Availability of land (space), materials, technical support, knowledge, and affordability in terms of cost were the enabling factors for constructing and maintaining toilet. Availability of land and materials relates strongly to easiness by which a household could construct or re-construct/repair their toilets. Interviewees opined that some of the households who did not have land were supported by nearby households.

56% of the respondents professed that they received enough fund easily for construction a toilet. It was found that 73% of respondents managed everything by themselves while constructing their toilets. Over half of the respondents (51%) got support because of their poor economic status. It was found that nearly 78% of the respondents did not take loan for constructing their toilet. 57% of the respondents reported that shops were available to buy toilet cleaning materials nearby their village. It was found that an overwhelming majority of the respondents (91%) had space available to move/reconstruct the toilet if their pit fills up. It was found that 89% of the respondents were able to afford to maintain their toilet. Over half of the respondents (54%) reported that it was easy for every people to get the loan.

### **Social norms**

The study indicated that there were new social norms created because of sanitation social movement. For instance, 99% of respondent mentioned that everyone should use a toilet while only 5.8% agreed to the statement that everyone should defecate in open. About 12% of the respondents agreed that they will practice open defecation if everyone in their communities does so. Almost 90% expressed that they will fix

their toilet or construct new toilet if their pit is filled up. About 97% of the neighbour agreed to the statement that everyone should use a toilet while 82% disagreed (82%) with the statement that “*it is fine for everyone to defecate in the open place*”. It was found that more than one third (37%) of neighbours constructed toilet before the respondent constructed his/her toilet. 44% of the respondents reported of feeling bad for not making toilet before their neighbours. It was found that almost all respondents (99%) reported that pride in having a toilet motivate them to continue to use and maintain it.

About two third of the respondent showed fears that they would be criticised by others for defecating in the open so idea of societal sanctions is real in most communities while 61% responded that warnings were given to people who defecates in open. These societal sanctions ranged from laws and regulations to fine and penalties and being omitted from community ceremonies, etc. Awareness of these sanctions was on average 69% but in some districts, it was as high as 96% which indicates that the norms has established.

### **Maintenance of the toilet**

Out of 1,845 household having toilets, 291 households (15 %) reported that they experienced some problems with the quality of their toilets. The topmost problem was associated with roofing (5 %) followed by pan (3 %), earthquake (2 %), cracks on wall (2 %), door (2 %) and collapsing soil (1 %). Among the 291 households (15%) who had faced problems, only 16 % of the households had repaired or maintained their toilets in the last three months. Majority of the problem was found in roofing of the toilet (56 %) followed by floor/pan (24 %), pit overflow (20 %) and breaking down of the flushing mechanism (15 %). It is notable that none of the Madeshi households repaired their toilets. A higher proportion of so called higher caste called Brahmin/Chhetri and Janajati (19 % each) households maintained their toilet as compared to 9% Newar and 12% Dalit households who maintained their toilets in the last three months. It was found that an overwhelming majority of the respondents (91 %) had space available to move/reconstruct the toilet if their pits get filled up. It was found that majority of the respondents (89 %) were able to afford maintenance of their toilets. More than half of the respondents (57 %) reported that shops are available to buy toilet cleaning materials nearby their village.

### **Households returning to OD**

Among the 3.5 % of the households who abandoned the toilet, it was found that an overwhelming majority of the respondents (93 %) reported that they did not feel inconvenience and discomfort returning to OD. More than a quarter of the respondents (27 %) said that closeness of the bush made OD easier for them.

### **Benefits from using toilet**

93 % respondents reported that the use of toilet has contributed to decrease in incidence of diarrhoea while 28 % said that the cost spent in the treatment has decreased.

### **Other dimensions**

WASH Coordination Committees (WASH CCs) at different level were found to be less active than during the ODF process. Most of the toilets in households and institutions lacked user’s friendly toilets. Use and maintenance of toilets in institutions especially in schools and health facilities were heavily constrained. Local social norms have been created to maintain the ODF status in the community. Open Defecation is considered as a social crime in the community which averts OD in the community. ODF declaration process has noticeably contributed to maintain cleanliness and aesthetic condition of households, schools and communities. ODF campaign has promoted other environment-friendly initiatives like indoor smoke free communities, plastic bags free communities and waste free rivers.

### **Lessons learned**

The specific lessons learnt from the study are summarized below:

- Setting national and local level ODF targets have created a positive pressure.
- Cross-sector collaboration is a crux of success.
- Political commitment is necessary to create positive working environment.
- Sanitation conference has generated stakeholders' tremendous energy & eagerness to propel ODF campaign.
- Linkage of sanitation activities with local level cultural occasions give positive message and build community's ownership.

- Building toilet is easier job than cultivating behaviors to use it.
- Students and local leaders are powerful change agent.
- Easy access to water is a key determinant for maintaining cleanliness of toilet and urinal.

The ODF success in Nepal is well recognized across South Asian Countries as a result many sectors in Nepal namely health, education, protection, environment, etc. have started full coverage concept and have declared fully immunized, fully literate, improved cooked stove, *chhaupadi* (tradition of segregating women from house during menstruation) free approaches well reflecting ODF as a social development agenda.

## Conclusions

The findings from study suggest that ODF social movement has been very successful specially in terms of sustaining and retaining ODF status despite many challenges. Keeping in view the poor socio-economic conditions especially of the most marginalized communities in Nepal, the average slippage rate of only 3.5% (i.e., proportion of households still practicing open defecation) is acceptable. This study confirms creation of new social norms around sanitation and hygiene practices and it also identified major areas of improvement especially specific to some of so called low caste groups (e.g., Dalits). This includes high open defecation rate (more than 8%) and poor hygiene practices amongst Dalits posing threat to the sustainability of ODF if not addressed adequately on urgent basis.

## Key recommendations

The study provided valuable insight to understand key behaviors associated with construction, use and maintenance of toilets. Following are the key recommendations proposed to address the identified issues:

1. **Additional Guidance to WASH CCs:** As majority of the WASH CCs at local level were found inactive after declaration of ODF zone, they should be properly guided by higher authorities formulating and implementing total sanitation strategies and action plans. Monitoring of ODF and total sanitation activities by WASH CCs at different levels have been found poor. Self-monitoring of ODF and total sanitation promotion activities should be established as a social norm at schools and villages through schools and WASH CCs.
2. **Support for Construction, Repair and Use of Toilets:** Still 3.5 % of the households did not have toilet and they were practicing OD, other 3 % has unimproved toilet and 9 % of households are using the shared toilet, 15 % toilet need repair hence all stakeholders should be informed and mobilized to build improved and repair the existing toilet with proper technical support. Social awareness and norms should be developed among the community for using toilet by women during their menstruation period.
3. **Safe Disposal of Child Faeces:** Focus should be given to mothers and care taker to safely dispose the feces of child into the toilet and washing hands after defecation and before feeding the child.
4. **Massive Communication at Community Level on Local Conduct:** This study showed that almost 33% households had knowledge about fine and penalties were provisioned in their code of conduct which motivated regular use of toilet. Local code of conduct should be massively conversed among community people.
5. **Use of Motivators for Sustainability:** This study found that health and pride were strong motivating factors for ODF sustainability. Household experience of better health and pride from long-term toilet use, either real or perceived, hence the focus should be given on these factors that drive households to use and maintain the toilets.
6. **Promotion of Local Technologies and Innovative Financing Mechanism:** The cost of sanitation was closely related to the ODF sustainability. Being able to use local materials to construct simple, low-cost toilets or without a financial outlay was a significant enabling factor for many households to have toilet, hence low cost sustainable toilet should be designed. Opportunities to access credit, for example through micro-finance schemes or community initiatives, may help to overcome financial barriers.
7. **Children as Change Agent:** Children proved to be instrumental as agents of change in communities. Though adult or household head tend to be the decision makers in terms of household resources and investment in most communities the children in their family or in community have applied pressure to construct toilet which has helped individual to build their toilet and community had achieved to use and maintain the toilet, and promote healthy practices such as hand washing with soap, the role of children is crucial to change the behavior of peers, household members and community at large.
8. **Effective Implementation of SHMP:** The study showed that sanitation and hygiene master plan had a major role in achieving ODF status at community level. Some districts and VDCs/Municipalities had

- total sanitation action plan under the guideline of the SHMP. Sustainability of ODF communities get continuity when the ODF declared communities prepares and implement the total sanitation plan.
9. **Linking Sanitation Social Movement with Provision of Safe Drinking Water:** The SHMP contributed to bring all WASH sector stakeholders together for promoting ODF campaign. However, master plan does not explain about access to safe drinking water which should be linked to sustain ODF. It would be more effective if the ODF program and access to water is launched together.
  10. **Community Leadership in Sustaining ODF:** Community leaders are well respected, trusted and perceived as role models in their communities and would enable to penetrate the larger community. They can better continue to stress the importance of Child Clubs presenting examples from other schools where Child Clubs have been successfully contributing to promote sanitation and hygiene activities.
  11. **No clear definition for ODF retention:** Nepal has to come up with a clear definition for retention of ODF status (i.e., sustaining ODF status). This study revealed that the slippage rate varied from 0.0% to 8.1% at district level while it ranged from 1.4% to 8.3% for different ethnic groups. The overall slippage rate for seven districts/ethnic groups came up to be 3.5%. However, if the data is further analyzed at community level (not done in this study) there could be communities with slippage rate up to 20% or more especially in the district with average slippage rate of 8.1% (e.g., Achham district). Therefore, without a clear and sector wide accepted definition, it is simply not possible to conclude that communities certified ODF in the past can still qualify to be ODF at a given point of time. This is also important to guide the implementation of sanitation programmes aimed at sustainability of ODF.
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### Note

The views expressed in this paper are those of the authors and do not necessarily reflect the views of the government/organizations they work for.

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