Perception and Societal Response to Hazard Mitigation:

An Example of Arsenic Contamination of Drinking Water in Bangladesh

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Despite being among the most well watered countries on earth, Bangladesh suffers from major shortages of pure drinking water. As a result, over 40% of the nation's 133 million people must rely on arsenic-contaminated, hand-pumped, tube-well water for drinking and cooking. Drinking and ingestion of arsenic-contaminated water by such a large populace may be the largest mass poisoning in human history. Arsenic is very hazardous to humans and immediate efforts must be made in order to mitigate its impact. Existing studies on arsenic-contaminated drinking water in Bangladesh deal with sources of the arsenic, its impacts, and options for addressing the contamination. Both geo-chemical and human-induced sources release arsenic into the drinking water of Bangladesh. When oxidized, naturally occurring pyrite minerals release arsenic into underground water (Das et al. 7). Oxidation of pyrite occurs as human-induced depletion of the ground water table (by crop irrigation, and the diversion of the Ganges River water by India) allows oxygen to rise to the pyrite layer of the bedrock (Nickson et al. 405).

The health effects of arsenic ingestion appear in about 5 to10 years, initially as skin lesions. Its dose-dependent hazardous impacts include internal cancer, interference in DNA replication, chromosomal aberrations, and death (Smith). While its hazardous impacts are still being discovered, various methods of mitigation of arsenic contamination in drinking water are also being tried. These methods of arsenic mitigation include the following: pond-sand-filter (PSF) using pond water, low-pressure nano-filteration, and conventional co-precipitation method using ferric chloride, lime softening, activated allumina as well as membrane filtration.

While there is extensive research on arsenic mitigation techniques, the socio-economic dimensions of the arsenic hazard mitigation are yet to be examined. Arsenic mitigation involves coping with the hazard and requires increased public awareness, community participation, and intervention by the government and non-governmental organizations (NGOs) (Paul). As these interventions are external forces to these rural societies, community participation and societal response to the hazard emerge as the most important internal components of the mitigation process, which involves monetary expense to purchase technology needed to reduce the Arsenic. Awareness and perception of the hazardous impacts of arsenic contamination in drinking water on public health play a very important role in increasing community participation in the mitigation process so that Bangladeshi citizens will be willing to bear the cost of the mitigation technology. However, public awareness of the arsenic contamination hazard and the level of community participation vary across Bangladesh as well as across socio-economic cross-sections of the rural community. Therefore, this forms an important topic for geographic research, which has not yet been undertaken in Bangladesh.

The objective of this study is three-fold. First, it aims to assess the Bangladeshi people's knowledge and perception of the arsenic hazard and its mitigation options, and thus explores the extent of public awareness of the hazard. Second, it analyzes the socio-economic conditions of the affected people and their level of awareness of the health hazard by arsenic contamination. Finally, it explores the different levels of community participation by analyzing the household response to the cost of the mitigation options and willingness to pay for the cost.

Study Area, Data, and Method

The present study was conducted in five villages selected from five districts in western and southwestern Bangladesh. Earlier studies done by the British Geological Survey revealed that large numbers of hand pump tube wells in each village were contaminated with toxic levels (>0.05 mg/l) of naturally released underground arsenic and that there are growing numbers of patients showing the symptoms of arsenic poisoning. The villages (Rajarampur in Nawabganj, Samta in Jessore, Fingri in Satkhira, Kanchanpur in Khulna, and Taltala-Lakshipasha in Narail) vary from each other in terms of the amount of arsenic present in drinking water, numbers of tube-wells contaminated, number of arsenic victims per 1000 people, and socio-economic conditions of their residents, thus forming unique conditions to study arsenic hazards and its mitigations (Table 1).*

Data was collected through detailed fieldwork conducted during the summer of 2001. A total of 243 sample households were selected and surveyed from five villages by a group of five research assistants over a period of two months. A detailed questionnaire was used to conduct the interview with the head of each household. The questionnaire contained questions regarding the sources of drinking water, socio-economic conditions of the household, perception of arsenic contamination of drinking water, and willingness to participate in the mitigation process. The sample households were selected randomly by giving the questionnaire to every third household (i.e., 33%) from a major central point in the village. All the questions were asked in Bengali since most villagers did not speak nor understand English. Data was cross-tabulated and interpreted to explore the respondents' knowledge and perception of the arsenic hazard, its mitigation process, and its variation among various socio-economic groups.

*See Appendix for Tables and Figures, pp. 48–51

Results:
Risk of Arsenic Hazard

The five villages studied are located in different ecosystems where, due to increased irrigation and diversion of the Ganges River water by India, variable rates of depletion of the underground water tables resulted in a variable level of arsenic release in tube well water. In all five villages residents rely on tube-well water supply for drinking and cooking purposes and use pond and well water for washing and bathing. Drinking water contaminated with <0.05 mg/l of arsenic may not be hazardous to humans. Alarmingly, tube-wells in four out of five villages under study were found to be contaminated with >0.05 mg/l, which is a great concern for their residents.

Each of the five villages had some degree of risk of the arsenic hazard, as indicated by the amount of arsenic present in the drinking water supply, the number of tube wells contaminated, and the number of victims per 1000 people (Table 1). Virtually all sample residents are knowledgeable about the problem of arsenic contamination of drinking water and about their risk or exposure to the arsenic hazard. However, despite their willingness to participate in any arsenic mitigation efforts, poor illiterate farming and wage laborer households with few resources and limited access to alternate water purification technology are at greater risk than the literate middle-to high-income business and servicemen households for exposure to arsenic.

The northwestern village of Rajarampur shows very high risk of arsenic hazard as almost one-half of its tube-wells are contaminated with very high level of arsenic (.831 mg/l) that affected 37 people per 1000 residents. In this village, mostly the poor and illiterate farmers and wage laborers are at greater risk of arsenic hazard as revealed from the fact that large number of arsenic victims belong this socio-economic class (Table 1). Another high-risk village is Samta, in which one-third of the village tube wells are contaminated with high quantities of arsenic (0.35 mg/l) that affected a staggeringly large number of people (95 people per 1000 residents). This is a poor village where the majority of the residents earn less than Taka 5000 per month from farming and as wage laborers. Unfortunately, the numbers of arsenic victims are greater among the poor and illiterate farmers.

The village of Kanchanpur in Khulna district has somewhat moderate risk of arsenic hazard. Despite the fact that most of the tube wells (>85%) were contaminated with moderate levels of arsenic (0.066mg/l), only 10 people per 1000 residents were infected by arsenic-borne skin lesions. Most of the residents in this village are literate and engaged in small business and service to earn a very low monthly income (<Taka 5000).

Low risk of arsenic hazard was found in the village Fingri where almost one-half of the tube wells were contaminated with very low levels of arsenic (0.04mg/l). However, there were no reported cases of arsenic poisoning in this village. The residents of this village are comparatively wealthier than the other villages described above. Most sampled respondents are literate and engaged in business and service and earn over Taka 5000 per month.

Very low risk of arsenic hazard was found in the village Taltala, where only 14% of the village tube-wells are contaminated with low quantities of arsenic. No victims had yet been reported. This village is comparatively prosperous as majority of the sampled households are literate and have high monthly income from business and service. From the village level risk assessment of arsenic hazard, it appears that all the five villages under study have risk of arsenic hazard and the poor illiterate residents are at greater risk of the hazard. Literate and wealthier residents have better access to the information on the arsenic hazard and resource to obtain arsenic free drinking water which may have put them at low risk to the hazard. While various geo-chemical and human-induced factors are responsible for the regional variability of arsenic contamination of tube-wells, variable socio-economic conditions of the village residents have influenced their knowledge, awareness, and perception of arsenic hazard, as well as their ability and willingness to cope with it through mitigation processes.

Knowledge and Perception of Arsenic Hazard

The incidence of arsenic contamination of drinking water has been a widespread problem in recent years in Bangladesh in general and in the areas studied in particular. Most of the residents in the five sampled villages possess fair knowledge of arsenic contamination of tube-well water on which they must rely for drinking and cooking. However, their view of the chemistry of arsenic and its impact on humans differed significantly. About one-half of the sampled respondent viewed it as a poison, the remaining people identified it as a disease, and virtually all of them recognized it as a cause of skin lesions because that is the most common symptom shown by the arsenic victims.

The knowledge of arsenic hazard and its impact on human health depended on the village risk levels, types of impacts experienced, and socio-economic conditions of the respondents (Table 2 and 3). For example, in Rajarampur village, where the risk level is very high, and most of the victims suffer from skin lesions, 95% of the respondents identified arsenic as a poison that causes skin lesions. In Samta, where the risk level is also very high and the victims commonly suffer from both skin lesion and cancer, the knowledge of arsenic hazard is mixed: 34% respondents referred to it as a poison and 56% identified it as a type of disease; and both groups recognized it as a cause of skin lesions and cancer. Also, somewhat mixed knowledge was found among the three low risk villages of Fingri, Taltala, and Kanchanpur where there are either no victims or few victims reported. Respondents from these three villages viewed arsenic as a poison and is found in drinking water from tube-well; drinking arsenic contaminated water is harmful and may cause white spots on human skin. Absence of victims in these villages actually blurred its residents' perceptual knowledge of the hazard.

The sampled respondents also differed in terms of known years of the arsenic problem and a media to acquire the knowledge. From the sample data, it was revealed that the majority of the respondents knew about the arsenic contamination of drinking water for the last 2 years as more and more people get affected by the poisoning. Most people in the study villages learned about the hazard through mass media such as radio, television, and government and NGO sponsored publicities. Regardless of their socio-economic conditions, most respondents perceived the arsenic contamination of drinking water as a natural hazard that causes too much suffering and death in their village (Table 2 and 3). Their knowledge and perception of the arsenic hazard forced the village residents to search for its mitigation procedure.

Societal Response to Arsenic Mitigation

A very high percentage of sampled respondents in all five villages had knowledge about water purification and various arsenic mitigation procedures and options (Table 4). Some of the common options known to respondents were water filtering, use of deep tube well water, collection and use of rainwater, and the uses of ponds and well water. Over 80% of the respondents in all five villages knew that water filtering and the use of deep tube wells are safe methods of arsenic mitigation. Less than 10% knew that open surface water such as pond, well, and rainwater should be arsenic free; regardless, they resisted using these sources for drinking and cooking because of the possibility of some other type of contamination.

Only a few active government and non-government organization (NGO) supported arsenic mitigation projects were found in all five villages and most sampled respondents reported that no body is making any attempt to mitigate arsenic contamination (Table 4). Virtually all respondents, regardless of their socio-economic conditions, preferred to receive more government and NGO support to address the arsenic contamination. They were willing to participate in the mitigation projects despite the possibility of their monetary involvement in such projects. Some would prefer to pay the cost of arsenic mitigation as per their financial ability: about 20% of respondents were willing to pay up to Taka 200 per month to receive arsenic-free water and a few rich service and businessmen households were willing to spend as much as Taka 500 or more per month for the safer drinking water supply. Poor, less-educated, and farming and laborer respondents preferred not to pay and insisted that the government and NGO should take more responsibility to assure the supply of arsenic-free water for the country.

Conclusion

The study is significant in two ways. First, it has collected a data set containing information on socio-economic conditions of the users and victims of the arsenic-contaminated drinking water from variable geographic conditions. It has also collected information on people's awareness of risk, mitigation processes (which involves monetary cost) and variations in willingness to participate depending on socio-economic conditions. The results of the study suggest that the incidence of arsenic contamination of drinking water has been perceived by most of the respondents as a hazard to human health. While most of the respondents were motivated to participate in the water purification and arsenic mitigation projects, they were most in favor of more government-and NGO-sponsored projects in which they would participate and pay as per their financial ability. Socio-economic conditions in general and literacy and income in particular play a role in determining the level of people's awareness of the arsenic hazard and its mitigation. The results of the study are important for future research and planning the large-scale mitigation process, as they will contribute to our understanding of the importance of socio-economic conditions on the level of awareness of natural hazards and human adjustments to those hazards.

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Appendix: Tables

Table 1 *CHARACTERISTICS OF THE VILLAGES AND THEIR RESIDENTS UNDER STUDY*

Village district	Amt. of arsenic in water (mg/l)	No. of tube well contaminated	No. of arsenic victims / 1000 people	Occupational classes				Years of schooling			Monthly income in Taka[1]		
				Farming	Service	Business	Wage Labor	<5	5–10	>10	<5000	5000–9999	>10000
Rajarampur Nawabganj	0.83	17 (39.5%)	37	10 (24%)	13 (32%)	10 (24%)	8 (20%)	18 (44%)	10 (24%)	13 (32%)	23 (56%)	16 (39%)	2 (5%)
Samta Jessore	0.35	17 (34%)	95	12 (24%)	8 (16%)	17 (34%)	13 (26%)	12 (24%)	24 (48%)	14 (28%)	42 (84%)	6 (12%)	2 (4%)
Kanchanpur Khulna	0.066	43 (86%)	10	22 (50%)	8 (16%)	14 (29%)	5 (10%)	9 (18%)	30 (60%)	11 (22%)	34 (68%)	13 (26%)	2 (4%)
Fingri Satkhira	0.055	26 (53%)	0	16 (36%)	15 (34%)	10 (23%)	3 (6.8%)	2 (4.5%)	20 (46%)	22 (50%)	21 (48%)	19 (43%)	4 (9%)
Taltala Narail	0.04	7 (14%)	0	4 (10%)	18 (45%)	13 (33%)	5 (13%)	5 (13%)	12 (30%)	23 (58%)	15 (38%)	20 (50%)	5 (13%)

1. Taka 50 is equivalent to US$1.00.

Table 2 *PERCEPTION AND KNOWLEDGE OF ARSENIC HAZARD BY VILLAGE*

Indicators of Perception of Arsenic Hazard and Expected Responses		Rajarampur	Samta	Fingri	Taltala	Kanchanpur	5 Village Total
Do you know about arsenic contamination of drinking water in your village?	Yes	39 (95%)	45 (90%)	44 (100%)	37(92.5%)	41 (83.7%)	206 (92%)
	No	2 (5%)	5 (10%)	0 (0%)	3 (7.5%)	8 (16.3%)	18 (8%)
What is arsenic?	Poison	39 (95%)	17 (34%)	35 (79.5%)	18 (45%)	11 (22.5%)	120 (53.6%)
	Type of disease	0 (0%)	28 (56%)	9 (20.5%)	20 (50%)	33 (67.3%)	90 (40.2%)
	No knowledge	2 (5%)	5 (10%)	0 (0%)	2 (5%)	5 (10.2%)	14(6.3%)
Do you know the effects of Arsenic poisoning on humans?	No knowledge	2 (5%)	5 (10%)	0 (0%)	2 (5%)	5 (10.2%)	14(6.3%)
	Skin lesions	36 (87.8%)	42 (84%)	44 (100%)	38 (95%)	44 (89.8%)	204 (91%)
	Skin Cancer	3 (7.2%)	3 (6%)	0 (0%)	0 (0%)	0 (0%)	6 (2.7%)
How many years you have known about the Arsenic problem?	1-2 years	26 (63.4%)	23 (46%)	26 (59%)	27 (67.5%)	21 (42.9%)	123 (55%)
	3-4 years	13 (31.7%)	22 (44%)	17 (38.6%)	13 (32.5%)	28 (57.1%)	101 (45%)
How did you learn about the Arsenic problem?	Health worker	14 (34%)	17 (34%)	21 (47.7%)	14 (35%)	16 (32.7%)	82 (36.7%)
	Neighbors & Radio/TV/newspaper	25 (61%)	33 (66%)	23 (52.3%)	26 (65%)	33 (67.3%)	142 (63.4%)
What are the major problems in this village?	Arsenic Hazard	38 (93%)	28 (56%)	20 (45.5%)	31 (77.5%)	33 (67.4)	150 (67%)
	Water contamination	1 (2.4%)	12 (24%)	15 (34.1%)	5 (12.5%)	4 (8.2%)	37 (16.5%)
	Poverty, Unemployment	2 (5%)	10 (20%)	14 (31.8%)	4 (10%)	12 (24.5%)	42 (18.8%)
Do you think that Arsenic problem in your village is hazardous to human life?	Yes	39 (95%)	42 (84%)	35 (79.5%)	31 (77.5%)	37 (75.6%)	184 (82.1%)
	No	2 (5%)	8 (16%)	9 (20.5%)	9 (22.5%)	12 (24.5%)	40 (17.9%)

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Table 3 *PERCEPTION AND KNOWLEDGE OF ARSENIC HAZARD BY SOCIO-ECONOMIC CONDITIONS OF THE RESPONDENTS*

Indicators of perception of arsenic hazard	Expected response	Occupational class				Years of schooling			Monthly income in Taka[1]		
		Farming	Service	Business	Wage Labor	<5	5–10	>10	<5000	5000 –9999	>10000
Do you know about arsenic contamination of drinking water in your village?	Yes	74 (98%)	61 (98%)	61 (95%)	32 (97%)	21 (100%)	113 (99%)	57 (97%)	14 (98%)	280 (96%)	6 (100%)
	No	1 (2%)	1 (2%)	3 (5%)	1 (3%)	0 (0%)	2 (1%)	2 (3%)	3 (2%)	3 (4%)	0 (0%)
What is arsenic?	Poison	31 (42%)	37 (60%)	30 (47%)	16 (48%)	6 (29%)	39 (34%)	34 (58%)	61 (42%)	47 (51%)	4 (66%)
	Type of disease	37 (51%)	23 (37%)	29 (46%)	13 (40%)	13 (62%)	66 (57%)	24 (41%)	72 (50%)	32 (39%)	1 (17%)
	No knowledge	5 (7%)	2 (3%)	5 (7%)	4 (12%)	2 (9%)	10 (9%)	1 (1%)	12 (8%)	4 (10%)	1 (17%)
How many years have you known about the arsenic problem?	1–2 years	73 (97%)	59 (95%)	61 (95%)	27 (82%)	18 (86%)	107 (93%)	56 (95%)	134 (92%)	81 (98%)	6 (100%)
	3–4 years	2 (3%)	3 (5%)	3 (5%)	6 (18%)	3 (14%)	8 (7%)	3 (5%)	11 (8%)	2 (2%) (2%)	0 0%
How did you learn about the arsenic problem?	Health worker	25 (34%)	20 (32%)	22 (34%)	12 (41%)	11 (52%)	45 (39%)	19 (32%)	61 (42%)	21 (25%)	2 (33%)
	Neighbors & radio or TV	49 (66%)	42 (67%)	42 (66%)	17 (59%)	10 (48%)	70 (61%)	40 (68%)	84 (58%)	62 (75%)	4 (66%)
What are the major problems in this village?	Arsenic Hazard	70 (93%)	59 (82%)	54 (84%)	28 (97%)	18 (86%)	93 (89%)	54 (92%)	138 (96%)	73 (92%)	4 (100%)
	Water Contamination	0 (0%)	1 (1%)	2 (3%)	0 (0%)	1 (5%)	1 (1%)	2 (3%)	0 (0%)	4 (5%)	0 (0%)
	Poverty/ Unemployment	5 (7%)	12 (17%)	8 (13%)	1 (3%)	2 (9%)	11 (10%)	3 (5%)	6 (4%)	2 (3%)	0 (0%)
Do you have an arsenic patient in your family?	Yes	6 (8%)	9 (15%)	15 (23%)	8 (30%)	3 (14%)	23 (20%)	2 (3%)	27 (19%)	8 (9%)	2 (33%)
	No	69 (92%)	53 (85%)	49 (77%)	19 (70%)	18 (86%)	92 (80%)	57 (97%)	118 (81%)	83 (91%)	4 (67%)
Do you use arsenic-contaminated water?	Yes	38 (51%)	28 (45%)	40 (63%)	13 (41%)	12 (60%)	57 (49%)	29 (49%)	71 (49%)	42 (51%)	2 (33%)
	No	37 (49%)	34 (55%)	24 (37%)	19 (59%)	8 (40%)	58 (51%)	30 (51%)	73 (51%)	41 (49%)	4 (67%)
If yes, why?	No alternative	23 (31%)	12 (19%)	21 (32%)	5 (16%)	6 (29%)	39 (34%)	13 (22%)	44 (30%)	14 (17%)	1 (17%)
	Believe no harm	2 (2%)	2 (4%)	5 (9%)	1 (3%)	1 (4%)	5 (4%)	2 (3%)	4 (3%)	5 (6%)	0 (0%)
	Water not tested	50 (67%)	48 (77%)	38 (59%)	26 (81%)	14 (67%)	71 (62%)	44 (75%)	96 (67%)	64 (77%)	5 (83%)

1. Taka 50 is equivalent to US$1.00.

Table 4 MITIGATION OPTIONS AND PEOPLE'S PARTICIPATION IN MITIGATION PROCESS

Mitigation options	Expected response	Occupational class				Years of schooling			Monthly income in Taka[1]		
		Farming	Service	Business	Wage Labor	<5	5–10	>10	<5000	5000 –9999	>10000
Do you know about water purification?	Yes	63 (82%)	46 (74%)	50 (78%)	24 (72%)	17 (81%)	92 (80%)	46 (78%)	110 (76%)	73 (88%)	4 (67%)
	No	14 (18%)	16 (26%)	14 (22%)	9 (28%)	4 (19%)	23 (20%)	13 (24%)	35 (24%)	10 (12%)	2 (33%)
What are the arsenic mitigation methods you know or heard of?	Filtering	33 (44%)	22 (35%)	30 (47%)	14 (42%)	11 (52%)	59 (51%)	19 (32%)	60 (41%)	35 (42%)	3 (50%)
	Deep tube well	29 (39%)	33 (53%)	27 (42%)	14 (42%)	5 (24%)	40 (35%)	29 (49%)	62 (43%)	38 (46%)	2 (33%)
	Rain water	9 (12%)	5 (81%)	4 (6%)	1 (3%)	2 (10%)	9 (7%)	6 (10%)	13 (9%)	5 (6%)	0 (0%)
	Pond or well	3 (4%)	2 (32%)	3 (5%)	3 (10%)	2 (10%)	4 (4%)	5 (9%)	8 (6%)	3 (4%)	1 (17%)
	Don't know	1 (1%)	0 (0%)	0 (0%)	1 (3%)	1 (4%)	3 (3%)	0 (0%)	2 1%)	2 (2%)	0 (0%)
Who is mitigating arsenic contamination in your area at present?	Government health workers	14 (19.5%)	11 (17%)	13 (20%)	5 (15%)	5 (8%)	21 (18%)	14 (24%)	23 (16%)	23 (28%)	2 (33%)
	Research team	1 (1%)	1 (2%)	1 (1%)	1 (3%)	0 (0%)	1 (1%)	0 (0%)	1 (1%)	3 (4%)	0 (0%)
	NGO	14 (19.5%)	7 (10%)	16 (25%)	9 (27%)	7 (12%)	34 (30%)	5 (9%)	39 (27%)	7 (8%)	2 (33%)
	Self	3 (4%)	2 (3%)	3 (5%)	2 (6%)	1 (2%)	9 (7%)	1 (1%)	4 (2%)	7 (8%)	0 (0%)
	No body	40 (56%)	41 (66%)	31 (49%)	16 (49%)	47 (78%)	50 (44%)	39 (66%)	79 (54%)	43 (52%)	2 (33%)
Who do you think should take the initiative to arsenic mitigation methods?	Government	61 (81%)	42 (68%)	51 (80%)	25 (75%)	58 (86%)	50 (73%)	37 (63%)	113 (78%)	62 (75%)	4 (68%)
	Research team	1 (1%)	3 (5%)	1 (1%)	1 (3%)	2 (3%)	0 (0%)	3 (5%)	5 (3%)	1 (1%)	0 (0%)
	NGO	11 (15%)	10 (16%)	7 (11%)	5 (15%)	6 (9%)	14 (20%)	10 (17%)	19 (13%)	13 (16%)	1 (16%)
	Self	2 (3%)	7 (11%)	5 (8%)	2 (6%)	1 (2%)	5 (7%)	9 (15%)	9 (6%)	7 (84%)	1 (16%)
Are you willing to participate in the arsenic mitigation and to pay the cost?	Yes	64 (85%)	57 (92%)	57 (89%)	29 (88%)	19 (90%)	99 (86%)	55 (93%)	125 (87%)	79 (95%)	5 (83%)
	No	11 (15%)	5 (8%)	7 (11%)	4 12%)	2 (10%)	16 (14%)	4 (7%)	21 (13%)	4 (15%)	1 (17%)
How much money are you willing to spend for arsenic mitigation process per month?	No capacity to pay	6 (8%)	3 (5%)	3 (4%)	1 (3%)	1 (5%)	6 (5%)	2 (3%)	9 (6%)	2 (2%)	1 (20%)
	Taka 100-200	15 (20%)	14 (23%)	20 (30%)	5 (15%)	3 (14%)	26 (22%)	15 (26%)	31 (21%)	24 (29%)	1 (20%)
	Taka 200-500	1 (1%)	1 (1%)	2 (3%)	4 (12%)	0 (0%)	1 (1%)	4 (7%)	0 (0%)	7 (8%)	1 (20%)
	>Taka 500	0 (0%)	2 (3%)	1 (1%)	0 (0%)	0 (0%)	2 (2%)	1 (2%)	1 (1%)	2 (3%)	1 (20%)
	As per capacity	53 (71%)	42 (68%)	41 (62%)	23 (70%)	17 (81%)	80 (70%)	36 (62%)	105 (72%)	48 (58%)	1 (20%)

1. Taka 50 is equivalent to US$1.00.

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