



Accessing and Retaining Access to the Sandbars by the Extreme Poor: Experiences from the Practical Action Project

shree working paper 9



Extreme Poverty Research Group (EPRG)

shiree

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The Extreme Poverty Research Group (EPRG) develops and disseminates knowledge about the nature of extreme poverty and the effectiveness of measures to address it. It initiates and oversees research and brings together a mix of thinkers and practitioners to actively feed knowledge into practice through interventions taking place in real time. It is an evolving forum for the shiree family to both design and share research findings.

The data used in this publication comes from the Economic Empowerment of the Poorest Programme (www.shiree.org), an initiative established by the Department for International Development (DFID) and the Government of Bangladesh (GoB) to help 1 million people lift themselves out of extreme poverty. The views expressed here are entirely those of the author(s).

The paper has been peer reviewed by colleagues in either the Chars Livelihood Programme (CLP), the UNDP Urban Partnerships for Poverty Reduction (UPPR) and BRAC's Challenging the Frontiers of Poverty Reduction – Targeting the Ultra Poor (CFPR-TUP) programmes – all part of the DFID/UKaid extreme poverty portfolio in Bangladesh.

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EXECUTIVE SUMMARY

A variety of means and mechanisms have been recommended to assist with the implementation of projects aimed at allowing the extreme poor to cross the lower poverty line. The Practical Action approach argues that to deal with extreme poverty, one potentially effective method is to equip households with technology that builds their capacity to use unutilized natural resources, in this case relatively less fertile sandbars or river beds. In the northwest of Bangladesh, there are vast areas of sandbars that appear in the dry season which could provide livelihood opportunities to the extreme poor. Accessing these sandbars for cropping can help extreme poor households diversify their incomes and facilitate a process of asset building alongside reducing the risks which threaten their livelihoods. It is one way of accessing a means of production.

Since 2005, Practical Action has been introducing sandpit cultivation technology suitable for use in the unfertile sandbars. It has been supporting extreme poor households in the cultivation of pumpkins under the River Erosion Project. This Shiree-supported project is a scaled-up version of a previous Practical Action project aimed at creating livelihood opportunities for those extreme poor living alongside the flood protection embankment of the Teesta and the Dhorola Rivers in four north-western districts of Bangladesh.

This study investigates the processes of negotiation undertaken to gain access to the sandbars. In so doing, the study tried to identify the main factors that facilitated successful access to sandbars by the extreme poor, and to question which approaches and methods are likely to continue to work in the future. In order to do this, the study looked specifically at the advantages and disadvantages of existing modes of access to sandbars, including free access to crop-sharing, and explored the different roles of relevant stakeholders (current and future). Key questions included: what are the factors that could change future access modalities? How long will land claimants allow free access by the extreme poor if sandbar cultivation proves profitable (despite the fact that the land remained unused before the project)? What is the role of local government and local administration in the on-going access negotiation process in relation to protecting the potential long-term gains secured by the extreme poor? Are there characteristics or features of sandbars (which change in size and location every year) which give the extreme poor leverage or greater chances of access?

The research focuses on the different types of agreements and arrangements established between land claimants and groups of extreme poor households that are involved in sandbar pumpkin cultivation. The research is highly relevant as in the first year of the project, there were no claims on the land because people felt it was not productive. With the pumpkin cultivation proving to be a success, a number of elites as well as some of the extreme poor who lost land because of river erosion made claims on the land at the start of the second year of the project. These claims posed a threat to the potential gains the extreme poor could secure from the sandbars. Lessons are drawn from the research with a view to identify relevant project recommendations and policy advocacy issues.

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1. INTRODUCTION

Various mechanisms have been recommended for implementing projects to help the extreme poor move out of poverty. The Practical Action approach argues that to deal with extreme poverty, one potentially effective approach is to equip households with technology that will build their capacity to use unutilized natural resources; in this case relatively less fertile sandbars or river beds. In the northwest of Bangladesh, there are vast areas of sandbars that appear in the dry season, which could provide livelihood opportunities to the extreme poor.

Since 2005, Practical Action has been introducing sandpit cultivation technology suitable for use in relatively less fertile sandbars under the River Erosion Project. In 2009, the initiative was scaled up with the support of Shiree and this allowed for the introduction of the technology to a larger section of the population living alongside the flood protection embankment of the Teesta and the Dhorola Rivers in four north-western districts of Bangladesh.

Through the project, extreme poor people are engaged in crop cultivation in the sandbar/river bed which is otherwise barren or abandoned. Throughout implementation, attempts have been made to involve the extreme poor in agricultural production with the aim of increasing their earnings from crop production by providing skill and capacity. This is seen as a potentially important route out of extreme poverty.

The sandbars are dynamic and depend upon the flood situation and available water flow throughout the year. They are available for cultivation/use only in the dry season (November to April). One of the crucial issues relates to the ownership of the sandbars. Since the sandbars are normally under water, they belong legally to the Government. The land reform act of 1997 encourages access to such land by the poor, a measure which is consistent with a history of laws and ordinances going back to the East Bengal Acquisition Act as well as the Tenancy Act of 1950. However this does not stop local elites and other influential people from making ownership claims on such land in the name of customary rights which deny the the access to the landless extreme poor. Often claims on sandbars are made by people who may have lost land in previous years through river erosion. The claim is often 'accepted as legitimate' because the claimants have secured the help of *amins* (surveyors) who act without authorization from the relevant government department¹. Hence for most of the extreme poor, access to the sandbar normally entails a process of negotiation and bargaining with local elites. The process of negotiation is always uncertain, and seldom favours the extreme poor.

In this research, therefore, an attempt has been made to explore the issues associated with the extreme poor's access to the sandbars. We also try to hypothesize the potential impacts of access on long-term poverty alleviation, consider potential future challenges, and recommend actions to overcome these. The overriding rationale for this research is that in negotiating access to the sandbars there is a constant risk that gains secured from cultivating sandbars by the extreme poor can be lost in the subsequent negotiation of access to the same lands.

¹ Given the complexity of the ownership issue, for the purposes of this research we refer to those claiming ownership of land as 'land claimants/owners'.

A key focus of this paper is the problem of land claimants who initially agreed to a zero-percent share of sandbar products but who then demanded a higher share in year two because they had observed the success of the initiative. The fear is that in year three, the demand may rise further or the extreme poor may face other costs such as input costs, calling into question the sustainability of the project impacts.

2. RESEARCH QUESTION AND SUB-QUESTIONS

2.1. MAIN QUESTION / STATEMENT

The research focuses broadly on the question of access and its relevance for longer term livelihood sustainability of the extreme poor. A key set of checklist questions have guided the research:

- What are the existing modes of access to the sandbars? What advantages and disadvantages do they present?
- Who are the stakeholders (current and future) involved in negotiating access to sandbars and how significant are their roles?
- What are the factors that can affect access negotiations?
- How does access impact on livelihood sustainability?

3. RELEVANCE OF THE RESEARCH

This research is important because one of the key assumptions of the project is that if extreme poor households manage to access the sandbars, and if the appropriate technology is introduced and adapted by extreme poor households, then agriculture production can provide the extreme poverty with a long term successful livelihood option. It is also assumed that it will be possible to secure access to sandbars if a well-crafted advocacy strategy is developed and implemented by committed NGOs.

Innumerable vast sandbars emerge in the river beds during the dry season in north-western Bangladesh. Most of these sandbars remain unused because of their sandy characteristics. The pit cultivation technology introduced by Practical Action Bangladesh has helped produce a growth in crops (pumpkin and squash) in the sandbars. This has enabled extreme poor households to make some significant economic gains. In the first year of the project, more than 500 hundred extreme poor households cultivated pumpkins in the sandbars. They secured access to these sandbars through negotiated agreements with the land claimants.

However, it has been observed that in year two, land claimants have demanded a share of production profits in return for access to the sandbars. As such, different types of informal agreements and arrangements have been negotiated in the second year of the project. Negotiating access to the land is key to the longer term sustainability of the initiative. On the one hand, negotiations may result in payments being made by the extreme poor which effectively remove/reduce any profit. On the other hand, the negotiation process may be a way of avoiding conflicts between land claimants and extreme poor producers.

4. LITERATURE REVIEW

Development practitioners recognize that extreme poverty is a multi-dimensional phenomenon, and that access to natural resources, particularly land, is imperative to addressing poverty. When the problem is gaining sustainable access to land, understanding access dynamics is critical. To date, there has been no research undertaken about access of the sandbars and the dynamics of competition or confrontation for their use. In part this reflects the fact that previously sandbars have not been used for significant agricultural cultivation. Unlike most char areas of Bangladesh, there have been few claims, disputes or protracted struggles over the use of sandbars.

In an agricultural country like Bangladesh where 160 million people live in a small area with only 9 million hectares of arable land, access to cultivable land is a significant issue. Distribution of land is skewed in favour of wealthier sectors of the population (Barakat, 2004a). The share of the population who are absolutely landless is 22 percent while the functionally landless (0.05-0.50 acres) and marginal farmers (0.50-2.50 acres) together constitute 61 percent of households. Thus, 83 percent of the population own around 33 percent of all land, with the remaining 18 percent own 67 percent of total land. In Bangladesh therefore, land remains a powerful determinant of an individual's economic status, social standing and political strength. This is reflected in some well-known Bangla proverbs such as "*Mati Kinle Harai Na*" (if you buy land, it will not get lost), "*Jomi na Jom*" (land or Yama – the god of death), "*Jomi Joma Hater Sona*" (accumulating land is like gold in your hand).

Land related disputes and the overall competition for land are therefore characteristics of the political economy of Bangladesh. In his recent research, Barakat (2004) offers an overview of the scale of these disputes. He reports that the total number of annual land-related operating court cases comes to 2.5 million while the amount of land under litigation would be about 2.35 million acres (around one-fourth of all privately owned cultivated land). Taking these figures, he calculates that the annual amount of incidental expenses would be Tk. 250.387 million, which is higher than the amount allocated in the government annual development budget. However the actual costs of litigation would be much higher because of different opportunity costs and rent demands.

There is a typical link between tenure and conflict over land. Changing political and economic factors can increase competition for access to resources such as land. Equally, when new resources arise, new conflicts can be triggered (Jansen, 1987). Land access is of critical importance to rural development, enabling the building of assets for a sustainable livelihood. However it is also widely acknowledged that elites, including touts and *matbars*, politicians and government officials have long been involved in making claims on land that is not legally theirs. This has been demonstrated most clearly in relation to *khas* land in Bangladesh (Barakat et al, 2001). Land grabbing in this way limits the ability of the poor to sustainably turn land into a source of income.

Although there are no known studies on the question of accessing sandbars, there are a number of good studies on the dynamic of accessing *khas* land. These studies tell us that:

- Elites and influentials have most of the access to available *khas* land in Bangladesh;

- Knowledge on the amount of *khas* land available is patchy and it is not easy to find out what land is considered *khas*. Often, local government officials work in collusion with elites and deliberately conceal the information;
- There are very clear laws favouring greater access of the poor to government owned land, but these have not been implemented;
- In terms of litigation, the large numbers of court cases show how difficult it is to secure access to *khas* land. In pursuing their rights to *khas* lands, the poor often have to pay a heavy price – including physically. A study of another Shiree supported project provides recent evidence of this (Kabir and Ali, 2011);
- When successful technologies come into play (e.g. shrimp cultivation in *khas* lands in the southern region of Bangladesh) the demand for land dramatically changes. If the new technology brings profits, elites come forward to lay claim on the land.

5. METHODOLOGY

The research is primarily qualitative in its design and approach. The main research phases, together with the main methods used, are outlined below:

- A literature review was carried out to understand and conceptualize existing property rights, land policies and reforms, as well as underpinning political-economic and social contexts. This helped locate the question of sandbar access.
- Group discussions were organized in different locations along the sandbars to map out a range of sandbar access agreements. The information generated through this process was used to determine the number and characteristics of the groups to be selected for subsequent focus group discussions.
- Focus Group Discussions were the primary tools used to collect and probe information. A total of eight focus group discussions were conducted including three with extreme poor producer groups, two with land claimants, two with extreme poor producer associations and one with local community leaders.
- Key Informant Interviews were undertaken with local administrators, members and chairmen of the Union Parishads, NGO staff, members of civil society, officials of line departments and leaders of the sandbar farmer associations. The main objective of the interviews was to identify different interests and perspectives related to sandbar access and use. The interviews were also used to validate information by the different stakeholders.

Throughout the research process, researchers continuously monitored and recorded any ethical considerations. Given the nature of the research, we were aware of the huge potential risk especially to those extreme poor households who were involved in the project. The degree of risk meant that the ethical scrutiny of the research had to be continuous. Information has been validated at different stages of the research with different informants.

6. INTRODUCTION TO PRACTICAL ACTION AND GRADUATION DESIGN

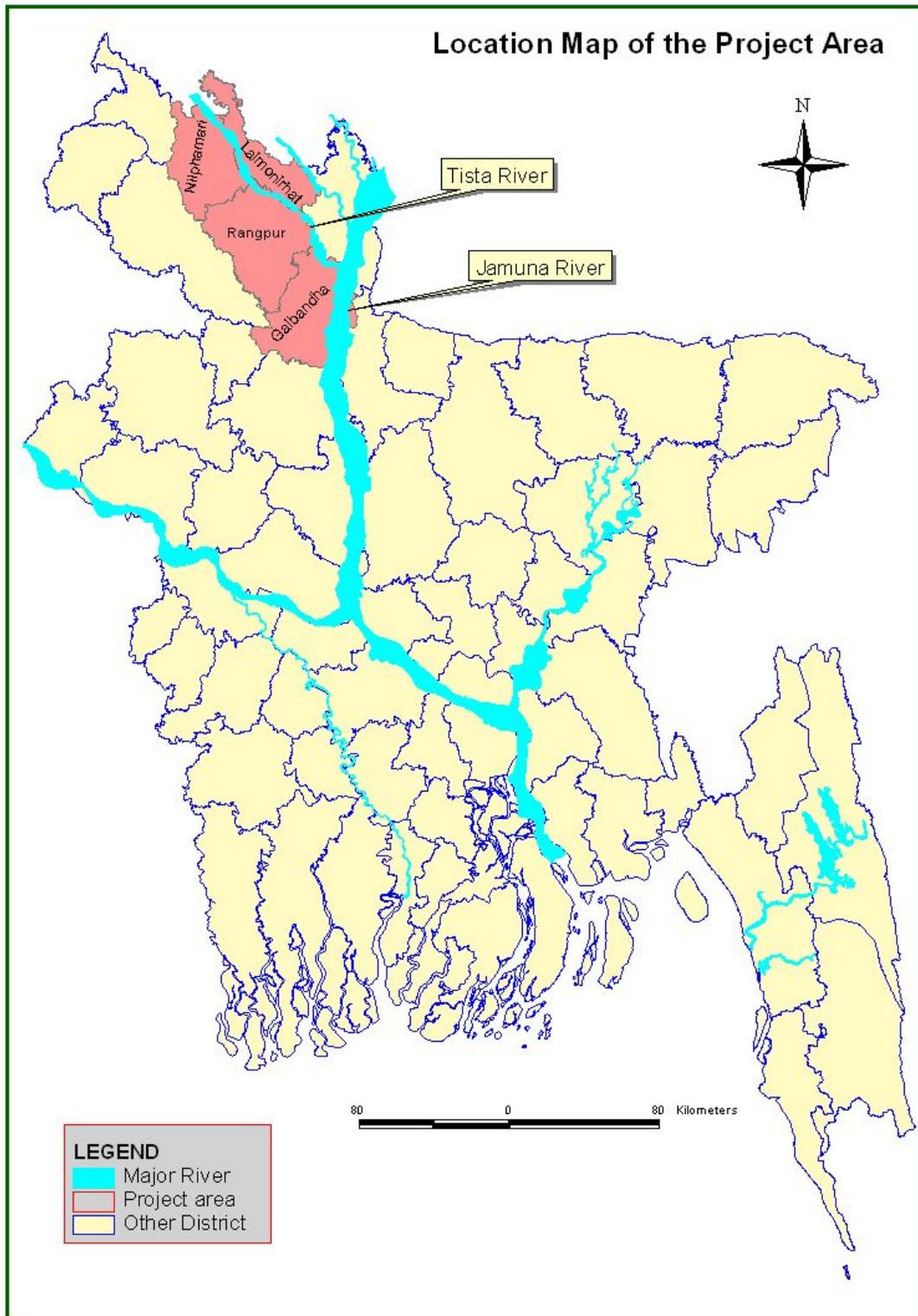
6.1. INTRODUCTION TO PRACTICAL ACTION

Practical Action has been working in Bangladesh for more than sixteen years. Since its establishment, it has been promoting technology focused support strategies to help improve the livelihoods of the poor. The organization has gained valuable experience and an understanding of the root causes of and practical solutions to extreme poverty through the implementation of different projects and a number of pilot programmes.

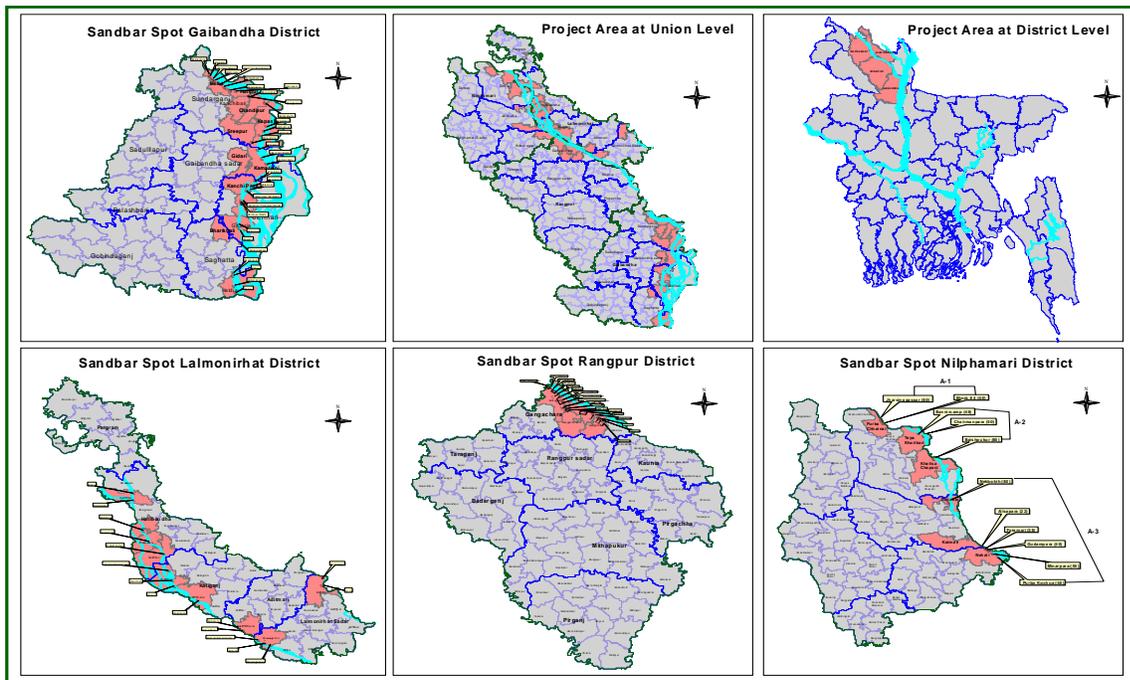
6.2. INTRODUCTION TO THE PROJECT

The Pathways from Poverty: Building Economic Empowerment and Resilience for Extreme Poor Households in Riverine Areas of Bangladesh (PFP) project aims to improve the livelihoods of 50,550 women, men and children (16,850 households), and increase their resilience to natural disasters and extreme poverty in four northern districts of Bangladesh: Gaibandha, Rangpur, Lalmonirhat and Nilphamari. The project is implemented by five partner NGOs namely Own Village Development (OVA), Jhanjira Samaj Kallyan Sangstha (JSKS), Uttara Development Program Society (UDPS), Gana Unnayan Kendra (GUK), and AKOTA (see maps 1 and 2 below).

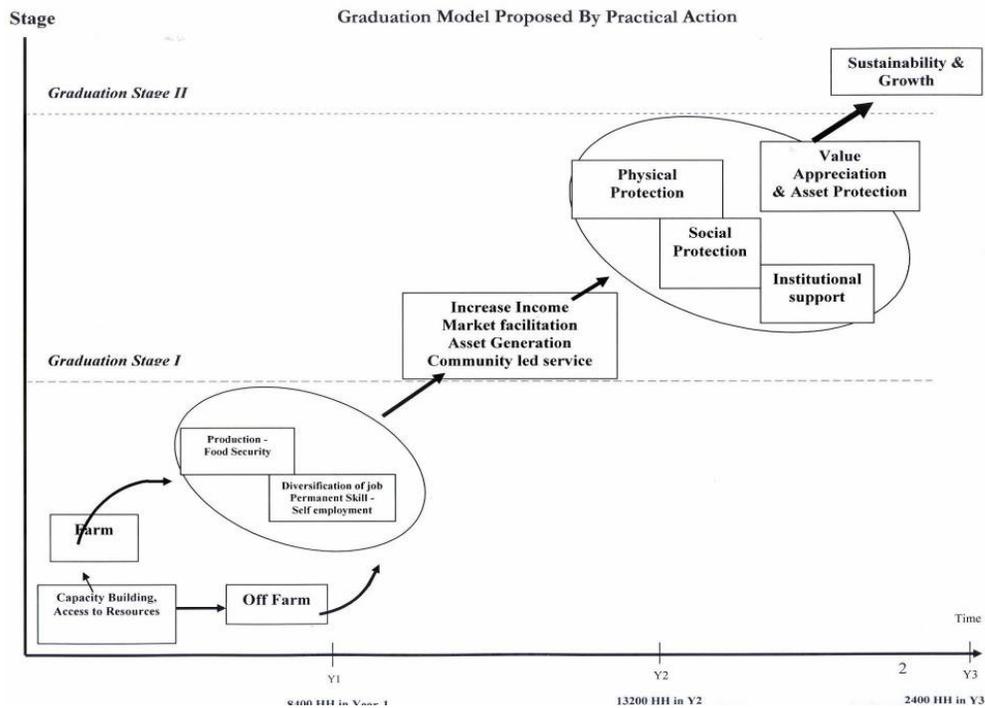
Map1: Location of Project Area



Map2: Location of sandbar cropping areas by district



The extreme poor in the project are mainly landless (98.4 percent of households are landless and only 6.2 percent households are engaged in sharecropping according to the Shiree annual socio-economic survey carried out in 2010) and many are displaced people living in flood protection embankments. The PFP project has adopted a graduation model which increases resilience and livelihoods over time:



The intended project outcomes are:

- 8,000 extreme poor households will secure operational access to the sandbar and underutilized land;
- 16,850 extreme poor households will secure market access and increase their incomes;
- 90 percent of the target households will receive asset protection strategies, increasing their resilience to disaster and seasonal food crises;
- Extreme poor households will have stronger influence over the decision-making process of local government, line departments and private service providers;

7. BACKGROUND TO THE STUDY REGION

7.1. OVERALL CONTEXT OF THE PROJECT AREA

The extreme poor live alongside the Flood Protection Embankment without permission and have very few assets. They suffer from extreme and multiple deprivations. Women-headed households, children and persons with a disability (PWDs) are particularly vulnerable within the community. Socially, the family system and structures are weak, with a high frequency of 'fragmented' households often caused by migration of males. The extreme poor are also often excluded from social and political processes, including their participation in elections and local power structures due to their unstable situation and powerlessness.

The greater Rangpur region has historically been one of the poorest areas in Bangladesh and the incidence of extreme poverty remains proportionally higher than the rest of the country. At the national level in 2005, 40 percent of Bangladesh's population fell below the upper poverty line and 25 percent below the lower poverty line (CPD, 2008). In the munga-prone region, on average 61 percent of the population live below the upper poverty line and 45 percent below the lower one (World Bank, BBS and WFP, 2005). Of the districts most affected by munga (seasonal famine like situation), extreme poverty is highest in Nilphamari, where 55 percent of the population live below the lower poverty line, followed by Kurigram (52.5 percent). Lalmonirhat has the lowest rate of extreme poverty of the five districts. Even here however the rate is still 33.8 percent (Marsden, H (2010).

This poverty situation of the extreme poor households living on the embankment is captured in the Shiree Annual and Quarterly Socio-Economic survey (Table 1,2,&3). This survey revealed that 57.8 percent of extreme poor households had an income of less than or equal to 3,000 taka while 17.2 percent households had an income of less than or equal to 4,000 taka. In terms of asset value, the survey found that 54.7 percent of extreme poor households had assets worth less than or equal to 2,000 taka. At the same time, among extreme poor households, 53.1 percent depend upon agriculture labouring for maintaining their livelihoods whilst 60.9 percent are engaged in non-agricultural labouring.

Table 1: Distribution of income of extreme poor by category

Income category	value	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 2000		24	37.5	37.5	37.5
2001-3000		13	20.3	20.3	57.8
3001-4000		11	17.2	17.2	75.0
More than 4000		16	25.0	25.0	100.0
Total		64	100.0	100.0	

Source: Shiree Quarterly Socio-Economic Survey

Table 2: Distribution of asset value owned by extreme poor

Category asset value	by	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 1000		12	18.8	18.8	18.8
1001-2000		23	35.9	35.9	54.7
2001-5000		19	29.7	29.7	84.4
More than 5000		10	15.6	15.6	100.0
Total		64	100.0	100.0	

Source: Shiree Quarterly Socio-Economic Survey

Table 3: Distribution of occupation of extreme poor

Occupation	Frequency	Percent	Valid Percent	Cumulative Percent
Unemployed	3	4.7	4.7	4.7
agri day labour	31	48.4	48.4	53.1
other day labour	5	7.8	7.8	60.9
domestic maid	6	9.4	9.4	70.3
rick van boat cart	5	7.8	7.8	78.1
skilled labour	1	1.6	1.6	79.7
fishing aquaculture	4	6.3	6.3	85.9
industrial garment	1	1.6	1.6	87.5
petty trade	2	3.1	3.1	90.6
other business	1	1.6	1.6	92.2
Begging	4	6.3	6.3	98.4
Other	1	1.6	1.6	100.0
Total	64	100.0	100.0	

Source: Shiree Quarterly Socio-Economic Survey

The extent of unutilized land in northern Bangladesh is considerable. The local government land department estimates that there are approximately 180,000 ha of unutilized riverbeds in the five northern districts of Bangladesh. This satellite imagery captured from Google Earth shows just how much of the sandbars are unutilized.

Map3: Sandbars of Teesta River near Rangpur



7.1.1. TECHNOLOGICAL AND MARKETING PROCESS OF SANDBAR CROPPING

Normally, the season for pumpkin cultivation starts in November and is cultivated as an inter crop in potato fields. A one cubic meter sized pit is prepared in October and November when the water has receded. In one decimal of land, around 10 pits are dug, usually around two meters from each other. The pit method involves mixing cow dung, soil, seeds, water and juice. The quantity and frequency of irrigation depends on the type of soil. Project farmers learn to understand the water availability of the soil and as such are able to assess irrigation needs. Ripe pumpkins can be easily stored in houses and are often stored on high platforms in the home.

Most farmers sell their pumpkins to collectors (*piker*) or local consumers, preferring to sell ripe pumpkins for cash. They also have access to nearby Hat/Bazars once or twice a week and can sell both green and ripe pumpkins there. Normally, very limited retailing takes place in these markets. Most of the collectors (*piker*) sell pumpkins to traders (*arotder*) and a few sell to local retailers and hotels.

Farmers do not sell to the large urban markets as these are far from the villages and therefore, incur additional labor and transport costs. They also have to pay commission to the *Arotder* and tax to the lease owners of these markets. The wholesaler and companies take the products to kitchen markets/supermarkets or processing plants in large urban centers, district towns or national markets.

7.1.2. PHYSICAL CHARACTERISTICS OF THE SANDBARS

Sandbars appear in the river of the northern areas of Bangladesh in the dry season (mid-November to Mid-April) mainly due to a decrease in water flow. In the wet season (Mid-April to Mid-October), these sandbars again disappear. Most of the sandbars remain unutilized as sand is the main component. In some areas of the sandbars, there are thin layers of silt,

which have been used for cultivation. Broadly speaking we can distinguish the following categories of sandbar:

- Sandbars covered with sufficient silt have sandy loom soil characteristics and are ideal for cultivation of tobacco and maize. These types of sandbars are generally located on the banks formed by river erosion. Sandbars located close to water sources can also be lucrative for cultivation. Moisture is retained for longer periods here.
- Sandbars with no silt are not suitable for production and therefore remain unutilized. The PAB Project targeted this kind of land because it had developed a technology suitable for this land.
- Upstream sandbars in the North emerge during the dry season and are different from the lands which emerge downstream in the South. The sandbars in the South lands are permanent in nature and are raised from the riverbed by the accretion process of alluvium (an increase in land resulting from alluvial deposits or waterborne sediments). This means they are less likely to erode. As such these lands are inhabited and cultivated. However, the sandbars in the northern part of Bangladesh are not raised and are basically dried up parts of the river bed. This means they are prone to erosion and therefore offer fewer opportunities for income generation.

7.1.3. LEGAL STATUS OF THE SANDBARS

The legal status of the sandbars is not clear according to the country's existing land tenure and management laws and regulations. Generally, the ownership of the land which emerges in the river is determined by the laws related with alluvion and diluvion. However, most of the available land in the river channel appears only in the dry season when the river dries up and is not raised. As such, these lands are not surveyed and therefore information on them is partial and not up to date. According to one local *kanungo* (clerk of land office) and Assistant Commissioner, the sandbars are not regular *chars* and therefore, cannot be brought under revenue and tenancy arrangements. All of this creates confusion about ownership. Formally, according to the existing laws, all river channels are owned by the government, and as such, the sandbars are the property of the government. However in reality, claims are made on land which emerges from the river, often by people who had lost other plots of land to erosion. This enables them to cultivate crops through sharecropping or to lease out the land for cropping.

7.1.4. CURRENT LAND-USE PATTERNS

Most of the sandbar land is unutilized. The sections of sandbars which have the silt cover (deposition of alluvium) or include sandy loom soil are utilized for cultivation. However this kind of land is quite rare. In the areas where silt is almost absent, no more than about 15% of the land is used for cultivation. In most cases, the lands are used to cultivate tobacco and maize. However, other crops can also be cultivated including potatoes, chili, onion, and garlic and China koun (Table 4).

Table 4: Crop calendar of the area

Crops	April-May	May-Jun	Jun-Jul	Jul-Aug	Aug-Sep	Sep-Oct	Oct-Nov	Nov-Dec	Dec-Jan	Jan-Feb	Feb-Mar	Mar-Apr
	Boishak	Jaistho	Ashar	Srabon	Bhadro	Aswin	Kartik	Agrahayan	Poush	Magh	Falgun	Chaitro
Water Level	O	Oo	ooo	oooo	ooooo	oo	O	0				
Aman Paddy			Plantation					Harvest				
Boro Paddy	Harvest								Plantation			
Tobacco								Plantation			Harvest	
Pumpkin	Harvest							Plantation			Harvest	

7.1.5. EXISTING LAND TENURE SYSTEM IN THE SANDBARS

The current tenure system of land is slightly different from place to place. The normal arrangement is for sharecroppers to give 100 Tk. per decimal to the land claimant/owner. In the case of fertile land with considerable silt cover, the amount of money per decimal can increase to 150 taka. This is the case of tenure arrangements in Gangachara upazila of Rangpur district. If the land claimant/owner shares the produced crop then normally 60 percent of the crop goes to the producer and 40 percent to the claimant/owner. In these cases, land claimants/owners do not give input support. If the claimant/owner shares input costs (seeds and fertilizer) then the produced crop is divided equally (50:50).

8. EVOLUTION OF RISING SHARES AND OTHER COSTS

8.1. THE FIRST YEAR OF PRODUCTION

Given that the sandbar areas were considered unproductive, they were left unutilized. For this reason, during the first year of the project extreme poor producers gained free access to the sandbars. This however changed in the second year of the project. The sections below outline the process of securing and retaining access to the sandbars.

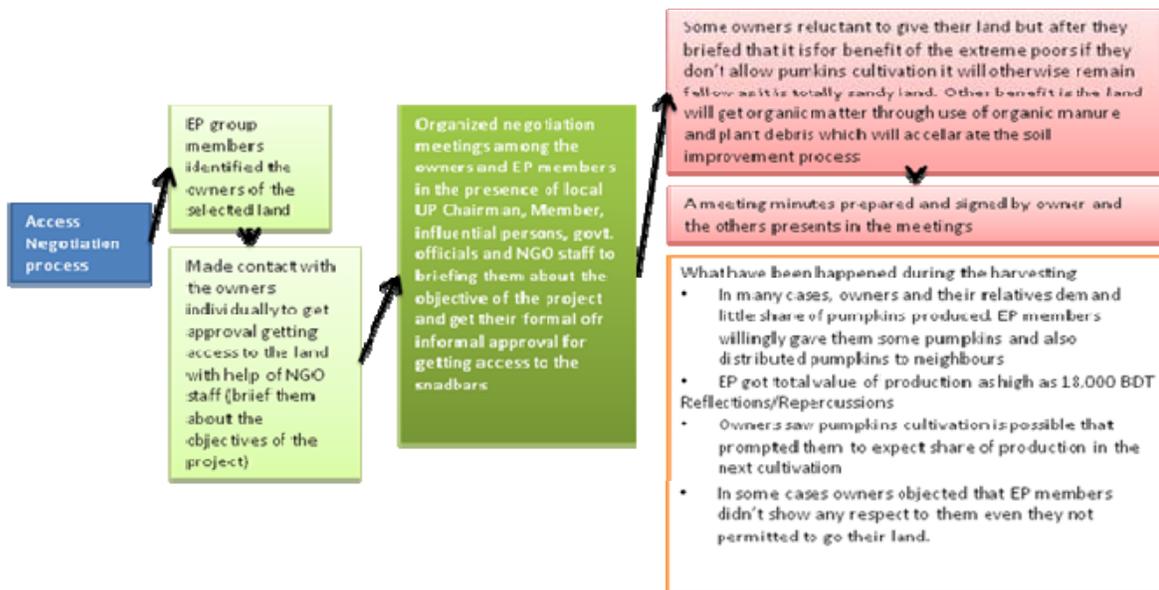
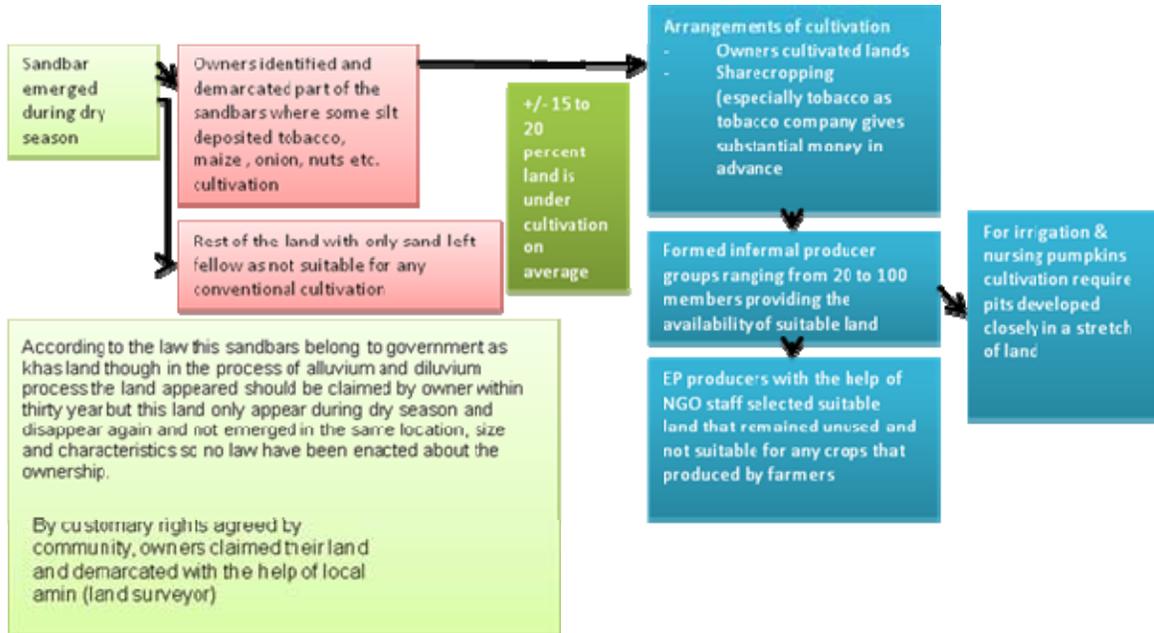
8.2. NEGOTIATING ACCESS

NGO staff selected beneficiaries interested in and capable of sandbar cropping. The beneficiaries were then organized into informal producer groups. These groups identified appropriate and available sandbar plots of land. In identifying the plots of land, the groups considered several factors including proximity to the water, location of households and extent of silt cover.

After identifying suitable land for cultivation, staff and beneficiaries contacted land owners/claimants personally. After a period of negotiation, a consultation meeting was organized in every union of the project area in which land owners/claimants, extreme poor producers, local elites, and the UP chairman participated. In this meeting, the objectives of the project and the method of cultivation were discussed. Minutes of the meeting were kept as a record of approval. In some meetings, the officers of the Upazilla level local line

departments were also present. The meetings were successful in that they helped build consensus around the idea of extreme poor households accessing and using the sandbar plots.

Scenarios of Access to Sandbar In the 1st Year of the Project



In the first year of the project, a total of 583 beneficiaries managed to access sandbar plots and cultivate pumpkins. The beneficiaries received all the profits from the production of pumpkins. At the same time, they decided to give some of the pumpkins to the land owners/claimants free of cost. This was in recognition of the fact that the same

owners/claimants had agreed to let the producers access the land. During the first year, the main benefits for the beneficiaries were:

- The extreme poor secured free access to the sandbars
- Pumpkin production was successful and gave good returns to extreme poor producers
- Households consumed and stored some pumpkins
- Households used stored pumpkins for consumption during the lean season.

8.3. CHALLENGES AND COSTS IN THE FIRST YEAR

In terms of accessing the sandbar plots, there were no reports of significant difficulties for the extreme poor. The agreements reached during the consultation meetings were therefore respected. However, there were challenges in both the marketing and storing of pumpkins. First of all, the extreme poor struggled to access local markets and as such were forced to sell their pumpkins at relatively lower prices. This affected profit margins. Second, most of the extreme poor households lived in small houses which were too small to store 50-60 pumpkins. If there were better storage options, beneficiaries could have retained more pumpkins for consumption in lean periods or for sale when market conditions were stronger.

8.4. NEGOTIATING ACCESS IN THE SECOND YEAR

The second year of the project brought new challenges in terms of land access. On the one hand the actual sandbar plots changed. Some of the plots that were totally sandy the previous year were now silt covered and therefore more valuable. Plots that were located nearer to water sources were also considered more valuable than others. On the other hand, given the success of the first year's cultivation local people realized that the sandbars were valuable and therefore claims on the land also increased. This meant that unlike the first year of the project, securing access to the land was going to be a far more contested process.

During our discussions with extreme poor sandbar producers, we were alerted to various strategies adopted by different people to claim access to the land. For example, even among the extreme poor many claimed that they had previously lost plots of land to the river. In so doing they were trying to legitimize their current claims on the land knowing that locally access is always easier for those who had previously lost land. We also heard of other extreme poor households who were not project beneficiaries, trying to make similar claims about losing land in the past in the hope that they might secure access to the sandbars in the present. This would mean that they would secure access instead of the project beneficiaries. As such, feelings of jealousy prevailed across households who felt that they were also extreme poor and therefore had some entitlement to the sandbar.

8.5. TYPES OF AGREEMENT RESULTING FROM THE NEGOTIATION PROCESS

In the first year of the project, beneficiaries had free access to the land for cropping. There were a number of reasons which allowed for this decision including low demand for the sandbar plots with only 583 beneficiaries in the end taking up production. Moreover plantation started late and again this contributed to an overall low level of demand. Finally, the consultation meeting helped build consensus around the project and its aims.

However, as stated earlier, year two presented a very different scenario. More plots were identified and more households wanted to access the land (see table 5). Moreover the success of year one meant that non extreme poor households were also interested in pumpkin cultivation in year two and began demanding a share of the production. In negotiating access for year two, NGO staff worked with local elites and UP leaders again. As a result, 78% of beneficiaries in 61 spots managed to secure free access in the second year. The remaining 13 sandbar spots were finally cultivated under different sharing arrangements ranging from 10 to 22% crop sharing (see table 6). Some of the beneficiaries who accessed the land had claimed they previously owned land lost to the river.

Table 5: Summary Statistics of Pumpkin Cultivation in Year 1 and 2

Item	PY-1	PY-2
Total BHHS	583	6,129
Total no. of Spots	21	74
Union coverage	12	36
Upazila coverage	7	11
Total no. of pits	64,733	613,900
Total area coverage (acre)	105	1412
Total production (MT)	1,522.8	16,956.77 MT
Total production cost (Tk.)	3,522,081	43,335,583 Tk.
Total gross Income (Tk.)	7,723,944	123,523,178
Cost-Benefit Ratio	01:02.2	2.8

Focus Group Discussions with land owners/claimants revealed that they are no longer interested in granting free access to beneficiaries in the third year, but want a share of the production and preferably cash in exchange for access. Many claimants/owners expressed that they will use the land for pumpkin cultivation in the third year if second year production proves to be profitable. Extreme poor beneficiaries who have land in the cultivated areas also expressed the view that they might prefer crop sharing in year three.

Table 6: Types of agreement in year two

Type of Agreement	No of Spot	%	No of BHHS	%
Free access	61	82.4%	4791	78.17%
10% Crop sharing	3	4.1%	446	7.28%
15% Crop sharing	2	2.7%	140	2.29%
20% Crop sharing	6	8.1%	615	10.03%
22% Crop sharing	1	1.4%	70	1.14%
Input support	1	1.4%	67	1.09%
Total	74	100.0%	6129	100%

The section below offers illustrations of the different access arrangements in different sandbar plots. These are given here to highlight the variety of arrangements. The significance of the different arrangements is that they have very different impacts on the profitability of the production and therefore on the livelihood potential of the project.

Spot 1: 600 decimals of land used by 25 extreme poor households

- In this spot, there were 13 land claimants/owners. Of these, 8 were not SHIREE direct beneficiaries and 5 were SHIREE direct beneficiaries.
- Initially the land claimants/owners were not interested in allowing access to the land. However, extreme poor households eventually secured access by agreeing to pay cash to the land claimants/owners as well as three pumpkins. The amount of cash paid ranged from 600 to 1,000 taka for 27 decimals of land.
- SHIREE direct beneficiaries gave 3-4 decimals of land for the pumpkin production.

Spot 2: 700 decimals of land used by 29 extreme poor households

- Initially land claimants/owners did not agree to give land for production despite attempts by NGO staff and some local leaders to convince them otherwise. Instead the land claimants/owners wanted a share of the product. Eventually a decision was reached that beneficiaries would give 180 pumpkins to the land claimants/owners.
- Extreme poor households therefore agreed to give 5 to 6 pumpkins each.

Spot 3: 1,150 decimals land used by 47 extreme poor households

- At first, the group could not find suitable land for pumpkin production but eventually found an area about 1.5 km from their homes. However, one land claimant/owner refused to provide access stating that he wished to cultivate tobacco instead. As the land was positioned in the middle of the spot, the extreme poor tried to negotiate with the land claimant/owner. Finally, the claimant/owner agreed that they could use the land in return for a share of the pumpkins. They decided that every beneficiary would give two pumpkins to the claimant/owner.

Spot 4: 480 decimals of land used by 20 extreme poor households

- At first this group could not locate suitable land for pumpkin production. They found some land along the local *katcha* road, but land claimants/owners were not willing to allow access. As a result, they travelled a further 3km and found another piece of land. This land however was so far away that they could not cultivate, fertilize or irrigate properly. Also as the land was so far away, it could not be guarded. As a result, pumpkins were often stolen.
- Free access was granted because of the distance, but the land claimants/owners demanded pumpkins in return for their own consumption.

8.6. 'LAND OWNERSHIP' IN THE CULTIVATED SANDBARS

Efforts were made to collect information about the 'ownership' patterns of cultivated sandbar areas from group discussions. Out of a total of 87 project pumpkin cultivation spots, information on 74 spots was gathered. Of the 74 spots, 58 (78.4%) had a combination of beneficiaries and non-beneficiaries claiming ownership of the land. In 16 spots non-

beneficiaries claimed ownership (see table 7). Around 12.47% of extreme poor beneficiaries had to negotiate access in spots where non beneficiaries had claims on the land.

Table 7: Type of ownership by spots

Land Ownership	No of Spot	%	No of Beneficiary	%
Beneficiary + Others	58	78.4%	5,365	87.53%
Only Others	16	21.6%	764	12.47%
Total	74	100.0%	6,129	100%

Another finding to emerge from the focus group discussions was that most of the beneficiaries had access to plots smaller than 60 decimals of land (see table 8). Among extreme poor beneficiaries, 68% had access to plots smaller than 60 decimals. The absence of large plots of land meant that the negotiation process was difficult because of the costs associated with multiple negotiations with land claimants/owners with relatively small plots of land. During focus group discussions, it was argued that the number of beneficiaries with ownership claims on land plays a vital role in negotiating access.

Table 8: Ownership by amount of land

Type of Owner	Area in Decimal	No of Owner	%	
			Total	Part
Beneficiary Owners	Less Than 60	192	16.8%	68.57%
	61-100	46	4.02%	16.43%
	101-199	33	2.89%	11.79%
	More Than 200	9	0.79%	3.21%
	Total	280	24.5%	100%
Others owner	Less Than 60	235	20.56%	27.23%
	61-100	229	20.03%	26.54%
	101-199	195	17.06%	22.59%
	More Than 200	204	17.85%	23.64%
	Total	863	75.5%	100%

8.7. YEAR TWO – OTHER CHALLENGES.

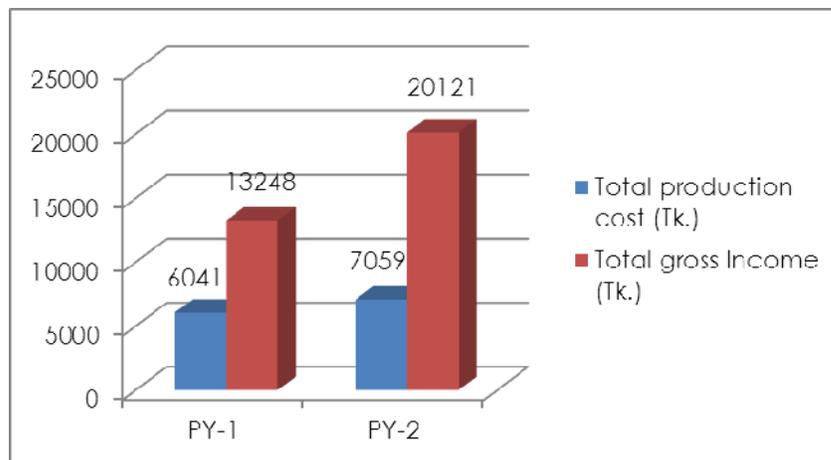
In the second year, land claimants/owners began demanding a share of the production. The share demanded went as far as 20% of the total crop. Besides access, the main other challenges found in year two included:

- Some beneficiaries were forced to cultivate in more distant and remote locations, or to divide the pits in different sandbar areas. This resulted in more complex irrigation and crop management, and higher costs;
- There is evidence of conflict among beneficiaries in relation to inputs, particularly irrigation pumps;
- Even when free access had been agreed, some land owners/claimants still demanded a share of crops later on. This means negotiations had to be reopened and profit margins reduce;
- In exchange for access, some land owners/claimants even demanded to be included in the list of beneficiaries in order to access other project inputs;
- UP representatives and other influential and respected people were not continuously consulted after the negotiation process. This was a weakness since their support could have helped resolve subsequent problems;

8.8. BENEFITS OF EXTREME POOR PUMPKIN PRODUCERS IN YEARS 1 AND 2

Our discussions and interviews with beneficiaries strongly indicate clear benefits in terms of income and household consumption, new skills acquisition, improved capacity, and increased self-confidence. This is supported in information available from project documents. Thus beneficiaries secured on average of 13,248 Tk. and 20,121 Tk. respectively in years 1 and 2 of pumpkin production (chart 1). Pumpkin producers consumed 461,241 pumpkins and distributed 284,324 pumpkins and squash (see table 9)

Chart 1: Average cost and income by beneficiary



Source: PAB document

Table 9: Pumpkin production, consumption and sales by district

District	BHH (PY-1+ PY-2)	Total pumpkin production Information (number)				
		Family Consumption	Distribution	Sold	Stored	Total
Gaibandha	Pumpkin	137300	115270	410677	114761	778008
	Squash	19215	9170	282015	0	310400
Gaibandha	Pumpkin	90088	50699	199733	82194	422714
	Squash	53773	14093	52157	0	120023
Nilphamari	Pumpkin	39579	36019	51485	33241	160324
	Squash	19188	8050	7861	0	35099
Lalmonihat	Pumpkin	46510	25718	178944	57300	308472
	Squash	24935	8396	29472	0	62803
Rangpur	Pumpkin	14822	10261	155105	122284	302472
	Squash	15831	6648	104150	0	126629
Total		461241	284324	147159	409780	2626944

Source: PAB document

9. FACTORS INFLUENCING THE ACCESS NEGOTIATION PROCESS

During Focus Group Discussions, beneficiaries identified a number of factors which influenced the access negotiation process. These are listed below:

- There is no law or policy which concerns the use of sandbars.
- Every year the land which emerges is different in terms of location, size and characteristics. This makes long term settlement impossible.
- It was more straightforward to gain access to land when the extreme poor members could make claims on land that had been lost to the river.
- There is a large number of what are known as 'absentee owners'. If properly identified, groups might gain access more easily.
- If demand for space is high (this is already the case among extreme poor households but will increase if non poor households start cultivating pumpkins on the sandbars), then the extreme poor households will have to take plots which are located at a distance from their homes.
- According to the project, sandbar farming is best carried out as a collective/group activity but in practice, households are working individually. In some places, competition has resulted in some members stealing from others pits.

Case Study: Farmer cultivating pumpkins on his own initiative

Spot Name: Dhamur; **Thana:** Gangachara; Rangpur

This individual lives in the Dhamur Union at Gangachara thana in Rangpur district. His main occupation is operating a number of businesses including fish, pumpkin, vegetable businesses and sometimes acting as a broker for land, crop and livestock. Before the SHIREE project, he tried to cultivate pumpkins in 300 pits but lacked knowledge or the technology, and was unsuccessful in making a profit. After the SHIREE project started, he observed the technology and tried to adapt this. He learned more and in year 2 cultivated around 1200 pits, borrowing money from his relatives and neighbors to fund the initiative. At the time of the survey, he had sold some of his pumpkins for around 34,500 taka and stored 600 pumpkins in his home. At the time of the research, the estimated selling price of the stored pumpkin was 15,000 taka but if sold in the lean season, the value of the pumpkins would increase 2 or 3 fold.

10. IMPACT ON THE EXTREME POOR AND IMPLICATIONS FOR FUTURE OF EXTREME POOR PUMPKIN GROWERS

In thinking about the future of sandbar use and the implications for the extreme poor, a number of key considerations come in to light. The main ones are as follows:

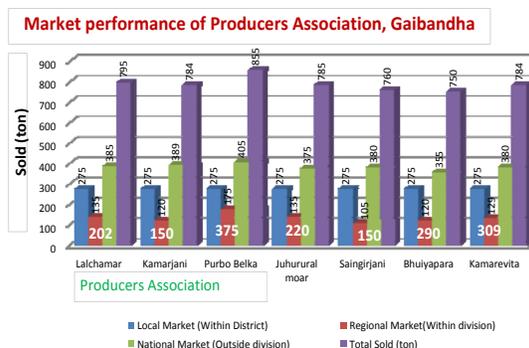
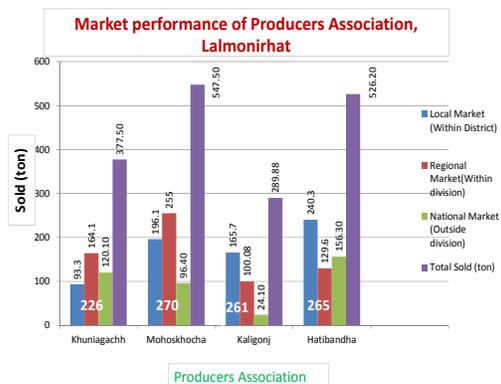
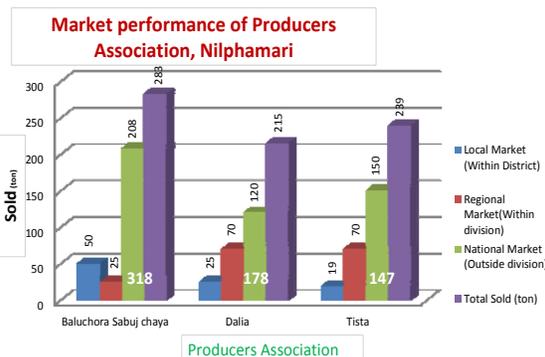
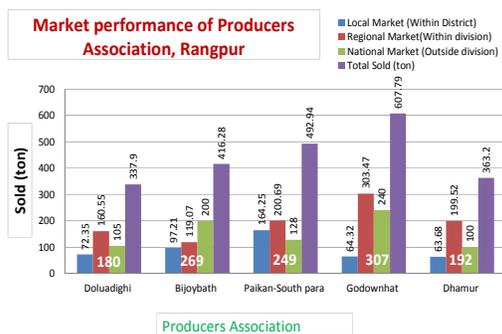
1. **New developments.** One of the consequences of a successful strategy which provides new and refined technology and diversification of crops is that it makes land even more valuable. This means that land is also more desirable and, the evidence to date is quite clear – when there is conflict over land, the extreme poor rarely win.

The sandbar land can be used for other products. Its value and desirability increases significantly with butternut squash production since this is even more profitable than pumpkins. Butternut squash can be introduced as a midterm product to increase income.

Another potential obstacle for future programming is the increased interest from tobacco industries in the sandbars. The tobacco industries have already been investing in the utilization of the sandbars and there remains a question over if and how far the extreme poor can take advantage or benefit from these developments.

2. **Collective bargaining.** Evidence suggests that the larger the number of beneficiaries in each group, the greater the potential bargaining power of these groups. This opens up a positive strategy for the future. Confidence needs to be built to help enhance the status of the extreme poor and their ability to negotiate with landowners. The involvement of a large number of women in pumpkin cultivation at a time when their male members migrate to other areas, particularly during Falgun to Boishak, has substantially minimized potential opportunity costs, and not deprived the households of extra income from migration. However, some women have reported finding the work very intensive.

3. **Market saturation.** There is already evidence that as pumpkin cultivation increases, the market may become flooded and as a result prices will be reduced.



Source: Practical Action Documents

4. **Labour demands.** It is envisaged that during the process of graduation, a household will become more and more able to invest in their children's education. However, a worrying dilemma currently being observed with this project is an increasing reliance on children's work capacity (especially those aged between 7-14 years) during the period when men migrate for paddy/boro cultivation (at the beginning and at the end of the season). During this middle season, women and children are found to be caring for the pumpkins, which is physically intensive work. The worry is that adults may become too dependent on their children to attend to the pumpkins and other vegetables at the expense of going to school. During this middle phase, women tend to work in the tobacco field, leaving their children to work in order to not lose out on possible wage employment. This is particularly the case with small households with only a few members.

Another issue arising is the actual intensity of the work (involving irrigation and pollination, often under the direct sun light). During a hail storm, one woman was found to be crying, claiming the labour to be hard, and questioning why men had delegated this to women

11. POLICY IMPLICATIONS

At the national level.

1. There is an urgent need to formulate a policy to enable extreme poor households displaced through river erosion to access and use sandbar areas. This includes the identification and addressing of gaps in the current land law about the use of dried up river beds during the dry season.

2. Mainstream sandbar cropping throughout the department of agricultural extension.
3. Create an enabling environment in government line departments to facilitate extreme poor households' access and use of land such as sandbars.
4. Ensure extreme poor produces can access adequate and appropriate input support like irrigation facilities, seeds etc.

Programmatic recommendations

1. Increase the involvement of Government officials in the access negotiation process. This is needed to secure land as well as to improve beneficiary access to government services and resolve potential disputes.
2. Find ways of reducing production costs of pumpkins. This will be important as competition in the market increases.
3. Develop market linkages to ensure the profitability of crops produced in the sandbars. Only putting emphasis on production is risky if market demand is not considered.
4. Develop sustainable ways of accessing inputs in the market and building up reliable relations with service providers (both public and private) as these are crucial to the overall sustainability of the initiative.
5. Undertake a risk assessment given that pumpkin cultivation involves technologies sensitive to time bound activities.
6. Work actively to find ways of combating child labour issues and to increase likelihood of longer term graduation

12. CONCLUSION

Sandbar cropping has brought positive changes to the lives and livelihoods of the extreme poor in northern Bangladesh as well as contributing useful knowledge for the future programming of extreme poverty reduction projects. This is because it has used technological developments to exploit income generating opportunities which had been ignored. Identifying new technological innovations in the agriculture sector and involving the extreme poor present significant potential for graduating them from extreme poverty.

However this research has found that the gains secured from sandbar cropping are at risk. Given that the initiative has been successful, interest in sandbar cropping has increased and as a result the extreme poor are likely to face increased competition to access the lands in the future. This will negatively impact on the livelihood potential of the initiative. For this reason, it is imperative that ensuring continued access to the sandbars is a policy priority. Similar to the existing khas land policy, the Government should take steps to ensure access to the sandbars for the extreme poor. In the long run this will positively impact on the livelihoods of the extreme poor, and will also help the Government meet its own poverty reduction ambitions.

The research has also discussed other ways to help ensure the potential gains from sandbar cropping are retained by the poor. The main issues include greater collective bargaining and work, developing a more diversified crop plantation plan, greater access to key production inputs, greater market linkages and more attention to mitigate some of the negative aspects of sandbar cropping such as child labour.

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