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**Report on
Land Monitoring Survey 2005**

Technical Report No. 20

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Chapter 1

Introduction

1.1 General

This is the Final Monitoring Survey Report 2005 on Land Settlement Programme of CDSP-I implemented in three old polders during the period of 1996-2000. This is a routine survey carried out once a year. The present survey is the fourth one of this kind. The first survey was carried out in 2000, and that one was a Census Survey, which covered all the land allotment beneficiaries (*Khatian* holders) of the Land Settlement Programme. The Census Survey covered the issues related to land possession while the present one is a sample survey covering more issues with special emphasis on actual control over land. Like the last two surveys the present one is also a sample survey carried out in January-February.

1.2 Objectives of the study

The objective of the monitoring of land settlement activities is linked with the overall objectives of the monitoring of developments in CDSP I Areas. The Internal Resource Report on Monitoring of Developments Activities states:

- Assess the efficacy of the land settlement programme of CDSP; and
-
- Assess the effect of land settlement programme on the livelihood of the settlers.

1.3 Scope of the study

The study has the following scope

- Possession over allotted *Khatian*/land
- Retention of allotted *Khas* land
 - Land loss/sale
- Actual control over land
 - Land lease in (share cropping in, mortgage, etc.)
 - Land lease out (share cropping out, mortgage out, etc.)
- Livelihood
 - quality of life
 - economic activities
 - means of livelihood

1.4 Actual control: A definition

The physical possession ensures the control over the land allotted to the landless people. The Agricultural *Khas* Land Management and Settlement Policy 1997 emphasizes on the better management of agricultural land. With this specific objective *Khas* land is given to the actual tillers. Thus control over land should be considered within the perspective of management.

Ownership is the necessary condition for control over land and management/operation is the sufficient condition for it. The combination of these two conditions ensures the full control over land by the landowners, and any deviations from this combination results short of full control.

The combination of necessary and sufficient conditions also determines the tenancy system, which is also an important factor for better land management. The tenancy system not only determines the actual control over land but also the adoption of modern technology.

1.5 Mortgage: A potential threat for land loss

The Agricultural *Khas* Land Management and Settlement Policy 1997 prohibits mortgaging out of allotted *Khas* land but the reality at the ground is that allotment-holders are mortgaging out land for different reasons. Mortgaging is a usufructuary and it entails the potential threat for land loss in the long run. Generally landowners do not go for land sale at first instance. Rather as a first resort they mortgage out land with an expectation of recovery of mortgaged out land but it remains in most cases an elusive.

The mortgaging out has itself a negative effect on the landowners' income. This negative effect perpetuates and accentuates the income deficit that coupled with the already distressed financial condition (for which land is mortgaged) makes the landowners unable to recover the land. Ultimately, mortgaging-out becomes tantamount to land loss in a better case and in worst case, distressed sale.

So, mortgage out of land has two-pronged effect – first, it facilitates the loss of control over land and second, it paves way for loss of income in better scenario and distressed land sale in a worst scenario. It is also said that mortgage is the entry point for land sale.

Chapter 2

Methodology

2.1 Introduction

The survey was carried out in three old polders of CDSP implemented during 1995-2000 and was limited to only those households, which got direct benefits from the Land Settlement Programme of CDSP-I (for detail see Land Monitoring Report 2003).

2.2 Sample design

The sample population of the present study is the same set of the population who were the sample of the first and the second surveys. A total sample of 453 *Khatian* holders (households) was selected from a population of about 4458 *Khatian* holders representing about 10% of total population (*Khatian* holders). A systematic random sampling procedure was followed and the sample size varies by polders. The monitoring survey covered only those sample households that were found residing inside the polders and in the villages nearby the polders and they constitute about 8.5% (Table 1.1) of the total population (*Khatian*-holders).

Table 1:1 : Distribution of *Khatian* holders and survey sample

Polders	<i>Khatian</i> holders	sample population		survey population*	
	Number	Number	Percent	Number	percent
CM	1147	118	10.3	96	8.4
CBD-II	815	83	10.2	80	9.8
CBT	2496	252	10.1	201	8.1
Total	4458	453	10.2	377	8.5

*They were found for interview.

Table-1.2 shows that about 17% of the selected sample households were not available and the remaining 83% were found for interviewed with a variation by polders. The reasons for non availability is discussed in a latter section.

Table 1.2 : Distribution of *Khatian*-holders by availability in polders

Polder	Availability (%)		Total
	Available	Not available	
CM	81.4	18.6	100
CBD-II	96.4	3.6	100
CBT	79.8	20.2	100
Total	83.2	16.8	100

In comparison with the last two sample surveys the present sample survey got more clear pictures about the land settlement beneficiaries' locations by using maps and plot number on

the maps. Many respondents that were left from interview because of non-availability the present survey has reached them. While many respondents who were interviewed during the last two surveys were non-available because they have left the polders. A more details account of this aspect would be given in a latter section.

Chapter 3

Household Characteristics, Landholding and Land Use

3.1. Characteristics of the surveyed households

In this section some characteristics of the surveyed households have been presented. These characteristics include Clustered Village (CV) status and household types (female headed and male-headed households).

Table 2.1 shows that 21 percent of the total surveyed respondent households are from the Clustered Villages (CV) and the remaining 79 percent of the respondents are from non-clustered villages/scattered villages. It should be noted that the proportionate of the CV households among the land settlers is 22%.

The surveyed households from CV are more in CM where they constitute about 39 percent of the total households, and lowest in CBT where they are only about 10 percent of the total respondents.

Table 2.1 : Distribution of surveyed households by CV Status

Polders	CV Status				Total	
	CV		Non-CV			
	No.	%	No.	%	No.	%
CM	46	39.0	72	61.0	118	100
CBD	24	28.9	59	71.1	83	100
CBT	24	9.5	228	90.5	252	100
Total	94	20.8	359	79.2	453	100

Table 2.2 shows the distribution of respondents according to types of household heads, and it appears that about 17 percent of the surveyed households are female-headed. They represent a little more shares in the sample households than their actual share in total population (*Khatian-holders*). They comprise 22 percent of the total surveyed households of CBD-II and about 13 percent of CM.

Table 2.2 : Distribution of the surveyed households by household head types

Polders	Household types				Total	
	Male		Female			
	No.	%	No.	%	No.	%
CM	83	86.5	13	13.5	96	100
CBD-II	63	78.8	17	21.3	80	100
CBT	168	83.6	33	16.4	201	100
All polders	314	83.3	63	16.7	377	100

Note: as per Khatian

From Table-2.3 it appears that at present only 6 percent of the total households are female headed. Most of the female-headed households at the time of land allotment did not have eligible couples for getting land allotment and the widow family members were used for getting land and now they have adult male members as household heads.

Table-2.3 : Distribution of the surveyed households by the present household head types

Polders	Household types				Total	
	Male		Female		No.	%
	No.	%	No.	%		
CM	87	90.6	9	9.4	96	100
CBD-II	78	97.5	2	2.5	80	100
CBT	189	94.0	12	6.0	201	100
All polders	354	93.9	23	6.1	377	100

3.2 Land use pattern and landownership size

This section presents the findings on land use pattern, distribution of agricultural land by land ownership size¹. Land use pattern has been determined based on the survey data instead of data recorded in the *Khatian* that categories land into null (agricultural), pond and *Bari* (homestead)².

3.2.1 Land use pattern

Table 3.1 shows the distribution of land under different land uses in the study areas. As is usual, agricultural land use is the highest of all kinds of land uses -- pond, homestead and fallow. More than 78 percent of the total lands are used as agricultural land in the study areas.

Table 3.1 : Distribution of land by land use pattern

Use pattern	(percent)			
	CM	CBD-II	CBT	All polders
Total arable land	78.7	80.7	77.5	78.4
Homestead	6.8	7.1	7.2	7.0
Water bodies	8.6	6.9	9.6	8.8
Others	6.0	5.4	5.8	5.7
Total	100	100	100	100

Note: All land possessed by the households has been considered. This means that the allotted and any other land have taken into consideration.

¹ Such a land-ownership categorisation has been done for the analytical purpose.

² Many households have acquired land after getting official land title by different means of which purchase, gift, occupying *Khas* land in new chars, concealing land owned by joint families. On the other hand, some settlers have lost their land through sale, gift, household split, etc. All these factors were taken into consideration to categorise the households into land-ownership categories.

Table-3.2 shows the average landholding by types of land in three polders. It appears that the average total land is highest in CM with 1.80 acres (0.73 ha) each and lowest in CBD-II with 1.65 acres (0.67 ha). The average agricultural landholding is the highest in CM with 1.42 acres (0.57 ha) and lowest in CBD-II with 1.33 acres (0.54 ha).

Table-3.2 : Average landholding by different uses

(land in acres)

Land types	Polders			All polders
	CM	CBD-II	CBT	
Total land	1.80	1.65	1.73	1.73
Arable land	1.42	1.33	1.35	1.36
Water bodies	0.16	0.11	0.17	0.15
Homestead	0.12	0.12	0.12	0.12
Other land	0.11	0.09	0.12	0.10

3.2.2 Landownership size

Table 3.3 shows that 52 respondents (13.8%) out of 378 respondent households/settlers do not have agricultural land because most of them have got allotment for homestead and pond, and they are mostly CV dwellers. Some of them have also converted their little agricultural landholding into non-agricultural land and some others of them have sold their arable land. Moreover, some people have not got possession over their allotted agricultural land. So, these people have been categorised into landless people.

It appears that about (32%) of the surveyed households have 0.01 to 1.00 acres (below subsistence level) agricultural landholding. In CM 22.6 percent of the surveyed households have below subsistence level landholding. It is highest in CBT with 35.8 percent of the total surveyed households. The households with below subsistence landholding are 33.8% in CBD-II.

Table 3.3 : Distribution of surveyed households by landownership size

Landownership size	CM		CBD		CBT		Total	
	No.	%	No.	%	No.	%	No.	%
Landless	21	21.9	6	7.5	24	11.9	51	13.5
0.01-0.50	8	8.3	16	20.0	23	11.4	47	12.5
0.51-1.00	14	14.6	12	15.0	49	24.4	75	19.9
1.01-1.50	13	13.5	17	21.3	43	21.4	73	19.4
1.51-2.00	12	12.5	16	20.0	29	14.4	57	15.1
2.00+	28	29.2	13	16.3	33	16.4	74	19.6
Total	96	100	80	100	201	100	377	100

Table 3.4 shows the distribution pattern of agricultural land by CV status. It appears that households of lower landownership size concentrate more in CV compared with that of the Non-CV.

Table 3.4 : Distribution of the surveyed households by landownership size and CV status

Land ownership size (acres)	CV Status				Total	
	CV		Non-CV			
	number	percent	number	percent	number	percent
Landless	29	35.4	22	7.5	51	13.5
0.01-0.50	19	23.2	28	9.5	47	12.5
0.51-1.00	11	13.4	64	21.7	75	19.9
1.01-1.50	8	9.8	65	22.0	73	19.4
1.5-2.00	10	12.2	47	15.9	57	15.1
2.00+	5	6.1	69	23.4	74	19.6
Total	82	100	295	100	377	100

Chapter 4

Land Retention and Official Land Settlers

4. Retention of land

Land retention has been seen from two points. First, possession of allotted land and sale of allotted land.

4.1 Possession status of allotted land

The settlement holders receive land from two different sources. The first source is the pre-settlement possession of the land by the land settlers³, and the second source is the additional land given from the reserve land⁴ recovered from the illegal occupants; mostly from the *jotedars*. Most of the land recipients got land from their own possession (pre-settlement occupation), some have got from both sources and some have got only from the reserve source.

Table 4.1 shows the average land allotment status of the surveyed households by sources of land. It appears that per household land allotment is 1.48 acres under CDSP-I, and it is the lowest in CM with 1.06 acres and the highest in CBT with 1.65 acres. In the study area the settlers had an average of 1.33 acres of land under their possession which they received from CDSP-I. Besides, they got an additional land of 0.15 acres per household from the reserved recovered from the surplus land occupiers mostly the *jotedars*. It is 0.12 acres, lowest in CM and 0.16 acres, both in CBD-II and in CBT.

Table 4.1 : Average land Allotment by land source

Polders	Total allotment (acres)	land allotment by sources	
		pre-settlement (acres)	reserved land (acres)
CM	1.07	0.95	0.12
CBD-II	1.55	1.39	0.16
CBT	1.65	1.49	0.16
Total	1.48	1.33	0.15

³ When the chars appeared from the riverbed new settlers settled down their through their own mechanisms, mostly patronised by the local power structure. The settlers occupied land and began their lives there. After some years, official settlement began and the settlers got land allotment based on occupation subject to the fulfilment of the official criteria for getting land allotment.

⁴ When chars appeared some *jotedars* occupied some big chunk of land in the chars. When the land settlement started there through CDSP those land were recovered from the *jotedars* and gave the land title of this land to the landless people.

Table 4.2 shows the possession status of the allotted land. The settlers do not have possession over 0.06 acres per household in three polders altogether though it is slightly low in CM and CBD-II, both having it is 0.05 acres.

Table 4.2: Average land possession

Polders	Total land allotment (acres)	Land possession (acres)	
		possess	do not possess
CM	1.07	1.02	0.05
CBD-II	1.54	1.49	0.05
CBT	1.65	1.59	0.06
Total	1.48	1.42	0.06

Table-4.3 shows the average surplus land allotted to the settlers recovered from the *jotedars* and illegal occupiers (land above the stipulated ceiling) and the possession status of the land. It is seen that the average surplus land was 0.15 acres in all three polders together and it varies from 0.12 acres in CM to 0.16 acres in CBT. The possession status shows that 0.09 acres of land has been recovered so far and 0.06 has yet to be recovered.

Table 4.3 : Average surplus land allotment and possession in three polders

Polders	Total surplus land allotted (acres)	Land possession (acres)	
		Possess	Do not possess
CM	0.12	0.07	0.05
CBD-II	0.15	0.10	0.05
CBT	0.16	0.10	0.06
Total	0.15	0.09	0.06

Table 4.4 shows that about 9.1 percent of the total surveyed households have not got the possession of land in three polders altogether. In comparison with last survey the situation has improved as it was about 13.7% of the total household that did not have possession over their allotted land.

Table 4.4 : Distribution of surveyed households by land possession status

Polders	N=*	% of households with**	
		land possession	no land possession
CM	118	100	14(11.9)
CBD-II	83	100	9 (10.8)
CBT	252	100	18 (7.1)
Total	453	100	41 (9.1)

* Population includes interviewed 377 households and non-interviewed 76 households for non-availability. The latter's land have been considered as under possession. Figures are inclusive.

**Figures inclusive as some of the households received possession partly and they are included in both categories

In three polders the surveyed households, who have unoccupied land, constitute 9.1 of the total sample households (Table 4.4 and Table 4.5) but their unoccupied land constitute 3.3 percent of the total allotted land of all sample households. These land are occupied by others illegally (ref: Table-4.6). In CM it is 4.1 percent and in CBD-II it is 2.5 percent). However, in CBD-II and CBT there remained some land unoccupied because of public uses.

Table 4.5 : Distribution of surveyed households by land possession status and landownership size

Land ownership size	N=**	% Households got	
		Possession	Not possess
0.01-0.50	67	100	16.4
0.51-1.00	99	100	17.2
1.01-1.50	120	100	10.0
1.51-2.00	129	100	0.8
2.01-2.50	6	100	0
>2.50	32	100	0
Total	453	100	9.1

*Land Size Groups has been classified based on the total allotted land (homestead, pond and agricultural land) instead of only agricultural land as done in Table-3.2 in previous section since here the objective is to see the possession status of all kind kinds settled land by the land recipients.

** Population includes both interviewed 381 households and non-interviewed 71 households and the latter's land have been considered as under possession. It has been observed during the survey that most of the settlers of this kind had tampered the settlement process in their favour unscrupulously and both field experience and the belief of the local people corroborate it. It is very much logical that people who could have manoeuvred the settlement process for getting land title they could have been able to possess it too.

***Some of the non-possessors have got partial possession. However, figures here are exclusive.

In fact 91 percent of the settled land was allotted to the settlers from their respective pre-settlement occupied land, and about 9 percent of the land was additional land allotted from the reserved land occupied by the illegal occupants. More than half of the additional land allotted from Reserved Land has been recovered.

Table 4.6 : Distribution of allotted land and possession over allotted land (percent)

Settlement index	Polders			Total
	CM	CBD-II	CBT	
1. Land from pre-settlement occupation	90.4	89.9	91.6	91.0
2. Additional land	9.6	10.1	8.4	9.0
3. Additional land under possession*	5.5	6.2	5.1	5.4
4. Land not under possession*	4.1	2.4	3.3	3.3
5. Total land under possession (1+3)	95.9	96.1	96.7	96.4

*Percent with respect to total allotted land.

Table 4.7 presents the average land allotment and possession status by CV status. It should be noted that the CV settlers are relatively poor; most of them belong to the hardcore poor. The average allotment for CV households is 0.86 acres (0.348 ha) while for non-CV households it is 1.66 acres (0.672 ha). The CV households had 0.47 acres (0.19 ha) of land under their possession before the land settlement and they have received another 0.39 acres (0.158 ha) of land from the reserve land i.e. land recovered from the illegal occupants; mostly from the *jotedars*. On the other hand, the surveyed Non-CV households have received only 0.09 acres (0.04 ha) of land from the reserve.

Table 4.7 : Average land allotment by land source and CV status

CV status	Total allotted land (acres)	land under possession (acres)	
		pre-settlement	reserve land
CV	0.86	0.47	0.39
Non-CV	1.66	1.57	0.09
Total	1.48	1.33	0.15

Note: Figure only for Surveyed households

The average land under non-possession is 0.21 acres (0.085 ha) for the CV households and 0.02 (0.012 ha) acres for the non-CV households as it is seen in Table 4.8.

Table 4.8 : Average land possession by CV status

Polders	Total allotted land (acres)	Land under (acres)	
		possession	do not possess
CV	0.86	0.65	0.21
Non-CV	1.66	1.64	0.02
Total	1.48	1.42	0.06

Table-4.9 shows the average surplus land allotted to the settlers recovered from the *jotedars* and illegal occupiers (land above the stipulated ceiling) and the possession status of the land by CV and Non-CV settlers. It is seen that the average surplus land was 0.09 acres (0.036 ha) for the Non-CV settlers in all three polders together and it is 0.39 acres (in 0.158 ha) for CV. The possession status shows that the average possession per Non-CV settler is 0.07 acres (0.028 ha) very close to the total surplus land allotment but for the CV settlers the average got possession is 0.18 acres (0.073 ha) far below the allotted surplus land; less than half. The CV dwellers have got the possession of mostly their homestead and pond which consists of 0.16 acres (0.065 ha) allotted clustered villages. They have not got the possession over their surplus agricultural land. Many of them have to sell their land being unable to recover the surplus land to the previous occupiers who are mostly powerful rural elite in the respective locality.

Table 4.9 : Average surplus land allotment and possession by CV status

Polders	Total surplus land allotted (acres)	Land possession (acres)	
		Possess	Do not possess
CV	0.39	0.18	0.21
Non-CV	0.09	0.07	0.02
Total	0.15	0.09	0.06

In Table 4.10 it is seen that 29.4 percent of the surveyed CV households and 3.4 percent of the surveyed non-CV households have not got the possession over their total allotted land.

Table 4. 10 : Distribution of households by possession over allotted land and CV status

CV status	N=	% of Beneficiary Households	
		Possession	Not possess
CV	97	100	29 (29.9)
Non CV	356	100	12 (3.4)
Total	453	100	41 (9.1)

*percentage figures are exclusive. Some non-possessor households have got partial possession.

From allotted land's points of view it is seen in Table 4.11 that the surveyed CV households have 40.4 percent of additional land in their allotted land while it is only 4.5 percent for the Non-CV households. On the other hand, the surveyed CV households have got possession over additional allotted land allotted from the reserve and it constitutes 18.8 percent of the total allotted land and the remaining 21.6 percent of the total allotted land are still unoccupied.

For Non-CV surveyed households, the unoccupied allotted land is 1.0% of the total allotted land and they have also recovered more than one-third of their allotted additional land.

Table 4.11 : Distribution of allotted land and possession status of allotted land by CV status

	CV Status		Total
	CV	Non-CV	
1. Land from pre-settlement occupation	59.6	95.5	91.0
2. Additional land	40.4	4.5	9.0
3. Additional land under possession*	18.8	3.5	5.4
4. Land not under possession*	21.6	1.0	3.5
5. Total land under possession (1+3)	78.4	99.0	96.4

*Percent with respect to total allotted land

So, the CV settlers have got possession over 78.4 percent of their total allotted land; 59.6 percent previously occupied and 18.8 percent they have recovered. In case of Non-CV 99 percent of the total allotted land is under possession.

4.2 Land retention status: sale

All land sellers have been divided into two categories. The first category of sellers has left the polders. The second type includes those sellers who are still living in the polders. There is a common belief among the people, particularly among them who discourage the land settlement programme, that the poor land settlers sell their allotted land and migrate to other new chars where they occupy land for a new settlement. The study with an aim of investigating this issue collected information on land sale and migration pattern.

Table 4.11 shows land sale status in different polders. About 23.4 percent of the total sample households have sold their land in all polders after receiving land allotment. A little more than 8 percent of the total sample households have sold all their landholding that they received through CDSP-I, and have left their respective polders. Such kind of land settlers is highest in CM where about 12 percent of the total sample households have left the areas.

On the other hand it appears that the land sale by the settlers who are living in the polder still is highest in CBT (18.7%) followed by CBD-II where it is 12 percent of the total sample households. These two groups of settlers constitute about 24 percent of the total sample settlers in all polders together.

Table 4.11 : Distribution of households by land sale

Category of settler households	Polders			Total N=453
	CM N=118	CBD-II N=83	CBT N=252	
Land sold and left the area*	14 (11.9)	3 (3.6)	20 (7.9)	37 (8.2)
Land sold but live in the area	12 (10.2)	10 (12.0)	47 (18.7)	69 (15.2)
Total	26 (21.1)	13 (15.6)	67 (26.6)	106(23.4)

Note: Figures within parenthesis are percentage.

*They are those sample that left the area selling land. Total population is the sample households that includes both households who are interviewed and who are not interviewed.

Table 4.12 presents the volume of land transacted. About 11.7 percent of the total allotted land have been sold in three polders altogether during last 10-11 years (1994-2005). However, land sale is higher in CBT (14.5%) and lowest in CBD-II (4.5%). In CBT many poor settlers who were given land from the rich land occupiers have been forced to sell land being unable to get the possession of the land. In CM some of the settlers have bought land in new chars nearby CM selling land that they received from CDSP-I.

Table 4.12 : Distribution of land sold by types of settlers

Category of households	Polders			All polders
	CM	CBD-II	CBT	
Land sold and left the area*	6.9	2.1	5.0	4.8
Land sold but live in the area	3.3	2.4	9.5	6.9
Total	10.2	4.5	14.5	11.7

Note: percentage is with respect to total allotted land given to the settlers through CDSP-I.

*This land belongs to those who have left the polder selling all land

4.3 Land purchase

As against there is cases of land buying in all polders. In all polder together 26 percent of the settlers interviewed (living inside and adjacent the polders) have purchase land after receiving land allotment. Here it is highest in CBT where 27% of the interviewed settlers have purchased land (ref: Table-4.13). However, most of them have purchased Khas land possession.

4.4 Land sale versus land purchase

Table-4.14 shows that both buying and selling are active in all polders among the settlers and it is buying that is higher than the sale. The average land purchase is 0.3 acres (0.121 ha) and sale is 0.10 acres (0.04 ha). However, the source of land for purchase is the new chars and absentee land recipients who somehow managed to get the allotment through CDSP-I. The first type of land is cheaper than the settled land that the settlers have sold.

Table-4.13 : Proportion of households with land purchase in three polders

Polders	Number of total hh	Households purchased land	
		Number	percent
CM	96	24	25.0
CBD-II	80	19	23.8
CBT	201	55	27.4
All polders	377	98	26.0

Table-4.14: Average land purchase and sale in three polders

Polder	Land (in acres)	
	Purchase	Sale
CM	0.4	0.03
CBD-II	0.1	0.04
CBT	0.3	0.15
All polders	0.3	0.10

Chapter 5

Land Operation and Control

5.1 Land operation and control over land

All surveyed agricultural landowners have been divided into three landowner categories to assess the level of actual control over their agricultural land. These are absentee landowners/non-operating landowners, partial operating landowners and full operating landowners. The absentee landowners are those who lease out their total landholding and operate no land under their management. The partial operating landowners are those who lease out a part of their landholding and operate the rest under their management. The full operating landowners are those who operate their total landholding under their own management.

The non-operating landowners do not have full control over their all land, while the partial operating landowners do not have their full control over their leased out land. The full operating landowners have their full control over their total land.

Table 5.1 shows the distribution of landowners by operating status by the landowners. It shows that about 20 percent of the total landowning households are non-operating landowners as they do not operate their land by themselves. This means that they do not have full control over their agricultural land. It is highest in CBT with 23% followed by CBD-II with 17.6% and lowest in CM with 14.7%.

Table 5.1 : Distribution of landowners by operating status

Polders	landowners categories				Total	
	non-operating		operating			
	number	percent	number	percent	number	percent
CM	11	14.7	64	85.3	75	100
CBD-II	13	17.6	61	82.4	74	100
CBT	41	23.2	136	76.8	177	100
Total	65	19.9	261	80.1	326	100

Table 5.2 presents the findings on the partial and the full operating landowners. About 25 percent of the operating landowners are partial operators in three polders altogether. The partial operating landowners are higher in CBD-II (33%) compared with two other polders as they are 17.2% in CM and 25% in CBT. Around 75 percent of the landowners, however, are full operating landowners in three polders altogether, varying from 75.0 percent in CBT, 67.2 percent in CBD-II and 82.8 percent in CM.

The non-operating and partial operating landowners altogether (see Table 5.1 and Table 5.2) constitute a little more than 44.8 percent of the total landowning households. This means that about 19.9 percent of the total surveyed households do not have full control over their total

agricultural land (Table 5.1), while another 24.9 percent of the total surveyed households do not have full control over a part of their land (Table 5.2).

Table 5.2 : Distribution of agricultural land operating households by types of land operation

Polders	operating landowners number	operating landowners			
		partial operating		full operating	
		number	Percent	number	percent
CM	64	11	17.2	53	82.8
CBD-II	61	20	32.8	41	67.2
CBT	136	34	25.0	102	75.0
Total	261	65	24.9	196	75.1

Table 5.3 shows that about 12.2 percent of total arable are share cropped out and 15.4 percent of the total arable are mortgaged out. This means that landowners do not have full control over about 27.6 percent of total arable land of three polders altogether though it varies from polder to polder. It is highest in CBT with 31.2% of the total land, lowest in CM with 19.8% and in CBD-II it is 28.5%.

Table 5.3 : Distribution of agricultural land by management types

Management types	CM	CBD-II	CBT	All
Own cultivating land	79.3	71.5	68.8	72.2
Share cropped out land	9.4	11.6	13.8	12.2
Mortgaged out land	10.4	16.9	17.4	15.4
Total	100	100	100	100

Table 5.4 shows the distribution of non-operating landowners by Land-ownership Category. It shows that there is a negative correlation between Land-ownership Category and the non-operating landowners. The lower Land-ownership Categories have relatively more non-operating landowners and it decreases as the Land-ownership Category goes up. This indicates that lower Land-ownership Categories prefer non-operation and they lease out their land because their operational holding is not optimum in size.

Table 5.5 shows the landowners by Clustered Village status. It shows that about 28.3 percent of the total surveyed CV households are non-operating landowners, and they not have any land of their own under their own operation. On the other hand, 18.3 percent of the total surveyed Non-CV households are non-operating landowners, and hence they do not have full control over their land. The difference between the CV and Non-CV households is not significant.

Table 5.4 : Distribution of non-operating landowners by land Ownership size

Land ownership size	Total landowners	Non-operating landowners	
	Number	Number	Percent
0.01-0.50	47	11	23.4
0.51-1.00	75	19	25.3
1.01-1.50	73	17	23.3
1.51-2.00	57	11	19.3
2.00+	74	7	9.5
Total	326	65	19.9

Table 5.5 : Distribution of non-operating landowning households by CV status

CV Status	Total landowners	non-operating landowners	
	Number	Number	Percent
CV	53	15	28.3
Non-CV	273	50	18.3
Total	326	65	19.9

5.2 Farm operation and control over land

It has been said earlier (sec 5.1) that the ownership is the necessary condition for control over land but the sufficient condition for control over land is the farm operation system.

Like landowners the farm operator can be divided into three categories. They are owner-farmer, farmer-cum-tenants and pure tenants. The first category farmers operate only own land, the second category operate both own and lease in land and the third category operates only leased in land and they do not have their own land under their own operation (either landless or have leased their all land).

As the ownership is an important factor for control over land, the third category does not fulfil the necessary condition for control over land under their operation. Similarly, the owner-cum-tenant farmers do not fulfil the necessary condition for control over all land under their operation. Only the owner-farmers fulfil the necessary condition for control over land under their operation.

Table 6.1 shows the distribution of households by farm status. About 27 percent of the total surveyed households are non-farm households and 73 percent of the total households are farm households. CBD-II has relative more farm households (80%) among three polders, and CM has less farm households with 68 percent of the total surveyed households as farm households.

Table 6.1 : Distribution of households by Farm status

Polders	Farm Status of households				Total	
	Non-farm		Farm			
	No.	%	No.	%	No.	%
CM	31	32.3	65	67.7	96	100
CBD-II	16	20.0	64	80.0	80	100
CBT	54	26.9	147	73.1	201	100
Total	101	26.8	276	73.2	377	100

Table 6.2 presents the distribution of households by farm and CV status. It appears that 47.6 percent of the surveyed CV households are non-farm houses while 21.0 percent of the surveyed non-CV households are non-farm households.

Table 6.2 : Distribution of households by Farm and CV status

CV status	Farm Status of Households				Total	
	Non-farm		Farm			
	No.	%	No.	%	No.	%
CV	39	47.6	43	52.4	82	100
Non-CV	62	21.0	233	79.0	295	100
Total	101	26.8	276	73.2	377	100

Note: included all interviewed respondent households

Table 6.3 shows the distribution of farm households by farm size. It appears that 1.51-2.50 farm size group constitutes about 25 percent of the total surveyed farms in the study areas. The next farm size group is the 2.51-5.00 acres group with 20% of the total farms. The three lower farm groups altogether constitute about 48 percent of the total farms.

Table 6.3 : Distribution of Farms by Farm size

Farm size (acres)	Polder						Total	
	CM		CBD-II		CBT			
	No.	%	No.	%	No.	%	No.	%
0.01-0.50	6	9.2	13	20.3	16	10.9	35	12.7
0.51-1.00	7	10.8	12	18.8	20	13.6	39	14.1
1.01-1.50	13	20.0	14	21.9	31	21.1	58	21.0
1.51-2.50	19	29.2	14	21.9	35	23.8	68	24.6
2.51-5.00	15	23.1	9	14.1	31	21.1	55	19.9
5.01 & +	5	7.7	2	3.1	14	9.5	21	7.6
Total	65	100	64	100	147	100	276	100

Table 6.4 shows the preponderance of the leasing system in the study area, as it appears that 36 percent of the farms share crop in land and 12 percent of them mortgage in land. This means that about 48 percent of the total surveyed farms lease in land for making their farms optimal in size.

Table 6.4 : Distribution of Farms by tenancy pattern

Polders	Farms with						Total	
	own land		share in		mortgage in			
	no.	%	no.	%	no.	%	no.	%
CM	64	98.5	20	30.8	6	9.2	65	100
CBD-II	61	95.3	17	26.6	11	17.2	64	100
CBT	136	92.5	62	42.2	16	10.9	147	100
Total	261	94.6	99	35.9	33	12.0	276	100

Note : Figures are mutually inclusive.

Table 6.5 presents the distribution of farms by Farm Categories. A little more than 5 percent of all farms are pure tenants while owner-cum-tenant farms constitute 39.1 percent of the total farms in three polders altogether. The rest farms (55.4%) are the owner operators. The pure tenant and owner-cum-tenant indicate that 44.5 percent of the total farms are tenants. Such tenants farm is higher in CBT with 50.4% lowest in CM with 41.5%.

Table 6.5 : Distribution of Farms by Farm categories

Farm Categories	Polders			All polders
	CM	CBD-II	CBT	
	N=65	N=64	N=147	N=276
Owner Operators	58.5	65.6	49.7	55.4
Owner-Cum-tenant Operator	40.0	29.7	42.9	39.1
Pure tenants	1.5	4.7	7.5	5.4
Total	100	100	100	100

Table 6.6 shows the distribution of farmland by tenancy pattern in the study area. A little more than 59 percent of the land belongs to own farms while about 41 percent of the total farmland is leased in land; 35% under share cropping in and 6% under mortgage in. Own land is lowest in CBT with 55% and highest in CBD-II with 70%.

Table 6.6 : Distribution of Farmland by tenancy types

Tenancy types	(percent)			
	CM	CBD-II	CBT	All
Own land	61.1	70.1	55.0	59.4
Share cropped in land	35.5	21.1	38.3	34.5
Mortgaged in land	3.5	10.0	6.7	6.3
Total	100	100	100	100

Table 6.7 shows the distribution of the surveyed farm households by labour hiring status. About 87 percent of the surveyed farm households have reported about labour hiring for their farm activities. Labour hiring is lowest in CBD with 75% while it is 92.5% in CBT and 84.69% in CM.

Table 6.7 : Labour hiring status for Farm activities in three polders

Polder	Hire		Do not hire		Total	
	Number	Percent	Number	Percent	Number	Percent
CM	55	84.6	10	15.4	65	100
CBD	48	75.0	16	25.0	64	100
CBT	136	92.5	11	7.5	147	100
Total	239	86.6	37	13.4	276	100

Table 6.8 shows that about more than 48% of the farm households sell labour for agriculture. This means that they do not get adequate family labour to meet labour demand during the peak agricultural season, particularly during Aman harvest and transplantation. It has been observed that the small and marginal farmers sell labour as well buy labour for their farms. Work in group accelerates the pace of work in agriculture and that is why they hire labour to work in group and latter sell their labour idle labour. They make their labour budget considering these two aspects of labour buying and selling. Table-6.9 that 43% of the farm households that hire labour for their agricultural activities they sell labour too.

Table 6.8 : Labour selling status of the Farm households in three polders

Polder	Sell		Do not sell		Total	
	Number	Percent	Number	Percent	Number	Percent
CM	34	52.3	31	47.7	65	100
CBD	26	40.6	38	59.4	64	100
CBT	73	49.7	74	50.3	147	100
Total	133	48.2	143	51.8	276	100

Table 6.9 : Labour hiring Farm households and their labour selling status

Polder	Sell		Do not sell		Total	
	Number	Percent	Number	Percent	Number	Percent
CM	25	45.5	30	54.5	55	100
CBD	12	25.0	36	75.0	48	100
CBT	66	48.5	70	51.5	136	100
Total	103	43.1	136	56.9	239	100

There is a co-relationship between the farm size and labour hiring. In Table-6.10 it appears that labour hiring is increasing with the farm size. On the other hand, there is a negative co-relation between the labour sale and farm size as it is seen in Table-6.11.

There is a positive co-relation between the average adult male labour and farm activities as is seen in Table 6.12. It appears that the average adult male member per farm household is 1.81 as against non-farm household for which it is 1.64. Table 6.13 shows that the average adult male family member is highest for farmer with 2.01 per household and it is 1.5 for day laborer household and for business category it is 1.97 per household.

Table-6.10 : Labour hiring households by Farm size

Farm size	# of farms hire lab	hiring status		Total
		hire	do not hire	
0.01-0.50	35	31.4	68.6	100
0.51-1.00	39	82.1	17.9	100
1.01-1.50	58	93.1	6.9	100
1.51-2.50	68	97.1	2.9	100
2.51-5.00	55	100.0		100
5.01+	21	100.0		100
Total	276	86.6	13.4	100

Table-6. 11 : Labour hiring labour selling status by Farm size

Farm size	# of farms hire lab	selling status		Total
		Sell	Do not sell	
0.01-0.50	11	45.5	54.5	100
0.51-1.00	32	56.3	43.8	100
1.01-1.50	54	50.0	50.0	100
1.51-2.50	66	47.0	53.0	100
2.51-5.00	55	38.2	61.8	100
5.01+	21	4.8	95.2	100
Total	239	43.1	56.9	100

Table-6.12 : Average adult male labour by Farm and Non-farm status

Polders	Farm households	Non-farm households	Total
CM	1.95	1.0	1.65
CBD-II	1.89	1.44	1.80
CBT	1.71	1.17	1.57
Total	1.81	1.16	1.64

Table-6.13 : Average number of the adult male members by occupation

Occupations	Households	Number of labour
Farmer	107	2.01
Day labour	113	1.51
Business	50	1.96
Transport workers	21	1.57
Fishermen	5	1.80
Service	35	1.43
Others	37	0.68
Total	368	1.63

Note: Occupations of Nine households are missing

Table 6.14 presents the distribution of households by draft power possession status. Only 17 percent of the total surveyed households have drought power. It is highest in CBT (21%) and lowest in CM (10%). Table 6.15 shows that there is a positive correlation between the farm sizes and the draft power owning status.

Table 6.14 : Farm households by draft power owning status

Polders	Farm Households owning				Total	
	draft power		no drought power			
	No.	%	No.	%	No.	%
CM	10	9.8	92	90.2	102	100
CBD-II	12	15.4	66	84.6	78	100
CBT	40	21.4	147	78.6	187	100
Total	62	16.9	305	83.1	367	100

Note: Monitoring Survey 2002-03

Table 6.15 : Distribution of Farms by draft power owning status and Farm size

Polders	households owning				Total	
	draft power		no draft power			
	number	percent	number	percent	number	percent
0.01-0.50			41	100.0	41	100
0.51-1.00	3	5.4	53	94.6	56	100
1.01-1.50	6	15.8	32	84.2	38	100
1.51-2.50	16	20.8	61	79.2	77	100
2.51-5.00	25	43.1	33	56.9	58	100
5.00+	12	60.0	8	40.0	20	100
Total	62	21.4	228	78.6		100

Note: Monitoring Survey 2002-03

5.3 Farm economy

5.3.1 Cropping intensity

The selected households have cultivated land both inside and outside the polders. Some of them have bought land, some of them have occupied khas land, many have done both. In addition to these they have share cropped in land outside the polder area.

Table 7.1 shows the cropping intensity inside the polder areas of the selected households. The total cropping intensity (both inside and outside) of the selected households has been shown in Table-7.2. It appears that cropping intensity inside the polder area in all three polders together is 189.6% with variation from polder to polder as in CBT it exceeds 200%, in CBD-II it is almost 200% and in CM it is only 130%.

As expected Aman coverage is almost 100% in three polders. The rabi coverage is 55.6 per cent inside the polder areas in three polders altogether. It is high in CBD-II with 64.4% and

low in CM with 30 percent. Again Aus coverage in general is low in all three polders but it is discernibly low in CM, only 1.4%.

Table 7.1 : Cropping intensity inside the polder areas

Polders	Crop season (%)			Cropping Intensity ⁵
	Aman	Aus	Rabi	
CM	98.8	1.4	30.1	130.4
CBD-II	98.5	36.5	64.0	199.0
CBT	99.0	45.0	60.4	204.4
All polders	98.9	35.6	55.6	189.6

The cropping intensity is only 176% (Table-7.2) in both inside and outside the polder together, meaning thereby the cropping intensity is higher inside the polder (ref: Table-7.1). The rabi coverage inside the polder is 56% (ref: Table-7.1) as against 50% in both sides together (Table-7.2).

Table 7.2 : Cropping intensity both inside and outside the polder

Polders	Crop season (%)			Cropping Intensity
	Aman	Aus	Rabi	
CM	97.4	0.7	30.7	128.8
CBD-II	98.6	35.3	62.5	196.3
CBT	98.5	39.8	56.2	194.5
All polders	98.2	28.5	50.1	176.3

5.3.2 HYV Rice and rabi coverage

Table-7.3 presents the HYV coverage of rice both in *Aus* and *Aman* seasons and rabi crops inside the Polder areas. The HYV *Aman* coverage is slightly more than 18 percent for the three polders together, and it is slightly higher in CBD-II with about 21 percent than CBT which has 19.7 percent HYV *Aman* coverage. CM has the lowest HYV *Aman* coverage with only 11%.

The HYV *Aus* coverage as is seen in Table 7.3 is very low in CM compared with other two polders; 38% in CBD-II, 27% in CBT. The HYV coverage is higher in *Aus* season than that of the *Aman* season in all three polders. In *Aus* season, it is about 29 percent for three polders together. Considering from the individual polder's point of view HYV is higher in *Aus* season than in *Aman* season holds in all polders.

The HYV coverage is higher in inside the polder (ref: Table-7.3) compared with that of the outside the polders (Table-7.4) for HYV *Aman* as inside the polder it is 18% and 15% in both sides together. However, the HYV coverage of HYV *Aus* is almost similar in both inside and outside areas (ref: Table-7.3 and Table-7.4). The higher coverage of *Aman* and HYV *Aman*

⁵ Cropping intensity with respect to net cropped areas i.e. gross cropped area/net cropped areas*100

inside the polder than that of the outside indicates the improvement of soil condition inside the polders.

Table 7.3 : HYV rice coverage inside the polder

Polders	% HYV coverage of	
	Aman	Aus
CM	11.0	15.4
CBD-II	20.8	37.8
CBT	19.7	26.6
All	18.3	29.0

Table 7.4 : HYV rice coverage inside and outside the polder

Polders	% HYV coverage of	
	Aman	Aus
CM	6.8	15.4
CBD-II	20.1	37.8
CBT	17.6	26.4
All	15.0	28.8

5.3.3 Tenancy system and HYV rice and rabi coverage

There is also impact of the tenancy system on HYV coverage. It is seen in Table 7.5 that the HYV coverage in Aman season is higher for own land than that of the share cropped in land in all three polders the respective figures being 22% and 12.5%. The same trend is observed even in the outside area as Table-7.6 shows.

Table-7.5 : HYV coverage in Aman season inside the polder

Tenure types	Polders			All polders
	CM	CBD-II	CBT	
Own land	17.6	23.5	22.9	22.1
Shared cropped in land	0.0	8.3	17.1	12.5
Mortgaged in land	7.3	24.8	5.5	9.6
Total	11.0	20.8	19.7	18.3

(percent)

Table-7.6 : HYV Aman coverage in inside and outside the polder

Tenure types	Polders			All
	CM	CBD-II	CBT	
Own land	11.0	23.2	21.1	18.8
Shared cropped in land	0.0	7.4	14.5	9.3
Mortgaged in land	5.2	24.8	5.2	8.6
Total	6.8	20.1	17.7	15.0

The HYV coverage on own land during the Aus season inside the polders is also high though the difference is not as much pronounced as it is in case of the Aman season. The coverage of HYV Aus on mortgaged in land is high compared with any other tenancy systems (Table-7.7).

Table-7.7 : HYV Coverage in Aus season inside the polder

Tenure types	Polders			All polders
	CM	CBD-II	CBT	
Own land	15.4	35.7	27.6	29.5
Shared cropped in land		100.0	19.1	24.7
Mortgaged in land		22.2	32.5	30.9
Total	15.4	37.8	26.6	29.0

Table 7.8 shows the distribution of the proportionate share of Rabi coverage by tenancy pattern i.e. by own land and leased in land (share cropped in and mortgaged in) inside the polder area. In the study area about 65 percent of the total own land are under Rabi while 33 percent of the sharecropped in land are under Rabi crops. In all polders the proportionate share of own land under Rabi crops is almost double than that of the sharecropped in land. Similarly, the coverage of rabi shows that is the own land that the farmers prefer to sharecropped land for rabi cultivation. Table-7.8 presents rabi coverage of both side together.

Table-7.8 : Rabi coverage inside the polder

Tenure types	Polders			All polders
	CM	CBD-II	CBT	
Own land	38.5	69.2	72.3	65.4
Shared cropped in land	16.5	50.5	34.4	32.9
Mortgaged in land	22.3	44.9	88.8	71.1
Total	30.1	64.1	60.6	55.7

Table-7.9 : Rabi coverage inside and outside the polder

Tenure types	Polders			All polders
	CM	CBD-II	CBT	
Own land	42.5	69.0	66.9	60.4
Shared cropped in land	9.9	45.2	33.0	27.3
Mortgaged in land	31.9	44.9	87.9	70.6
Total	30.7	62.5	56.4	50.2

The most important rabi crops as it appears in Table 7.9 are the pulses and chilli in all polders. In CBD-II groundnut grows considerably (26%) while it is very low in CM with 1.7% and in CBT it 2.1%. Oilseed is also predominant inside the polders and it is a recently introduced (soybean)

Table 7.10 : Distribution of different rabi crop Coverage

Crop's name	(percent)			
	CM	CBD-II	CBT	All polders
Chillies	14.4	23.9	13.7	16.0
Sweet potato	5.0	8.5	2.5	4.2
Groundnut	1.7	25.5	2.1	7.1
Garlic/onion	1.1	1.1	0.7	0.8
Pulses	47.5	22.0	73.7	58.1
Oilseed	27.8	14.4	5.9	11.5
Winter vegetables	2.3	1.8	0.9	1.3
Ladies finger	0.0	2.6	0.0	0.6
Others	0.2	0.2	0.6	0.4
Total	100	100	100	100

Chapter 6

Land Settlement : Who Got

6. Migration of household members to new chars

Permanent migration⁶ to new chars of household members of the surveyed households is about 8.8 percent though it varies from polder to polder. It is highest in CM with about 11.5 percent and lowest in CBD-II with 6.3 percent (Table 8.1). The permanent migration is gradually increasing in the study area though permanent in-migration has increased many times and still it is on rise.

Table 8.1 : Households by permanent migration status of the household members

Polders	Migration status				Total	
	migration		no migration			
	number	percent	number	percent	number	percent
CM	11	11.5	85	88.5	96	100
CBD-II	5	6.3	75	93.8	80	100
CBT	17	8.5	183	91.5	200	100
All polders	33	8.8	343	91.2	376	100

It is very commonly believed that poor people (i.e. settlers) very frequently sell their settled in one char and then they move to some new chars for getting another land settlement there. However, Table 8.2 shows that members of 18.2 percent of the surveyed households have household members in new chars and they constitute 1.6 percent of the total surveyed households (6 out of 377). Besides them, some of the households have left the areas and settled in other areas from where they came before settlement. These people came in the polder after being evicted mostly by the river erosion or due to poverty in their native areas. Now the economy of their native area has improved and they are going back there. Some households are sending their members outside area for higher income in non-farm activities. Table-8.3 shows more details about the settlement behaviour of the coastal chars.

Table 8.2 : Displaced household members by places of new settlement area

Polder	new settlement place after displacement				Total	
	new chars		Non-char			
	number	percent	number	percent	number	percent
CM	4	36.4	7	63.6	11	100
CBD-II	0	0	5	100	5	100
CBT	2	11.8	15	88.2	17	100
All polders	6	18.2	27	81.8	33	100

More than 84% of the settlers are still in the locality; 81.7 percent being inside the polder and 1.5 percent in the adjacent area and 0.9 percent were not found for interview. The field

⁶ Here permanent migration means the leaving the polder for permanent settlement in some other areas.

investigators could not identify them during the survey but latter they are found. About 16 percent of the settlers are not in the locality. Of them 4 percent were fake being used by the local settlers with surplus land who manipulated the settlement process. These manipulators were big landowners and *jotdars* with influence and power. CDSP-I could not identify them because local poor people could raise voice against them. Moreover, CDSP-I for tacitly pacify them over looking their land possession status because these people could jeopardise the settlement by resorting to the court. Similarly, the powerful absentee settlers who occupied land previously could manage the official land settlement. It appears that about 8 percent of the total settlers have left the polder after selling their land and many of them have settled in new chars. Such trend is more strong in CM nearby which there is a big new chars and new autonomous human settlement has taken place. People from CBT have also migrated to those places.

Table-8.3 : Distribution of the settlers by their present and previous location

Settlers' present location	CM		CBD-II		CBT		All	
	No.	%	No.	%	No.	%	No.	%
Living in the locality	96	81.4	80	96.4	201	79.8	377	83.2
Left from interview					4	1.6	4	0.9
Absentee but still retain land	0		0		5	2.0	5	1.1
Joint family	0		0		2	0.8	2	0.4
Left polder and hold land	6	5.1			1	0.4	7	1.5
Residential settlers but left area after selling all land	14	11.9	3	3.6	20	7.9	37	8.2
Absentee and sold land					3	1.2	3	0.7
Fake name	2	1.6			16	6.3	18	4.0
Total	118	100	83	100	252	100	453	100

Chapter 7

Land and Livelihoods

7.1 Introduction

It is plausibly expected that the landless people after getting land title over the *Khas* land will improve their socioeconomic conditions. Land being the more secured capital for their livelihood will open avenues i.e. social capital, human capital, and financial. Consequently, they will get more opportunities to change their livelihood. This chapter deals with the livelihood strategies of the land settlement beneficiaries who have received land title through CDSP-I. .

7.2 Quality of life

It appears in Table-9.1 that 93.9% of the surveyed households have only one dwelling house each and the remaining 6.1% have more than one dwelling houses. Comparison among the polders no discernable difference is not noticed.

Table 9.1 : Distribution of the households by number of dwelling houses

Polder	One house		>One houses		Total	
	Number	Percent	Number	Percent	Number	Percent
CM	90	93.8	6	6.3	96	100
CBD	74	92.5	6	7.5	80	100
CBT	189	94.5	11	5.5	200	100
Total	353	93.9	23	6.1	376	100

Note: Data for one household is missing

Table 9.2 shows the conditions of the main living room of the surveyed households in respect to the building materials used in its roof and walls. All the houses are *kutchra* (except 4 semi-*pucca* houses).

Table 9.2 : Structures of main living room by types of materials

House types	Polders						All polders	
	CM		CBD-II		CBT			
	no.	%	no.	%	no.	%	no.	%
Wall Pucca: roof tin	2	2.2	1	1.3	1	0.5	4	1.1
Wall tin: roof tin	21	22.1	10	12.8	23	11.9	54	14.7
Wall bamboo: roof tin	49	51.6	30	38.5	66	34.0	145	39.5
All thatched	23	24.2	37	47.4	104	53.6	164	44.7
Total	95	100	78	100	194	100	367	

Of them the most dominant mode is all thatched house (bamboo walls and thatched roof) houses with 44.7 percent of the total houses. The second dominant mode is the houses with bamboo walls and tin roofs, as it constitutes 39.3% of the total houses.

The is the most dominant in CM where CV house is comparatively more than other two polders. CDSP gave those CV dwellers a house with tin roof and bamboo wall, one each. The better quality house is with tin wall and tin roof. It is prevalent at small scale. Only 14.7 percent of the houses in the study are of this type. Compared with previous monitoring survey this type of houses has increased from 7% to 14.7%.

7.3 Living environment

Living environment of a house depends on many factors. It also depends on the closeness of kitchen and cowshed with the living room. In a rural setting, particularly in CDSP working char areas many of the houses have attached kitchens and cowshed and they have bearing on hygienic living conditions. Smoke from the kitchen makes environment inside the living room polluted if kitchen is close and or attached. Similarly the bad smell from the cowshed and the cow-dung make the living environment polluted if the cowshed is attached with the living houses. Table 9.3 Shows that about the 17 percent of the surveyed households do not have separate kitchen and 83% of them have separate kitchen though they are very close to the living room. Table 9.4 shows the location of the cowshed of the surveyed households. It shows that 18 percent of the surveyed households have attached cowsheds. This means that they live in an unhygienic environment.

Table 9.3 : Distribution of households with separate kitchen

Polders	N=	hh separate kitchen owning status (%)	
		separate kitchen	no separate kitchen
CM	95	86.3	13.7
CBD-II	80	80.0	20.0
CBT	195	83.1	16.9
All polders	370	83.2	16.8

Note=Data on seven households is missing.

Table 9.4 : Distribution of cow-owning households and location of cow-sheds

Polders	Total hh number	owning hh		hh with attached cow-shed	
		#	%	number	Percent*
CM	96	39	40.6	17	17.7
CBD-II	80	32	40.0	22	27.5
CBT	201	44	36.3	29	14.4
All polders	377	76	38.2	68	18.0

Percentage with respect to total surveyed households.

7.4 Asset structure

From Livelihood point of view the asset is an important capital as it provides the means for livelihood. Table 9.5 presents the assets in the study area.

Table 9.5 shows that about 38 percent of the surveyed households own cow and 1.1 percent of the surveyed households own buffalos in all polders together. The cow-owning households is highest in CM with 40.6% followed by CBT with 37.3% households. The average number of cattle animal of the owning households is 2.43 for the whole study and it is 2.36 in CM and 2.56 in CBT. More than 93% of the surveyed households own poultry bird with an average of 12.80 per owning households.

Table 9.5 : Distribution of households by assets-owning status

Assets	Polders						All polders	
	CM		CBD-II		CBT		% of hh own	aver -age #
	% of hh own	aver -age #	% of hh own	aver -age #	% of hh own	aver -age #		
Cow	40.6	2.36	33.8	2.19	37.3	2.56	37.4	2.43
Buffalos	1.0	6.0	2.5	2.00	0.5	4.00	1.1	3.50
Goats/sheep	7.3	3.57	21.3	2.47	20.4	3.12	17.2	3.00
Poultry birds	92.7	10.40	91.3	13.47	94.0	13.65	93.1	12.80
Cycles/Rickshaw	29.2	1.36	26.3	1.52	22.9	1.63	25.2	1.53
Motor cycles	1.0	2.00	0.0	0.0	0.5	1.00	0.5	1.50
Boats	3.1	1.33	0.0	0.0	1.5	1.00	1.6	1.17
Trawler	3.1	1.33	0.0	0.0	0.0	0.0	0.8	1.33
Tube well	8.3	1.00	13.8	1.00	13.4	1.00	12.2	1.00
Radio	16.7	1.13	17.5	1.07	17.4	1.06	17.2	1.08
TV	2.1	1.00	6.3	1.00	5.5	1.00	4.8	1.00
Thresher	0.0	0.0	3.8	1.00	3.0	1.00	2.4	1.00
Husking hauler	0.0	0.0	0.0	0.0	2.5	1.00	1.3	1.00
STW	0.0	0.0	0.0	0.0	1.0	1.00	0.5	1.00
Tractors	5.2	1.20	0.0	0.0	1.0	1.50	1.9	1.29
Tillers	0.0	0.0	1.3	1.00	0.5	1.00	0.5	1.00
<i>Dhenki</i> **	22.5	1.0	17.7	1.0	31.0	1.0	26.0	1.0
Others	2.1	4.50	0.0	0.0	3.0	1.33	2.1	2.13
N=	96		80		201		377	

*Average with respect households owning assets.

** Previous Monitoring Survey results

Dhenkhi (see-saw), a traditional means, is on dominant position in the study area as 26 percent of the surveyed households own it. The second most important asset is the bicycle/rickshaw/van as more than 23 percent of the surveyed households possess it. A few TV sets are found in the study area. Threshing machines for paddy threshing is also available in the study area.

The Table 9.6 shows the average value of different assets. The average value has been shown on the basis of all surveyed households. Table-9.7 provides a picture of the household assets/furniture position of the households surveyed and Table-9.8 present a picture on fishing gear of the surveyed households.

Table 9.6 : Average value of different assets per households owned by the surveyed households

Assets	CM	CBD-II	CBT	All polder
	Value (Taka)	Value (Taka)	Value (Taka)	Value (Taka)
Cow	5404	3854	4832	4785
Buffalos	750	475	149	371
Goats/sheep	102	338	554	393
Poultry birds	763	837	1328	1080
Cycles/rickshaw	843	954	728	805
Motor cycles	11	0	348	189
Boats	303	0	192	179
Trawler	3698	0	0	942
Tube well	144	214	233	206
Radio	163	230	235	215
TV	94	194	181	161
Thresher	0	75	62	49
Hauler	0	0	386	206
STW	0	0	174	93
Tractors	2969	0	448	995
Tillers	0	625	125	199
Others	41	0	1000	544
N	96	80	201	377

Note: Average assets per household with respect to all households

Table-9.7 : Average household furniture in three polders

Furniture types	% owning hh	Average (number) with respect to	
		Owning hh	all hh
Bedstead	95.0	2.24	2.12
<i>Khat</i>	7.2	1.37	0.10
Chairs	57.0	2.65	1.51
Tables	51.7	1.44	0.75
<i>Almirah</i>	15.6	1.34	0.21
Dress-stand	20.7	1.26	0.26
Total hh (N)	377		

Table-9.8 : Average fishing gear per household in three polders

Types of gear	% owning hh	Average (number) with respect to	
		Owning hh	all hh
Chhandi	0.53	1.50	0.01
Jhaki	21.75	1.17	0.25
Bhesal	1.33	1.60	0.02
Bindi	3.71	1.64	0.06
Dharma	0.27	1.00	Negligible
Thela	1.33	1.00	0.01
Ber	0.27	1.00	Negligible
Others	0.80	3.00	0.02
Total hh	N=377		

Table-9.9 provides a picture on the trees of all surveyed households. In coastal chars trees are important assets as it provides not only income but also protection from the strong wind during the cyclones and tidal surges.

Table-9.9 : Average trees per household in three polders

Tree varieties	Size of Trees			Total
	Big	medium	small	
Mango	2.49	7.28	9.53	19.32
Black berry	0.75	2.06	2.50	5.32
Jackfruits	0.48	2.60	4.32	7.40
Coconut	5.42	8.05	8.24	21.71
Betel nut	3.78	11.82	20.05	35.65
Lemon	0.07	0.21	0.32	0.60
Jamrul	0.06	0.24	0.25	0.55
Ata	0.17	0.55	0.91	1.64
Gab	0.49	1.73	3.08	5.29
Kamranga	0.15	0.30	0.39	0.84
Tamaric	0.66	1.76	1.88	4.30
Akasmoni	0.20	0.51	0.81	1.51
Ipilipil	2.58	4.02	5.36	11.94
Silkoroi	1.96	4.92	4.29	11.17
Bot koroi	4.73	13.12	17.99	35.85
Jarul	0.05	0.08	0.07	0.20
Garjan	0.01	0.02	0.01	0.03
Tamar	0.08	0.11	0.09	0.28

Note: Average number with respect to all hh

7.5 Labour force

Table 10.1 shows the average labour force per household. All three polders have almost equal number of average male labour. The average numbers of male and female family

labour are 1.64 and 1.72 respectively in the study area altogether though there are variations among polders.

Table 10.1 : Average labour force per household in three polders

Polders	Labour categories				Total
	N=	Adult		Child	
		Male	Female		
CM	96	1.65	1.61	0.21	3.47
CBD-II	80	1.80	1.96	0.26	4.00
CBT	201	1.57	1.68	0.14	3.39
All polders	377	1.64	1.72	0.18	3.54

7.6 Human resource quality : literacy and school enrolment

As human resource is one of the capitals for livelihoods its quality is important. The present survey has not attempted to assess the human resource quality except the literacy level of the household heads and the enrolment rate of the school going aged children. Besides, the volume of the labour forces of the surveyed households has been investigated.

The present survey has not collected information of education status but has used the previous monitoring survey result. Table 10.2 shows the literacy level of the household heads of the surveyed households. About 31 percent of the household heads are literate (including functional education). However, most of them (19%) have either attended or completed primary level. Literacy rate is more in CM (32.4%) followed by CBT (31.2%).

Table 10.2 : Distribution of households by household heads' literacy level

Education level	Polders						All polders	
	CM		CBD-II		CBT			
	#	%	#	%	#	%	#	%
Illiterate	69	67.6	56	70.9	137	68.8	262	68.9
Functional	8	7.8			5	2.5	13	3.4
1-5 grade	15	14.7	17	21.5	41	20.6	73	19.2
6-9 grade	4	3.9	4	5.1	8	4.0	16	4.2
SSC and +	6	5.9	2	2.5	8	4.0	16	4.2
Total	102	100	79	100	199	100	380	100

Source : Land Monitoring Survey Report 2003.

The universal primary education programme still suffers from shortage of enrolment as it is short of 100% of the school going aged children. About 92 percent of the children have enrolled themselves in the primary schools.

The enrolment rate of children particularly for boys is lowest in CM because of the child labour. Many children collect twigs from the nearby forest. The enrolment rate of the girls is higher than that of the boys in all but CM polders (ref. Table 10.3).

Table 10.3 : School enrolment of school aged children

Polders	% of school going		Children
	boys	girls	
CM	88.6	87.7	88.2
CBD-II	89.7	90.4	90.1
CBT	92.5	99.2	95.5
All polders	90.8	93.8	92.2

7.7 Occupation pattern

Table 11.1 shows the distribution of household heads by occupation pattern. It appears that agriculture is major economy of the study area as farming and labour are the major occupation categories in the area. About 31 percent of the households have day labour as their main occupation while 28 percent of the households have farming as their main occupation. Small business is also an important occupation category with 13.3 percent of the sample households. Fishing category is considerably high (5%) in CM compared with other two polders. About 10% of the surveyed households have service as their main occupation and a little more than 6% of the households have transport work as their main occupation.

Table 11.1 : Household heads by main occupation types

Occupation types	CM		CBD-II		CBT		All	
	No.	percent	No.	percent	No.	percent	No.	percent
Farmer	24	25.0	23	28.8	57	28.4	104	27.6
Day labour	26	27.1	37	46.3	53	26.4	116	30.8
Business	8	8.3	6	7.5	36	17.9	50	13.32
Transport worker	7	7.3	8	10.0	9	4.5	24	6.4
Fishermen	5	5.2	1	1.3	1	0.5	7	1.9
Service	13	13.5	5	6.3	18	9.0	36	9.5
Others	13	13.5			27	13.4	40	10.6
Total	96	100	80	100	201	100	377	100

Table 11.2 shows the pre-harvest agricultural activities done by the women members of the surveyed households. Traditional belief is that women do not perform the pre-harvest activities in agriculture. From Table 11.2 it appears that almost all surveyed households have reported that their female members do the threshing of harvested crops including paddy. They also perform the weeding and plantation. The participation of the women household members in harvesting crops especially rabi crops is widely prevalent.

Table 11.2 : Women activities in field agriculture in CDSP-I areas

	Number	percent
Ploughing	6	2.0
Seedling plantation	7	2.4
Weeding rice field	14	4.7
Harvesting of paddy	26	8.8
Threshing of paddy	262	88.8
Mulching of rabi crops	95	32.2
Planting of rabi crops	150	50.8
Weeding of rabi crops	157	53.2
Harvesting of rabi crops	250	84.7
Total	295	327.8

*multiple answer.

7.8 Labour selling

Table-11.3 shows that about 49 percent of the total households with adult male members sell agricultural labour, and it varies from polder to polder. In CM and CBT about 50 percent of the households with adult household members sell agricultural labour though it is a bit low in CBD-II (46.2%). It should be note that in CBD-II earth-cutting and brick field workers is relatively more compared with other two polders.

Table 11.3 : Distribution of Households by agricultural labour selling status in three polders

Polders	households with adult male				Total	
	sell labour		do not sell labour			
	number	percent	number	percent	number	percent
CM	43	50.0	43	50.0	86	100
CBD-II	36	46.2	42	53.8	78	100
CBT	94	50.3	93	49.7	187	100
All polders	173	49.3	178	50.7	351	100

*households with adult male members

Table-11.4 shows the temporary migration status of labour selling households. About 48 percent of the total surveyed households with adult male members migrate for labour selling outside areas. In CBD-II about 77% of the surveyed households with adult male member migrate out side and in CBT it is about 36%.

Labour migration takes place for different works of which agricultural work, earth-cutting are most prominent (ref: Table 11.5). Following them work in brick field is also dominant as about 26 percent have reported it.

Table 11.4 : Distribution of labour selling households by temporary migration Status

Polders	migration status				Total	
	migrate		do not migrate			
	number	percent	number	percent	number	percent
CM	40	46.5	46	53.5	86	100
CBD-II	59	76.6	18	23.4	77	100
CBT	67	36.4	117	63.6	184	100
Total	166	47.8	181	52.2	347	100

Note: Households with adult male members.

Table-11.5 : Distribution of migrated labour by types of work for migration

Work types	Number	Percent
Agricultural work	92	56.1
Earth-cutting	84	51.2
Brick field	43	26.2
Fishing	14	8.5
Others	22	13.4
Total	166	155.5

*multiple answer.

7.9 Land transfer

7.9.1 Land sale

Fig-1 shows the land sale over the year starting from 1997 to 2002. The trend of lands sale is going up gradually and it came down the year 2001 and continued 2003 but increases abruptly in 2004.

The prevalence rate of land sold in three polders is seen in Table 12.1. A little more than 18 percent of the surveyed households have sold land from 1997 to 2004. Such land sale is high in CBT with 23.4 percent.

The average land sale per household is seen in Table 12.2. During the period of 1997 to 2004 on average 0.12 acres of land has been sold in the total study area and it is the lowest in CBD-II with .04 acres and highest in CBT with 0.18 acres. However, the average with respect to the land selling households it is about 0.68 acres in the study area and it is 0.31 acres in CBD-II, the lowest of all polders.

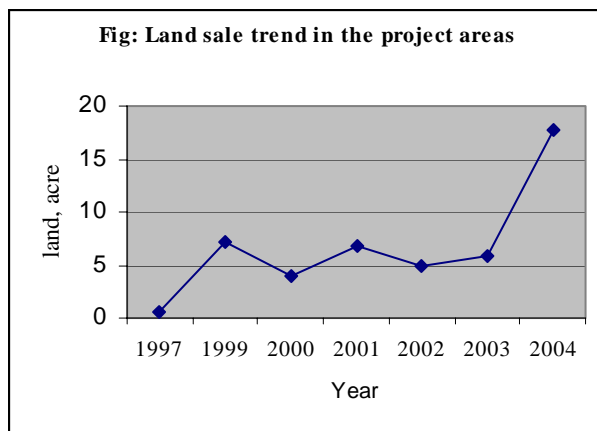


Table 12.1 : Distribution of land selling households in three polders

Polders	Total hh	Land selling hh	
	Number	Number	Percent
CM	96	12	12.5
CBD-II	80	10	12.5
CBT	201	47	23.4
All	377	69	18.3

Table 12.2 : Average land sold per household in there polders

Polders	Average with respect to	
	Total hh	Selling hh
CM	0.07	0.58
CBD-II	0.04	0.31
CBT	0.18	0.79
All	0.12	0.68

Table 12.3 shows the distribution of the land selling households by landownership groups. It appears that land selling and landownership groups is positively related except the lowest land strata. This means that the lower land groups have more incidences of land sale.

Table 12.4 provides a picture on the average land sold by different land size. The average land sold is dominant among the lowers size except the lowest size (0.01-0.50).

Table 12.3 : Percentage of households land sold by land ownership size

Landownership size*	Total hh	Number of hh land sold	% hh land sold
0.01-0.50	49	6	12.2
0.51-1.00	75	17	22.7
1.01-1.50	100	20	20.0
1.51-2.00	115	21	18.3
>2.00	38	5	13.2
Total	377	69	18.3

Note: Land ownership is based on total allotted land through CDSP-I. Total allotted land does not necessarily mean that they have got possession over all allotted land. However, here this aspect of land possession has not been considered

Table 12.4 : Average land sale by landownership size

Land ownership size	Total households	Average land (acres)	
		All hh	Land Selling hh
0.01-0.50	49	0.03	0.25
0.51-1.00	75	0.12	0.52
1.01-1.50	100	0.14	0.68
1.5 1-2.00	115	0.14	0.77
2.00+	38	0.11	0.81
All groups	377	0.12	0.64

Table 12.5 shows the same trend as it is seen that in terms of land a positive relationship exists. The households that received more than 2.00 acres of land (joint families with more than one *Khatian*) they have sold 2.9% of their received land. On the other hand, the households who received 0.51-1.00 acres of land they have sold 16.0% of their land.

Table 12.6 presents the trend of land value over several years starting from 1997 until 2004. It pears that land sale is increasing along with its value though such increase is not steady.

Table 12.4 : Proportionate distribution of land sold by landownership size

Land ownership Groups	% land sold with respect to total allotted land
0.01-0.50	8.9
0.51-1.00	16.0
1.01-1.50	10.8
1.51-2.00	8.4
>2.00	2.9
Total	8.4

Table 12.5 : Year-wise land value

Year	Total land sale (acres)	Land value per acres (Taka)
1997	0.56	44643
1999	7.08	34534
2000	4.01	35910
2001	6.79	37850
2002	4.92	32927
2003	5.88	38861
2004	17.71	47132
Average		53333

The use pattern of land sale money will give the factors that determine the land market. It appears from Table 12.6 that investment is important use of land sale as about 23.5 percent of the total land sale money have been used for investment that includes asset, purchase, land purchase/mortgage in, or in other investments like cow purchase, agricultural production and business.. Land sale for unproductive purposes such as treatment and consumption is also high. It is interesting to note that loan repayment is also an important cause for land sale.

Table 12.6 : Use pattern of income from land sale in three polders

Uses	Polders			All polders
	CM	CBD-II	CBT	
Consumption	9.8	3.9	10.3	9.6
Marriage	16.9	4.5	8.9	9.8
Treatment	25.8	3.9	10.4	12.2
Litigation	15.9	28.2	6.3	9.8
Unproductive investment	68.5	40.6	36.0	41.5
Land purchase/mortgage	3.4	22.5	10.8	10.7
Cow purchase	0.0	0.0	0.4	0.3
Agricultural Production	0.3	0.0	1.8	1.4
Pond digging	0.0	7.9	0.4	1.0
Trawler purchase	0.0	0.0	2.2	1.6
Asset purchase	1.4	0.0	2.0	1.7
Advanced to lab	0.0	5.1	0.0	0.5
Paddy purchase	0.0	0.0	4.2	3.2
Business	0.0	0.0	4.1	3.1
Productive Investment	5.1	35.5	25.8	23.5
Housing	0.0	0.0	7.7	5.8
Loan payment	26.4	23.9	25.4	25.4
Education	0.0	0.0	0.4	0.3
Others	0.0	0.0	4.7	3.5
Total	100	100	100	100

7.10 Mortgage out

Table 13.1 presents the average amount of mortgage out land by the landowning households in all three polders together. It is seen that the average amount of land mortgaged out in all areas is 0.25 acres and it is comparatively high in CBT (0.27 acres) and low in CM (0.20 acres). It also appears that about 29% of the total landowning households have mortgaged out land and it is relatively high in CBD-II and low in CBT.

Table 13.1 : Average mortgage out land in three polders

Polders	Total land owning hh	Mortgage out		
		# of hh	% hh	Average land*
CM	75	15	20.0	0.20
CBD-II	74	26	35.1	0.25
CBT	177	54	30.5	0.27
All areas	326	95	29.1	0.25

*Average with respect to total surveyed landowning households.

In the study area average income per household from mortgage out land is TK. 2794 and it is Tk. 543 for the lowest Land-ownership Category, just above the Landless category. Since the landless does not have any arable land for mortgaging out this group has not been considered here.

From Table 14.2 it is seen that the average income from mortgage out increases as the land-ownership size goes up. It means that there is a positive correlation between the mortgage out and Landownership Category. From Polder point of view the average income from the land mortgage out is highest in CBT and lowest in CBD-II as it is Tk. 3178 and Tk. 2101 respectively. In case of CM it is Tk. 2573.

Table-13.2 : Average income from mortgage-out land of different landownership size

Taka.

Land ownership size*	Polders			Total
	CM	CBD-II	CBT	
	N=75	N=74	N=177	
0.01-0.50	0	594	696	543
0.51-1.00	2000	1000	1591	1573
1.01-1.50	692	1853	3977	2897
1.51-2.00	2167	2719	4534	3526
2.00+	4643	4538	5030	4797
Total	2573	2101	3178	2794

*Landownership categories have been done based on own arable land of the surveyed households. This land include allotted land and land from other sources.

Note: Average has been calculated with respect to all surveyed landowning households

Since there is a need for loan for agricultural input purchase an analysis has made on farm and farm size basis. The findings are presented in Table 13.3. It is seen that non-farm landowning households have more income from mortgage out (Table 2.25) as they have an average income of TK. 2391 from this source as against TK. 2511 for all categories of households. The marginal farm size has more income from mortgage out compared with the small farm size group (0.51-1.00 and 1.01-1.50 acres). The average mortgaged out money is also lowest for the highest farm size.

Table 13.4 presents the use pattern of income from mortgage out land. It is seen that uses for unproductive purposes like consumption, treatment, marriage, and dowries feature most.

Table 13.3 : Average income from land mortgage-out of different Farm size

Farm Size	Polders			Total N=377
	CM	CBD-II	CBT	
	N=96	N=80	N=201	
Landowning Non-farm	2161	3500	2194	2391
0.01-0.50	1500	2500	3500	2786
0.51-1.00	0	1208	2700	1756
1.01-1.50	308	1464	2742	1888
1.51-2.50	2632	1071	3986	3007
2.51-5.00	3400	1222	4548	3691
5.00+	2400	5000	0	1048
Total	2010	1994	2995	2511

*Average has been calculated with respect to all surveyed households.

7.11 Credit and credit market

7.11.1 Average credit and magnitude of indebtedness

The demand for credits both for productive and unproductive uses is strong in the study areas. About 78 percent of the surveyed households are indebted and their average loan size is TK. 10757 per household for the study area (ref. Table 14.1). The average loan size is almost equal both in CBT and CBD-II with respective average of Taka 11750 and Taka 11696, lowest being in CM with 7521. The proportion of the indebted households is highest in CBD-II. (81% and lowest in CM (70%).

On the other hand, if the size of the loan is considered from the view point of all surveyed households the average stands at Taka 8246 and in that case CBD-II with a loan size of Taka 9178 exceeds the average loan size of CBT that has an average loan of Taka 9503. The average loan size for all surveyed households is Taka 5249 in CM, the lowest of all three polders.

Table 13.4 : Distribution of income from land mortgage out by use pattern

Uses	(percent)			
	CM	CBD-II	CBT	All polders
Consumption	14.5	24.1	18.9	18.9
Marriage	30.6	16.6	5.9	12.9
Treatment	9.3	1.3	10.7	8.8
Litigation	0.0	0.0	8.3	5.1
Unproductive investment	54.5	42.0	43.8	45.7
Land purchase	4.1	0.0	12.4	8.6
Cow purchase	0.0	3.8	0.3	0.9
Agricultural production	5.2	8.2	1.6	3.4
Pond digging	0.0	0.0	3.1	1.9
Fish culture	0.0	0.0	0.5	0.3
Business	6.2	3.8	4.3	4.6
Trolley purchase	0.0	0.0	1.7	1.1
Asset purchase	0.0	0.0	0.0	0.0
Advance to labour	0.0	0.0	1.2	0.8
Paddy purchase	0.0	0.0	0.7	0.4
Productive investment	15.5	15.7	25.8	22.0
Housing	15.5	0.0	2.6	4.8
Loan repayment	11.4	29.8	22.0	21.2
Education	2.1	0.0	0.0	0.4
Commission for Abroad	0.0	12.5	5.7	5.7
Others	1.0	0.0	0.0	0.2
Total	100.0	100.0	100.0	100.0

Table 14.1 : Average loan per households in three polders

	# of Total households	Debtor hh		Average loan with respect to (Taka)	
		Number	percent	all hh	debtor hh
CM	96	67	69.8	5249	7521
CBD-II	80	65	81.3	9503	11695
CBT	201	157	78.1	9178	11750
All polders	377	289	76.7	8246	10757

7.11.2 Credit sources

Table 14.2 presents the distribution of loan by credit sources. There are both formal and informal credit institutions in the locality. Formal institution includes Bank and NGO. Informal credit institutions include mostly the traditional moneylenders. It is seen from Table 14.2 that the bulk of the credit comes from the formal institutional sources and more specifically from bank (Bangladesh Krishi Bank which covers a little more than 60 percent of the credit market. NGO covers only 11.4 percent of the total credit market.

On the other hand, the moneylenders supply 27.6 percent of the total credit market in the study area and it is very high in CM where it supplies around 51 percent of the total credit.

The average size of loan by sources is presented in Table 14.3. It appears that Bank provides the highest loan size and NGO is the lowest.

Table 14.2 : Distribution of loans by sources of loan

Sources of Loan	Polders			All polders
	CM	CBD-II	CBT	
Bank	33.7	71.5	64.0	60.9
NGO	15.1	17.4	8.0	11.4
Money lenders	51.2	11.1	28.0	27.6
Total	100	100	100	100

Table-14.3 : Average loan by sources in three polders

Source	CM N=96	CBD-II N=80	CBT N=201	All polders N=377
Bank	1771	6794	5876	5025
NGO	792	1650	731	942
Money lender	2686	1059	2571	2279
Total	5249	9503	9178	8246

7.11.3 Rate of interest

The generally there is no apparent rate of interest for the borrowing from the traditional moneylenders as they charge 5 to 6 *maunds* of paddy (1 *maund*=37.5 kg. approximate) for each thousand Taka. They do not charge any exclusive interest as it is prohibited in Islam and socially down grading. They charge such fixed amount of paddy to avoid the religious injunction on interest, and charge the fixed amount of paddy dictated by market price of paddy apparently on a ground that they could sell their paddy in the open market during the lean period at a high price like this (5-6 maunds per thousand Taka). This means has to give

For the borrowings from the NGO the exclusive interest is 12 percent but eventually it is more than 27 percent.

7.11.4 Use pattern of loans

Credit use for productive invest as is seen in Table 14.4 is the highest use with about 49 percent of the total loans. Investment includes land and other productive assets like rickshaw, van, etc purchases, fish culture, pond digging, net and boat, net purchase, agricultural input use recovery of mortgaged land, and business, land purchase. Among the

productive investment business ranks the second position with 11%. Unproductive uses of loan, such consumption, treatment, and marriage, dowry and other social festival are also considerably high with about 32.8 percent of the total loan and for consumption it is 19% and highest in CM with 23%.

Table 14.4 : Distribution of loan by use pattern in three polders

Uses	Polders			All polders
	CM	CBD	CBT	
Consumption	22.6	19.3	17.9	19.0
Marriage	3.4	1.7	6.8	5.0
Treatment	9.9	3.0	8.3	7.3
Litigation	0.0	0.0	2.7	1.6
Unproductive investment	35.9	24.0	35.6	32.8
Land purchase	13.5	10.0	6.0	8.2
Mortgaged land recovered	0.0	0.0	2.6	1.5
Cow purchase	6.5	9.7	5.3	6.6
Agricultural production	13.8	10.2	16.1	14.3
Land clearing	2.2	0.0	0.0	0.4
Fish culture	0.0	0.0	1.7	1.0
Pond digging	0.0	1.2	0.2	0.4
Net purchase	0.6	0.0	0.4	0.4
Business	6.5	20.1	8.5	11.0
Trolley /power tiller	2.0	2.0	0.0	0.8
Trolley repairing	0.0	0.9	0.0	0.2
Asset purchase	1.8	0.0	1.7	1.3
Advance to lab	0.0	0.0	3.8	2.3
Paddy purchase	0.0	0.7	1.3	0.9
Productive investment	46.9	54.7	47.6	49.3
Housing	7.6	4.9	4.2	4.9
Loan payment	7.9	16.4	10.0	11.2
Education	1.0	0.0	0.2	0.3
Abroad	0.0	0.0	2.1	1.2
Others	0.6	0.0	0.3	0.3
Total	100	100	100	100

7.12 Land purchase

In three polders 26% of the surveyed settlers have purchased land after land settlement (Table-15.1). In CBT around 27% of the surveyed households have purchased land while about 24% of the surveyed settlers have purchase land.

Table-15.1 : Percentage of households with land purchase in three polders

Polders	Number of total hh	Households purchased land	
		Number	percent
CM	96	24	25.0
CBD-II	80	19	23.8
CBT	201	55	27.4
All polders	377	98	26.0

The average amount of land purchased 0.30 acres (0.12 ha) per household with respect to total surveyed households and 1.1 acres (0.45 ha) with respect to land purchasing households (Table-15.2). The land purchase is highest in CM with 0.40 acres (0.16 ha) with respect to total surveyed households and lowest in CBD-II with 0.1 acre (0.04 ha).

Table 15.2 : Amount of average land purchase in three polders
(in acres)

Polders	With respect to	
	Total hh	Purchasing households
CM	0.4	1.6
CBD-II	0.1	0.5
CBT	0.3	1.0
All	0.3	1.1

Table-15.3 presents the distribution of land by land types. It appears that a little more than 54% of the total purchased land are settled land (land that have official title) and About 40% of the purchased land are *Khas* land and the purchasers of the land have bought only the possession of the *Khas* land with an expectation that they would get the official title when settlement operation would be done or they would somehow manage the official title of the land. It is very high in CM where 64% of the total purchased land are of the *Khas* land and the buyers have bought only the possession. The purchase of the possession of the *Khas* land is higher in CM from the buyers have bough the possession of *Khas* land in Nagulia and Naluar chars. Both the chars are new and *Khas* land and are close to CM.

Table 15.4 shows the buyers by types of land. It appears that 71.4% of the buyers have bought the settled land and about 30% have bought the possession of the *Khas* land. However, the buyers of the *Khas* land is very high in CM (71%).

The average size of purchased land is almost double for *Khas* land in CM (Table-15.5) but it is less than half in CBT and very negligible in CBD-II. This is because of the fact that *Khas* land is available in plenty near CM and scarce for CBD-II. Moreover, the value of the possession of the *Khas* land is lower than that of the land with official title.

Table 15.3 : Distribution of land by Types of land in three polders

Land type of land	Polders			All
	CM	CBD-II	CBT	
Settled khas land	30.6	58.3	69.6	54.4
Possession of khas land	63.7	3.9	30.4	39.9
Non-Khas	5.7			2.0
Others		37.8		3.7
Total	100	100.0		100

Table-15.4: Distribution of the land buyers by types of land

Types of land	CM		CBD-II		CBT		All	
	No.	%	No.	%	No.	%	No.	%
Settled khas land	8	33.3	16	84.2	46	83.6	70	71.4
Possession of khas land	17	70.8	1	5.3	11	20.0	29	29.6
Non-khas land	2	8.3	2	10.5		0.0	4	4.1
Total	24	112.4	19	100	55	103.6	98	105.1

Note: Some of the respondents have bought different types of land

Table-15.5 : Average land purchased by types of land

(land in acres)

Land types	CM	CBD-II	CBT	All
	N=96	N=80	N=201	N=377
Settled khas land	0.12	0.07	0.20	0.15
Possession of Khas land	0.25	0.01	0.09	0.11
Non-khas land	0.02	0.05		0.02
Total	0.40	0.13	0.29	0.28

Table-15.6 shows the proportionate households of each land categories that bought land. It appears that there no strong co-relationship between the land purchasers and land ownership sizes.

Table-15.6 : Distribution of the land buyers by land ownership size in three polders

(percent)

Landownership size	Polders			All polders
	CM	CBD-II	CBT	
0.01-0.50	8.7	45.5	40.0	26.5
0.51-1.00	28.0	30.8	24.3	26.7
1.01-1.50	28.0	16.7	21.1	22.0
1.51-2.00	36.4	24.1	31.3	30.4
>2.00	0.0	0.0	28.6	21.1
Total	25.0	23.8	27.4	26.0

*Land ownership has been categorised based on land received from CDSP-II

Table-15.7 shows the average value purchased land. It is seen that the average value of land per household with respect to total surveyed households is Taka 9404 while it is Taka 36424 per household with respect to the land purchasing households.

Table-15.7 : Average value of land purchased in three polders
(in Taka)

Polders	With respect to	
	Total households	Purchasing households
CM	10474	41896
CBD-II	6019	25342
CBT	10240	37424
All	9404	36177

7.13 Income and income sources

The average annual income is presented in Table-16.1. The average income is Taka 41006 in a year in three polders together and it is highest in CM with taka 46638 and lowest in CBD-II with 36611.

Table-16.1 : Average income per household in three polders

Polders	Number of hh	income (Taka)
CM	96	46638
CBD-II	80	36611
CBT	201	40065
All polders	377	41006

Table-16.2 shows that agriculture is the major source of income in all three polders as it provides 38 percent of the total income of the surveyed households. Agriculture includes livestock, vegetables gardening, fish culture, orchards/fruits and poultry. Income from wage is substantial as it gives about 18 percent of the total income of the surveyed households. Income from wage is very high in CBD-II where more than 35 percent of the income comes from it. Many labour migrate to out side in all three polders but is high among the settlers of CBD-II.

Table-16.2 : Distribution of income by sectors in three polders

Sector	CM	CBD-II	CBT	All
Crop	15.6	20.7	20.5	19.1
Livestock	2.9	3.6	3.9	3.5
Vegetables	3.5	1.1	3.6	3.1
Cultured Fish	6.8	4.1	8.4	7.1
Orchards	1	6.8	2.3	2.8
Poultry	1.7	3.2	2.5	2.4
Sub-agriculture	31.5	39.5	41.2	38.0
Fishing	6.7	2.2	2.3	3.5
Wage	13.6	35.3	13.5	17.6
Transport	4.9	9.3	3.2	4.9
Business/shop keeping	10.3	5.8	18.8	13.9
Cottage	0.5	0	1.3	0.8
Service	19.8	6.1	8.8	11.4
Remittance	9.8	0	3.9	4.9
Other sectors	2.7	1.7	7.1	4.8
Total	100	100	100	100

Table-16.3 presents the distribution of the surveyed households by income ranges.

Table-16.3: Distribution of the surveyed households by income range

(percent)

Income range	CM		CBD-II		CBT		All	
	#	%	#	%	#	%	#	%
<20000	29	30.2	11	13.8	43	21.4	83	22.0
20001-30000	24	25.0	24	30.0	60	29.9	108	28.6
30001-50000	18	18.8	30	37.5	52	25.9	100	26.5
50001-75000	11	11.5	12	15.0	28	13.9	51	13.5
75001-10000	6	6.3	3	3.8	8	4.0	17	4.5
100001-15000	4	4.2			6	3.0	10	2.7
15000+	4	4.2			4	2.0	8	2.1
Total	96	100	80	100	201	100	377	100

CHAPTER 8

CONCLUSION

8.1 Land allotment and agricultural land

About 87 percent settlers have got no agricultural land. They are the poorest of the poor and have been rehabilitated in the Clustered villages (popularly known as CV or colony). Most of the land recipients belong to the land ownership Groups of 1.01-.50 acres and 1.50+ acres.

8.2 Land possession status

All settlers have got the possession of their land either fully or partially. About 9 percent have not got their all allotted land.

Non-possessed land is higher for CV house allotment holders as 30% of the CV settlers have unoccupied land. Of total allotted land 91% were occupied by the settlers before official settlement and only 9 % of additional land recovered from the illegal occupiers such as *jotedars* and land above the official ceiling were given to the landless people.

8.3 Land retention status

A little more than 23 percent of the total sample (including both interviewed and those who left the polder) have sold land. Of them 8.2 percent have left the polders though they were residential settlers at the time of settlement. In terms of land it involves about 11.7 percent; 4.8 by those who have left the polders and 6.9 percent by those who are still living in the polders. On the other hand settlers are also buying land. It has been reported that 26 percent of the interviewed households (377 households were interviewed) have purchased land. The average amount of purchased land is 0.30 acres (0.121 ha) and the average sale of land is 0.10 acres (0.040 ha).

In short about 92 percent of the settlers are still have retaining their land; fully or partly. The land lost by those who have lost land partly constitute only 6.9 percent. This means that land retention amount to 89.3 percent.

8.4 Land operation and land allotment

Almost 80% of the agricultural land recipients, operate land under own management, and of them 25% partially and 75% fully. About 20% of the agricultural land recipients are non-operating landowners (they lease out their land). The agricultural land operating households operate have 72% of their total land under own cultivation and share crop out (12.2%) or mortgage out (12.2%) or both the rest of the land. Non-operating households is higher among the CV households (28.3%) compared with that of the non-CV households (18%).

There is a positive co-relation between the landownership size and the operation of agricultural land as it increases with land size increases and vice versa.

8.5 Farm economy

A little more than 73% of the total surveyed households are farm households. More than 51% of the total farms have farm size more than 1.50 acres. Though most of the land recipients have got land below than 2.00 acres yet the farm size is higher because they have share cropped in land from others. In each polder there are big landowners as well as absentee landowners from who they have mostly share cropped and/or mortgaged in land. Besides, many of them share crop in land from outside polders. Of total farms, 55% are pure owner operator, meaning thereby they do not have any share in and/or mortgage in land. The rest 39% of the farms are owner-cum-tenants farms and 5% are pure tenants.

Both labour hiring is universal in the study areas. A small number of farm households own (17%) drought animals and they are mostly from the large farm groups.

8.6 Cropping intensity inside the polder

The cropping intensity is about 190%. The Aus coverage is 36% of the total net cropped areas and *rabi* acres comprises 57%. The coverage of *rabi* has been increasing gradually. HYV Aman coverage season is lower than that of the Aus HYV coverage and it is 18.3% during the Aman season and 29% during the Aus season.

8.7 Tenancy and HYV technology relationship

There is an impact of the tenancy pattern on HYV coverage. The HYV coverage is higher on own land compared with the sharecropped in land. Similarly, the *rabi* coverage is higher for the own land than that of the sharecropped in land.

8.8 Land settlement and livelihoods

The quality of lives of the settlers has improved as their housing conditions and living environment have improved. But the settlers have meagre durable household assets still.

Human Resource is one of the non-land assets that contribute to enhance the income of the settlers. About 28% of the total household heads are literate. More than 92% of the children are enrolled with the primary school.

Agriculture is the major economic sector for the settlers with farming, sharecropping and labour selling in the agriculture. Women participate in the some of the field agricultural activities. Land sale, mortgage out and borrowing from the banks and from the moneylenders are three important coping strategies for the settlers.

Annex-1: Average trees per household in three polders

Varieties of trees	CM				CBD-II				CBT			
	B	M	S	Total	B	M	S	Total	B	M	S	Total
Mango	2.44	6.96	9.32	18.72	2.44	6.28	14.26	22.98	2.53	7.88	7.75	18.15
Blackberry	0.45	1.68	2.10	4.23	1.46	1.64	2.83	5.93	0.62	2.41	2.57	5.59
Jackfruit	0.42	2.96	3.69	6.47	1.01	3.28	8.71	13.00	0.30	2.44	2.87	5.62
Coconut	7.04	8.96	8.83	24.84	2.76	2.53	5.31	1.60	5.70	9.82	9.12	24.65
Betel nut	3.09	9.74	9.69	22.53	6.00	7.39	27.15	40.54	3.22	14.58	22.17	39.98
Lemon	0.07	0.14	0.22	0.43	0.24	0.24	0.64	1.12	0.00	0.23	0.23	0.48
Jamrul	0.14	0.18	0.22	0.54	0.04	0.30	0.41	0.75	0.02	0.25	0.21	0.49
Custard apple (Ata)	0.24	0.45	0.90	1.60	0.25	0.50	1.65	2.40	0.10	0.62	0.63	1.36
Gab	0.77	1.84	3.13	5.74	0.30	0.65	3.44	4.39	0.42	2.10	2.91	5.44
Kamranga	0.26	0.61	0.76	1.64	0.14	0.13	0.23	0.49	0.10	0.22	0.28	0.61
Tamarind	0.67	2.00	1.97	4.64	0.49	0.64	0.49	1.62	0.72	2.10	2.38	5.21
Akashmoni	0.11	0.17	0.25	0.54	0.56	1.49	1.95	4.00	0.09	0.28	0.62	1.00
Ipilipil	0.26	0.36	0.35	0.98	8.65	11.45	16.80	36.90	1.28	2.81	3.19	7.28
Bot /Rendi Karoi	3.29	7.77	7.64	18.70	6.94	19.39	34.68	61.00	4.53	13.19	16.30	34.03
Shil Karoi	2.19	4.71	4.44	11.34	0.93	1.96	2.19	5.08	2.27	6.20	5.05	13.52
Jarul	0.21	0.31	0.26	0.78	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.00
Garzan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.03	0.02	0.06
Tamarisk	0.16	0.13	0.11	0.40	0.00	0.00	0.00	0.00	0.07	0.14	0.12	0.33

B=Big

M=Medium

S=Small

Annex 2.1: Income sources and involved households (%)

Income sources	CM	CBD-II	CBT	All
Agriculture	75.3	85.0	82.1	81.0
Livestock	37.1	32.5	34.3	34.7
Vegetables	91.8	66.3	94.5	87.8
Fishery	91.8	86.3	92.0	90.7
Fruits	29.9	93.8	54.2	56.3
Poultry	90.7	85.0	92.0	90.2
Fish collection	19.6	13.8	6.5	11.4
Wage	50.5	75.0	44.8	52.6
Transport	14.4	17.5	11.4	13.5
Business/shop keeping	11.3	12.5	27.9	20.4
Cottage industry	13.4	0.0	9.0	8.2
Service	14.4	5.0	12.9	11.6
Remittance	5.2	0.0	2.5	2.6
Others	16.5	3.8	30.3	21.2

Annex-2.2: Average income by sources and CV status

Sectors	Average income(Taka) with respect to all hh		
	CV	Non-CV	Total
Agriculture	1978	9485	7852
Livestock	737	1650	1452
Vegetables	1177	1303	1275
Fish culture	1570	3299	2923
Fruits	590	1299	1145
Poultry	568	1084	972
Fishing	2190	1245	1450
Wage	7639	7122	7234
Transport *	3634	1541	1996
Business/shop	5240	5811	5687
Cottage industry	93	402	335
Service	10143	3180	4695
Remittance	610	2390	2002
Others	1102	2235	1988
Total	37271	42046	41006

Wage includes day labour, labour sardar and earth-cutting/brick field

*Rick/van/other transport

Note Average income with respect to all households

Annex-2.3: Average income by Occupation

Occupational categories	CM		CBD-II		CBT		All polders	
	# of hh	Taka	# of hh	Taka	# of hh	Taka	# of hh	Taka
Farmer	24	41754	23	40943	57	46816	104	44349
Wage laborer	26	24448	37	30000	53	22988	116	25552
Business	8	68463	6	39717	36	63011	50	61088
Transport worker	7	30190	8	44013	9	31461	24	35274
Fishermen	5	44040	1	50500	1	129000	7	57100
Service	13	55173	5	47260	18	45189	36	49082
Others	13	87923			27	24902	40	45383
Total	96	46638	80	36611	201	40065	377	41006

Note: Average with respect to number of households of each occupational category

Annex-2.4: Average Income by Farm Size

Farm categories	CM		CBD-II		CBT		All polders	
	# of hh	Taka	# of hh	Taka	# of hh	Taka	# of hh	Taka
Non-farmer	31	55238	16	34650	54	30832	101	38928
0.01-0.50	6	30517	13	31538	16	29258	35	30321
0.51-1.00	7	34271	12	30975	20	27163	39	29612
1.01-1.50	13	31008	14	36579	31	36582	58	35332
1.51-2.50	19	37166	14	37700	35	33279	68	35275
2.51-5.00	15	57487	9	43488	31	53026	55	52682
5.00+	5	74060	2	80750	14	102443	21	93619
Total	96	46638	80	36611	201	40065	377	41006

Annex-2.5: Average Income by Landownership (based on Arable land) size

Landownership size (arable land based)	CM		CBD-II		CBT		All polders	
	# of hh	Taka	# of hh	Taka	# of hh	Taka	# of hh	Taka
Landless	21	54394	6	19233	24	25895	51	36846
0.01-0.50	8	37288	16	29106	23	36627	47	34179
0.51-1.00	14	23729	12	32625	49	34464	75	32166
1.01-1.50	13	32188	17	38800	43	33355	73	34416
1.51-2.00	12	36158	16	38756	29	43470	57	40607
>2.00	28	66146	13	52046	33	66836	74	63977
Total	96	46638	80	36611	201	40065	377	41006

Annex-2.6: Average Income by Landownership (based on all types of land) size

Landownership size (Total land based)	CM		CBD-II		CBT		All polders	
	# of hh	Taka	# of hh	Taka	# of hh	Taka	# of hh	Taka
Landless					4	14780	4	14780
0.01-0.50	24	53970	14	22721	30	27903	68	36036
0.51-1.00	10	22310	11	30073	37	32100	58	30028
1.01-1.50	14	23114	15	37027	44	34322	73	32728
1.51-2.00	14	31989	21	40386	36	36072	71	36543
>2.00	34	64335	19	46132	50	63210	103	60431
Total	96	46638	80	36611	201	40065	377	41006

Annex-2.7: Average Surveyed households by Income Range and CV status

Income range	CV		Non-CV		All	
	#	%	#	%	#	%
<20000	37	45.1	46	15.6	83	22.0
20001-30000	21	25.6	87	29.5	108	28.6
30001-50000	11	13.4	89	30.2	100	26.5
50001-75000	6	7.3	45	15.2	51	13.5
75001-10000	4	4.9	13	4.4	17	4.5
100001-15000	1	1.2	9	3.1	10	2.7
15000+	2	2.4	6	2.0	8	2.1
Total	82	100	295	100	377	100

Annex-2.8: Percentage Distribution of income by sectors and CV status

Sectors	CV	Non-CV	Total
Agriculture	5.3	22.6	19.1
Livestock	2.0	3.9	3.5
Vegetables	3.2	3.1	3.1
Fish culture	4.2	7.8	7.1
Fruits	1.6	3.1	2.8
Poultry	1.5	2.6	2.4
Agricultural sector	17.8	43.1	38.0
Fishing	5.9	3.0	3.5
Wage	20.5	16.9	17.6
Transport sector	9.8	3.7	4.9
Business/shop keeping	14.1	13.8	13.9
Cottage industry	0.2	1.0	0.8
Service	27.2	7.6	11.4
Remittance	1.6	5.7	4.9
Others	3.0	5.3	4.8
Total	100	100	100

