HEALTH AND DEMOGRAPHIC SURVEILLANCE SYSTEM – MATLAB

Volume Forty Eight

HOUSEHOLD SOCIO-ECONOMIC CENSUS 2014

Scientific Report No. 132 – March 2016

icddr,b

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GLOSSARY OF ACRONYMS

BBS	Bangladesh Bureau of Statistics
CHRW	Community Health Research Worker
DSS	Demographic Surveillance System
GAR	Gross Attendance Ratio
GIS	Geographical Information System
GoB	Government of Bangladesh
HDSS	Health and Demographic Surveillance System
HSEC	Household Socio-economic Census
icddr,b	International Centre for Diarrhoeal Disease Research, Bangladesh
MCH-FP	Maternal and Child Health-Family Planning
NAR	Net Attendance Ratio
NGO	Non-government Organization
NIPORT	National Institute of Population Research and Training
PDA	Personal Digital Assistant
SES	Socio-economic Status
RKS	Record Keeping System

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EXECUTIVE SUMMARY

icddr,b has been maintaining a Health and Demographic Surveillance System (HDSS) in Matlab sub-district in Chandpur district since 1966 which registers births, deaths, migrations, marriages, divorces and records selected information on child and reproductive health through routine household visits. The HDSS is currently covering 229,936 people in 53,226 households in 142 villages. Since socio-economic characteristics are important factors of diverse health outcomes, the HDSS conducts household socio-economic census (HSEC) at a certain interval. In 2014, a HSEC has been conducted to update the socio-economic status of the households within the HDSS. Structured questionnaire was used to collect the data. Levels of selected indicators in 2014 and changes in their levels during 1974-2014 are tabulated below –

Selected indicators	1974	1982	1996	2005	2014
Demographics					
% of under-five children in the population	18	16	12	12	10
% of women of reproductive age in the population	21	24	25	27	27
% of 65+ people in the population	3	3	4	6	7
Child dependency ratio (%)	95	80	67	57	53
Aged dependency ratio (%)	7	7	8	10	12
Sex ratio (Male/Female) (%)	104	103	97	91	86
Household (HH) composition					
Mean HH size	5.9	5.9	5.3	4.8	4.3
% of HH headed by female	11	13	19	27	34
Housing materials					
% of HHs that have tin roof	77	82	96	98	94
% of HHs that have tin wall	27	26	46	83	87
% of HHs that have pucca/semi-pucca floor	-	-	-	7	20
Important HH fixed assets					
% of HHs that have television	-	-	5	22	39
% of HHs that have mobile/land phone	-	-	-	13	93
% of HHs that have cow/goat	-	37	33	34	23
Level of education of men aged 6-24					
% of men ever attended school	60[a]	53[a]	81	92	89
% of men completed primary (5-9 years schooling)	16[a]	17[a]	25	35	36
% of men completed secondary or above	7[a]	3[a]	7	7	13
Level of education of women aged 6-24					
% of women ever attended school	38[a]	43[a]	80	94	91
% of women completed primary (5-9 years schooling)	12[a]	13[a]	27	46	45
% of women completed secondary or above	1[a]	1[a]	5	6	15
% of HHs that has agricultural land	-	73	62	57	51
% of HHs where tubewell is the main source of drinking water	25	55	95	90	97
% of HHs with micro-credit membership	-	-	13	40	38
% of HHs where ___ is the main source of income					
Agriculture	-	-	-	15	8
Remittance	-	-	-	24	33
Business	-	-	-	24	24
Labour	-	-	-	18	21
Service	-	-	-	11	12
% of HHs heads whose occupation is ___					
Farm owner-worker	35	31	24	12	10
Business	6	7	12	15	16
Service	5	6	6	8	9
Religion: % of non-Muslims in the population	16[a]	15[a]	12	12	12
Population density (persons per square kilometre)	808[a]	990[a]	1,129	1,219	1,236

[a] For 1974 and 1982, the indicator has been measured for the 149 villages which were retained after 1978's restructure of the HDSS. For other year, 142 villages have been considered as river erosion devoured 7 villages in 1987.

1. BACKGROUND

1.1. Inception and evolution of Health and Demographic Surveillance System, Matlab

Since 1963, the International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b; Pakistan-SEATO Cholera Research Laboratory) has been maintaining a field research station at Matlab – a sub-district of Chandpur district located 55 kilometres south-east of Dhaka, the capital of the country (Figure 1.1). A Demographic Surveillance System (DSS) in Matlab was established in 1966. The DSS consists of two types of operations: a. Continuous periodic registration of demographic events (births, deaths, in and out migration, marital unions and dissolutions, inter-village movements, household head changes) and b. periodic household socio-economic censuses (HSEC).

To fulfil the objectives of Pakistan-SEATO Cholera Research Laboratory, established in 1963, a population census was undertaken in the same year covering 23 villages of Matlab Upazila with a population around 27,629. With the requirements of large studies, the population coverage was expanded to 132 villages with a population closed to 111,748 in 1966 (Mosley et al., June 1968). Immediately after the 1966 census, a Demographic Surveillance System (DSS) was established for continuous periodic registration of vital events (births, deaths, and in and out migration). To expand the DSS area, 101 villages were added to the system in 1968 (DSS, March 1978). The population of the entire surveillance area was 276,984 in 1974 census. The DSS began registration of marital status in 1975, inter-village movements in 1982, and household splits in 1993. A major change in the field structure and program activities was made in October 1977 with contraction of the surveillance area. Eighty four villages (approximately 120,000 populations) were excluded from the system and the DSS area reduced to 149 villages with 173,433 populations. For the greater potential of existing data infrastructure and with an objective to evaluate the impacts of different maternal and child health and family planning programs, in 1977, the DSS boundaries were separated into two administrative areas: "Intervention area" - that received icddr,b services under the auspices of Maternal, Child Health and Family Planning (MCH-FP) program (70 villages, 88,925 population), and "Comparison area" - that received the usual government health services (79 villages, 84,518 population)[1]. At the same time, Record Keeping System (RKS) was introduced to record selected child and reproductive health information from icddr,b area. River erosion washed away seven villages from the government area in 1987 and the surveillance area was reduced to 142 villages. As most of the villagers had resettled in the nearby villages of the DSS area, the total population size remained almost the same. The MCH-FP activities were stopped in three villages of icddr,b area in 1999 and kept under surveillance as government area. So, the number of villages in the icddr,b area reduced to 67 and in government area increased to 75. A Geographical Information System (GIS) was integrated into the DSS in 1994. The RKS was expanded to the government area in 2001, and the DSS was renamed as the Health and Demographic Surveillance System (HDSS) (Mostafa et al., 2007). Area of the HDSS is 184.4 square kilometre.

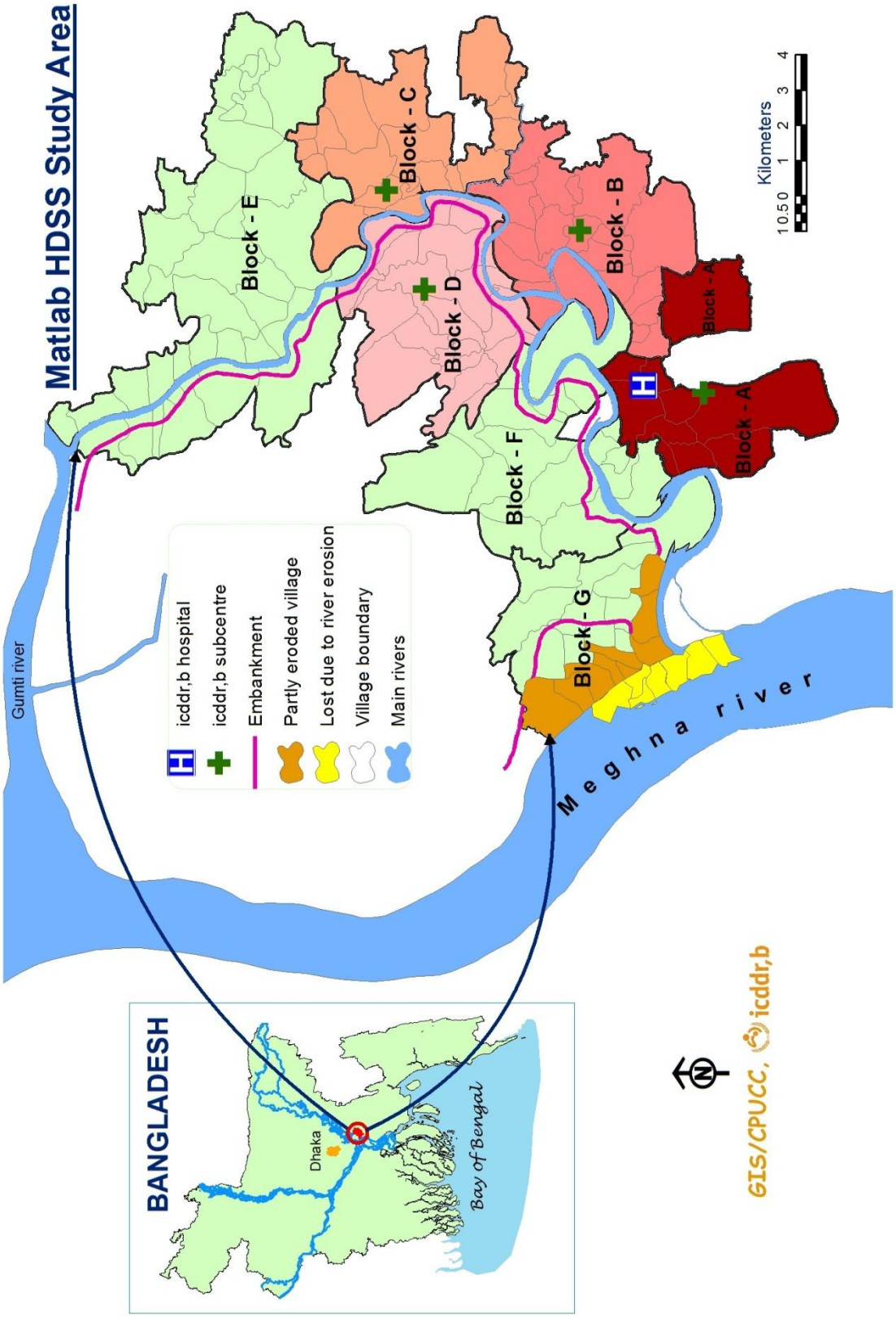
Table 1.1.1. Household socio-economic censuses, Matlab HDSS, 1966-2014

Censuses	1966	1968	1970	1974	1978	1982	1993	1996	2005	2014
Population census	√	√	√	√	√*	√	√	√	√	√
Socio-economic census	-	-	-	√	-	√	-	√	√	√

* Updated household population list.

[1] In this report, "Intervention area" and "Comparison area" are termed as "icddr,b area" and "Government area", respectively.

Figure 1.1 Map showing icddr,b and government service areas, Matlab HDSS, 2014



1.2. Geography and environment of Matlab

Matlab is a plane low land located between latitudes 23°29'36.45" and 23°17'30.20" North, and longitudes 90°48'07.01" and 90°36'58.72" East. The climate is subtropical and the Tropic of Cancer passes through the area. A network of tidal rivers, streams and cannals and branches of the mighty Padma and Meghna rivers have intersected the area (Fauveau, 1994). River Dhonogoda flows through the area linking with river Gumti at the north and river Meghna at the west. Hundreds of scattered ponds and ditches are located all around the area. Floods regularly visit the area and sometimes river erosions devour villages; seven villages were eroded in 1987. Almost half of the HDSS area was enclosed by Meghna-Dhonogoda embankment in 1988.

1.3. Objectives of the Socio-economic Census 2014

Levels of demographic and health phenomena like fertility, mortality and morbidity, health practice and health care seeking behaviour, etc., are highly influenced by the social and economic conditions of the population. Socio-economic characteristics have widespread recognition as important factors for diverse health outcomes and most health studies consider these variables as potential confounders in association or correlation between health and other variables (Braveman et al., 2005). This reality leads socio-economic censuses for health studies to include few important socio-economic characteristics like durable assets, source of income, education, etc. However, where a population is under demographic surveillance, the surveillance system collects this information at a certain interval instead of routine collection.

Data collected through the last detailed socio-economic census in Matlab HDSS in 2005 have become outdated due to the rapid socio-economic changes during the last few years. The ongoing research projects nested in HDSS area need updated socio-economic information of the households and their members.

Keeping all the issues in mind, another socio-economic census has been undertaken and data on selected social and economic indicators have been collected in 2014 which now enables to compare changes in HDSS population over the years.

2. METHODOLOGY

2.1. Data collection – period, devices used and field staff

Prior to 2005, the household socio-economic censuses (HSEC) were conducted by hiring additional field staff for which the HDSS required additional fund allocations. An initiative was taken in 2005 to conduct the HSEC without hiring any additional staff and routine HDSS field staff successfully collected HSEC 2005 data. FRSs, FROs and Field Manager supervised all the way data collection. However, it delayed the routine data management works.

A big shift in data collection procedure of the HDSS took place in 2010 – electronic devices were introduced, CHRWs started data collection using Personal Digital Assistants (PDA) and again within a short period, in 2014, the HDSS introduced the Samsung Galaxy tab for data collection. This technological initiative helped CHRWs interviewing more families with minimum errors. For HSEC 2014, routine HDSS field staff were involved in data collection and used the Galaxy Tab 3 that they had been using for collecting routine HDSS data. Other than the absentee cases data collection was almost completed during November and December, 2014 and the absentees were covered during January and February 2015. The primary editing and cleaning of collected data were completed within 5 months without affecting much the routine data collection and data management activities.

2.2. Data collection tools development

Two structured questionnaires were administered: a. individual-level (date of birth, sex, marital status, relation to household head, education and occupation) and household-level (sources of household income, possessions of household assets, construction materials used for roof, wall and floor of the main dwelling, possession of homestead and agricultural land, sources of drinking water and type of latrine use). In addition, information on the membership of any household member with micro-credit institutions, having a bank account including mobile banking, and prevailing food shortages in the households throughout the year, were also included in the questionnaire.

The FRSs and FROs were oriented to the draft questionnaire during HDSS monthly meetings for incorporating additional variables for expanding content and improving the quality of the questionnaire. Every supervisor was assigned to fill up three questionnaires (printed copy) to test the usability of the questionnaire. The draft questionnaire was finalized by responding to the feedbacks of the field supervisors and a change on field activity had taken place – data on ownership of lands were decided to be collected prior to other socio-economic data collection since it takes long time. So, a template along with guidelines for data collection on land ownership was separately developed. Guidelines for the HSEC questionnaire and individual questionnaire were developed for uniformity in data collection across CHRWs. Beside this, need based verbal instructions were continuously provided to the CHRWs.

A computerized program was developed for Samsung Galaxy Tab based of the finalized questionnaires since this electronic device was used to collect both population and socio-economic census data. Careful field testing was done before finalizing the digital program used in the electronic device.

The questionnaires are attached in Appendices A2 and A3. The template for collecting data on land ownership is embedded in the HSEC questionnaire without separately adding.

2.3. Training of field workers

A two days workshop on the questionnaire and the program in Galaxy Tab to be used was conducted in 2-3 November 2014. After the class room session in the first day of the training, the field staff field tested the questionnaire using Galaxy Tab in early morning of the second day around their residence. Their comments and feedbacks were reviewed during second day's session and necessary modifications were made by the programmer on spot of the workshop.

The workshop was conducted by the Senior Manager, HDSS, Matlab and a Senior Programmer from HDSS office, Dhaka.

2.4. Field procedures and definitions

The data collection was done in three steps. At first step, data on land ownership was collected. Mainly household heads were the respondents for this part. In some cases either a relative of the household head or an elderly person of the *Bari* who knows well about the amount of land the household owns was interviewed. Data on land were collected separately prior to data collection on other socio-economic status (SES) because probing amount of land owned takes much time and other part of the interview gets affected.

At second step, other data rather than land were collected. CHRWs, FRAs, FRSs and FROs were specifically assigned to different activities, i.e., data collection, monitoring and supervision. Initially the CHRWs conducted interviews in presence of their supervisors. A good number of CHRWs performed well and their supervisors left them for conducting interviews independently after the second day. However, there were few CHRWs who took more than two days to prepare themselves for conducting interviews independently. Respective supervisors helped them to overcome their problems with the survey.

Finally, for absentee cases CHRWs made a schedule suitable for the household and revisited for collecting data. However, there were some households which were not available during November and December; those households were interviewed in January and February routine visit.

During HSEC 2014 data collection CHRWs were advised to report only birth and death events. Routine RKS data collection was stopped for that round to reduce the work load of the CHRWs. The observational events (migration-in or out and internal movement) were recorded considering Aug 31, 2014 as cut-off date.

Most of the respondents were female and spouse of the household head. However, in many cases other adult family members, relatives or neighbours also assisted the respondent to provide accurate information.

All staff involved in data collection, monitoring and supervision worked six days per week, and sometimes beyond office hour for timely completion of the data collection.

The following procedures were followed during HSEC 2014 data collection in the field on the basis of the cut-off date Aug 31, 2014:

- Roll call of the household members to ascertain whether the FVR cards or Electronic database or Field volumes were correct.

- Tracking of death and out-migration from electronic database.
- Inclusion of births, inter-village movements and in-migrations, if found.
- Exclusion of wrongly included and inclusion of wrongly excluded household members.
- Assigning new location in case of inter-village movements or household head changes, determining heads and relationships of other members with the heads for household's split cases.
- Identifying new head (if the head had died or out-migrated or changed somehow) and assigning relationship to this new head.

2.5. Quality control in field activities

Respective supervisors monitored and supervised the CHRWs data collection activities to ensure quality of the data. In case of any new decision regarding any issue of data collection raised from any field site, the supervisors discussed with the Senior Manager for decision making and the Senior Manager disseminated the message to all for maintaining unified guidelines.

2.6. Data processing and data quality control

Field supervisors downloaded the data from the Galaxy Tabs to laptops, completed quick edits and sent the data to the data management team at Matlab. The data files were appended to one master data file into ORACLE database. Primary errors and inconsistencies were detected using a pre-developed Error Detection Tool and detected errors were sent to the field for correction. Data inconsistency check basically included range checking and matching with the family and individual file.

Afterwards during data analysis when any kind of inconsistencies were found by the analyst, they were corrected by the help of Matlab office and CHWRs' revisit or over phone conversation with respective household members.

3. RESULTS

3.1. Household economic status

This section includes housing materials and household durable assets which indirectly describes the economic condition of the households and provides relative measure of economic status. In addition, a crude measure of food insecurity and giving or receiving *zakat* and/or *fitra* (for Muslim households only) are also included to get some idea on economic status of the people in the area.

3.1.1. Housing characteristics

One in five households has cement floor, and others have mainly mud floor. Tin is the predominant material of wall and roof in Matlab. Eighty seven percent of the households have tin walls and 94 percent have a tin roof. Housing materials are similar across service area and inside or outside embankment (Table 3.1.1).

Table 3.1.1. Percent distribution of housing characteristics by area and embankment, Matlab HDSS, HSEC 2014

Housing characteristics	Service area		Embankment		Total HDSS
	icddr,b	Govt.	Inside	Outside	
Flooring material					
Earth, sand	76.3	84.7	84.0	78.8	80.3
Cement	23.6	15.2	16.0	21.1	19.6
Other	0.1	0.0	0.0	0.1	0.1
Roof materials					
Palm/bamboo	0.1	0.1	0.1	0.1	0.1
Cement	7.6	3.9	4.4	6.4	5.8
Tin	92.3	96.0	95.5	93.5	94.1
Wall materials					
Bamboo	1.6	0.8	0.4	1.5	1.2
Tin	82.5	90.8	90.4	84.8	86.5
Cement	15.6	8.4	9.1	13.5	12.2
Other	0.3	0.1	0.1	0.2	0.2
Total	100.0	100.0	100.0	100.0	100.0
Number of households	27,698	25,528	15,812	37,414	53,226

3.1.2. Household possessions

People do not want to tell the actual income of the household for many reasons. So, it is quite impossible to accurately assess household economic status by collecting data on household income; generally, it gives under reported results. In this situation, some other indicators are needed and possession of durable consumer goods is a useful indicator to assess household socio-economic status. Moreover, durable assets may have multiple direct and indirect effects and implications on knowledge, attitudes and practices of household members. For instance, possessing a radio or a television ensures access to media through which the household members get updates of daily events, are exposed to information of home and abroad, and receive educational and awareness materials. Similarly, in keeping food fresh and hygienic by prolonging food storage, a refrigerator is very effective asset. Table 3.1.2 presents information on important durable assets of households.

Communication devices among households – 93 percent have mobile or telephones, 39 percent have televisions, 13 percent have Radio/DVD/VCD player; device for food quality control – 22 percent of households have refrigerators; land ownership – half of the households have both homestead and agricultural land, 44 percent have only homestead land and four percent do not have any land; animal husbandry among households – 67 percent rear chickens/ducks, 23 percent rear cows or buffalos and only eight percent rear goats or sheep. Very few households have means of transportation, e.g., auto-bike, tempo, CNG, rickshaw, van, bicycle or motorcycle.

Table 3.1.2 Percentage of households possessing various assets, transports, agricultural land and livestock, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Possession	icddr,b	Govt.	Inside	Outside	HDSS
Household assets					
Radio/DVD/VCD player	13.2	13.7	10.9	14.5	13.4
Television	38.8	38.1	33.6	40.5	38.5
Mobile/land telephone	93.1	92.9	92.5	93.2	93.0
Refrigerator	24.1	19.4	16.6	24.1	21.9
Almirah/showcase	82.7	83.6	84.0	82.7	83.1
Electric fan	65.5	66.4	61.4	67.8	65.9
Fishing boat/boat	16.2	17.6	2.4	23.0	16.9
Water pump	8.4	4.8	3.3	8.1	6.7
Sewing machine	11.8	9.8	9.7	11.3	10.8
Computer/laptop	4.8	3.2	2.6	4.7	4.0
IPS/generator	3.2	2.4	2.3	3.1	2.8
Means of transport					
Auto-bike/tempo/CNG	3.2	3.1	2.3	3.5	3.1
Rickshaw/van	3.4	2.3	2.7	2.9	2.9
Bicycle	8.8	8.2	10.3	7.7	8.5
Motorcycle	2.7	2.0	2.5	2.3	2.4
Ownership of land					
Homestead	96.5	96.1	98.1	95.5	96.3
Agriculture	52.3	49.8	51.8	50.8	51.1
No land	3.3	3.7	1.8	4.2	3.5
Ownership of farm animals					
Cows /buffaloes	21.1	24.8	29.4	20.1	22.9
Goats/sheep	7.2	8.6	5.6	8.8	7.9
Chickens/ducks	63.8	70.2	71.0	65.1	66.9
Number of households	27,698	25,528	15,812	37,414	53,226

3.1.3. Wealth index

The wealth index used in this census is a measure that has been used in many demographic and health surveys (DHS) and other country-level surveys to measure inequalities: in household characteristics, in the use of health and other services, and in health outcomes (Rutstein et al., 2000). It serves as an indicator of household level wealth that is consistent with expenditure and income measures (Rutstein, 1999). The index is constructed using household asset data via principal components analysis.

To create the wealth index a subset of indicators is used to create wealth scores for households. Categorical variables are transformed into separate dichotomous (0-1) indicators.

These indicators and those that are continuous are then examined using a principal components analysis to produce a common factor score for each household. The resulting wealth index has a mean of zero and a standard deviation of one. Once the index is computed, wealth quintiles (from lowest to highest) are obtained by dividing the ranking into five equal categories, each comprising 20 percent of the population. Table 3.1.3 shows the distribution of households among different wealth quintiles by service area and embankment.

Table 3.1.3 Percent distribution of the households by wealth quintiles and area, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Wealth quintile	icddr,b	Govt.	Inside	Outside	HDSS
Lowest	19.7	20.3	19.0	20.4	20.0
Second	19.0	21.1	20.7	19.7	20.0
Middle	18.7	21.4	22.2	19.1	20.0
Fourth	18.8	21.3	21.7	19.3	20.0
Highest	23.7	16.0	16.4	21.5	20.0
Total	100.0	100.0	100.0	100.0	100.0
Number of households	27,698	25,528	15,812	37,414	53,226

3.1.4. Source of household income

Remittance is the main source of income among one third of the households followed by business (24 percent), labour (21 percent) and service (12 percent). Only eight percent of the households reported that agriculture was the main source of the household income. Remittances from outside the country have the larger share (Table 3.1.4a). As the main source of household income remittance has increased from 24 percent in 2005 to 33 percent in 2014. Seven percent point decline in agriculture as the main source of household income occurred in Matlab during the period (Nahar, 2007).

Table 3.1.4a Percent distribution of main source of household income by area and embankment, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Main income source	icddr,b	Govt.	Inside	Outside	HDSS
Remittance	30.3	36.6	36.9	31.8	33.3
Remittance from outside	*19.8*	*22.3*	21.1	21.0	*21.0*
Remittance from country	*10.5*	*14.3*	15.8	10.8	*12.3*
Business	23.2	23.8	20.5	24.7	23.5
Labour	22.4	19.4	19.4	21.6	20.9
Service	13.3	10.1	11.4	11.9	11.8
Agriculture	8.3	7.3	8.8	7.4	7.8
Others	2.6	2.7	3.0	2.5	2.7
Total	100.0	100.0	100.0	100.0	100.0
Number of households	27,698	25,528	15,812	37,414	53,226

Table 3.1.4b Percentage distribution of households, by number of income sources, area and embankment, Matlab HDSS, HSEC 2014

Number of income sources	Service area		Embankment		Total HDSS
	icddr,b	Govt.	Inside	Outside	
1	18.3	18.1	17.7	18.4	18.2
2	29.5	29.1	29.3	29.3	29.3
3	24.4	24.6	24.8	24.4	24.5
4	14.7	14.8	15.6	14.4	14.7
5+	13.2	13.3	12.8	13.5	13.3
Total	100.0	100.0	100	100	100.0
Number of households	27,698	25,528	15,812	37,414	53,226

Table 3.1.4b shows that 82 percent of the households in the HDSS area have multiple sources of income irrespective of service areas and inside or outside embankment.

3.1.5. Giving and receiving *zakat* and *fitra*

Zakat is an economic support system deployed by Islamic Shariyah to help the poor. Allah has mandated giving *zakat* for all wealthy Muslims repeatedly though the verses of holy Qur'an and his messenger prophet Muhammad (s.a.a.w.) has encouraged and directed to do so and showed by giving *zakat* himself. Like *zakat,* giving *fitra* (a kind of monitory help to the poor from the economically able Muslims which is also a mandate for capable Muslims). The operational definitions of "wealthy to give *zakat" and "*economically able to give *fitra"* are properly described in the holy Qur'an and Hadits. During HSEC 2014, data on giving and receiving *zakat* and *fitra* were collected and results are shown in Table 3.1.5.

At least one in ten households, and seven in ten households gave *zakat* and *fitra,* respectively, in the last year preceding the census. Expectedly households from higher wealth quintiles are more likely to give *zakat* and *fitra*. Receiving zakat and *fitra* are sometimes under reported since a) the givers do not necessarily mention *zakat* and/or *fitra* to the receivers and b) sometimes the receivers hesitate to report that they receiver *zakat* and/or *fitra*. At least one member from one in ten households received *zakat* and same proportion received fitra. Generally, the givers distribute their *zakat* to more than one person, as such, the proportion of *zakat* receivers are expected to be much higher than the proportion of *zakat* givers. Both the proportions are comparable as one person received it from multiple givers. Similarly, households receiving *fitra* are likely to receive it from multiple households.

Although someone in a household from the highest wealth quintile receiving *zakat* or *fitra* is very unlikely, two percent of households from the highest wealth quintile reported that someone received *zakat* or *fitra*. It could be due to the misclassification error within principal component based asset index which is unavoidable (Sharker et al., 2014) or any other person (domestic help/a relative to the head) lives in the household and eligibly received *zakat* or *fitra*.

Table 3.1.5 Percent of Muslim households that gave or received *zakat* and/or *fitra* in last year, by background characteristics, Matlab HDSS, HSEC 2014

Background characteristics	Gave *Zakat*	Received *Zakat*	Gave *Fitra*	Received *Fitra*	Number of households
Service area					
icddr,b	10.0	9.4	68.2	9.7	23,693
Government	9.0	12.9	65.4	12.4	23,443
Embankment					
Inside	6.5	12.6	65.4	12.1	14,894
Outside	10.9	10.4	67.5	10.6	32,242
Wealth quintile					
Lowest	1.8	33.4	25.3	32.8	9,082
Second	2.6	13.5	52.4	13.2	9,156
Middle	4.9	5.9	72.1	6.0	9,464
Fourth	10.6	2.4	87.3	2.7	9,665
Highest	26.5	1.9	93.7	1.9	9,769
Main source of household income					
Agriculture	10.8	6.0	73.5	6.2	3,994
Labour	2.2	21.1	35.7	20.9	10,020
Business	10.3	7.1	72.1	6.8	9,387
Service	11.1	6.6	77.9	6.6	5,655
Remittance	12.7	8.4	78.3	8.3	16,804
Others	8.3	34.9	51.4	34.8	1,276
Number of income source					
1	5.3	10.3	59.2	10.6	8,514
2	8.2	12.7	64.6	12.6	13,826
3	10.2	11.6	68.6	11.4	11,641
4	12.0	10.1	71.8	9.8	6,998
5	13.0	9.7	73.1	9.1	3,549
6	12.2	8.4	72.9	8.2	1,457
7+	20.6	8.2	74.1	8.8	1,151
Total HDSS	9.5	11.1	66.8	11.0	47,136

3.1.6. Food security

The respondent was asked whether the household had food for all members for three times every day during last one year (answer codes were “yes” or “no”). Although the answers are influenced by recall bias and these types of question have many other critiques, it can give a rough idea about the food security of the people living within the area. It also reflects the economic ability of the population.

Table 3.1.6 shows that availability of foods three times a day for all members of the households everyday over last one year preceding the census in the HDSS area is almost universal; 95 percent of the households had that availability of food and it was similar across icddr,b and government service areas, inside and outside embankment, and among different religious groups (Muslim and non-Muslim). Availability of food for all household members at the mentioned level is associated with household wealth quintile; 99 percent of households from fourth and highest wealth quintile had that availability of food for all household members followed by households from middle and second wealth quintile (97 percent and 95 percent, respectively). Still 14 percent of the households from lowest wealth quintile have some sorts of shortage of food.

Table 3.1.6 Percent of households that had been able to have food for all members three times a day in last one year, Matlab HDSS, HSEC 2014

Background characteristics	Had food	Number of households
Service area		
icddr,b	94.0	27,698
Government	96.2	25,528
Embankment		
Inside	96.3	15,812
Outside	94.6	37,414
Religion		
Muslim	95.1	47,136
Non-Muslim	94.8	6,090
Wealth quintile		
Lowest	86.2	10,645
Second	94.7	10,647
Middle	97.0	10,643
Fourth	98.6	10,646
Highest	98.8	10,645
Main source of household income		
Agriculture	97.7	4,149
Labour	89.2	11,143
Business	96.5	12,499
Service	97.2	6,269
Remittance	97.2	17,739
Others	85.7	1,427
Number of income sources		
1	94.0	9,677
2	94.4	15,590
3	95.0	13,041
4	96.1	7,846
5	96.9	4,032
6	97.6	1,696
7+	96.6	1,344
Total HDSS	95.1	53,226

3.2. Source of energy

3.2.1. Source of fuel for cooking

The type of fuel used for cooking is an important indicator of household indoor air quality. However, most of the households in Matlab cook outside the household in winter and summer (November-April). So, members are not always exposed to the air pollution by fuel burning. HSEC 2014 collected information on type of fuel used for cooking.

Solid fuels are the main source of cooking fuels among 93 percent of the households. Using solid fuels for cooking is almost universal in the government service area and inside the embankment. Only three percent of the households reported kerosene as cooking fuel which is similar across areas. These households keep kerosene stoves as an alternative fuel for cooking – they usually use it for hitting previously cooked food. Nine percent of the households reported use of cylinder gas as cooking fuel – experience tells that it is also an alternative source. Twelve percent of the households from outside embankment and 14 percent from the icddr,b service area reported pipe line gas as cooking fuel. Around one percent of the households use electricity for cooking (Table 3.2.1).

Table 3.2.1 Percent of households by type of fuels for cooking, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Source of fuel for cooking	icddr,b	Govt.	Inside	Outside	HDSS
Solid and non-liquid fuel					
Wood/wood dust/paddy husk/leaves and/or straw	87.7	98.2	99.8	89.8	92.8
Kerosene	2.2	2.8	2.9	2.4	2.5
Clean fuel					
Gas line	14.1	1.6	0.0	11.6	8.1
Gas cylinder	9.3	8.9	9.0	9.2	9.1
Electricity	1.4	1.2	1.1	1.5	1.3
Number of households	27,698	25,528	15,812	37,414	53,226

Note: Multiple sources were recorded.

3.2.2. Source of light

Overall 84 percent of the households have electricity as source of light. Availability of electricity as source of light is similar across service areas and inside or outside the embankment. Solar panel has become a main (for some an alternative) source of light in one third of the households. More than half of the households still use kerosene as main or alternative source of light (Table 3.2.2).

Table 3.2.2 Percent of households by sources of light, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Source of light	icddr,b	Govt.	Inside	Outside	HDSS
Electricity (electricity/solar panel/generator)	83.9	84.5	83.1	84.7	84.2
Electricity	56.6	58.6	50.2	60.7	57.6
Solar panel	35.7	32.1	38.9	31.9	34.0
Generator	0.7	0.3	0.1	0.7	0.5
Kerosene	54.4	52.5	56.9	52.0	53.5
Others	4.9	9.3	13.2	4.4	7.0
Number of households	27,698	25,528	15,812	37,414	53,226

3.3. Water and sanitation

Access to safe drinking water and sanitation are basic requirements for ensuring healthy life. HSEC 2014 collected information on sources of drinking water; test of tubewell water for arsenic contamination, practices of water purification before drinking, types of purifier, and types of latrines used, and shared and unshared latrines.

Table 3.3.1a Percent of households that drink water from only improved sources by area, Matlab HDSS, HSEC 2014

Area	Percent	Number
Service area		
icddr,b,	87.7	27,698
Government	78.4	25,528
Embankment		
Inside	86.5	15,812
Outside	81.9	37,414
Total HDSS	83.3	53,226

Note: Improve sources – tubewell water, supply water, rain water and bottled water.

3.3.1. Source of drinking water

Eighty three percent of the households drink water from improved sources. In other words, one in six households does not have access to any improved water source. More households in icddr,b service area (88 percent) compared to government service area (78 percent) , and inside embankment (87 percent) than outside embankment (82 percent) drink water from improved sources (Table 3.3.1a).

Deep tube-well water is the source of water for 26 percent of the households in government service area which is only five percent in icddr,b service area (Table 3.3.1b).

Table 3.3.1b Percent of households that drink water from different sources, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Source of water	icddr,b	Govt.	Inside	Outside	HDSS
Deep tube-well	4.8	26.0	15.9	14.6	15.0
Tube-well (green)	62.1	42.1	58.3	50.1	52.5
Tube-well (red)	19.3	11.0	13.5	16.1	15.3
Tube-well (not tested)	12.3	21.5	14.3	17.7	16.7
Supply water	4.3	0.3	0.2	3.4	2.4
Rain water	0.3	1.0	1.6	0.2	0.6
Pond/river/ditch/ canal/others	2.3	3.5	2.4	3.1	2.9
Number of households	27,698	25,528	15,812	37,414	53,226

3.3.2. Water filtration/purification

Eleven per 100 households have reported that they purify water before drinking. More households from the icddr,b area than the government area, outside than inside the embankment, and the highest than other wealth quintiles use water purification (Table 3.3.2a).

Table 3.3.2a Percent of households that purify water before drinking by area, Matlab HDSS, HSEC 2014

Background characteristics	Percent	Number of households
Service area		
icddr,b	13.3	27,698
Government	9.4	25,528
Embankment		
Inside	8.2	15,812
Outside	12.8	37,414
Wealth quintile		
Lowest	5.3	10,645
Second	5.3	10,647
Middle	6.9	10,643
Fourth	11.8	10,646
Highest	27.9	10,645
Total HDSS	11.4	53,226

Water purification is the most common among those households who drink surface water, i.e., water from pond, river, ditch, canal, etc. (63 percent). One in four households where supply and rain water are the sources of drinking water purifies water before drinking (Table 3.3.2b). Purifying tube well water is less common – near one in ten.

Table 3.3.2b Percent of household that purify water before drinking by source of drinking water, Matlab HDSS, HSEC 2014

Sources of drinking water	Percent	Number of households
Deep tube-well	7.6	7,967
Tube-well (green)	8.5	27,960
Tube-well (red)	12.1	8,160
Tube-well (not tested)	9.3	8,902
Supply water	26.9	1,278
Rain water	23.8	323
Pond/river/ditch/canal/others	62.6	1,521

Filter available in the local markets is the most common water purification method followed by boiling (2 percent). Recommended method (PSF, RSF, Three pitchers, Alcan, Rea-F, Alum) (Ahmed, 2003, Ahmed and Rahman, 2000) of filtration for arsenic contaminated water is used by only two percent of the households where 15 percent of the households drink arsenic contaminated water and 17 percent drink water from tubewells which are not arsenic tested (Table 3.3.2c).

The quality (in terms of removing arsenic or bacterial contamination) of these locally available water purifiers is questionable. Moreover, the appropriate use of the filters might not be followed in all cases.

Table 3.3.2c Percent of households by water purification method and area, Matlab HDSS, HSEC 2014

Water purification methods/tools	Service area		Embankment		Total
	icddr,b	Govt.	Inside	Outside	HDSS
None	86.7	90.6	91.8	87.2	87.2
PSF/RSF	0.2	0.2	0.2	0.2	0.2
Three pitchers	0.2	0.4	0.3	0.3	0.3
Alcan	0.3	0.3	0.1	0.3	0.3
Read-F	0.1	0.0	0	0	0.0
Alum	1.5	1.6	0.6	1.9	1.5
Other filters available in local market	9.6	6.4	6.7	8.6	8.1
Boil	3.7	0.9	0.4	3.2	2.4
Number of households	27,698	25,528	15,812	37,414	53,226

3.3.3. Latrine use

Improved sanitation facility is a key component of hygiene practice and one of the most important prerequisites for preventing water borne diseases. Table 3.3.3 shows around six in ten households have improved sanitation facilities irrespective of area of residence, i.e., inside or outside embankment and government or icddr,b service area. Although three in ten households have improved toilet facilities they share toilets with other households. Still 14 percent households use unimproved toilets.

Table 3.3.3 Percentage of households by type of latrines, Matlab HDSS, HSEC 2014

Background characteristics	Improved (not shared)		Shared		Unimproved				
	Septic tank/ moder n toilet	Ring/slab and waste not drain out	Septic tank/ moder n toilet	Ring/slab and waste not drain out	Ring/ slab but waste drain out	*Pucca* latrine but waste drain out	*Kacha* latrine	Total	Number of households
Service area									
icddr,b	18.8	40.4	7.6	21.1	8.8	1.8	1.6	100.0	27,698
Government	13.9	41.1	7.2	22.1	12.7	1.4	1.7	100.0	25,528
Embankment									
Inside	17.2	43.3	7.7	18.9	10.5	1.2	1.2	100.0	15,812
Outside	16.1	39.6	7.3	22.7	10.8	1.7	1.8	100.0	37,414
Wealth quintile									
Lowest	0.1	38.7	0.6	38.9	16.7	1.1	4.0	100.0	10,645
Second	0.6	49.6	2.5	28.6	14.4	1.8	2.3	100.0	10,647
Middle	4.5	51.4	8.2	20.6	12.1	2.0	1.3	100.0	10,643
Fourth	19.9	44.0	13.6	13.2	7.4	1.7	0.4	100.0	10,646
Highest	57.2	20.0	12.3	6.5	2.8	1.2	0.1	100.0	10,645
Main income source									
Remittance	22.4	40.8	7.7	18.0	8.9	1.4	0.9	100.0	17,739
Business	16.9	37.3	8.55	22.33	11.1	2.0	1.9	100.0	12,499
Labour	3.7	41.9	5.91	28.85	14.9	1.8	2.9	100.0	11,143
Service	22.9	41.1	7.5	18.9	7.8	1.0	0.8	100.0	6,269
Agriculture	13.7	47.8	7.8	17.7	10.3	1.6	1.0	100.0	4,149
Others	18.3	36.4	5.2	25.1	9.9	1.5	3.6	100.0	1,427
NGO/*Samity* membership									
Yes	11.3	42.9	6.0	23.1	13.2	1.5	1.9	100.0	20,119
No	19.5	39.3	8.3	20.6	9.2	1.7	1.4	100.0	33,107
Total	16.4	40.7	7.4	21.6	10.7	1.6	1.6	100.0	53,226

Note: Shared toilets are not considered as improved since those are not as hygienic as the toilets that are not shared.

3.4. Microcredit, insurance and banking

This section explores the involvement of household members with micro-credits, insurance and banking sectors.

3.4.1. NGO *or Samity* membership

Overall 38 percent of the households reported that at least one member of the household had membership in any NGO/*Samity*. It is similar across icddr,b and government service areas, and inside and outside embankment. Near half of the households from lowest two wealth quintiles have NGO/*Samity* membership whereas one fourth of the households from highest quintile has the membership (Table 3.4.1a). Membership is more common among non-Muslims than Muslims and it varies by source of main income. It is highest among labourer (58 percent) followed by businessman (48 percent). People participate in NGO/*Samity for* membership to get micro-credit. A number of NGOs or *Samitys* give micro-credit to the people, mainly to the poor women.

Grameen Bank and BRAC are the most common micro-credit providing organizations (both 11 percent) followed by ASA (8 percent) and Uddipon (3 percent) (Table 3.4.1b). Each of BRDB, Buru, CCDA, PAGE and TMSS provides micro-credit to less than one percent of the

households. Aside them, there are some other local *Samitys* that give micro-credit to nine percent of the households in Matlab.

Table 3.4.1a Percent of households with NGO/*samity* membership by selected background characteristics, Matlab HDSS, HSEC 2014

Background Characteristics	Percent	Number of households
Service area		
icddr,b	36.8	27,698
Government	38.9	25,528
Embankment		
Inside	40.6	15,812
Outside	36.6	37,414
Wealth quintile		
Lowest	44.7	10,645
Second	45.6	10,647
Middle	39.4	10,643
Fourth	33.3	10,646
Highest	26.0	10,645
Religion		
Muslim	36.6	47,136
Non-Muslim	47.0	6,090
Main income source		
Remittance	22.7	17,739
Business	47.5	12,499
Labour	57.6	11,143
Service	32.4	6,269
Agriculture	32.8	4,149
Others	23.5	1,427
Total HDSS	37.8	53,226

Table3.4.1b Percent of households by membership with specific NGO/*samity and* area, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
NGO/*samity*	icddr,b	Govt.	Inside	Outside	HDSS
None	63.2	61.1	59.4	63.4	62.2
ASA	7.4	9.3	10.4	7.5	8.3
BRAC	9.4	11.8	13.9	9.1	10.5
BRDB	0.9	0.4	0.2	0.8	0.6
Buro	2.1	1.0	0.9	1.8	1.6
CCDA	1.8	2.0	1.7	2.0	1.9
Grameen Bank	11.4	11.4	14.0	10.3	11.4
PAGE	2.5	0.6	0.1	2.2	1.6
TMSS	0.5	0.4	0.6	0.4	0.5
Uddipon	3.3	1.6	0.6	3.2	2.5
Others	7.8	10.0	10.9	8.0	8.9
Number of households	27,698	25,528	15,812	37,414	53,226

3.4.2. Insurance policy

More than one fourth (28 percent) of the households across icddr,b and government service areas, and inside and outside the embankment has at least one member who is a policy holder of an insurance company. The percent of policy holders is the highest among households from the highest wealth quintile (one in three) and the lowest among households from the lowest wealth quintile (one in five) (Table 3.4.2a).

Saving is the commonest type of insurance (26 percent) in Matlab. Only one percent of the households have any other insurance policy like pension, education, child protection, marriage, health, hajj, or others (Table 3.4.2b).

Table 3.4.2a Percent of households having insurance policy by selected background characteristics, HSEC 2014

Area	Percent	Number of households
Service area		
icddr,b	27.3	27,698
Government	27.6	25,528
Embankment		
Inside	29.0	15,812
Outside	26.8	37,414
Wealth quintile		
Lowest	19.4	10,645
Second	26.0	10,647
Middle	27.3	10,643
Fourth	30.9	10,646
Highest	33.7	10,645
Religion		
Muslim	27.1	47,136
Non-Muslim	30.1	6,090
Main income source		
Remittance	25.4	17,739
Business	31.9	12,499
Labour	26.6	11,143
Service	29.4	6,269
Agriculture	24.8	4,149
Others	19.9	1,427
Total HDSS	27.5	53,226

Table 3.4.2b Percent of households by type of insurance policy, area and embankment, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Type of insurance	icddr,b	Govt.	Inside	Outside	HDSS
None	72.7	72.3	71.0	73.2	72.5
Savings	25.9	26.4	27.5	25.5	26.1
Pension	0.1	0.2	0.1	0.2	0.2
Education	0.5	0.5	0.7	0.3	0.5
Child protection	0.5	0.4	0.4	0.5	0.5
Marriage	0.3	0.1	0.2	0.2	0.2
Group insurance	0.1	0.0	0.0	0.1	0.0
Others	0.1	0.1	0.1	0.0	0.1
Number of households	27,698	25,528	15,812	37,414	53,226

3.4.3. Bank account in public/private commercial bank

Thirty two percent of the households have accounts with formal banks only (i.e., at least one member of the households have the account) and three percent have accounts with mobile banks only and five percent have both types of accounts (Table 3.4.3a). Overall 39 percent of the households have accounts with banking sectors.

At least one member of every two in five households has a bank account which is similar across inside or outside embankment and icddr,b or government service areas. Having a bank

account is the most prevalent among households from highest wealth quintile (74 percent) compared to only 11 percent among households from lowest wealth quintile (Table 3.4.3b).

Table 3.4.3a Percent of households with bank accounts by type of account and area, Mtlab HDSS, HSEC 2014

	Service area		Embankment		Total
Type of bank account	icddr,b	Govt.	Inside	Outside	HDSS
None	58.3	63.0	62.3	59.9	60.6
Only mobile bank	2.4	3.6	3.4	2.8	3.0
Only formal account	34.2	28.8	29.4	32.5	31.6
Both	5.0	4.7	4.9	4.8	4.8
Number of households	27,698	25,528	15,812	37,414	53,226

Table 3.4.3b Percent of households having bank account, Matlab HDSS, HSEC 2014

Background characteristics	Percent	Number
Service area		
icddr,b	41.6	27,698
Government	37.0	25,528
Embankment		
Inside	37.7	15,812
Outside	40.1	37,414
Wealth quintile		
Lowest	10.9	10,645
Second	22.9	10,647
Middle	35.5	10,643
Fourth	53.9	10,646
Highest	73.7	10,645
Religion		
Muslim	40.1	47,136
Non-Muslim	33.8	6,090
Main income source		
Remittance	51.7	17,739
Business	39.6	12,499
Labour	15.3	11,143
Service	53.5	6,269
Agriculture	28.1	4,149
Others	42.0	1,427
Sex of household head		
Male	35.9	34,703
Female	45.9	18,523
Total HDSS	39.4	53,226

3.5. Population characteristics

This section is summarized describing household composition and demographics of the population of Matlab HDSS area.

3.5.1. Population size

Table 3.5.1 shows that 229,936 people live in 53,226 households in the Matlab HDSS area in 2014. Around one third of the population live inside the Meghna-Dhonogoda embankment, i.e., in the flood protected area.

Table 3.5.1 Number of households and population size by area and embankment, Matlab HDSS, HSEC 2014

Area	Number of households	Total population
Service area		
icddr,b		
Block A	9,163	38,036
Block B	7,593	32,913
Block C	5,656	24,848
Block D	5,286	23,006
Government		
Block E	8,942	39,943
Block F	8,313	36,423
Block G	8,273	34,767
Embankment		
Inside	15,812	67,744
Outside	37,414	162,192
Total HDSS	53,226	229,936

3.5.2. Household composition

Information on household composition is useful for understanding family size, household headship, distribution of child dependent and aged dependent population which can help to develop population-based programs and policies. Household composition refers to economic and demographic positions that indirectly determine health and well-being of the household members. Table 3.1.2 shows household composition of Matlab HDSS area.

Two-thirds of the households are headed by male members, which is much lower compared to the national level (88 percent) (NIPORT, 2011). This can be due to huge migration of adult male population to other places within the country and other countries for employment or business. One fourth of the households have aged dependent member(s) (aged 65+ years). Six in ten are two generation households and one in four is a three generation household. The average household size is 4.3 in 2014 – the same size irrespective of icddr,b and government area, or inside and outside embankment. It was 4.9 in 2005.

3.5.3. Age and sex composition of the population

Table 3.5.3 shows the distribution of population by age and sex. Among the 229,936 people enumerated in HSEC 2014, 123,368 are women (54 percent). It differs with the national proportion of female population – according to National Population Census 2011, 50% of the population were women. The sex ratio in Matlab is 86 males per 100 females. This is lower than the sex ratio of 91 males per 100 females obtained in the HSEC 2005 (Nahar, 2007) and much lower than the ratio of 100.3 males per 100 females obtained in the 2011 Census (BBS, 2011b). The marked difference in the sex ratio between the HSEC 2014 and HSEC 2005 could be due to the continued out migration of adult men from Matlab. The sex ratio is the lowest in the age group 25-29 years (63 percent) followed by 30-34 years age group (68 percent) and 20-24 years age group (69 percent). The overall sex ratio is lower because of the lower sex ratio in the 20-34 years age group.

Table 3.5.2 Percent distribution of households by sex of household head, size and type by area and by embankment, Matlab HDSS, HSEC 2014

Characteristics	Service area		Embankment		Total
	icddr,b	Govt.	Inside	Outside	HDSS
Sex of household heads					
Male	66.4	63.9	62.7	66.2	65.2
Female	33.6	36.1	37.3	33.8	34.8
Number of usual members					
1	3.7	4.7	4.7	4.0	4.2
2	9.9	10.2	10.8	9.8	10.1
3	18.9	17.3	17.5	18.4	18.1
4	26.5	24.2	25.0	25.6	25.4
5	20.9	21.0	20.6	21.0	20.9
6	11.0	12.1	11.7	11.5	11.5
7	4.8	5.5	5.2	5.1	5.1
8	2.1	2.4	2.3	2.2	2.2
9+	2.2	2.6	2.1	2.5	2.4
Household has 65+ member					
Yes	17.2	19.2	19.6	17.5	18.1
No	82.8	80.8	80.4	82.5	81.9
Household type[1]					
Single-person	3.7	4.7	4.7	4.0	4.2
One generation	5.5	5.7	5.9	5.5	5.6
Two generation	57.0	55.6	54.5	57.1	56.3
Three generation	32.9	33.0	33.9	32.6	33.0
Others	0.8	1.0	0.9	0.9	0.9
Total	100.0	100.0	100.0	100.0	100.0
Mean household size	4.3	4.3	4.3	4.3	4.3
Number of individuals	118,803	111,133	67,744	162,192	229,936
Number of households	27,698	25,528	27,698	25,528	53,226

[1] Household type is elaborately described in appendix A1.

Table 3.5.3 Percent distribution of population by age and sex, Matlab HDSS, HSEC 2014

Age group	Percent			Sex ratio
	Male	Female	Both sexes	
0-4	11.4	9.6	10.5	102.6
5-9	11.7	9.8	10.7	103.4
10-14	11.9	10.3	11.1	100.0
15-19	9.4	8.6	9.0	94.0
20-24	6.4	8.1	7.3	68.5
25-29	5.7	7.8	6.8	62.8
30-34	5.5	7.1	6.4	67.8
35-39	5.2	6.1	5.7	73.9
40-44	5.6	6.1	5.9	79.3
45-49	5.5	6.3	5.9	75.7
50-54	6.3	5.8	6.0	93.8
55-59	5.0	4.2	4.5	102.8
60-64	3.4	3.1	3.2	96.2
65-69	2.5	2.7	2.6	79.1
70-74	1.9	2.2	2.1	73.9
75-79	1.4	1.3	1.3	92.2
80-84	0.7	0.6	0.7	99.1
85+	0.4	0.3	0.4	116.0
Total	100.0	100.0	100.0	86.4
Number of individuals	106,568	123,368	229,936	-

3.5.4. Religion composition

Islam is the predominant religion in Matlab. Muslims constitute 88% of the population. Other non-Muslims are mostly the Hindus; except 13 are Buddhists and nine are Christians (Table 3.5.4).

Table 3.5.4 Percent distribution of population by religious affiliation, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Religious affiliation	icddr,b	Govt.	Inside	Outside	HDSS
Muslim	85.3	91.4	94.0	85.8	88.2
Non-Muslim	14.7	8.6	6.0	14.2	11.8
Total	100.0	100.0	100.0	100.0	100.0
Number of individuals	118,803	111,133	67,744	162,192	229,936

3.5.5. Age dependency and aging

Table 3.5.5 Dependency ratio and aging index, by background characteristics, Matlab HDSS, HSEC 2014

	Age dependency ratio				Population ($P_{age\ group}$)		
Area	Total dependency ratio[1]	Child dependency ratio[2]	Aged dependency ratio[3]	Aged-child ratio[4]	P_{0-14}	P_{15-64}	P_{65+}
Service area							
icddr,b	63.7	52.6	11.1	21.2	38,162	72,568	8,073
Government	65.3	53.3	12.0	22.5	35,832	67,234	8,067
Embankment							
Inside	64.9	52.6	12.3	23.4	21,608	41,076	5,060
Outside	64.3	53.1	11.2	21.2	52,386	98,726	11,080
Asset quintile							
Lowest	72.4	61.1	11.3	18.5	14,077	23,047	2,604
Second	64.0	54.3	9.7	17.9	14,908	27,477	2,665
Middle	61.7	50.4	11.3	22.4	14,835	29,424	3,321
Third	61.1	48.8	12.3	25.2	14,945	30,612	3,770
Highest	65.0	52.1	12.9	24.8	15,229	29,242	3,780
Religion							
Muslim	66.4	54.6	11.8	21.7	66,551	121,878	14,429
Non-Muslim	51.1	41.5	9.5	23.0	7,443	17,924	1,711
Total HDSS	64.5	52.9	11.5	21.8	73,994	139,802	16,140

[1] Total dependency ratio: $(P_{0-14} + P_{65+})/ (P_{15-64}) \times 100$.
[2] Child dependency ratio: $P_{0-14}/ P_{15-64} \times 100$.
[3] Aged dependency ratio: $P_{65+}/ P_{15-64} \times 100$.
[4] Aged-child ratio: $(P_{65+}/ P_{0-14}) \times 100$.

The dependency ratio reflects the economic burden of a population. The age dependency ratio represents the ratio of the combined child (<15 years) population and aged (65+ years) population to the population of intermediate age (Siegel et al., 2004). The total dependency ratio (TDR) in Matlab HDSS area is 65 percent. This means, in the population 65 persons are of dependent age group against 100 persons of working age group (Table 3.5.5). Among these 65 dependent persons, 53 persons are children. TDRs are similar in different areas of Matlab – in icddr,b or government area and inside or outside embankment. TDR is higher (72 percent) in the lowest wealth quintile and it varies in between 61 to 65 in other wealth quintiles. Aged dependency ratio (ADR) is similar across wealth quintiles – 10 to 13 while child dependency ratio (CDR) is higher in the lowest quintile which increases the TDR of the lowest wealth quintile. TDR is different across religious groups – higher among Muslims (66%) compared to the non-Muslims (51%).

3.6. Education of Household Population

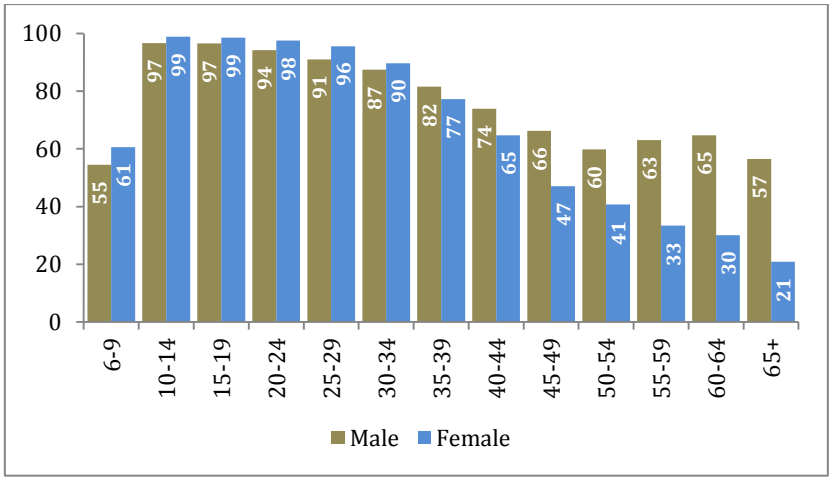
No new proof is needed to acknowledge the importance of education – the world has already countless examples. Nelson Mandela called education the most powerful weapon to change the world. Education influences human behaviours, attitudes and practices, and helps to reduce social inequalities and to improve quality of life.

3.6.1. Educational attainment of the household population

Data on level of education and the highest years of schooling completed were collected for all household members aged five or older. Table 3.6.1a and Table 3.6.1b (for female), and Table 3.6.1c and Table 3.6.1d (for male) show the distribution of household populations aged 6 and older by the highest level of education completed and the median number of years of education completed, according to background characteristics.

Twenty nine percent of females and 23 percent of males have never attended school. More men than women age 35 or more have ever attended school but attending school is little higher among women than men age below 35, that is, gender difference in attending school has been eliminated (Figure 3.1). Changes in educational attainment by successive age groups indicate the long-term trend in a country's educational achievement, that is, overall attending school has increased. Gender difference in completion of primary education exists no longer and attending secondary education is little higher among men. More men completed secondary and higher level of education than women, but overall it is low among both males (16 percent) and females (11 percent).

Figure 3.1 Percentage of individuals ever attended school, by age and sex, Matlab HDSS, HSEC 2014



Eighteen percent of women and 12 percent of men from the highest wealth quintile never attended school and around four in five (for both men and women) from the lowest wealth quintile never attended school. One in four women and one in three men from the highest quintile completed secondary or more education compared to only two percent of women and three percent of men from the lowest wealth quintile completed that level. It reflects larger sex differences in secondary or higher level of education completion in lower wealth quintiles.

The completed median year of schooling is five among both men and women. Among people age 45 or more, median year of schooling is higher among men (varies between 2 to 4) than women. However, the gender difference among young men and women no longer persists.

Table 3.6.1a Percent distribution of female household population aged six and over by grade completed and median years completed, according to age group, Matlab HDSS, HSEC 2014

Age group	No education[1]	Some primary[2]	Completed primary[3]	Some secondary[4]	Completed secondary[5]	More than secondary[6]	Total	Number	Median years completed
6-9	39.4	60.5	0.1	0.0	0.0	0.0	100.0	9,751	1.0
10-14	1.1	46.3	21.1	31.5	0.0	0.0	100.0	12,711	5.0
15-19	1.5	3.9	5.8	60.9	23.0	4.8	100.0	10,644	8.0
20-24	2.5	6.5	8.1	48.2	17.8	16.9	100.0	9,962	9.0
25-29	4.5	7.8	12.1	58.5	7.6	9.5	100.0	9,660	8.0
30-34	10.3	11.3	13.5	48.3	11.0	5.6	100.0	8,711	8.0
35-39	22.8	15.5	16.5	29.2	9.1	6.9	100.0	7,551	5.0
40-44	35.3	16.2	17.2	21.2	5.3	4.8	100.0	7,582	4.0
45-49	52.9	15.7	13.8	12.1	3.3	2.2	100.0	7,723	0.0
50-54	59.3	15.2	13.7	9.1	1.7	0.9	100.0	7,157	0.0
55-59	66.6	12.4	12.2	6.9	1.5	0.4	100.0	5,154	0.0
60-64	69.9	13.6	11.5	4.3	0.5	0.2	100.0	3,775	0.0
65+	79.1	11.6	7.2	2.0	0.1	0.0	100.0	8,809	0.0
Total	28.8	19.7	11.7	28.6	6.9	4.4	100.0	109,190	5.0

[1] Never attending school.
[2] Attended school but did not complete any grade and completed 1-4 grade and attended grade 5 but didn't complete.
[3] Completing grade 5.
[4] Attended grade but didn't complete and completed 6-9 grade and attended grade 10 but didn't complete.
[5] Completed grade 10.
[6] Attended grade 11 or more.

Table 3.6.1b Percent distribution of female household population aged six and over by grade completed and median years completed, according to background characteristics, Matlab HDSS, HSEC 2014

Background characteristic	No education[1]	Some primary[2]	Completed primary[3]	Some secondary[4]	Completed secondary[5]	More than secondary[6]	Total	Number	Median years completed
Service area									
icdd,b	27.3	19.4	11.6	29.0	7.6	5.2	100.0	56,366	5.0
Government	30.5	19.9	11.8	28.2	6.1	3.5	100.0	52,824	4.0
Embankment									
Inside	29.1	19.8	11.9	28.8	6.4	3.9	100.0	32,488	5.0
Outside	28.7	19.6	11.6	28.5	7.0	4.6	100.0	76,702	5.0
Wealth quintile									
Lowest	42.0	23.4	11.9	20.5	1.8	0.5	100.0	18,583	2.0
Second	33.7	22.3	12.4	26.6	3.8	1.4	100.0	21,180	4.0
Middle	29.6	20.0	11.8	30.4	5.6	2.7	100.0	22,569	5.0
Fourth	24.5	17.7	11.7	32.2	8.9	5.0	100.0	23,520	5.0
Highest	17.7	15.9	10.7	31.6	12.9	11.2	100.0	23,338	7.0
Religion									
Muslim	27.8	19.8	12.0	29.1	6.9	4.4	100.0	96,674	5.0
Non-Muslim	36.9	18.5	9.0	24.8	6.6	4.2	100.0	12,516	4.0
Total	28.8	19.7	11.7	28.6	6.9	4.4	100.0	109,190	5.0

[1] Never attending school.
[2] Attended school but did not complete any grade or completed 1-4 grade or attended grade 5 but didn't complete.
[3] Completing grade 5.
[4] Attended grade but didn't complete or completed 6-9 grade or attended grade 10 but didn't complete.
[5] Completed grade 10.
[6] Attended grade 12 or more.

Table 3.6.1c Percent distribution of the male household population aged six and over by grade completed and median years completed, according to age group, Matlab HDSS, HSEC 2014

Age group	No education[1]	Some primary[2]	Completed primary[3]	Some secondary[4]	Completed secondary[5]	More than secondary[6]	Total	Number	Median years completed
6-9	45.5	54.4	0.1	0.0	0.0	0.0	100.0	10,042	1.0
10-14	3.4	53.8	19.1	23.6	0.0	0.0	100.0	12,706	4.0
15-19	3.5	11.9	9.6	51.4	20.0	3.7	100.0	10,010	8.0
20-24	5.8	15.1	12.6	25.6	19.4	21.5	100.0	6,820	8.0
25-29	9.0	17.5	17.7	33.2	6.6	16.0	100.0	6,063	7.0
30-34	12.6	16.2	15.3	34.8	9.7	11.5	100.0	5,904	7.0
35-39	18.5	18.4	14.5	23.4	10.9	14.2	100.0	5,582	5.0
40-44	26.1	18.9	12.8	21.2	7.3	13.7	100.0	6,009	5.0
45-49	33.8	18.3	11.7	17.2	6.9	12.1	100.0	5,849	4.0
50-54	40.2	18.2	12.6	15.1	5.7	8.2	100.0	6,716	3.0
55-59	37.0	16.9	11.5	20.0	8.0	6.5	100.0	5,297	4.0
60-64	35.3	17.5	10.2	15.8	11.3	10.0	100.0	3,633	4.0
65+	43.5	20.4	11.4	13.7	5.7	5.2	100.0	7,331	2.0
Total	22.6	26.1	12.1	23.1	8.0	8.1	100.0	91,962	5.0

[1] Never attending school.
[2] Attended school but did not complete any grade or completed 1-4 grade or attended grade 5 but didn't complete.
[3] Completing grade 5.
[4] Attended grade but didn't complete or completed 6-9 grade or attended grade 10 but didn't complete.
[5] Completed grade 10.
[6] Attended grade 12 or more.

Table 3.6.1d Percent distribution of the male household population aged six and over by grade completed and median years completed, according to background characteristics, Matlab HDSS, HSEC 2014

Background characteristic	No education[1]	Some primary[2]	Completed primary[3]	Some secondary[4]	Completed secondary[5]	More than secondary[6]	Total	Number	Median years completed
Service area									
icdd,b	21.8	24.9	12.0	23.0	8.7	9.6	100.0	47,367	5.0
Government	23.4	27.4	12.3	23.1	7.3	6.5	100.0	44,595	4.0
Embankment									
Inside	21.9	27.0	12.4	23.7	8.1	6.9	100.0	26,976	5.0
Outside	22.8	25.8	12.0	22.8	8.0	8.6	100.0	64,986	5.0
Wealth quintile									
Lowest	36.7	33.1	12.4	14.1	2.7	1.0	100.0	15,801	2.0
Second	27.4	30.3	13.9	20.9	4.8	2.7	100.0	18,523	4.0
Middle	22.2	27.0	13.1	24.9	7.5	5.3	100.0	19,530	5.0
Fourth	16.8	23.0	12.2	27.8	10.7	9.4	100.0	19,672	5.0
Highest	12.2	18.4	9.1	25.8	13.5	21.1	100.0	18,436	8.0
Religion									
Muslim	22.3	26.3	12.2	23.0	8.0	8.2	100.0	80,305	5.0
Non-Muslim	24.7	24.7	11.9	23.1	8.1	7.5	100.0	11,657	5.0
Total	22.6	26.1	12.1	23.1	8.0	8.1	100.0	91,962	5.0

[1] Never attending school.
[2] Attended school but did not complete any grade and completed 1-4 grade and attended grade 5 but didn't complete.
[3] Completing grade 5.
[4] Attended grade but didn't complete and completed 6-9 grade and attended grade 10 but didn't complete.
[5] Completed grade 10.
[6] Attended grade 11 or more.

3.6.2. School attendance ratio and gender inequalities in schooling

The net attendance ratio (NAR) indicates participation in primary schooling for the population age 6-10 and participation in secondary schooling for the population age 11-17. The gross attendance ratio (GAR) measures participation at each level of schooling among those of any age. The GAR is almost always higher than the NAR for the same level because the GAR includes participation by those who may be older or younger than the official age range for that level. A NAR of 100 percent would indicate that all of those in the official age range for that level are attending at that level. The GAR can exceed 100 percent if there is significant over-age or under-age participation at a given level of schooling. Table 3.6.2 shows the NARs and GARs, and GPIs according to background characteristics.

Net attendance ratio at the primary-school level (NARp) - and secondary-school level (NARs) between icddr,b and government service areas are similar. The NARp is overall high; shows a clear increasing pattern from the lowest wealth quintile (94 percent) to the highest wealth quintile (99 percent). The NARs and GARs are positively associated with wealth quintile.

Table 3.6.2 Net Attendance Ratios, Gross Attendance Ratios and Gender Parity Index for the household population for primary and secondary school by sex, according to background characteristics, Matlab HDSS, HSEC 2014

Background characteristic	Net attendance ratio[1]				Gross attendance ratio[2]			
	Male	Female	Total	Gender Parity Index[3]	Male	Female	Total	Gender Parity Index[3]
PRIMARY SCHOOL								
Service area								
icdd,b	97.5	97.9	97.7	99.7	98.0	98.7	98.4	99.3
Government	96.2	97.2	96.7	99.0	96.7	97.8	97.2	98.8
Embankment								
Inside	97.7	97.3	97.5	100.4	98.0	98.5	98.3	99.5
Outside	96.5	97.6	97.1	98.9	97.1	98.2	97.6	98.9
Wealth quintile								
Lowest	93.9	95.9	94.8	97.9	94.7	96.7	95.7	97.9
Second	96.7	97.4	97.1	99.3	97.3	98.4	97.8	99.0
Middle	97.4	97.5	97.4	99.9	97.9	98.2	98.1	99.6
Fourth	97.7	98.3	98.0	99.4	98.0	99.0	98.5	99.0
Highest	98.9	98.5	98.7	100.4	99.1	99.1	99.1	100.0
Religion								
Muslim	97.0	97.5	97.3	99.5	97.6	98.3	97.9	99.2
Non-Muslim	95.5	97.4	96.4	98.1	95.7	98.0	96.9	97.7
Total	96.9	97.5	97.2	99.3	97.4	98.3	97.8	99.1
SECONDARY SCHOOL								
Service area								
icdd,b	82.5	88.6	85.6	93.2	97.4	99.1	98.3	98.4
Government	81.7	88.4	85.0	92.5	97.3	99.2	98.2	98.1
Embankment								
Inside	84.6	88.9	86.7	95.1	97.9	99.5	98.7	98.4
Outside	81.1	88.3	84.7	91.8	97.2	98.9	98.1	98.2
Wealth quintile								
Lowest	67.7	84.6	76.0	80.1	94.1	98.2	96.1	95.8
Second	77.4	88.0	82.7	88.0	97.1	99.1	98.1	98.0
Middle	83.4	89.3	86.3	93.3	97.7	99.4	98.6	98.3
Fourth	88.2	89.8	89.0	98.3	98.8	99.3	99.1	99.4
Highest	94.4	90.2	92.2	104.6	99.1	99.4	99.3	99.7
Religion								
Muslim	82.4	88.4	85.4	93.3	97.4	99.2	98.3	98.3
Non-Muslim	79.5	89.2	84.3	89.2	96.9	98.6	97.7	98.2
Total	82.1	88.5	85.3	92.8	97.4	99.1	98.3	98.3

[1] The NAR_P for primary school is the percentage of the primary-school age (age 6-10) population that is attending primary school. The NAR_S for secondary school is the percentage of the secondary-school age (age 11-17) population that is attending secondary school. By definition the NAR cannot exceed 100 percent.

[2] The GAR_P for primary school is the total number of primary school students, expressed as a percentage of the official primary-school-age population. The GAR_S for secondary school is the total number of secondary school students, expressed as a percentage of the official secondary-school-age population. If there are significant numbers of over-age and under-age students at a given level of schooling, the GAR can exceed 100 percent.

[3]The Gender Parity Index (GPI_P) for primary school is the ratio of the primary-school NAR_P (GAR_P) for females to the NAR_P (GAR_P) for males. The Gender Parity Index (GPI_S) for secondary school is the ratio of the secondary-school NAR_S (GAR_S) for females to the NAR_S(GAR_S) for males.

The Gender Parity Index (GPI) is a more precise indicator of gender differences in the schooling system. It represents the ratio of the NAR and GAR for females to the NAR and GAR for males. A GPI greater than 100 percent, indicates that a higher proportion of females than males attend school. The GPI_p for both NAR_p and GAR_p at primary-school level is 999 percent. It indicates a narrow gender gap in primary education. The GPIs for NAR_s and GAR_s for secondary-school level are 93 percent and 98 percent, respectively which also indicate a little gender gap at secondary education.

3.6.3. School attendance

This section describes the school attendance of people aged 6 to 24. Proportion of school attending population declines with increase in age (Table 3.6.3a). Ninety seven percent of children age 6-10 are in school which decreases to 90 percent for children age 11-15. Only 55 percent of the population age 16-20 attend school. School attendance is higher among girls than among boys age 6-15, but boys age 16-20 and age 21-24 are more likely to be in school than girls of the age groups. It seems that the recent efforts to uplift education, with special focus on female education might have an impact. Table 3.6.3b shows school attendance is similar across populations living in the icddr,b service area and the government service area, and the populations living inside and outside the flood protection embankment.

Table 3.6.3a Percentage of household population age 6-24 attending school , by age and sex, Matlab HDSS, HSEC 2014

Age group	Male	Female	Total
6-15	91.7	95.8	93.7
6-10	96.9	97.5	97.2
11-15	86.4	94.2	90.3
16-20	58.4	51.7	54.8
21-24	23.0	13.0	17.0

Table 3.6.3b Percentage of household population age 6-24 attending school, by age and area, Matlab HDSS, HSEC 2014

	Service area		Embankment		Total
Age group	icddr,b	Govt.	Inside	Outside	HDSS
6-15	94.1	93.4	94.5	93.4	93.7
6-10	97.7	96.7	97.5	97.1	97.2
11-15	90.4	90.2	91.6	89.7	90.3
16-20	54.6	55.1	58.1	53.4	54.8
21-24	17.2	16.8	18.4	16.5	17.0

3.7. Labour force

To explore the size of economically active population and demographic and socio-economic differentials of current labour force in rural Matlab, data on employment and occupation were collected during HSEC 2014. The previous HSEC also collected data on labour force but did not follow any standard classification of occupation. During HSEC 2014, like other HSEC labour force data were collected using the last revised classification of occupation by HDSS, Matlab in 2010. These occupation classes are re-classified according to Bangladesh Standard Classification of Occupation (BBS, 2012) with-a-view to make them comparable with the national status of labour force.

3.7.1. Employment

Employment, the state of having paid work, is an important indicator of economic status. The development process of a country vastly depends on its employed population. So, to know about the economic condition of a specific area or community, it is important to know about their working status, types of occupation, etc. The HSEC 2014 collected this information of all household members aged eight and above.

Table 3.7.1a Percentage of male and female household population aged eight and over who were working at the time of census, by age and area, Matlab HDSS, HSEC 2014

	Percent						Number					
	Male			Female			Male			Female		
Age group	icddr,b	Govt.	Total HDSS	icddr,b	Govt.	Total HDSS	icddr,b	Govt.	Total HDSS	icddr,b	Govt.	Total HDSS
8-9	0.1	0.1	0.1	0.0	0.0	0.0	2,597	2,371	4,968	2,466	2,394	4,860
10-14	3.9	4.8	4.4	0.3	0.1	0.2	6,307	6,399	12,706	6,550	6,161	12,711
15-19	25.6	26.6	26.1	1.0	1.3	1.1	4,960	5,050	10,010	5,399	5,245	10,644
20-24	59.3	60.7	60.0	3.6	4.1	3.8	3,372	3,448	6,820	5,310	4,652	9,962
25-29	84.7	85.5	85.1	6.4	6.0	6.2	3,178	2,885	6,063	5,035	4,625	9,660
30-34	94.0	93.2	93.6	7.8	7.7	7.7	3,099	2,805	5,904	4,525	4,186	8,711
35-39	95.5	95.4	95.4	8.2	6.9	7.6	3,030	2,552	5,582	4,007	3,544	7,551
40-44	96.7	96.5	96.6	8.4	6.7	7.6	3,216	2,793	6,009	3,980	3,602	7,582
45-49	95.6	96.1	95.8	7.2	4.4	5.9	3,095	2,754	5,849	4,056	3,667	7,723
50-54	93.5	93.9	93.7	6.2	3.2	4.7	3,510	3,206	6,716	3,654	3,503	7,157
55-59	87.2	86.3	86.8	4.6	3.2	3.9	2,750	2,547	5,297	2,583	2,571	5,154
60-64	71.9	74.5	73.2	1.9	1.2	1.5	1,869	1,764	3,633	1,940	1,835	3,775
65+	38.9	42.0	40.4	1.0	0.6	0.8	3,746	3,585	7,331	4,327	4,482	8,809
Total	59.4	58.4	58.9	4.3	3.5	3.9	44,729	42,159	86,888	53,832	50,467	104,299

Table 3.7.1b Percentage of male and female household population age eight and over who are working at the time of census, by age, and by embankment status, Matlab HDSS, HSEC 2014

	Percent						Number of individuals					
	Male			Female			Male			Female		
Age group	Inside	Outside	Total HDSS	Inside	Outside	Total HDSS	Inside	Outside	Total HDSS	Inside	Outside	Total HDSS
8-9	0.0	0.1	0.1	0.0	0.0	0.0	1,454	3,514	4,968	1,428	3,432	4,860
10-14	3.3	4.8	4.4	0.1	0.2	0.2	3,810	8,896	12,706	3,735	8,976	12,711
15-19	22.3	27.8	26.1	1.0	1.2	1.1	2,988	7,022	10,010	3,153	7,491	10,644
20-24	57.9	60.9	60.0	3.9	3.8	3.8	2,035	4,785	6,820	2,755	7,207	9,962
25-29	84.6	85.3	85.1	6.3	6.2	6.2	1,720	4,343	6,063	2,853	6,807	9,660
30-34	93.1	93.8	93.6	7.8	7.7	7.7	1,587	4,317	5,904	2,504	6,207	8,711
35-39	95.4	95.5	95.4	7.2	7.7	7.6	1,591	3,991	5,582	2,223	5,328	7,551
40-44	96.7	96.6	96.6	5.7	8.4	7.6	1,684	4,325	6,009	2,208	5,374	7,582
45-49	96.3	95.7	95.8	4.8	6.3	5.9	1,687	4,162	5,849	2,290	5,433	7,723
50-54	94.3	93.4	93.7	2.7	5.6	4.7	2,060	4,656	6,716	2,256	4,901	7,157
55-59	87.1	86.6	86.8	2.9	4.4	3.9	1,586	3,711	5,297	1,652	3,502	5,154
60-64	76.6	71.7	73.2	1.6	1.5	1.5	1,100	2,533	3,633	1,144	2,631	3,775
65+	41.8	39.7	40.4	0.5	0.9	0.8	2,244	5,087	7,331	2,816	5,993	8,809
Total	57.9	59.4	58.9	3.4	4.1	3.9	25,546	61,342	86,888	31,017	73,282	104,299

Fifty nine percent of men and only four percent of women are working in the HDSS area; working status of both men and women is comparable across service areas and inside and outside the embankment. Almost all men age 30-54 are working; proportion of working women is the highest in the age group 30-44 (8 percent). Child labour is low and differs by sex of the child, around five percent of male children aged below fifteen years are working, and it is very negligible among female children of same age group. A large proportion of aged dependent men are not economically dependent – 73 percent men age 60-64 and 40 percent of men age 65 and above are working (Table 3.7.1a and Table 3.7.1b).

3.7.2. Occupation

There is a big difference in occupation of men and women in Matlab like other rural parts of Bangladesh. Women are basically involved in household chores and very few are directly involved in economic activities (BBS, 2011a). Table 3.7.2 shows occupation classifications of household heads. Although household headship in Matlab is shifting towards women and now 35 percent of the households are headed by a female member, we describe the occupation of male heads only since most of the female heads are housewives (89 percent).

Table 3.7.2 Distribution of occupation of household heads and other members during 12 months prior to the survey, by sex

	Household head			All members including HH head (aged 8 and above)		
Primary occupation	Male	Female	Total	Male	Female	Total
Manager	0.3	0.0	0.2	0.3	0.0	0.1
Professionals	2.9	0.7	2.1	1.9	0.8	1.3
Technicians and associate professionals	0.1	0.0	0.0	0.0	0.0	0.0
Clerical support workers	5.0	1.2	3.7	5.2	1.0	2.9
Service and sales workers	20.5	1.1	13.7	15.1	0.7	7.3
Skilled agricultural, forestry and fisheries workers	22.8	0.1	14.9	12.9	0.1	5.9
Craft and related trade workers	6.9	0.8	4.8	6.2	0.9	3.3
Plant and machine operators and assemblers	1.8	0.0	1.2	1.6	0.0	0.7
Elementary occupation	23.2	1.2	15.5	15.8	0.5	7.4
Others[1]						
Housewives	0.0	89.4	31.1	0.0	67.9	37.1
Housekeeping supervisor	8.5	0.8	5.9	4.4	0.5	2.3
Retired/Beggar/disabled/too old/ others/ unknown	6.1	4.0	5.4	3.4	2.8	3.1
Other miscellaneous (Children, Student, Unemployed/Jobless/Jobseeker)	1.9	0.5	1.4	28.9	24.6	26.6
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of individuals	34,703	18,523	53,226	86,888	104,299	191,187

[1] "Others" class is not classified in Bangladesh Standard Classification of Occupation - 2012. Since for our reporting we have adopted that standard classification after HSEC has been done, we have included this class.

Twenty three percent of male household heads do some kind of elementary work, another 23 percent do skilled agricultural, forestry and fisheries work followed by service and sales works (21 percent). Managers, professionals, technician and associate professionals, clerical support workers, craft and related trade workers, and plant and machine operators and assemblers constitute 17 percent. Another 17 percent of male household heads are not currently economically active.

3.8. Awareness of Union Information and Service Centre of GoB

GoB is providing information services to rural citizens through Union Information and Service Centres (UISC) at Union Parishads[2]. Among many other initiatives, UISC established Union Digital Centres (UDC) in November 2010 to facilitate access to information including public exam results, government forms download, birth and death registration, VGD/VGF card database, livelihood information, employment information, various online forms processing, e-mail and internet browsing, computer training, video conferencing, mobile banking, English learning, etc. to rural people. In HSEC 2014, a question "Have you/your family member heard

[2] Source: http://a2i.pmo.gov.bd/union-information-and-service-centre (Accessed on 14 March 2015, 15:47)

that there is an information centre in each union that provides information?" was asked to the respondents to know their awareness about government's information services. Many people, particularly women may not be aware of the centres and availability of services since rural women hardly visit public places. They are less involved in other activities beside household chores. As most of our respondents were female we cannot say how many people know about union information centre – we only report respondent's awareness of this facility.

One fourth of the respondents heard about union information system. Respondents from government service area (26 percent) are more aware of the facility than the respondents of icddr,b service area (20 percent) and inside embankment (33 percent) than outside embankment (19 percent). Thirty one percent of the respondents from highest wealth quintile are aware of union information system whereas it is only 14 percent among the respondents from lowest wealth quintile (Table 3.8.1).

Table 3.8.1 Percent of respondents ever heard about union information centre by area, Matlab HDSS, HSEC 2014

Background characteristics	Percent	Number of households
Service area		
icddr,b	20.0	27,698
Government	26.3	25,528
Embankment		
Inside	32.7	15,812
Outside	18.9	37,414
Wealth quintile		
Lowest	14.1	47,136
Second	19.2	6,090
Middle	23.0	
Fourth	28.0	10,645
Highest	30.7	10,647
Religion		
Muslim	23.4	47,136
Non-Muslim	20.2	6,090
Main income source		
Remittance	22.2	17,739
Business	23.7	12,499
Labour	17.1	11,143
Service	29.8	6,269
Agriculture	30.5	4,149
Others	21.6	1,427
Sex of respondent		
Male	29.9	10,328
Female	21.4	42,589
Missing[1]	17.8	309
Education of respondent		
No education	17.7	17,835
Primary incomplete	20.9	7,811
Primary complete	21.7	7,315
Secondary incomplete	24.8	14,095
Secondary complete and above	39.8	5,837
Missing[1]	17.8	309
Total HDSS	23.0	53,226

[1] Sex of respondents was not recorded during interview; current idetification number (CID) was recorded. Those CIDs are unmatched in individual file.

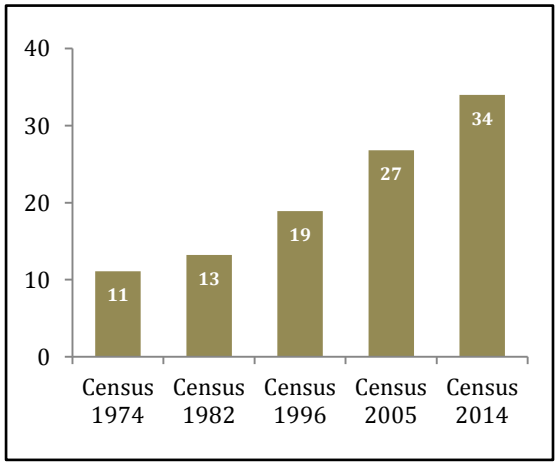
4. SOCIO-ECONOMIC AND POPULATION CHARATERISTICS, MATLAB HDSS, 1974-2014

Bangladesh has been experiencing rapid demographic, social, economic and epidemiologic changes. Matlab HDSS and periodic socioeconomic censuses during 1974-2014 provide us a unique scope to show demographic, social, economic and epidemiologic changes. In this chapter, we have attempted to exhibit the changes for selected demographic and socio-economic indicators in Matlab.

4.1. Household headship

Figure 4.1 shows a dramatic increase in the proportion of female headed households in Matlab – increased from 11 percent in 1974 to 35 percent in 2014. High rate of out migration of male population from Matlab during the period might have affected the sex distribution of household headship in this region. Female headed household also increased from nine percent in 1993 (Mitra et al., 1994), 10 percent in 2004 (Mitra et al., 2005) and 12 percent in 2014 (NIPORT, 2015) nationwide.

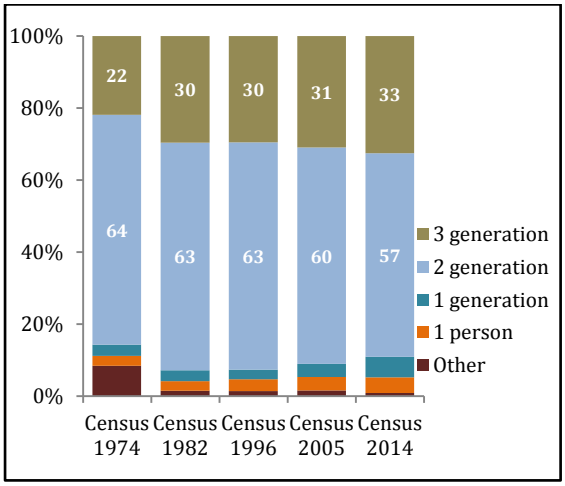
Figure 4.1 Percent of female headed households, Matlab HDSS, 1974-2014



4.2. Household type

Figure 4.2 shows the changes in household types during the period 1974-2014. Three generation households have increased from 22 percent in 1974 to 33 percent in 2014 and two generation households have declined from 64 percent to 57 percent during the same period. There is a little increase in one generation households and single person households. Other types of households have also been decreased during the period.

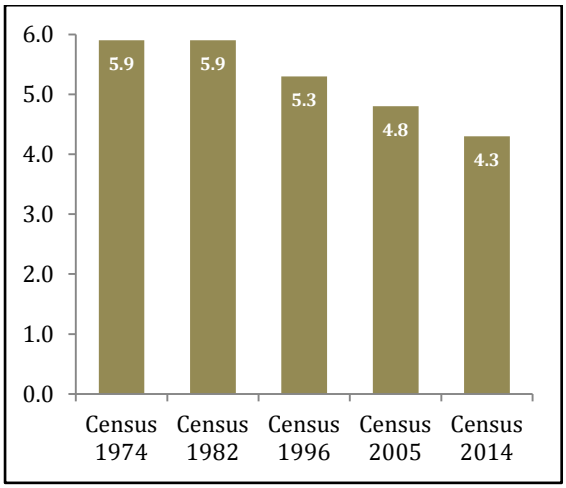
Figure 4.2 Household types, Matlab HDSS, 1974-2014



4.3. Household size

Like any other parts of the country household size is also declining sharply in rural Matlab. Average household size has declined to 4.3 in 2014 from 5.8 in 1974 (Figure 4.3).

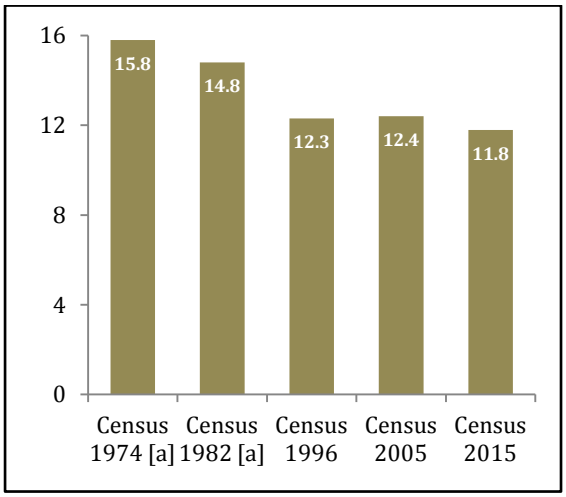
Figure 4.3 Average household sizes, Matlab HDSS, 1974-2014



4.4. Religion

Inhabitants of Matlab are mainly Muslims and Hindus (only 22 are from other religions). Relative share of Hindus slightly dropped from 16 percent in 1974 to 15 percent in 1982 and then sharply declined to 12 percent in 1996. Tremendous out-migration of Hindus from Matlab was probably the key contributor in this decline. Afterwards, the population continued its journey with similar share of Hindus up to 2014 with a little relative decline which might be an impact of lower fertility and higher mortality than those of Muslims (Razzaque et al., 2009, Alam and Khuda, 2011) (Figure 4.4).

Figure 4.4 Percentage of Non-Muslim populations, Matlab HDSS, 1974-2014



[a] For 1974 and 1982, the indicator has been measured for the 149 villages which were retained after 1978's restructured of the HDSS. For other year, 142 villages have been considered as river erosion devoured 7 villages in 1987.

4.5. Housing materials

Figure 4.5 shows that tin has always been the predominant roof material in Matlab and now almost all the households have tin roof. As households having pacca roof has increased from two percent to six percent during 2005-2014, households having tin roof has declined from 98 percent to 94 percent. Households having tin wall have increased from 27 percent to 87 percent during 1974-2014. Households having pacca/semi-pacca floor have increased from seven percent to 20 percent during 2005-2014 (data on floor materials were not collected in censuses before 2005).

Figure 4.5 Percentage of household having tin roof, tin wall and pacca/semi-pacca floor, Matlab HDSS, 1974-2014

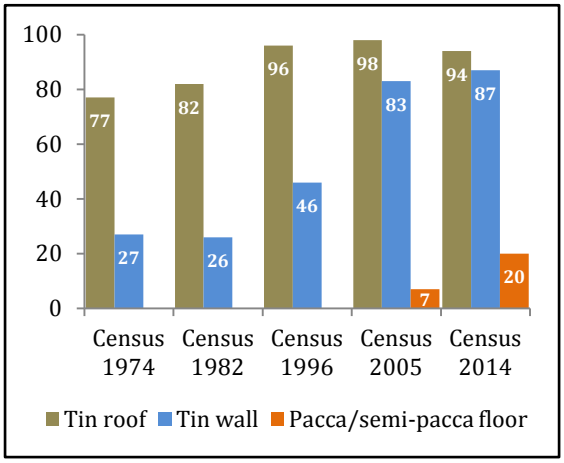
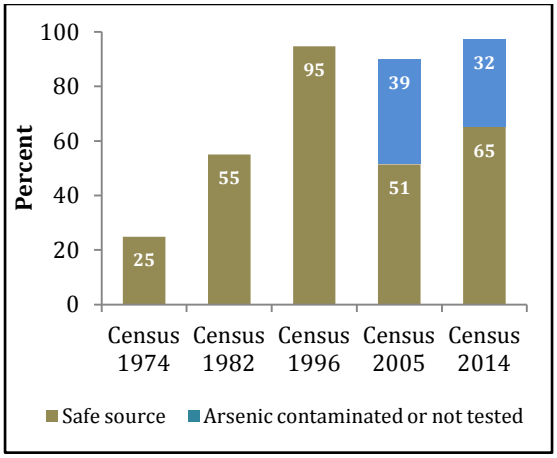


Figure 4.6 Percent of households where tubewell is the main source of drinking water, Matlab HDSS, 1974-2014



4.6. Safe drinking water

Tubewell is the most common safe source of drinking water in Matlab like other parts of the country. After detection of arsenic in tubewell water in Bangladesh in 1993, it was realised that the safe source was not as safe as we knew[3]. For awareness building and not drinking arsenic

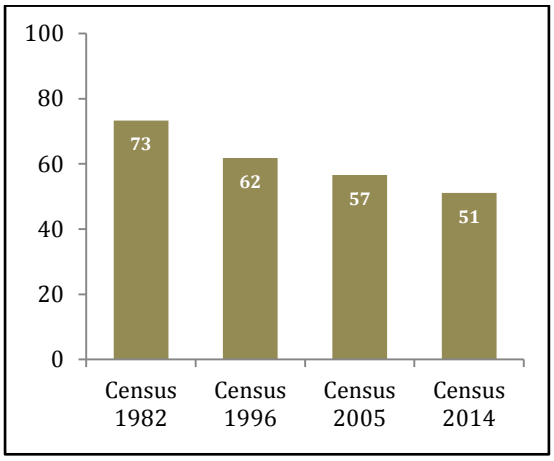
[3] http://www.unicef.org/bangladesh/Arsenic.pdf
(Accessed on 14 January 2015, 14:20)

contaminated tubewell water, government and development partners took initiative to red mark the arsenic contaminated tubewell in 1996[4] and planned to cover all the tubewells. But, all the tubewells in Matlab are not arsenic tested and still one third of the households' members are drinking arsenic contaminated or not tested tubewell water (Figure 4.6).

4.7. Land ownership

Proportion of households with ownership of agricultural land in Matlab is continuously decreasing – dropped to 51 percent in 2014 from 73 percent in 1982 (Figure 4.7).

Figure 4.7 Percent of households having agricultural land, Matlab HDSS, 1982-2014



4.8. Household assets and livestock

Number of households possessing a television is exponentially increasing in Matlab. Only five percent of the households possessed a television in 1996 which increased to 22 percent in 2005 and reached to 93 percent with eight percent point annual increase (Figure 4.8b).

Figure 4.8a Percent of households that possess television, Matlab HDSS, 1996-2014

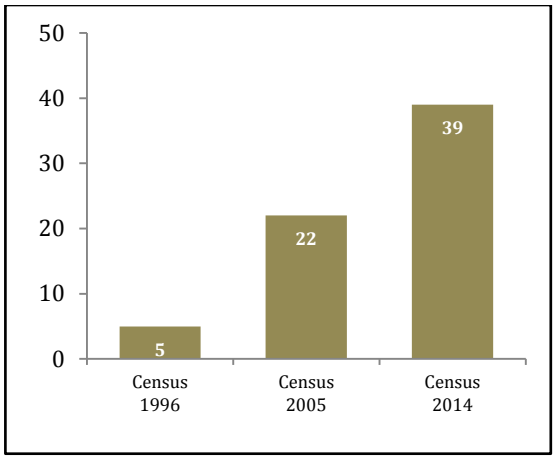
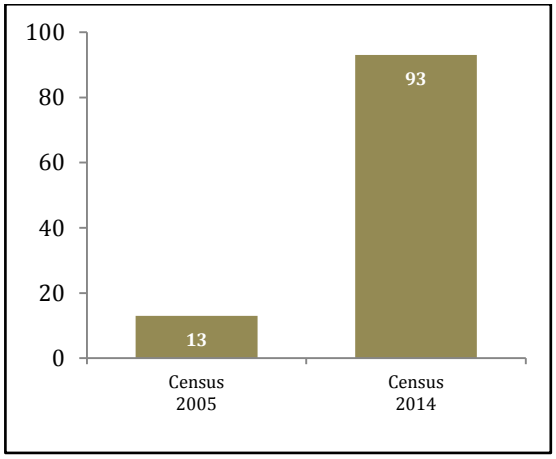
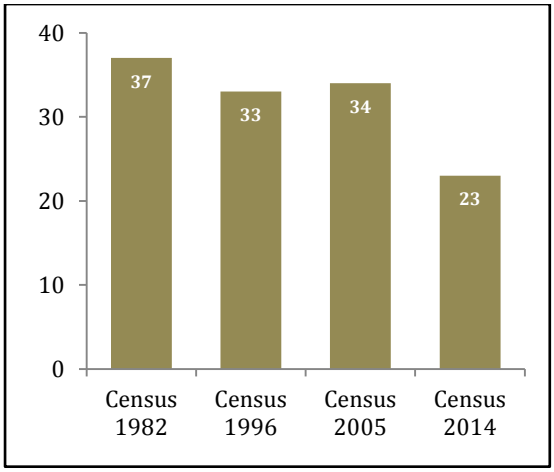


Figure 4.8b Percent of households that possess mobile phone, Matlab HDSS, 2005-2014



Note: Very few of households have land phone.

Figure 4.8c Percent of households that have cow/goat, Matlab HDSS, 1982-2014



Alike other region of Bangladesh, possessing a mobile phone is almost universal in the households in Matlab. Only 13 percent of the households had mobile phone in 2005 and in last ten year period it

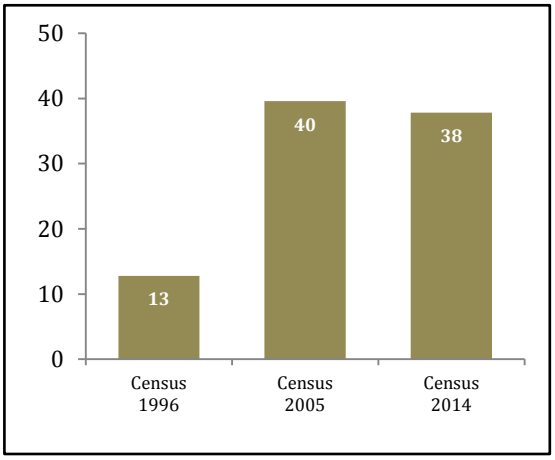
[4] http://www.bvsde.ops-oms.org/enwww/fulltext/recuhidr/arsenic/arsenic.pdf (Accessed on 14 January 2015, 14:20)

Livestock rearing is declining in Matlab. For example, fewer households in 2014 (23 percent) compared to 1974 (37 percent) have cows or goats (Figure 4.8c).

4.9. Micro-credit membership

Mainly women and in few cases men become members of NGO/*samity* to get micro-credit. So, generally, being a member of NGO/*samity* is an indicator of receiving micro-credit. Households with micro-credit membership in Matlab sharply increased during 1996-2005 – from 13 percent (women) to 40 percent. After that, during 2005-2014 proportion of households with micro-credit membership became static with indication of little decrease (Figure 4.9).

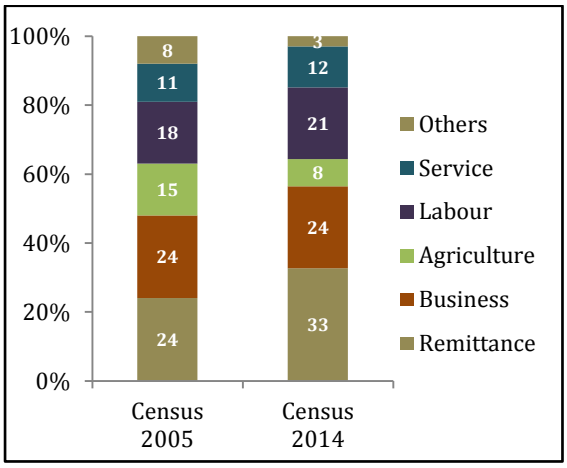
Figure 4.9 Percent of households with NGO/*samity* membership, Matlab HDSS, 1996-2014



4.10. Source of household income

As main source of household income, remittance has been increased by 38 percent during 2005-14 and agriculture has been declined by 47 percent. Labour as main source of household income shows a little increase while business and service remained similar. Other type of sources of household income has been declined (Figure 4.10).

Figure 4.10 Percent distribution of main sources of household income, Matlab HDSS, 2005-2014

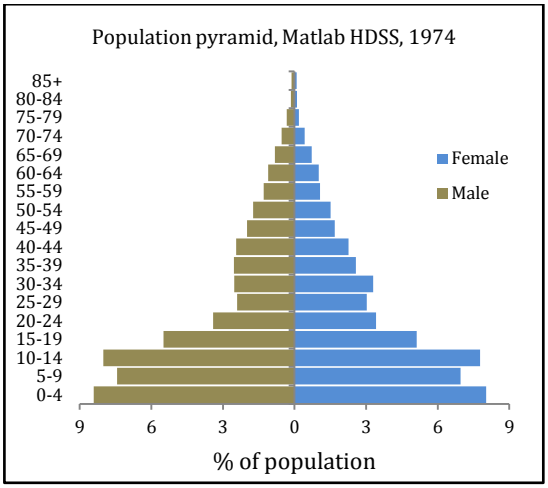


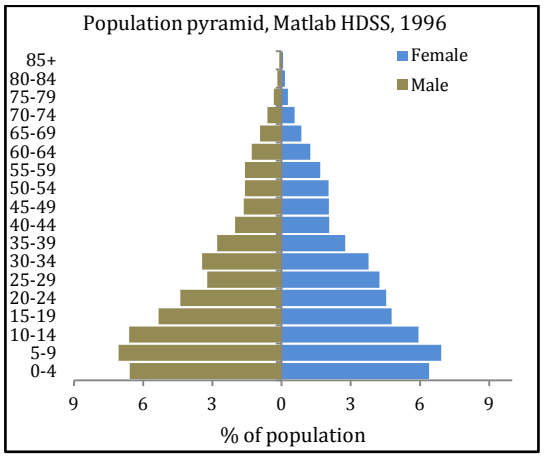
4.11. Population age-sex structure

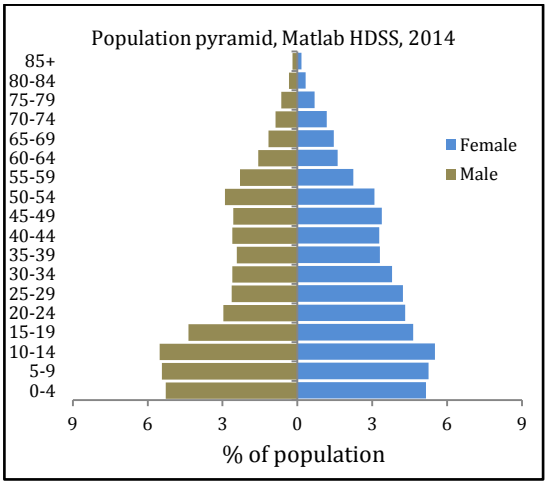
The age-sex structure of a population can be studied through population pyramids. The overall shape of the pyramid indicates different levels of population growth – a. rapid b. slow c. zero and d. negative growth.

The population pyramid of Matlab in 1974 with wide base and narrow top represents a population with large proportion of young people. A sharp change in the shape of the population structure appeared in 1996 – a narrower bottom with wider middle part compared to the shape of the population pyramid of 1974. It reflects that within these two decades the birth rate declined quite quickly. The structure of the pyramid remained similar in 2014 which indicates a continued lower birth rate. The wider top of the pyramid is indicating an increasing aged population (Figure 4.11).

Figure 4.11 Age structure of the population, Matlab HDSS, 1974-2014





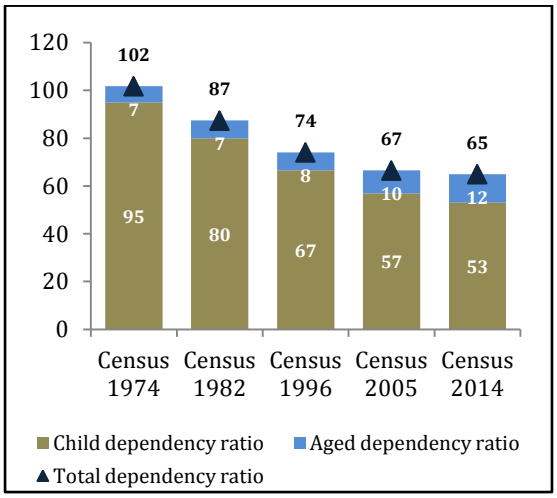


4.12. Age dependency and aging

Figure 4.12 shows that dependency ratio within HDSS area has declined mainly for the decline of child dependency ratio which dropped from 95 percent in 1974 to 52 percent in 2014. On the other hand, the aged dependency ratio has increased to 12 percent in 2014 from 7 percent in 1974.

Age reporting of individuals at the inception of the HDSS was biased indicated by age heaping which arise due to error in reporting age. Date of birth of people was recorded by probing. Many young and mid-age people under report their ages (Streatfield et al., 2015) and from the context, we know that aged people over report their ages. So, during earlier period of the HDSS age dependency ratios were approximately measured which is nowadays almost exactly measured because date of birth of people born after 1966 is recorded by routine household visits.

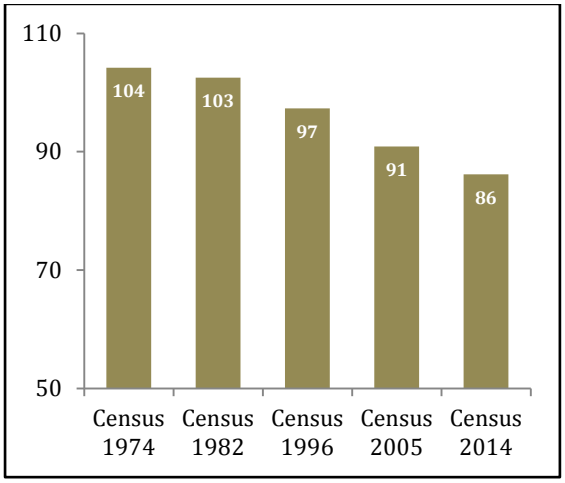
Figure 4.12 Dependency ratios, Matlab HDSS, 1974-2014



4.13. Sex ratio

Number of males per 100 females has declined from 104 in 1974 to 86 in 2014. Probably higher out migration of men from Matlab compared to women is the main reason of the decline in the sex ratio (Alam and Khuda, 2011) (Figure 4.13).

Figure 4.13 Number of males per 100 females, Matlab HDSS, 1974-2014



4.14. Level of education

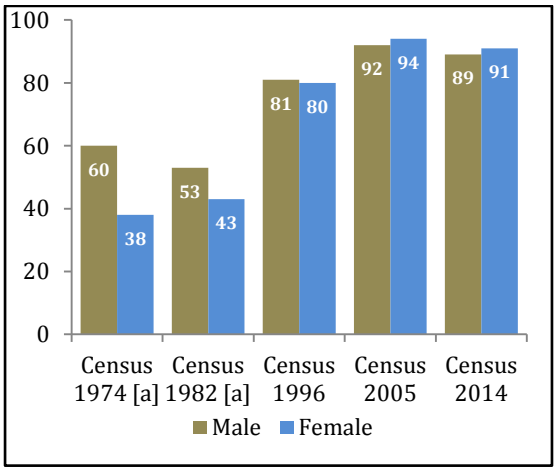
Ever attended school

Ever attending school among both male and female is nowadays universal in Matlab. While four in ten women age 6-24 aver attended school in 1974, nine in ten of them ever attended school in 2014. Among women, attending school got a momentum during 1990s when government offered stipend for all school going girls and for Figure 4.1a, we see a reflection of that – an increase from 43 percent in 1982 to 91 percent in 2014. Among men, ever attending shows a regular trend if we ignore ever attending status of men in 1982. We need further investigation why a drop was there. Sex difference in ever attending school has been eliminated and little higher among women since 2005.

Primary completion

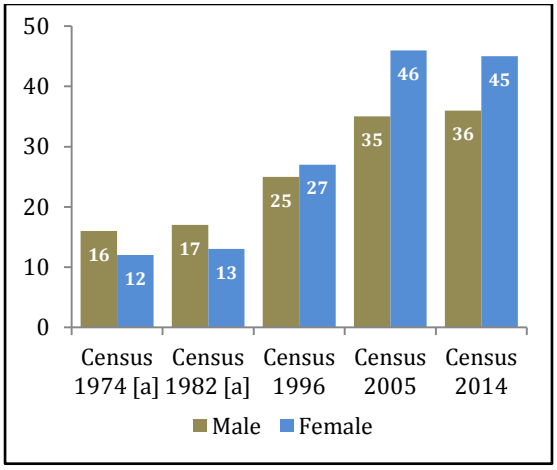
Completion of primary level and incomplete secondary level of education is termed here as primary completion. Primary completion has increased more rapidly among women than men during 1974 t0 2014. Till 1982, men completed primary level of education more than women; in 1996 it was quite similar and after that primary completion became higher among women than men. The level of education among men increased from 16 percent 1974 to 36 percent in 2014 while from 12 percent to 45 percent during this period among women (Figure 4.14b).

Figure 4.14a Percent of individuals aged 6-24 who ever attended school, by sex, Matlab HDSS, 1974-2014



[a] For 1974 and 1982, the indicator has been measured for the 149 villages which were retained after 1978's restructured of the HDSS. For other year, 142 villages have been considered as river erosion devoured 7 villages in 1987.

Figure 4.14b Percent of individuals aged 6-24 who completed 5-9 years of schooling, by sex, Matlab HDSS, 1974-2014

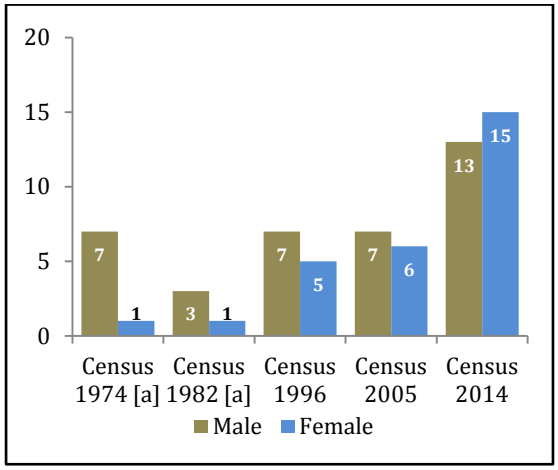


[a] For 1974 and 1982, the indicator has been measured for the 149 villages which were retained after 1978's restructured of the HDSS. For other year, 142 villages have been considered as river erosion devoured 7 villages in 1987.

Secondary and higher levels

While completion of secondary and higher level of education was seven times higher among men compared to women in 1974, men are 13 percent lower than women in completion of that level in 2014. Despite of the increase of completion of that level of education among both men and women has been increased during 1974 to 2014 (men: 7 percent to 13 percent and women: 1 percent to 15 percent), the overall level is still low (Figure 4.14c).

Figure 4.14c Percent of individuals aged 6-24 who completed 10+ years of schooling, by sex, Matlab HDSS, 1974-2014

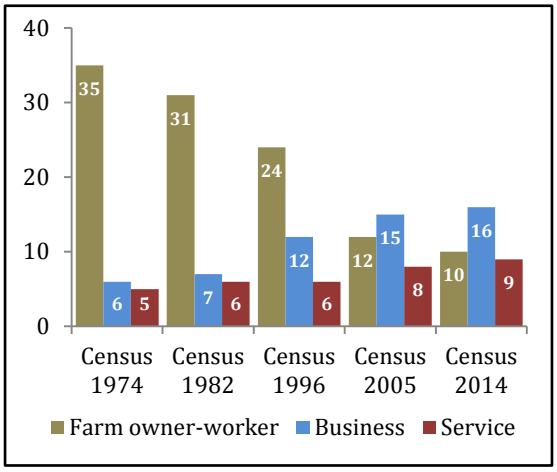


[a] For 1974 and 1982, the indicator has been measured for the 149 villages which were retained after 1978's restructured of the HDSS. For other year, 142 villages have been considered as river erosion devoured 7 villages in 1987.

4.15. Occupation of household heads

Figure 4.15 shows the distribution of main occupation of household heads. Farm owning and working in own agricultural farm has been declined from 35 percent in 1974 to 10 percent in 2014 while more household heads are getting in service. Business as main occupation has been increased from six percent to 16 percent and service as main occupation has been increased from five percent to nine percent during the period.

Figure 4.15 Percent of household heads, by selected type of main occupation, Matlab HDSS, 1974-2014



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6. APPENDICES

Appendix 1 Description of household types

Household type	Head	Wife(s)/ husband	Brother/ sister[1]	Married/ unmarried children[2]	Married/ unmarried Grandchildren[3]	Father/ Mother[4]	Grandfather/ grandmother[5]
Single-person	√						
One generation	√	√	√				
	√	√					
	√		√				
Two generation	√	√	√	√			
	√	√		√			
	√		√	√			
	√			√			
	√	√	√			√	
	√	√				√	
	√		√			√	
	√					√	
Three generation	√	√	√	√		√	
	√	√		√		√	
	√		√	√		√	
	√			√		√	
	√	√	√	√	√		
	√	√		√	√		
	√		√	√	√		
	√			√	√		
	√				√		
	√	√	√			√	√
	√	√				√	√
	√		√			√	√
	√					√	√
	√						√
Others	Any other combination, that is, more than three generation households or households with other persons with whom the household head does not have any relation, e.g., house tutor, servant, relation unknown, etc.						

[1] Bother, sister, brother-in-law, sister-in-law, stepbrother, stepsister
[2] Son, daughter, son-in-law, daughter-in-law, stepson, stepdaughter, niece, niece's husband, nephew, nephew's wife
[3] Grandson, granddaughter, grandson-in-law, granddaughter-in-law
[4] Father, mother, father-in-law, mother-in-law, stepfather, stepmother
[5] Grandfather, grandmother, grandfather-in-law, grandmother-in-law

Appendix 2. Questionnaire of Household Socio-economic Census 2014, Matlab HDSS, icddr,b

Matlab Socio-economic Survey - 2014
icddr,b

	CID of Household Head										
	RID of Household Head										
	CID of respondant if s/he is not Household Head										

	Information on Land:										
S.1	How much land do your household own?	Decimal				Kani		Gonda		Kora	
	a. Homestead (including ponds & ditches)										
	b. Agricultural land										

S.2	Source of Income:			Yes	No
	a) During the last 12 months what were the sources of income of your household ?	1	Agriculture (own land)	1	2
		2	Agriculture (share crops)	1	2
		3	Land/pond mortage/lease/rent (in/out)	1	2
		4	Day labourer/ Rickshaw/ Van puller/ Boatman	1	2
		5	Skill labourer (driver,plum,carpen,electri)	1	2
		6	Fishing	1	2
		7	Cattle/Chicken/Duck /Poultry/Fishery	1	2
		8	Handicraft	1	2
		9	Tailoring works	1	2
		10	Business/ Coaching/ Broker	1	2
		11	Service	1	2
	Sl. No.	12	Pension/ Sevings/ Interest	1	2
	b) What was the main source?	13	Remittance (within country)	1	2
		14	Remittance (other country)	1	2
		15	Food for work	1	2
		16	Old age/destitute(allowances)/VGD	1	2
		17	House/shop rent	1	2
		18	Rent of Taxi, Tempu, Auto	1	2
		19	Boat /Rickshaw/ Van renting out	1	2
		20	Others (specify)	1	2

S.3	Food insecurity			
	(Some households may not have food for all members three times everyday for all times). Has your household been able to have food for all members for three times everyday during the last one year?	Yes		1
		No		2

S.4	Zakat	Yes	No	N/ A
	a) Has any one of your household received Zakat (for Muslim only)?	1	2	3
	b) Has any one of your household given Zakat (for Muslim only)?	1	2	3

S.5	Fitra	Yes	No	N/ A
	a) Has any one of your household received Fetra (for Muslim only)?	1	2	3
	b) Has any one of your household provided Fetra (for Muslim only)?	1	2	3

S.6 Dwellings

a) How many dwellings your household owns? Number: ____

b) Materials used for construction of the main dwelling (Write by observing)

		Roof	Wall	Floor
1	Pucca			
2	Tin			
3	Tin and bamboo			
4	Tin and others			
5	Bamboo and others			
6	Kancha (earth)			
7	Wood			
8	Others			

S.7 Commodities / Assets

Does your household own the following commodities or assets?

		Yes	No
1	Fishing net	1	2
2	Fishing boat	1	2
3	Boat	1	2
4	Shop	1	2
5	Rickshaw/Rickshawr van/Engine boat	1	2
6	Auto rickshaw (CNG/ Battery/ Patrol)	1	2
7	Power tiller	1	2
8	Pump (irrigation/ water pump)	1	2
9	Thresher machine	1	2
10	Weeding tools	1	2
11	IPS	1	2
12	Computer/ Laptop	1	2
13	Generator	1	2
14	Solar panel	1	2
15	Tubewell (shallow)	1	2
16	Tubewell (deep)	1	2
17	Quilt/Blanket	1	2
18	Mattress	1	2
19	Chair/Table	1	2
20	Dining table	1	2
21	Almirah/Showcase	1	2
22	Sofa set	1	2
23	Television	1	2
24	Radio/Tape recorder/DVD/VCD	1	2
25	Land Telephone / Mobile phone	1	2
26	Bi-cycle	1	2
27	Motor cycle	1	2
28	Refregerator	1	2
29	Fan	1	2
30	Sewing Machine	1	2

S.8 Livestock

a) Does your household owns livestocks; cow, goat, chicken and duck? Yes= 1 No= 2

b). If yes mention number by type

	Type	Number
1	Chicken/Duck/ Pigeon	
2	Goat/Sheep	
3	Cow/ Bufalo	

S. 9 Latrine

a) Do your household owns a latrine ? Yes=1 No=2

b) What types of latrines are used by your household? (Write by observing)

	Type of latrine	Yes	No
1	Septic tank/ modern toilet	1	2
2	Ring/slab but waste not drained out	1	2
3	Ring/slab but waste drained out	1	2
4	Pacca latrine but waste drained out	1	2
5	Kancha latrine (open)	1	2
6	Others	1	2

c). Do you share latrine with other household? Yes = 1 No = 2

d). if yes, mention the number of number of household you share Nos

S.10 Drinking water

What are the main sources (most commonly used) of drinking water?

(May have multiple response)

SL	Sources	Yes	No
1	Deep Tubewell	1	2
2	Tubewell (green)	1	2
3	Tubewell (red)	1	2
4	Tubewell not tested yet	1	2
5	Supply water	1	2
6	Rain water	1	2
7	Pond	1	2
8	River	1	2
9	Ditch/canal	1	2
10	Others (specify)	1	2

b). Do your household use any filter or device for water filtration/ purification? Yes=1 No=2

c). If yes mention type of filter / device that you are using at household
(May have multiple response)
If no skip to S. 11 d

	Types	Yes	No
1	PSF/RSF	1	2
2	Three pitchers	1	2
3	Alcan	1	2
4	Read-F	1	2
5	Rainwater harvester	1	2
6	Alum	1	2
7	Other filters available in market	1	2
8	Boil	1	2

d). Do you share Tubewell / Supply water with other households ? Yes = 1 No = 2

e). If yes, mention number of households you share Nos.

S.11 Light

Source of light
(May have multiple response)

	Sources	Yes	No
1	Kerosine oil	1	2
2	Electricity	1	2
3	Solar Panel	1	2
4	Generator	1	2
5	Others	1	2

Fuel

S.12 Type of fuel used for cooking (May have multiple response)

	Yes	No
a) Wood/ Wood dust/ Paddy Husk	1	2
b) Leaves and straw	1	2
c) Keroshine	1	2
d) Gas-line	1	2
e) Gas cylender	1	2
f) Electric (oven/ rice cooker/ micro-oven/ grill)	1	2
	1	2

NGO/Samity

S.13 a) Do you/any one of your household is a member of a samity or NGO? Yes = 1 No = 2

If no skip to S. 13 c

b). If Yes, circle the box and ask for how many years and months they have been the member of the samity (registered or unregistered)/NGO?

	NGO/ Samity	Years	Months
1	ASA		
2	BRAC		
3	BRDB		
4	Buro		
5	CCDA		
6	Grameen Bank		
7	PAGE		
8	TMSS		
9	Uddipon		
10	VOSD		
11	Other samity/NGO (Specify):		
11.a			
11.b			
12	Unregistered samity/organization		

c) Are you/any member of your household currently paying installment of a loan to Samity/NGO/Bank? Yes = 1 No = 2

Insurance

S.14 a). Do you/any one of your household has a policy with Insurance company? Yes = 1 No = 2

If no skip to S.15

b).If yes, mention individual number and the type of policy (May have multiple response)

Policy code: 1=Savings
2= Pension
3= Education
4= Child protection
5= Marriage
6= Health
7= Hajj
8= Group Insurance
9= Others 1
10= Others 2

Sl.	Indi. #	Policy code
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

	Union Information Center											
S.15	a). Have you/ your family member heard that there is an information center in each union that provides information on govt. services available for people?									Yes = 1		No = 2
	b). If yes; did you/any one of your household ever visit Union Informaton Center for servic									Yes = 1		No = 2
	Bank Account											
S.16	a) Do you/any one of your household has an account with public/ private commercial Ban									Yes = 1		No = 2
	b) if yes mention the type		Mobile= 1			Formal = 2					Both = 3	
								Day		Month		Year
	Interviewer's Code					Date of Interview						

Household Socio-economic Census 2014, Matlab HDSS, icddr,b

(Individual Information)

Date of Interview: Village: Village name: Household:

Ind	CID	RID	Name	DOB	Sex	Relation to HH	Marr. status	Education age>5 years		Occupation	
								Prev	Curr	Prev	Curr
01											
02											
03											
04											
05											
06											
07											
08											
09											
10											
11											
12											

Appendix 3. Field manual for Household Socio-economic Census, 2014, Matlab HDSS, icddrb

Instruction Manual
Household Socio-economic Census 2014, Matlab HDSS, icddr,b

Individual Information

Please record CID and RID of every individual.

Household Information

Respondent: Household head is the respondent. In absence of him/her, choose his/her spouse as respondent. In absence of both of them, choose an active member of the household aged more than 18 years who can give all information of the household.

Information on amount of Land: Collect information on homestead and agricultural land (cultivable). The respondent may reply using several units to provide information on amount of land owned like decimal, *kani, gonda, kora, etc.* Record the amount of land in decimal if the respondent can provide the information in decimal unit; otherwise convert other units to decimal unit. Record the amount of land in integer numbers, not in fraction numbers. For example, record 2 decimal instead of 1.5 decimal, 0 decimal for less than 0.5 decimal, etc.

Homestead: Ask the amount of homestead land owned by the household, which includes dwelling, courtyard, garden, and ditch-pond (may be part of ditch-pond). If the household members own more than one homestead, include those also while recording. For the persons living in rented house, record the amount of homestead land that they own in somewhere else. Also include the amount of land inherited from his/her in-law's or maternal grandfather's side. If a currently living father has orally allocated the homestead among his sons/daughters and they are residing in that land, then record the amount of land under respective sons/daughters.

Agricultural land: Agricultural land refers to the amount of land household members own altogether for cultivation. Even if the agricultural land is used for growing vegetables, it is to be regarded as agricultural land. Moreover, pond and garden not adjacent the *bari* has to be regarded as agricultural land. If the land is rented out either for money or on the basis of sharing crop then the land has to be included as agricultural land of the owner. On the other hand, if the land is rented-in either for money or on the basis of sharing crop then do not consider the land as agricultural land of the respondent. For those who are living in rented house but own agricultural land anywhere else, record the amount of agricultural land under their ownership. Also include the amount of inherited agricultural land from either of the respondent's in-law's or maternal grandfather's side. If a currently living father has orally allocated the agricultural land among his son/daughter and they are exercising their ownership, then record the amount of agricultural land under respective sons/daughters.

Source of Income: Collect the information about sources of income of the household members in last 12 months. Multiple answers are possible for this question. In serial number 8, handicraft includes smiths, masons and cottage industries. In serial number 9, tailoring refers to work with sewing machine to earn livelihood. In serial numbers 13 and 14, record regular/irregular monetary support to the household from someone outside the family (as per surveillance definition). Circle serial number 13 if the support comes from within the country and circle serial number 14 if it comes from outside the country. If a member of the household is

engaged in service, business or any kinds of occupation outside the project area, then consider the occupation as the main source of income of that household.

Main Source of Income: Record the serial number for the household's income source that earned most among other sources in last 12 months.

Food security: Please ask the respondent, whether there was any food shortage in the household in last 12 months. Ask the respondent exactly as it is written in question 3 and record answer option 'Yes' or 'No' appropriately.

Zakat: Ask Muslim households whether anyone of the household received or given *Zakat* in last 12 months and record using 'Yes' or 'No' and 'NA' for Non-Muslim households.

Fitra: Ask Muslim households whether anyone of the household received *Fitra* in last 12 months and record using 'Yes' or 'No', and 'NA' for Non Muslim households.

Fuel: Ask the type of fuel that household uses for cooking. Multiple answers are possible.

NGO/Samity membership: See question 13 - if any of the household members are involved with anyone of the organizations/NGOs listed here then record 'Yes', otherwise 'No'. If anyone of the household members is involved with any of the organizations/NGOs listed here, then record the appropriate code and record the duration of membership in years and months. If anyone of the household members is involved with other organization/NGO, which is not mentioned here, then write down the name of that organization/NGO in the 'others' option (answer option 11). If two or more household members are involved with different organizations/NGOs, then record the duration of membership for each organization/NGO in years and months. If two or more household members are involved with the same organization/NGO, then record the information of the member with longest duration.

Insurance: Ask whether anyone of the households have purchased any insurance policy and record the appropriate type of insurance policy listed in the questionnaire. Multiple answers are possible.

Type of Latrine: Please record the appropriate latrine code. Probe to know whether they share the latrine they use.

Source of Drinking Water: Please circle the appropriate code for the general source of drinking water. Probe whether the households use any filtration method or any purification tools, instruments or devices.

Sources of light: *If* any source of light beyond kerosene, electricity, solar panel or generator, record that as "other" answer option. Multiple answers are possible.

Dwelling: Dwelling refers to the room in which the family members reside (stays/sleeps at night). If the family members hold night (reside) in the 'drawing room/*Kacharighor/Baithok Khana*' then it will also be considered as a dwelling. If the 'drawing room' is not owned by a single family (i.e. shared) then it will not be considered as a dwelling. Do not include the kitchen, cowshed and Dheki (a tool used for rice grinding) room as a dwelling.

Main Dwelling: If a household has more than one dwelling, the main dwelling will be the one, which is considered as main by the household members. Usually the largest room in the

household is considered as the main dwelling. If two brothers of a household live in two similar dwellings then the main dwelling will be the one in which the head of the household (of two brothers) lives in.

Construction material of main dwelling: Record the appropriate codes in the box for the construction material of wall, roof and floor of the main dwelling. Note that if among the four walls three are *pucca* and one is made of tin, then record the construction material of wall as tin, i.e. focus on the inferior construction material.

Commodity and Asset of the Household: Household durable assets are listed in the questionnaire. Read the name of all the items and record the appropriate codes for items owned by the household.

Livestock: Livestock by types are categorised under three broad headings – Chicken/ Duck/Pigeon, Goat/ Sheep and Cow/ Buffalo. Record the number of livestock that the household owns by category. Insert '0' to ensure no livestock available against the given category.

Union information centre: Ask the respondent whether s/he knows about the Union Information System and record the answer.

Accounts with Bank: Ask whether anyone of the households have any bank account, if yes, then ask the type of banking and record the appropriate answer. Multiple answers are possible.