



Livelihood Status of the People Living in Unified Enclaves (*Chitmahal*) of Bangladesh

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Authors' contributions

This work was carried out in collaboration among all authors. Author AKMZ designed the study, wrote the protocol and supervised the research work. Authors M. A. Mamun, M. A. Majid and RS managed the literature searches, conducted field survey, collected data, performed statistical analysis and wrote the first draft of the manuscript. All authors read and approved the final manuscript.

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ABSTRACT

The study was under take to determine and describe the general characteristic of respondents, to explore present livelihood status of unified enclaves people and to identify problems faced by them. The study was conducted at different unified enclaves' areas of Lalmonirhat, Kurigram, Panchagarh and Nilphamari district during December 2016-June 2017. A total 200 respondents were randomly selected from unified enclave areas for the study 50 from each district. Thirty two percent residents live in straw and mud wall houses and side walls are developed either by tin or by bamboo or other low cost materials and poor families (29%) have walls made by jute sticks. Agriculture is the main source of livelihoods in these areas (80%) including agricultural day labour. Non-farm activities (20%) are mainly limited to shop keeping or trading, rickshaw van pulling. No formal educational institute sponsored by government or private sector was found in unified enclave areas but recently people in enclave areas have built new structures with signboard on their lands by own finances with the hope that their relatives and peers will get jobs if the government approves the scheme. There is no community clinic or primary healthcare facility in the unified enclave areas. Majority of the respondents (76%) take treatment from village doctor and Kobiraj followed by upazilla health care centre (13%) and 5% from community clinic. Ninety two percent birth deliveries had been attended by relatives or midwives at home. Nearly 92% girls were

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married before age of 18 years. The study reveals that 88% respondents were suffering from dowry but there is no eve-teasing in the unified enclaves due to their strong family and social bondage. Insufficient irrigation facilities and quality agricultural inputs, lack of training and lack of marketing facilities of agricultural products is the major problems of their livelihoods. Insufficient support and lack of training in agriculture, livestock and fisheries, lack of healthcare centre, educational institution, poor road transportation facilities, and insufficient loan facilities of agriculture is the major problems of unified enclaves. To improve the condition of lives of people in unified enclaves, need to ensure quality agricultural inputs and irrigation facilities, agricultural product marketing facilities, training on modern farming and agricultural credits with lower interest rate. Group based or community based fish, poultry or cattle farming might be beneficial for landless people. Low cost capital is needed to establish micro or small business enterprise. To improve the condition of lives of people in unified enclaves, different government agencies have taken various initiatives. But government programmes will not be enough to meet various needs of people of unified enclaves. Intervention from private sector would address various development needs there.

Keywords: Livelihood; unified enclaves Chitmahal.

1. INTRODUCTION

1.1 Background of the Study

Enclave or exclave (*Chitmahal* in Bengali) means a portion of territory of one state surrounded by territory of another or others, as viewed by the surrounded territory [1]. There are a good number of enclaves all around the world, which were created for a variety of historical, political or geographical reasons. Both Bangladesh and neighboring India are suffering much from enclave problem. There are a total number of 162 territories within Bangladesh and India, which are commonly known as '*Chitmahal*' in Bengali which means the land disconnected from the mainland. There are 102 Indian exclaves inside Bangladesh and 71 Bangladeshi ones inside India, with a combined population between 50,000 to 100,000. Inside those enclaves are also 28 counter-enclaves and one counter-counter-enclave. Maximum Indian exclaves are located in the north-west part of Bangladesh in the districts of Lalmonirhat, Panchagarh, Kurigram and Nilphamari. On the other hand, the Bangladeshi exclaves are located in Kuchbihar and Jolpaiguri districts of West Bengal of India [2,3].

These enclaves are the consequence of the historical partition of Indian subcontinent awarded by Sir Redcliff in 1947 [4]. The imminent territory within these two countries created an inhuman situation for the people of these enclaves. In the Mujib-Indira treaty 1974 of boundary identification between Bangladesh and India, it was mentioned that the people of these enclaves and exclaves might live in any of these

two countries [5]. However, the treaty was not finally executed or no effective steps were taken in last 40 years and the enclave people are passing their days in an inhuman situation of statelessness [6].

A revised version of the agreement was adopted by the two countries on 7 May 2015, when the Parliament of India passed the 100th Amendment to the Indian Constitution. Under this agreement, which was ratified on 6 June 2015, India received 51 Bangladeshi enclaves (covering 7,110 acres /2,880 ha) in the Indian mainland, while Bangladesh received 111 Indian enclaves (covering 17,160 acres /6,940 ha) in the Bangladeshi mainland. The counter-enclaves, together with Dahagram-Angarpota, will not be exchanged when the Indira-Mujib agreement of 1974 is finally implemented. The enclave residents are to be allowed to either reside at their present location or move to the country of their choice. The physical exchange of enclaves was implemented in phases between 31 July 2015 and 30 June 2016. The enclaves stand exchanged on the midnight of 31 July 2015 and the transfer of enclave residents is expected to be completed by 30 November 2015. After the Land Boundary Agreement, India lost around 40 km² (10,000 acres) to Bangladesh. Of the 111 enclaves, there are human settlements in 72 enclaves and rests are mainly cropland. Some 7,648 households, having 39,144 members, reside in these enclaves in four bordering districts of northern Bangladesh. The number of population is expected to decline 38,157 after migration of 987 persons who opted to go to India. The average family size is 5.11 and the percentage of men is higher than women,

according to joint survey of enclave people by Bangladesh India.

There are 111 unified enclaves or nearly 17,000 acres of land within Bangladesh and 20071 people live in these enclaves (Krishi Projukti Hatboi, 2015). The residents are in effect stateless and lack access to public services. These enclaves are a legacy of colonial times and have been a contentious issue between the two nations for decades. The Government of Bangladesh has already identified the zone as 'vulnerable to adverse ecological processes' and as one of the most vulnerable neglected region. The opportunities and potentialities of these areas have not received much attention. By harnessing and exploiting these opportunities, the areas can achieve the goals of the national poverty reduction strategy. An attempt has been made in this study to understand the actual challenges ahead. The overarching goal of the research is to build information about vulnerability of the people living in unified enclaves' areas, their livelihood status and scope of improvement. Towards meeting the goal, the following appears to be the specific objectives of the proposed study.

1.2 Objectives

- i. To determine and describe the general characteristic of respondents;
- ii. To explore present livelihood status of unified enclaves people;
- iii. To identify problems faced by them.

2. METHODOLOGY

2.1 Population and Sampling

The study was conducted at different unified enclaves' areas of Lalmonorhat, Kurigram, Panchagarh and Nilphamari District during December 2016-June 2017. Random sampling technique was applied. Desire sample size was 200 who living in unified enclave areas. A total 50 samples were taken from each of the district.

2.2 Data Collection Instrument

In order to collect relevant data an interview schedule was carefully prepared keeping the objectives of the research in mind. The interview schedule contained both open and closed form of questions. For easy understanding the interview schedule was prepared in Bengali. Thereafter, an English version of the same has been prepared. The draft schedules were pre-tested with 10

respondents in the sample blocks before finalizing the interview schedule for collecting data. The pre-test was helpful in identifying faulty questions and statements in the draft schedule. Necessary addition, deletions, modifications and adjustments were made in the interview schedule on the basis of experiences gained from pre-test.

2.3 Data Collection

Data were collected by the researcher herself using structured interview schedule through face-to-face contact. Before data collection, the selected respondents were well informed by the help of their respective personnel. Researcher established desired rapport with the respondents before explaining the purpose of the research and collection of data. If any respondent failed to understand any questions, utmost care was taken to explain it as far as possible. In order to minimize error, the information of the respondents was carefully recorded and fully checked. Collection of data was started on 15 January 2017 and completed 25 January 2017.

2.4 Data Processing and Analysis

Data collected for this study from the respondents were compiled, tabulated, coded and analyzed in accordance with the objectives of the research. Descriptive statistical measures such as frequency, range, mean, standard deviation and rank order was used wherever necessary in describing the variables. Pearson's Product Moment Correlation Co-efficient (r) was used to examine the relationship of the independent variables with the dependent variables. Throughout the study five percent (0.05) and one percent (0.01) level of probability were used as a basis of rejecting the null hypotheses. Both Microsoft Excels and SPSS Programs were used to analyze the data.

3. RESULTS AND DISCUSSION

3.1 General Characteristic of Respondents

Of the 111 enclaves, there are human settlements in 72 enclaves and rests are mainly cropland. Some 7,648 households, having 39,144 members, reside in these enclaves in four bordering districts of northern Bangladesh. The number of population is expected to decline 38,157 after migration of 987 persons who opted to go to India. The average family size is 5.11 and the percentage of men is higher than women, according to joint survey of enclave

people by Bangladesh India. Eight characteristics of which were the independent variables of the study were investigated viz age, education, family annual income, farm size, agricultural knowledge, training exposure, extension contact and organizational participation. Measuring system of the each characteristic, their observed range, mean and standard deviation are presented in the Table 1.

The average age of the respondent was 38.23 years, observed range 18-58 years with standard deviation 5.13 and average education level 2.13, observed range 0-9 years with standard deviation 2.96. The average farm size 0.21 hectare, observed range 0.02- 1.75 hectare with a standard deviation 0.62 and average annual income 53.08 thousand taka, observed range 10.50-181.50 taka with standard deviation 42.52. Observed range on agricultural Knowledge was 3-20 with average 9.87 and standard deviation 4.45. The training exposure average score was 1.93 with observed range 0-10 and standard deviation 2.13. The average score of extension contact 4.65 with an observed range 0-13 and standard deviation 1.83. The average score of organizational participation was 3.86 with an observed range of 0-12 and standard deviation 3.46.

3.2 Housing Situation

From the study it was found that 32% residents live in straw and mud wall houses and side walls are developed either by tin or by bamboo or other low cost materials. Poor families (29%) have walls made by jute sticks. Earthen floor is quite common except for well off households. Most of the families have separate sheds for kitchen. Almost every household has extended sheds as shelter for reared animals and fire

wood. All the sheds including living rooms houses are built in square shape that leaves a yard inside the residence presented in Table 1.

3.3 Livelihood Options

Agriculture is the main source of livelihoods in the area (80%). Non-farm activities (20%) are mainly limited to shop keeping or trading, rickshaw van pulling. Family members of a section of residents also work in towns and cities including Bangladesh and India and send money home.

Fig. 2 shows that majority of the population depends on farming for their livelihoods. Some of the population (43 percent) directly involved with agriculture. Engagement in agriculture sector by the enclave's dwellers also reflects overall scenario of Bangladesh. Labour Force Survey [7] shows that 47.3 percent people were engaged in agriculture in 2010 down from 51.7 percent in 2002-03, a workforce gradually shift to non-farm activities. However, this farming system mainly depends on landless, marginal and small farmers. The study also shows that two-third (67%) of the respondents belongs to these categories where landless (38%) and small farmers (29%) followed by medium farmers (24%) and large farmers (9%) presented in the Table 2.

Nationally, the number of functionally landless households (Only homestead and up to 0.5acre of land) was 67 percent in 2013. It was 47 percent in 1988 [8]. As a result of higher prevalence of functional landless, a land market for tenancy, lease and mortgage has developed following the pattern of mainland Bangladesh [8].

Table 1. General characteristic of respondents

Sl. no.	Characteristics	Measuring unit	Possible range	Observed range	Mean	Standard deviation
1.	Age	Actual years	Unknown	18-58	38.23	5.13
2.	Level of Education	Years of schooling	Unknown	0-9	2.13	2.96
3.	Farm Size	Hectare	Unknown	0.02-1.75	0.21	0.62
4.	Family Annual Income	In Tk.1000	Unknown	10.50-181.50	53.08	42.52
5.	Agricultural Knowledge	Score	0-30	3-20	9.87	4.45
6.	Training Exposure	Score	Unknown	0-10	1.93	2.13
7.	Extension Contact	Score	0-40	0-13	4.65	1.83
8.	Organizational Participation	Score	Unknown	0-12	3.86	3.46

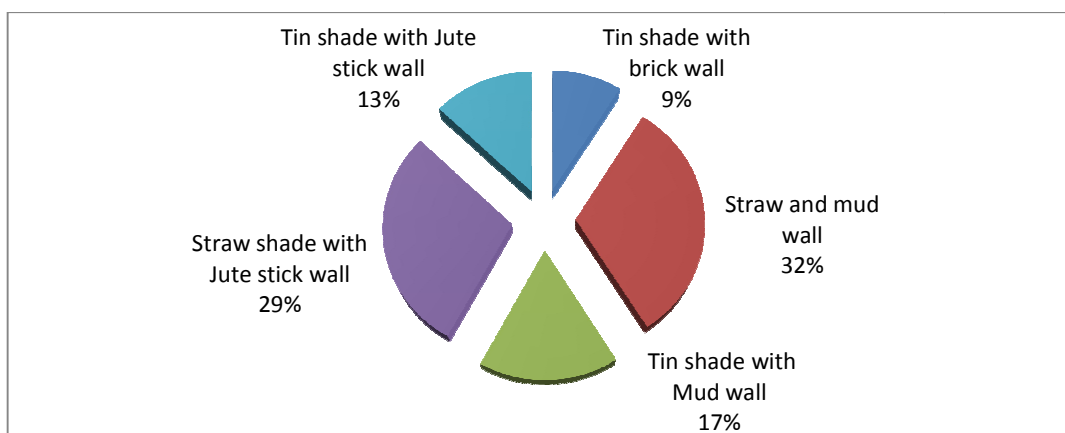


Fig. 1. Percentage of people occupied in housing pattern

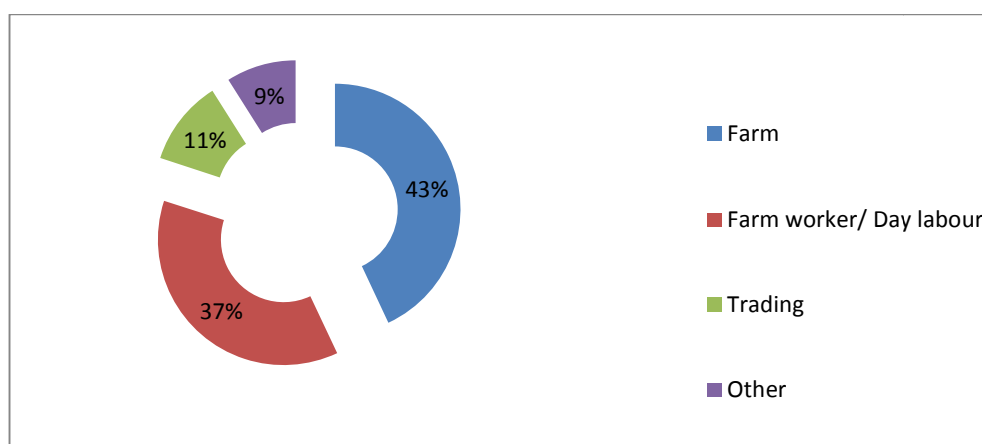


Fig. 2. Percentage of people occupied in various income generating activities

Table 2. Percentage distribution of the respondents according to farm size categories

Farm categories	Frequency	% respondents
Land less (below 33 decimal)	76	38
Small (34-100 decimal)	58	29
Medium (101-250 decimal)	48	24
Large (above 251)	18	9

3.4 Land Management

Before unification, off land transfer document were used for land management at enclaves of Bangladesh. Although it is not official, the persons engaged in the transfer have used a Bangladeshi stamp to give validity of the deal. Residents in enclave also know it but they use Bangladeshi stamp as a proof and for their mental relief. Power tiller was the main mean of cultivation, reflecting the influence of rising mechanization in Bangladesh. However, poor households also use bullocks for tilling still now.

3.5 Horticultural Product, Livestock, Poultry and Fish

Bamboo is the most commonly grown because of its steady demand in enclaves. Bamboo bushes were seen frequently throughout the field trip. Locals said it has demand in urban areas for construction activities. In this study it was found that most of the farm families (83%) rear cows and goats but not for commercial purposes. The respondents also reported that most of them rearing local cattle breed and they also indicated the gap of artificial insemination. Peoples didn't

have enough knowledge about cow fattening and commercial milk production. There have some ponds used for pisciculture but not for commercial purpose. The water holding capacities of those ponds are very low and its contained water periodically for seven to eight months. People didn't have enough knowledge on commercial fish production.

3.6 Educational Status and Institutions

Fig. 3 shows that most of the respondents in the unified enclaves were illiterate (30%) and twenty seven percent can sign only followed by primary education (22%). Only 15 % of the respondents completed their secondary education and 6% completed higher secondary and above.

In this study it was also found that there were no formal educational institutes sponsored by government or private sector in unified enclave areas. The respondents also said that earlier they admitted their children in Bangladeshi schools by faking their real identities. However, the percentage of adults who have completed secondary and higher secondary education was found to be very low. The rate of education

among youths, adolescents and children are comparatively higher but poverty acts as a restraint factor for engaging their children in education for many families. Absence of incentives (guarantee or prospect of jobs) for education is also another factor behind residents' lack of eagerness to invest and encourage children to continue education. However, locals have established some *maktabs* in some areas for religious education, according to key informants and FGD. After the exchange of enclaves, different educational institutions with new signboards proposing names and types have been made like mushroom. Many people of enclaves have been built such structures on their lands by own finances with the hope that their relatives and peers will get jobs if the government approves the scheme.

3.7 Healthcare Situation and Infrastructure

In this study it was found that there was a huge gapon treatment facilities in the enclave's area. There is no community clinic or primary healthcare facility in these areas. People depend

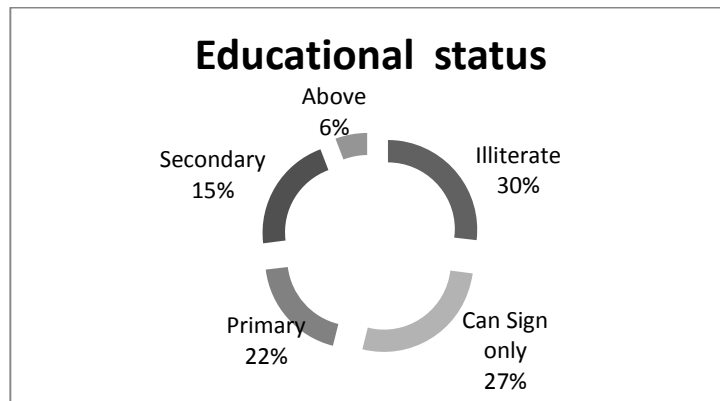


Fig. 3. Distribution of the respondents according to education

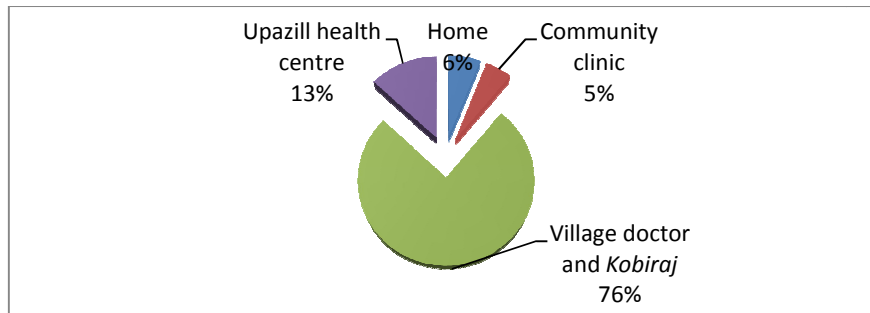


Fig. 4. Percentage of respondents according to availability of treatment facilities

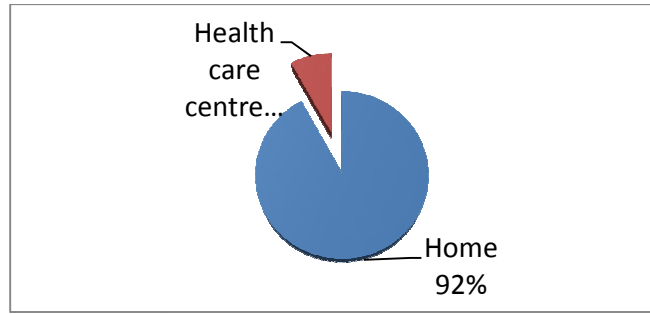


Fig. 5. Birth attendance ratio in the unified enclaves

on mainly village doctors for minor illness. In case of major complications, they usually go to private clinics and public hospitals at nearby upazilla or district for treatment. But before unification they were able to get treatment from state hospitals if they could hide their enclave identity and use fake citizenship of Bangladesh. Majority of the respondent 76% take treatment from village doctor and *Kobiraj* followed by upazilla health care centre (13%). Only 5% get treatment from community clinic presented in the Fig. 4.

It was found that 92% birth deliveries have been took place at home with the help of relatives or midwives. Only 8% birth deliveries happened on healthcare centre (Fig. 5).

From FGD it was found that most of the respondents had birth deliveries attended by relatives or midwives at home but the delivery attendants were not well trained.

In addition, immunization coverage was low in the study areas. The extent of vaccination among

elderly men and women has been found very low in all areas. Earlier they got vaccination by using false identity. During the field visits, most of the respondents mentioned that aged people didn't get vaccines.

3.8 Early Marriage Dowry and Eve-teasing

Prevalence of early marriage was quite high in the investigated areas. More than three-fourth (78 percent) of the respondents stated that girls were married before the age of 18 years which is higher rather than the national level (62.8 percent). They also stated that poverty, lack of access to education and awareness are liable for high rate of early marriages. Dowry is another social severe problem in unified enclaves and it has spread into our society like a disease. The study reveals that majority of the enclaves people (88%) were suffering from dowry and 12% free from this diseases. The result from FGD, it is important to note that there was no eve-teasing in the unified enclaves because of their strong family and social bondage.

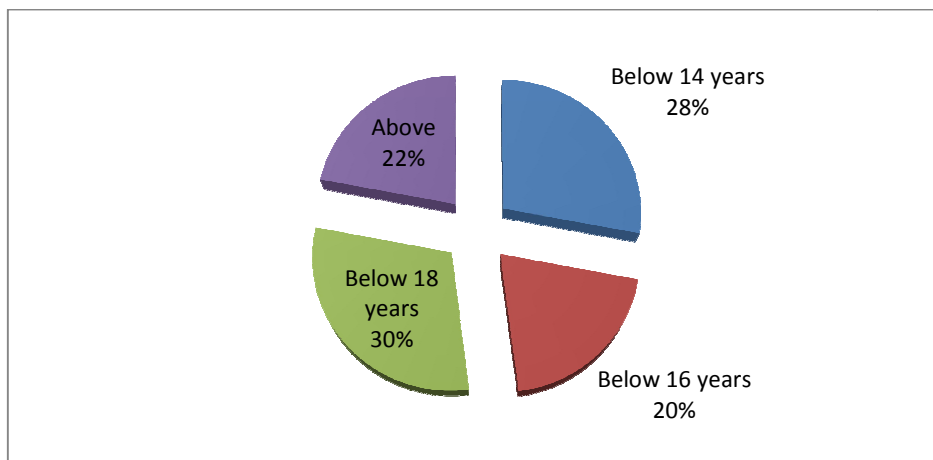


Fig. 6. Percentage of respondents according to the marriage age of the girl child

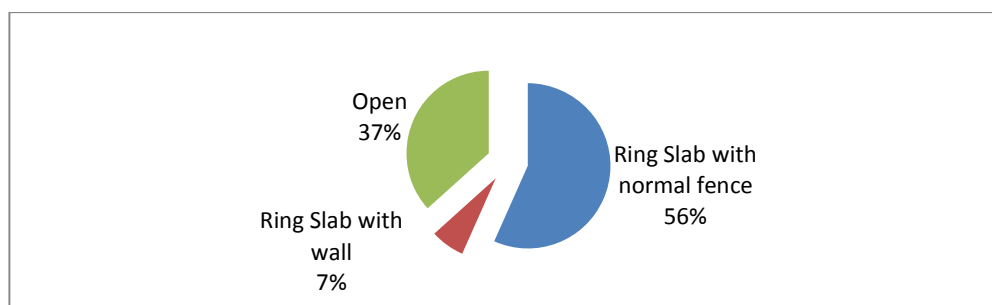


Fig. 7. Sanitation scenario of the respondents

Table 3. Percentage distribution of the respondents according to problem faced

SI	Problems	Frequency	% respondents
1)	Insufficient irrigation facilities and agricultural inputs	51	25.5
2)	Lack of health care facilities	38	19
3)	Insufficient support and training in agriculture, livestock or fisheries office for farming	29	14.5
4)	Poor roads and transportation facilities	25	12.5
5)	Insufficient loan facilities for agriculture or any farming	19	9.5
6)	Lack of educational institutions	16	8
7)	Unemployed problems	13	6.5
8)	Lack of social safety net programme	9	4.5

3.9 Water and Sanitation

The result from the study showed that most of the people used underground water for drinking and other household purposes which are remarkable except some areas. Shallow tube-wells were available almost all households but water quality not yet tested which is very important for safe drinking. By contrast, few household used sanitary latrine. People of the study area were built their latrines by using ring slabs. Among the respondents (37%) use open toilet, only (7%) use ring slab with wall toilet and (56%) use ring slab with normal fence presented into the Fig. 7.

3.10 Vulnerability

During field visits, residents mentioned the problem of river erosion and flood in Dashiarchara, Kurigram, some parts in Lalmonirhat and Panchagarh. Water logging is another problem mainly in Dashiarchara area: Locals say couple of hundreds of acres of crop land remains water logged because of congestion of canals. As a result, a vast area cannot be cultivated.

3.10.1 Problems of the unified enclaves' dwellers

The respondents stated their problems to the research team and identified following problem which is presented in the Table 3.

4. CONCLUSION AND RECOMMENDATIONS

Nearly 80 percent of population in the unified enclaves is poor. There is acute problem of education, health and sanitation. Many people have homestead land but do not have money to build house. Many enclave residents lived in Bangladesh and in enclaves before the exchange. Some also have bought land in Bangladesh prior to requirement of national identity cards for land registration. Agriculture is the main source of livelihoods in the area (80%) including agricultural day labour. Non-farm activities (20%) are mainly limited to shop keeping or trading, rickshaw van pulling. No formal educational institute sponsored by government or private sector was found in unified enclave areas but many people in enclave areas have built such structures on their lands by arranging finances from their own with the hope that their relatives and peers will get jobs if the government approves the scheme. Lack of community clinic or primary healthcare facilities leads the dwellers towards the village doctors and *Kobiraj* for treatments. Except some cases about 92% had birth deliveries attended by relatives or midwives at home as a result the child and maternal mortality rate is comparatively higher. Early marriage rate is higher than the national average. Dowry is a common issue in unified enclave's areas but there is no eve-

teasing due to their strong family and social bondage. Insufficient irrigation facilities and agricultural inputs like quality seed, fertilizer, pesticides, lack of training and lack of marketing facilities of agricultural inputs is the major problems of their livelihoods. Insufficient support and lack of training in agriculture, livestock and fisheries sector for farming or any other income generating activities, lack of healthcare centre, educational institution, poor road transportation facilities, and insufficient loan facilities for agriculture or any farming also the problems of unified enclaves. Though there is a lot of problems of the livelihoods in the study area, development opportunities also very high. Initiatives could have been taken to available quality agriculture input to farmers in unified enclaves. A solar irrigation system can be introduced in the unified enclaves areas for improving the irrigation facilities and enhance crop production. Improved seed supply is necessary for higher yield. Agricultural extension workers should be appointed/deputed in unified enclave areas. Training particularly women on cattle rearing will be boost livestock farming. Group based or community based fish, poultry or cattle farming might be beneficial for landless people. Low cost capital is needed to establish micro or small business enterprise. Interest-free loans could also be considered for education of children of poor and low income families and IGAs creation for women. Under the interest free education loan scheme, technical education can be encouraged among boys and girls of unified enclaves. Training scheme for youth so that they can be self employed. Poorest families can be handed over cows and interest free after giving them training. Establishment of sales centre or assurance for fair prices of farm produces to growers. Private community healthcare clinics should be established. Skill development training would be given to women and awareness training to men on care during pregnancy and delivery. To improve the condition of lives of people in unified enclaves, different government agencies have taken various initiatives. But

government programmes will not be enough to meet various needs of people of unified enclaves. Intervention from private sector can address various development needs there.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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