

# Myanmar experiences in sanitation and hygiene promotion: lessons learned and future directions

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Recent activities in connection with the National Sanitation Week (NSW) and Social Mobilisation for Sanitation and Hygiene have contributed to a significant increase in access to sanitary means of excreta disposal, from 45% in 1997 to 67% in 2001. Handwashing with soap and water after defecation has also increased from 18% in 1996 to 43% in 2001. Success is attributable to high level political commitment, state or division level action and community mobilisation by village level authorities. Multi-level efforts such as mass media, planning workshops, training sessions and house-to-house visits by village authorities and health officials have raised greater awareness of sanitation and hygiene issues and led to construction of latrines on a self-help basis. The challenge ahead is to give greater attention to the 'hard to reach' who live in less accessible areas and are more resistant to change. The 2002 NSW has accordingly given special emphasis to activities in 73 of 324 townships where 50% or more of the households have no access to a sanitary latrine. The communication and social mobilisation package has been improved to upgrading unsanitary latrines and integrating handwashing more systematically with promotion of sanitary latrines. Programmatic follow-up to the NSW is being provided in selected townships through more intensive social mobilisation for 'hard to reach' households and activity-based school sanitation and hygiene education. This approach will contribute further towards improved hygienic practices and reduce diarrhoeal morbidity and mortality.

*Keywords:* Sanitation; handwashing; latrine; social mobilisation; hygiene; community; morbidity; mortality.

## Introduction

Recent experiences in the promotion of sanitation and hygiene in Myanmar provide good examples of how people can be motivated to construct sanitary latrines and adopt hygienic practices. Following the adoption of the National Health Policy, a national guideline was established in 1995 to achieve sanitation for all by 2000 (Ministry of Health 1995). Priority was accordingly given to sanitation and hygiene from the highest level of government down to the village level. Social Mobilisation (SocMob) was carried out in 174 townships in Myanmar from 1996 to 2000 and National Sanitation Week (NSW) launched yearly from 1998 onwards. Village level officials and authorities, as well as local non-governmental organisations, were thus mobilised to motivate household members to construct sanitary latrines on a self-help basis. The United Nations Children's Fund (UNICEF) provided support to the Department of Health (DOH) and the Central Health Education Bureau (CHEB) of the Department of Health Planning (DHP) to develop and distribute information, education and communication (IEC)

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materials, conduct orientation and planning workshops, and training for community mobilisation. Mass media, such as television, radio, newspapers and periodicals, were also used to promote the cause.

This paper summarises the main findings of a survey conducted in 2001 by Myanmar Marketing Research and Development Services (MMRD) to assess the effectiveness of the activities pursued under NSW and SocMob (MMRD and UNICEF 2002). It also draws on relevant lessons from NSW and SocMob experiences for future improvements in order to achieve universal sanitation coverage, with particular attention being made to accelerate efforts in townships where this is low.

### Impact on latrine construction and handwashing after defecation

The study results confirm earlier findings from Multiple Indicator Cluster Surveys (MICS) (Dept. Health Planning and UNICEF 1995, 1997, 2000) that NSW and SocMob have led to an 18% increase in household access to sanitary latrines from 45% in 1997 (1 year before the NSW was launched) to 63% in 2000 (2 years after the first NSW). The 2001 level of access to sanitary latrine according to the MMRD survey is 67%. The trend is significant, especially in light of only a 2% increase from 1995 to 1997.

The successful impact is also evident from the chronology of latrine construction. There was a rapid increase after 1998 in the construction of all latrines, including both sanitary and unsanitary types, in all four hydro-geological areas of the country. A similar pattern is apparent when sanitary latrines alone are taken into account (Fig. 1). The rate of construction is highest in the plains and dry zone, and lowest in the delta/coastal areas.

Progress in becoming accustomed to handwashing after defecation has been less encouraging though. Handwashing was one of the 'three cleans' promoted in the course of NSW and SocMob, along with mobilisation for construction of sanitary latrines. It has remained at about the same level for at 5 years. Compared with 46% of the respondents who in 1996 indicated that they did not wash hands after toileting, the MMRD survey showed that the level in 2001 was 48% (Dept. Health Planning and UNICEF 1996). However, a dramatic improvement was notable in terms of soap use for handwashing: 43% in 2001 compared with 18% in 1996, more than a two-fold increase in 5 years (Fig. 2).

The increase in handwashing with soap or ash after toilet use is again prominent in the plains and the dry zone (about 40% and 30%, respectively, in 5 years). In the delta/

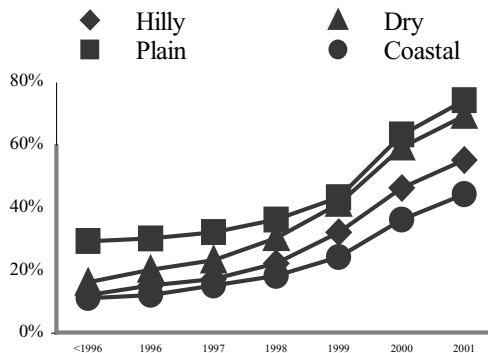
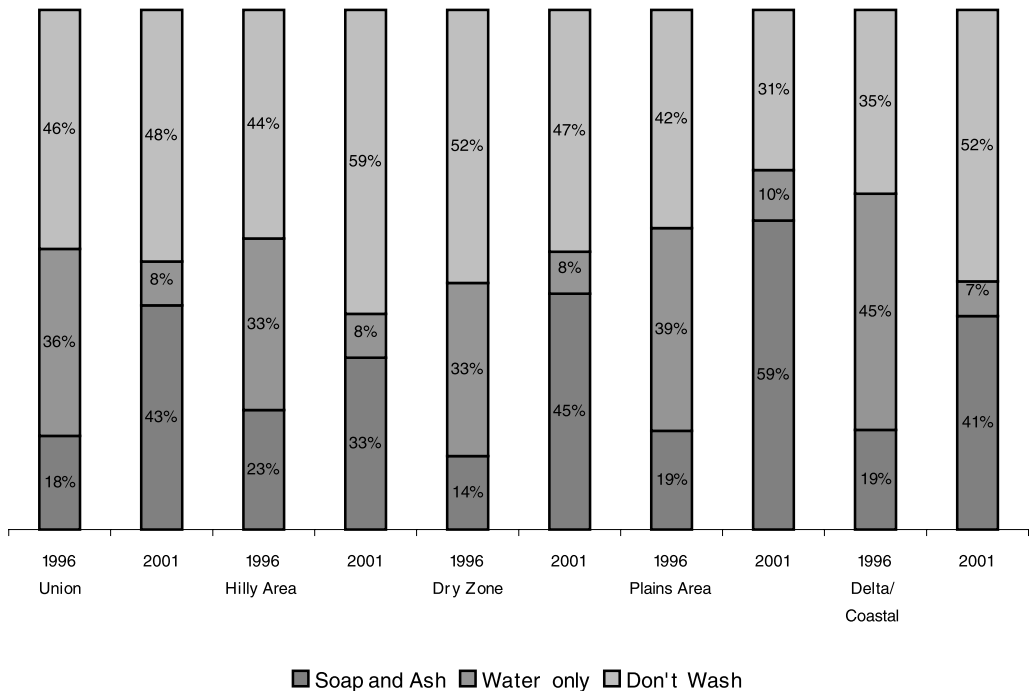


Fig. 1. Construction of sanitary latrines in hydrological zones.



**Fig. 2.** Handwashing practice in different hydrogeological zones (1996 vs. 2001).

coastal and hilly areas, the rate is considerably lower (20% and 10%, respectively). However, the overall increase, including those who wash hands with water only is mixed. Although small, the plains and the dry zone witnessed an increase over 5 years in the order of 10% and 5%, respectively, but the hilly as well as delta/coastal areas are characterised by a decrease.

There is strong evidence to suggest that latrine ownership and handwashing habits are mutually related (Table 1). Fifty-four per cent of sanitary latrine owners wash hands with soap, compared with 20% among those without a latrine. The extent to which NSW and SocMob succeeded in promoting latrine construction corresponds to an increase in handwashing practice, especially among owners of sanitary latrines.

The positive developments in sanitation and hygiene behaviour are particularly encouraging, given the socio-economic conditions in Myanmar. The country has a population of about 50 million people in an area of 677,000 square kilometres, and a population density of 70 people per square kilometre depending on the state.

From the economic point of view, Myanmar is classified as one of the least developed countries with a GDP per capita of US\$258. The GDP, when broken down by sectors, indicates that agriculture has the largest part (51%), trade (24%), industry and manufacturing (10%), other primary production (8%), and transport, finance and services (7%). The official development assistance (ODA) for Myanmar is very small at about US\$73 million (1999), or about US\$1.50 per capita. The infant mortality rate is very high at 78 per 1,000 live births and that for children under 5 years of age is 112 per 1,000 live births. About 35% of children in this age group also suffer from moderate and severe malnutrition.

**Table 1.** Ownership of latrine vs. handwashing after toileting

	<i>Handwashing after toileting</i>		
	<i>Soap/Ash (%)</i>	<i>Water only (%)</i>	<i>No washing (%)</i>
<i>Ownership of latrine</i>			
Sanitary latrine	54	8	39
Unsanitary latrine	33	10	57
No latrine	20	9	71

### Effectiveness of programme activities

Three types of activities under NSW and SocMob contributed to positive results:

- (a) Use of mass media such as television, radio and printed IEC materials including posters.
- (b) Participation in training, orientation, planning workshops at various levels, all grouped together as ‘information sharing sessions’.
- (c) House to house visits by village authorities, basic health staff and others to motivate people to change their behavioural practices.

Printed IEC materials had the highest outreach in terms of creating awareness about sanitation and hygiene issues—63% of respondents recalled having seen at least one of the printed materials used. Next was the television. Out of 35% of respondents who watched television, about two thirds (or 22% of the total respondents) remembered seeing either a television spot or an educational programme on sanitation and hygiene. Radio was the least effective medium—among 13% who listened to radio, a little over two thirds (9% of total) indicated having heard at least one programme related to sanitation and hygiene.

Ability to recall sanitation and hygiene issues based on IEC materials had a very positive influence on latrine construction and handwashing after defecation. As shown in Table 2, 69% of those who could recall print materials owned a sanitary latrine and 75% washed their hands after defecation. In contrast, among respondents who did not have a latrine or did not wash hands, only 49% and 53%, respectively, recalled seeing them. Greater recall therefore corresponds to an incremental sanitary latrine coverage or handwashing with soap by up to 20% in both cases. It is noteworthy that more than 30% of those who were unable to recall had gone ahead with sanitary latrine construction and more than 40% with unsanitary latrine construction. This is attributable to influences other than those that come under the scope of communication and social mobilisation activities of the programme. At the same time, about half of the respondents who could recall seeing or hearing IEC materials faced other constraints, which prevented them from latrine construction or handwashing after defecation.

About 13% of respondents indicated that they had participated in information sharing sessions. The project design provided training and orientation for two people per village, who in turn were expected to call meetings with other villagers to encourage them to go on house-to-house visits or motivate them to take action directly. More importantly, about 40% recalled the visit of at least one member of the village authority or basic health staff. Three quarters (about

**Table 2.** Influence of IEC materials on latrine construction and handwashing after toilet

	<i>Recall of IEC materials</i>		
	<i>Print materials (%)</i>	<i>Television materials (%)</i>	<i>Radio materials (%)</i>
<i>Ownership of latrine</i>			
Sanitary	69	30	11
Unsanitary	56	13	7
No latrine	49	7	5
<i>Handwashing after toilet with</i>			
Soap/Ash	75	36	12
Water only	61	13	9
Does not wash	53	11	6

30% of all respondents) referred to the visit made by the head of the ward or village, and about half (about 20% of the total) to that by the village health staff.

The household visit had a big influence in the construction of latrines and adoption of handwashing practice with soap after toileting. Fifty per cent of sanitary latrine owners, as opposed to 17% respondents with no latrine, referred to having remembered such a visit. Similarly, 48% respondents who washed hands with soap after defecation noted the visits, as against 34% among those who did not wash at all (Table 3).

### **A comparison of effectiveness between SocMob and NSW**

SocMob activities carried out from 1998 onwards (post-1998 SocMob) were able to reach townships that had very low sanitation coverage and socio-economically disadvantaged population. The purpose was to complement NSW activities with additional mobilisation efforts to boost behavioural change in more difficult areas. Respondents from post-1998 SocMob townships, compared with NSW-only townships, showed the following characteristics:

- Predominantly from rural areas (79% vs. 56%).
- Larger proportion from hilly areas (50% vs. 29%) and dry zone (30% vs. 19%).
- Less possession of economic assets (62% vs. 43%).
- Larger representation of those with less than primary education (57% vs. 46%).

At the same time, participation in information sharing sessions and occurrence of household visits were slightly larger in post-1998 SocMob areas than in NSW-only areas (17% vs. 14% and 51% vs. 48%, respectively). However, the outcome of complementary interventions by SocMob in terms of total latrine construction and handwashing after toileting is quite mixed.

From 1998 to 2001, post-1998 SocMob areas in the plains saw a more rapid growth in both sanitary and unsanitary latrines than in NSW-only areas, by a margin of 6% and 5%, respectively (Table 4). In the dry zone, similar progress was notable, but only in relation to construction of unsanitary latrines by a margin of 13%. No net gains were noted in the delta/coastal areas thus maintaining the disparity between the areas. The hilly areas noted a net gain in sanitary latrines but still lagged behind in relation to construction of unsanitary latrines.

**Table 3.** Influence of information sharing sessions and household visits on latrine ownership and handwashing after toilet

	<i>Participated in information sharing sessions (%)</i>	<i>Household visits (%)</i>
<i>Ownership of latrine</i>		
Sanitary latrines	14	50
Unsanitary latrines	13	36
No latrine	10	17
<i>Wash hands after toilet with</i>		
Soap/ash	15	48
Water only	12	41
Does not wash	12	34

**Table 4.** Increment in latrine construction between 1998 and 2001: Post-1998 SocMob vs. NSW-only areas

	<i>Sanitary</i>			<i>Unsanitary</i>		
	<i>Post-1998 SocMob areas (%)</i>	<i>NSW-only areas (%)</i>	<i>Difference (%)</i>	<i>Post-1998 SocMob (%)</i>	<i>NSW-only areas (%)</i>	<i>Difference (%)</i>
Plains areas	44	38	6	12	7	5
Dry zone	38	40	-2	17	4	13
Hilly areas	34	32	2	14	18	-4
Delta/Coastal areas	20	31	-11	11	18	-7

Further disaggregation by respondents' groups for education and income categories shows that SocMob interventions, compared with those in NSW-only areas, were more effective among the more educated and higher income groups. The increase in sanitary latrine construction was greater by 9% among respondents who had attained greater than middle school education in post-1998 SocMob townships. A similar increase was noted among those whose monthly household income was greater than 25,000 kyats. Interestingly, a small gain was also notable among the illiterate group.

The impact in terms of handwashing after toilet use is less encouraging in SocMob areas than in NSW-only areas—41% of respondents washed hands after toileting (with soap/ash or only water) in post-1998 SocMob areas as opposed to 60% in NSW-only areas. The impact due to recall of sanitation and hygiene issues on handwashing practice is very high in both post-1998 SocMob and NSW-only areas (Fig. 3). The difference in handwashing after toileting between those who could recall vs. those who could not is 26% in post-1998 SocMob areas as opposed to 38% in NSW-only areas. The higher value in NSW-only areas is indicative of the greater effectiveness of IEC materials in encouraging the population to practise handwashing.

However, household visits had a greater impact in post-1998 SocMob areas in relation to handwashing after toilet use than in NSW-only areas. Fifty-three per cent of households in

post-1998 SocMob areas washed their hands after toileting, where visits were made, as opposed to 33% where they were not (Fig. 4). The corresponding percentages in NSW-only areas were 66% and 56%, respectively. The difference in the two areas shows that household visits led to a greater increase in post-1998 SocMob areas than in NSW-only areas (20% vs. 10%), a good indicator of the greater effectiveness of household visits in post-1998 SocMob areas.

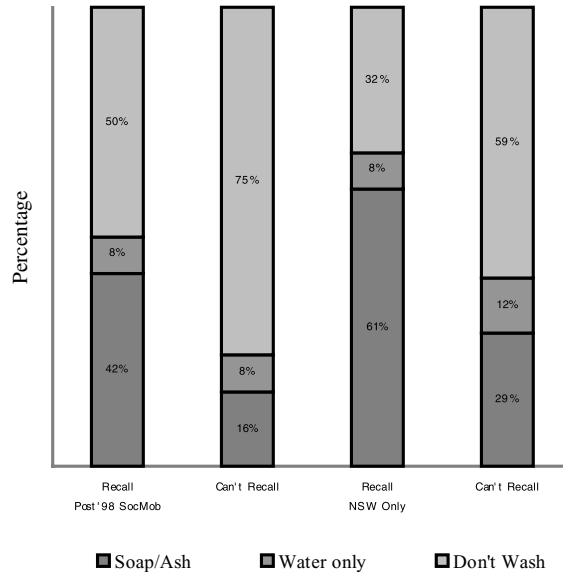


Fig. 3. Handwashing after toilet vs. recall of IEC materials in programme areas.

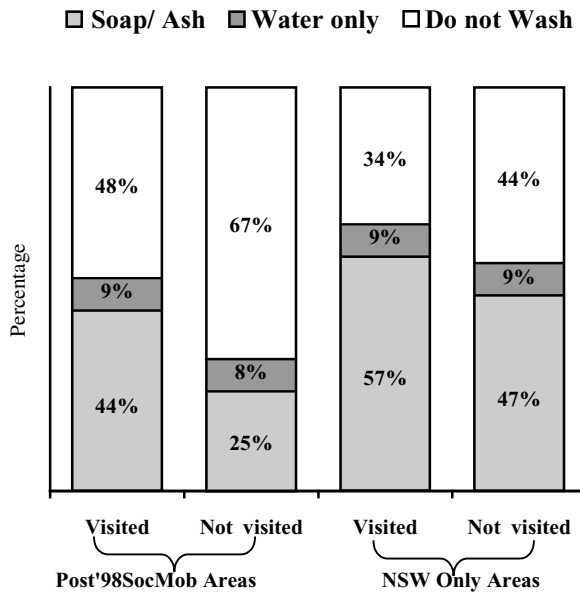


Fig. 4. Handwashing vs. household visits in programme areas.

### Lessons for the future

The NSW complemented by SocMob in selected low-coverage townships had without doubt a very positive impact on motivating a large proportion of households to construct and use latrines. However, the progress with respect to handwashing has not been as prominent. The path for the future is to build on the momentum of success and create a better environment for achieving universal sanitation coverage and improve hygienic practices. The need is to identify and give primary attention to those households that are left far behind by focusing on three concerns:

- Motivating households unable to build any latrine by helping to overcome constraints they are faced with.
- Encouraging those households that currently own unsanitary latrines by emphasising the need to upgrade them to sanitary conditions.
- Giving added attention to motivating people to wash hands with soap and water after toileting and at other critical times.

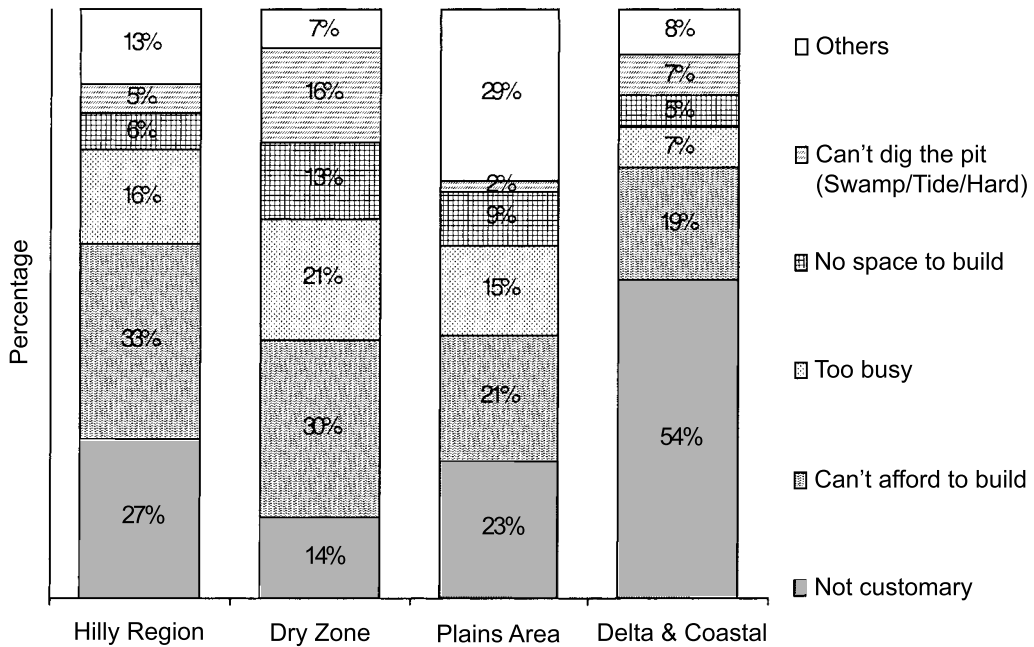
### Constraints faced by no-latrine households

Among 20% of respondents who indicated that they did not have any latrine in the house, 12% defecate in the open and 8% use communal latrines or other people's latrines. The profile of these respondents show that about half of those who defecate in the open are from hilly areas and a third from the delta/coastal areas. Those who share the latrines with others are equally divided among the plains, delta/coastal and hilly areas. About three quarters are from less educated groups (who are illiterate or who have not even completed primary school), with a monthly household income of less than 15,000 kyats.

Three types of constraints have been identified, which need to be overcome to make progress in the future:

- Forty per cent indicate that they cannot afford, or are too busy earning their livelihood, to concentrate on latrine construction. This is of particular concern in the hilly areas (mainly among the Shan) and the dry zone where the response in this category is about 50% (Fig. 5). The implication is that economic subsidisation, to supplement the communication and social mobilisation efforts, would be necessary to enable low-income less-educated families to build sanitary latrines.
- Thirty-three per cent of the respondents state that building latrines is 'not customary'. In Rakhine State, the proportion is about 70% and thus requires added attention. Considering that the current level of awareness of sanitation and hygiene issues is also low, there is an important role for better communication for this group, so as to generate understanding of the benefits of latrine construction and of low cost options.
- Fifteen per cent face physical constraints, such as not having enough space (primarily in poorer communities of metropolitan areas), or the difficulty in digging pits due to rocky ground (mainly in hilly areas and dry zone), or flood-prone conditions (particularly in the delta/coastal areas). In this context, a programme that looks into the development and diffusion of appropriate technology for low-income groups or the promotion of communal latrines will have to supplement communication and social mobilisation efforts.





Base: HHs able to recall related IEC

Fig. 5. Constraints in various hydrogeological areas.

### Upgrading unsanitary latrines

Upgrading unsanitary latrines is another area that needs special attention in the future. If done properly, this can increase the use of sanitary latrines by an additional 19% of households. The profile of households who currently own unsanitary latrines provides many clues as to how improvement in the programmes may be brought about, the key features of which are summarised below.

- More than half are in the hilly areas, mostly from Kachin, Kayah and Shan households.
- More than 60% of the unsanitary latrines are found in households where the heads of the household are either illiterate or have not completed primary school.
- More than 60% of unsanitary latrine owners have monthly household income of less than 15,000 kyats.
- About 40% are unaware of any IEC materials on sanitation and hygiene.

The conditions that need improvement are largely related to making sure that the direct pits (60% of all unsanitary latrine owners) and back pits (17% of all unsanitary latrine owners) are closed and rendered fly-proof. Only about a quarter of the unsanitary latrine owners will require a major effort in terms of digging the pit to contain the excreta in a confined space. The open direct pits are of particular concern in the hilly areas where more than 70% of this problem is concentrated. A large part of the problem can be addressed in

conjunction with the continuing communication campaign, by placing increased emphasis on the benefits of upgrading unsanitary latrines and the possibility of using simple low-cost techniques.

### Handwashing after defecation

Handwashing after toileting, rather than latrine construction, is influenced heavily by socio-cultural factors. The availability of cleaning materials in or near the latrine and the time required to reach a drinking water source provide two good examples of the complexity that surrounds why people do not wash hands after defecation (Table 5).

- The propensity to wash hands after defecation is greater when water and/or soap are found in or near the latrine. However, it is surprising that in over one third of households where water was found, the respondents reported not washing hands after defecation. Similarly in over one quarter of the cases, where water and soap were found, handwashing practice was not observed.
- Use of twigs, paper and other materials for cleaning after defecation is a prevailing custom in Myanmar in order to avoid direct contact with faeces. This also discourages the practice of washing hands after defecation. In households where these materials were found, two thirds of respondents did not wash their hands. When these materials were found in combination with water, the proportion of people who washed their hands increased substantially. However, this same group still had about half of the respondents that do not wash hands.
- Longer time to fetch water is understandably a disincentive when it comes to washing hands. As evident from Table 5, those who have water within the household compound are more likely to wash their hands. What is confounding, though, is that more than one third of them do not wash hands. The proportion increases to more than half when the water source is 1–5 min further away from the house.

**Table 5.** Handwashing after toilet vs. availability of cleansing materials and time to reach water source

	<i>Total</i>		<i>Soap/Ash</i> (43%) (%)	<i>Water only</i> (8%) (%)	<i>Do not wash</i> (48%) (%)
	(%)	<i>N</i>			
<i>Cleansing materials available</i>					
Water only	45	2,702	53	8	39
Water and soap	19	1,124	70	3	27
Water and/or twig and/or paper	15	920	44	11	44
Twig and/or paper only	20	1,212	21	12	67
<i>Time to reach water source</i>					
Within house compound	40	3,000	58	6	36
1–5 min	45	3,379	34	10	56
6–20 min	12	895	29	10	61
> 20 min	2	183	25	14	61

Handwashing after defecation thus presents a special challenge in relation to finding an effective communication strategy. As already indicated above, a strong correlation exists between the ownership of sanitary latrines and the practice of handwashing with soap after defecation. This is indicative of the limited success achieved so far. It would be appropriate to continue emphasising the need to wash hands while promoting sanitary latrine construction. It would be important to make direct reference to why washing hands after defecation yields direct benefits, especially among those who have ready access to water or soap, in or near the latrine, and persuade them to adopt this practice. It would be equally important to address the issue of why it is essential to wash hands, even when there is no direct contact with the excreta while using twigs or paper for cleaning.

### **Future communication and social mobilisation challenge**

It is evident that there is still a big role for the communication campaign to be continued so as to increase the knowledge about the benefits of sanitation and hygiene for producing the desired behavioural outcomes. This is particularly appropriate among about the half of the population who do not wash their hands, who mostly own unsanitary latrines and defecate in the open. A large proportion of them are poorer and less educated than the population at large, and have not been reached by the campaign, in spite of successful efforts under the auspices of the NSW and SocMob. The print materials had done relatively better in reaching out to this segment of the population: 49% among the no-latrine households, 56% among the unsanitary latrine owners, and 53% among those who do not wash hands after defecation. This contrasts against 7%, 13% and 11%, respectively, whose awareness about sanitation and hygiene is due to television, and 5%, 7% and 6%, respectively, whose awareness is due to radio. Future attempts will have to be directed to: (a) making concerted efforts to reach this group, (b) using appropriate communication to convince them of the benefits of sanitation and hygiene initiatives, and (c) providing additional activities to help overcome constraints and enable people to take action.

Raising awareness alone though is no longer adequate. There are already about half of the people who are aware of the issues but unable to take any action. There needs to be participatory problem solving discussions centred around a variety of issues, such as inability to afford the costs, or lack of suitable space for construction, or difficulties in digging pits because of hydro-geological conditions. This is equally applicable in relation to washing hands with soap and water after defecation, although there is no direct contact with faeces (because of use of twigs, papers, etc.). The identification of the potential participants from the community who may be engaged in such participatory discussions would therefore be a vital step to take.

The opportunity to engage in interpersonal communication is already there during house-to-house visits, which has been a prominent feature of NSW and SocMob. What is needed now is to direct these household visits primarily to those that have not been reached so far: the lower income, less educated people living in hard-to-reach areas. As described, only 17% of households without latrines and 38% of the unsanitary latrine owners had the benefit of household visits as opposed to 50% among the sanitary latrine owners. Moreover, there is a need for information sharing sessions to also include more people from communities where the potential participants live, or those who would be interested in engaging in house-to-house visits to work with them.

Both NSW and SocMob have made their mark in the sanitation scene of Myanmar. The political desire demonstrated by the highest authorities of the government, followed up by

village level mobilisation through concerned authorities and officials, have led to remarkable results. The next stage will require greater integration between NSW and SocMob. The high profile created by the NSW must be followed up by more participatory SocMob with greater attention paid to potential participants from low coverage areas. The massive mobilisation during the NSW can help identify potential participants with whom SocMob activities can concentrate, particularly about overcoming constraints and problem solving in the specific context of the area where the participants live.

One additional component should be developed further to supplement ongoing activities. The School Network under SocMob should be expanded into a fully fledged sanitation and hygiene education programme. Hygiene education under the Life Skills Curriculum in schools should be enhanced in the classroom context. More importantly, it should engage students in activities, which will encourage them to observe what is happening at home and in the community, and to practise what they learn in class and enable them to participate in child-to-child and child-to-parent communication for improvement in sanitation and hygiene behaviour. These activities together will make an even greater contribution to development of hygiene behaviour than what NSW and SocMob have done independently to date.

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