

4. Title: A Situation Analysis of Water, Sanitation and Hygiene in Selected Areas of Bangladesh

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a. Objectives of the Study

The general Objective of the study was to find out the overall sanitation situation in Bangladesh considering the government policy of “Sanitation for all by the year 2015”.

The specific objectives of the research were:

- to assess the availability of water resources and its use at the household level in the study areas; to analyze the state of current toilet and its practice at the rural households;
- to find out how the waste management is being carried out in rural areas of Bangladesh;
- to determine the situation and behavioral practice of personal and environmental hygiene by the rural population;
- and to make recommendations for the policy makers for the next step of water supply, sanitation and hygiene improvement.

b. Study Methods

The study method included at the first stage, all the districts in each division were listed and one district was selected at random from each division (total of 7 districts). At the second stage, all the upazilas in the sample district was listed and 2 upazilas were selected purposively: one ‘better performing’ upazila and another upazila with poor performance. This was given a total of 14 selected upazilas from the 7 sample districts. At the third stage, from each sample upazila, two unions were selected randomly. This was given a total of 28 selected unions from the seven divisions. At the final stage, from each union 30 households were selected at random from each union where 50% households were poor. The special emphasis was given to select the households where in each household having at least one

adolescent girl. Thus, a total of 840 households from 28 unions were covered under the present study.

c. Major Findings

- The study indicated that in total 4403 household members reported during field survey from 840 respondents. The age of the family members below 5 years and more than 5 years were almost same which was varied from highest in Dhaka 5.28 and lowest 3.96 percent in Barishal division and 46.23 percent in Chittagong 44.62 percent in Rangpur respectively. Population below 5 years and more than 5 years were considered as they were habituated in different practices as well as their awareness level of sanitation and hygiene. According to the information collected from the respondents in Bangladesh, the household size of the 328 (39.05%) respondents out of total 840 belongs to the category of 6-8 people's family. The average household size was 6.28. Among the 7 divisions of Bangladesh the household average household size was highest in Rangpur division (7.12) and lowest in Rajshahi division (5.48) The average Household size was the Dhaka, Chittagong, Khulna, Rajshahi, Rangpur, Barisal, and Sylhet comprised by 6.34, 6.28, 6.13, 5.48, 7.12, 6.32 and 6.28 respectively.
- The study findings showed that people of different divisions were practice hand washing in different aspects. There were few common areas where the most people use soap for hand washing. In Dhaka division most of the studied households interested to use soap after defecation (20.83%), which were followed by Rajshahi (24.17%) and Khulna (19.17%) divisions, where responds of Chittagong (10.83%) and Sylhet (10.83%) divisions emphasized to use soap after eating. In case of Rangpur and Barishal divisions poor percentages had been found among the respondents about hand washing practices irrespective of using soap in different situations. Most of the food handlers (6.67%) use soap before feeding a child and after cleaning Childs anus in Barishal division, where as in Rangpur division only few (2.5%) food handlers use soap after disposal of child feces which indicate the poor hand washing practices both the divisions.

- It was surprising that almost all the respondents had used soap at least once in reporting 24 hours, but in Rangpur and Barishal division the hand washing practice with soap was still poor. If we compare among the divisions about soap users and ranks then Rajshahi division stands top of the list and Rangpur division was in lowest position. Dhaka division stands in medium position. Using soap by food handlers were insignificant in Rangpur division and this kind of practice was almost absent in poverty stricken area. Due to remote area and attitudinal problem the food handlers of Barishal division use soap in a limited way. As the respondents of Rajshahi and Khulna division lived in urban area, they were conscious about cleanliness and use of soap by the food handlers were found significantly high. In case of Chittagong division the people of hilly area use soap in a limited way. For this reason though they use soap after eating (10.83%) but in other activities the use of soap by the food handlers were in a limited way and the result was insignificant. The human beings usually try to use soap in different purpose. To remind these respondents were asked to answer the question for using soap in different purposes within last 2 days. It was found that 100% respondents used soap for washing clothes; 80.48% of respondents used soap for child's bath; 77.50% respondents used soap for their own bath and only 3.45% of respondents used soap before preparing food which indicates unconsciousness about their health.
- The study findings showed that about 86.19% respondent households of the rural areas actually had used to Hand Tube Wells as the source of drinking water. In studied areas the findings of the use of the source of drinking water's breakdown is 86.19% tube wells; 5.36% underground water through electric motor; 3.45% pond water with purification; 2.02% shallow tube wells; and more than 3% deep tube well, rain water and springs. About 90% household in Dhaka division used water from hand tube well for drinking purposes and 4.17% used underground water through electric motor. For drinking purpose water of shallow tube well and pond water was used in a few cases. There were no findings about the rain water, spring or public tap used drinking purpose. Like Dhaka division most of the people of Chittagong (85.83%), Khulna (90.83%), Rajshahi (84.17%), Rangpur (80%), Barishal (90%) and Sylhet (82.50%) division used water of hand tube-well for drinking purpose. The other sources of drinking water plays insignificant role. The NGO workers and television channels specially the Bangladesh Television (BTV) have been playing important role for disseminating knowledge and

awareness making regarding hygiene behavior and use safe water in rural areas of Bangladesh. It was found from the study that sources of message on safe water use and hygiene behaviour was 30.24% each from television and NGO activists. Government Health Assistants also playing important role on this awareness (18.33%).

- Menstruation is a normal biological process and a key sign of reproductive health, yet in many cultures it is treated as something negative, shameful or dirty. The continued silence around menstruation combined with limited access to information at home and in schools results in millions of women and girls having very little knowledge about what is happening to their bodies when they menstruate and how to deal with it. From the study it was found that the willingness of sharing menstrual hygiene practices to others among the adolescent girls in the study households were less in every division of Bangladesh. Even menstruation is a physiological matter and common around the world but the maximum adolescent girls among the study respondent's households gave the impression it as big problems in their life. Regarding the material use on the time of menstruation the adolescents usually use cloths (rag), sanitary pad, cotton and other materials like tissue paper. It was found that use of cloths during menstruation comprised the highest position (63.93%). The second position was the pad with is followed by cotton. About 10% adolescents refused to say what they were using during menstruation and they said it is their matter so, no need to express this dirty matters with others. Those adolescents' girls were using the cloths during their menstruation they were habituated with old cloths (62.60%) among the respondents of Bangladesh. Only 24.95% adolescents were habituated with using the new cloths among the total adolescents and this figure was highest in Sylhet division (34.09%) and lowest in Khulna division (17.39%). The adolescent's girls usually use cloths during their menstruation but they need to change these cloths after some time. The place for changing cloths is one of the main problems for the adolescent girls in rural areas of Bangladesh, especially if there are no separate toilet and water facilities for the girls.
- It was found from the study that changing menstrual cloths was maximum 1-2 times per day (57.73%), changing 3-4 times was lower than that (39.29%). But it is require to wash and dry the menstrual cloths after each use and it was found that process of drying was so inquisitive and for repeated use the adolescents was trying to make dry inside the house

but not in sunlight (51.77%) and it takes long time to dry. Some adolescents tried to dry the menstrual cloths for repeated use inside the house and in sunlight (21.97%) and others (26.26%) dried it outside the house and in sunlight. The place of keeping of menstrual cloths for repeated use is also important for them. If they keep them in dirty place then there is a probability of skin diseases. Therefore, it is require keeping the dried menstrual cloths in clean place. But it was found that, more than 60% adolescents kept their menstrual cloths for repeated use in dirty place and it was highest in Rangpur division (70.00%) and lowest in Khulna division (52.17%).

- Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of wastes as well as the treatment and proper disposal of sewage or wastewater. The conventional sewage systems are found in rural areas of Bangladesh which is popularly known as use of toilets. There are two types of toilets usually found in rural areas of Bangladesh. One is flush toilets using generally by the rich households and pit latrine which is most common in rural areas of Bangladesh. Even the people of rural areas of Bangladesh are mainly using the pit latrines but most of the pit latrines are not water sealed, so that these are unhygienic (36.07%). The most dangerous issue of these pit latrines is these latrines are connected to canal, ditch, or river (32.98%). The number of pit latrines varies from district to district and it was found that pit latrine with water sealed was highest in Rajshahi division (20.83%) and lowest in Rangpur division (1.67%).
- Pit latrines with no water sealed is very dangerous to human health because flies can carry bacteria and other germs which are mainly responsible for diarrhoea, dysentery and typhoid diseases. Therefore, these type of latrines are totally unhygienic and it was found from the study that these type of pit latrine with no water sealed was 36.07% among the study households in Bangladesh whereas it was highest in Sylhet division (45.00%) and lowest in Rangpur division (21.67%). But the most significant drawback of the respondents living in Rangpur division was the practicing hanging latrines (24.17%) and using the pit latrines those were connected to somewhere else like canal which was 27.50%. The hanging latrines were also connected to ponds or canals and using these two types of latrines are very dangerous to human health and healthy environment is concerned so far. About one third of the toilets used by the study respondents households

of Bangladesh were these types i.e., pit latrine connected to somewhere else (canal, river, ditch etc.).

- It is very rare to reuse the waste in rural areas of Bangladesh but it has huge potentialities of resource management and reuse. It was found from the study that about one third of the study households had no specific places for waste disposal. Availability of specific place was highest among the respondent's households in Rajshahi division (75.83%). The specific place where waste can be disposed properly i.e., drum or pit is quite low which were only 2.74% and 2.26% respectively in Bangladesh. The maximum number of households put/ throws their garbage beside the homestead or beside the kitchen (42.86%) and it was followed by here and there throwing or putting (31.07%).
- The availability of drainage system is also important considering the safe sanitation. But it was found that 67.98% households had no proper drainage system which is responsible to fever like dengue and other health hazards. Those households had the available drainage system, these systems were almost not satisfactory in nature and it was found that 53.90% drainage systems were broken drain.
- Based on the findings of the survey it is conceivable that hand washing with water alone reduces disease transmission somewhat, but it is significantly important to wash both hands especially for the food handlers before cooking or preparing foods. Some demonstration programme can be undertaken in rural areas regarding the proper hand washing practices. The most important is to motivate people who do not know how to wash their hands effectively to acquire a hand washing habit. There are some aspects of hand washing practices, especially washing both hands and drying that would benefit from improved understanding. Both government agencies like Upazila and Union level health workers can play the vital role. For approval of any project of NGOs, NGO Affairs Bureau can impose this type of awareness raising programme to their respective projects.
- The defecation behaviour needs to improve through using hygiene toilets and washing hands after defecation. Soap use should be encouraged in rural areas before and after eating and mandatory after defecation. Awareness raising programme through village based schools can be undertaken for proper defecation practices and soap use. The unhealthy toilets should be shifted by healthy and hygienic toilets. Both government

organizations and NGO and especially through the direct coordination from the Union Parishad level can solve this problem. Proper monitoring is also necessary in rural households for ensuring installation of hygienic toilets. All wastes are resources and can be reusable even after some processes. Some wastes are degradable to compost fertilizer. Local level kitchen waste management programme can be undertaken to manage to wastes in rural areas. School awareness programme on waste management can also be started in schools situated in rural areas of Bangladesh.

- Adolescent's girls are the mother of upcoming generation. Therefore, it is important to teach them about the reproductive health. The need to aware what to do during menstruation periods. Adequate facilities should also be given in both households and school level for maintaining their menstrual hygiene. A special class on reproductive health and awareness can be arranged in all schools with the adolescent's girls. A special programme in both private and government channels should be broadcast at least in every week regarding the safe water use, sanitation, waste management, menstrual hygiene, and healthy toilets use with maintaining personal hygiene.