

Research Report *a source book*

Polderisation in Tidal Floodplains:

Exploring Impacts on Social Processes in Bangladesh Southwest Delta

Hamidul Huq





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This research report contains the findings of research 'Understanding the Impacts of Flood Polder on the social processes in southwest coastal Bangladesh' under UNESCO-IHE Partnership Research Fund (UPaRF), Integrating the dynamics of social and biophysical processes to support delta management (add-on NICHE Bangladesh 155 and NWO WOTRO Bangladesh). The project was funded by the Dutch government, under the DGIS-UNESCO-IHE Development Cooperation Programme (DUPC).

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Exploring Impacts on Social Processes in Bangladesh Southwest Delta

By

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Preface

This research report is the output of my postdoctoral research on impacts of *Polder* on social processes. I have conducted this research during the period of September 2013 – December 2014. My postdoctoral research was titled as ***Polderisation in Tidal Floodplains: Exploring Impacts on Social Processes in Bangladesh Southwest Delta***. My convincing points, which were agreed upon by the research team members at UNESCO-IHE and WUR as well as my colleagues at ULAB-CSD, to publish my research findings as a research report are: this report would serve as sources book for researchers, especially the young scientists, the academics, the policy people, and the development practitioners. This research report is being published apart from few articles in peer reviewed journals.

This research report contains the findings of research, narratives of interviews, and the working paper that I prepared on literature review prior to my field research. My postdoctoral research was conducted under UNESCO-IHE Partnership Research Fund (UPaRF), Integrating the dynamics of social and biophysical processes to support delta management (add-on NICHE Bangladesh 155 and NWO WOTRO Bangladesh). The project was funded by the Dutch government, under the DGIS-UNESCO-IHE Development Cooperation Programme (DUPC).

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Foreword

[by Dr. Michelle Kooy]

Chapter 1

Introduction

The southwest coastal floodplain region of Bangladesh belongs principally to agro-ecological zone of Ganges Tidal Floodplain. This region is potential area of newly reclaimed cultivable land (PDO-ICZMP, 2005). The tidal floodplain has an almost level landscape crossed by innumerable, often interconnecting, tidal rivers and creeks. Differences in elevation between river banks and basin centers usually are about 1 meter. The region is naturally characterized by having tidal floodplains; capillary river networks; the rivers bring enough siltation to the floodplains through their tidal process; rivers are connected with *beels* (wetlands) that functions as tidal water reservoir and drainage; tidal sediment forms landscape, and enrich land fertility (Nandy, 2011). The area of these *beels* is around 4840 ha (PDO-ICZMP, 2005). Gradual morphological changes have major impacts on the region, which is almost impossible to control (Maddrell, 1993).

Southwest region is consisted of six districts: Khulna, Bagerhat, Satkhira, Jessore, Narail, and Gopalganj (PDO-ICZMP, 2005). The total population stands at 14.11 million, with a population density of 555 per sq. km. The population growth rate between 2001-2011 is 0.6 for Khulna region, compared to national average growth rate of 1.34. The incidence of poverty in Khulna Division is 32.1% while the national average is 31.5% (BBS, 2011).

Polderization

The southwest coastal region of Bangladesh is full of opportunities and vulnerabilities (Coastal Zone Policy, 2005). These two dynamics were tried to deal with local landlords' initiatives of construction of small embankments around individual land to limit saline water overflow and prevent crop damage since the 17th century. The villagers collectively built earthen embankments on both sides of river bank to protect their *Aman* crop. This embankment was built for eight month period every year, because this earthen embankment was washed away by the monsoon tidal surge (Nady, 2011). However, this traditional mechanism of construction of embankments through local efforts practically ceased in 1947 (Islam, 2006).

Following Krug Mission's report, the government designed the Coastal Embankment Project (CEP) in 1961 and constructed 129 polders, 5588 kilometers coastal embankment and 1062 sluice gates to cover 1.01 million hectare coastal land area in tidal floodplains of Bangladesh coastal delta by the end of 1971 with USAID funding support and the World Bank's loan (PDO-

ICZMP, 2005). The main purpose of the polder construction was to increase agriculture production in southwest region (*ibid*).

Rapid change in land use occurred in the area after the polderisation. Farmers made their land very productive. They went for intensive rice cultivation. High yield varieties of rice were introduced. Rice production was increased significantly. Some yields increased by 200–300% (Nishat, 1988). The polderization contributed in significant socio-economic changes in southwest region. These changes embraced land based production increased; land owners' benefits ensured, small, marginal, and landless farmers got scope of doing agriculture through sharecropping systems, and the landless got employment opportunities in agriculture fields. But, these benefits were evaporated within a decade with the introduction of shrimp farming in the agriculture lands (Nandy et al, 2007). The salinity in tidal river water got increased because of obstacles in tidal system by the dyks and lowering of upstream freshwater flow (Nady, 2011). Around the same time, there was increased demand and a high price for shrimp on the international market. To earn hundreds time hire profit, the powerful people among the rich farmers, businessmen and party political leaders including local and outsiders initiated the shrimp (*Penaeus monodon*, which is popularly called *Bagda*) farming in the polderized rice field. Conflicts appeared on the surface centering the changes in land use, e.g., taking away small farmers agriculture land for shrimp farming by the power groups, violating embankment regulation (dike cut) to bring salt water for shrimp farming, creating oppression on the shrimp farming protesters, abuse of women, violence against the small, marginal and landless farmers, unemployment was increased, migration generated, land tenure system changed (Nandy et al 2007). All these have given a new shape to social and biophysical processes. Therefore, research is intended to understand clearly the polderization induced shaped and reshaped socio processes of southwest region of Bangladesh.

Research objectives:

1. Investigate the impacts of polderization in social processes of coastal tidal floodplains;
2. Identifying the interplays of socio-biophysical processes in polderized area;
3. Investigate the social processes of socio-biophysical interplays, focusing on 'transformation of rice cultivation to shrimp farming';
4. Investigate new shape of social processes.

Research Questions:

The main research question of this research was 'how did constitutive socio-nature processes shape the social landscape in the polderized southwest floodplains of Bangladesh'.

Specific Research (sub) Questions were:

- i. How did social relations shape the polder intervention?
- ii. How were social relations/organization shaped by the polder intervention?

- iii. What were the conflicts and the impacts of conflicts?
- iv. How did shrimp farming change the rural economy and labor market?
- v. Who benefited from this changing land use from rice cultivation to shrimp farming, which ways they are benefited?
- vi. Who are the losers? Why and how?
- vii. How the changes of rice cultivation to shrimp farming have impacted on gender?

Research Methodology

In order to attain the research objectives and explore the answers to research questions, attempts were made to collect both secondary and primary data. Secondary information were collected from reports, publications and printed materials of relevant government organizations e.g., Fisheries Department, Agriculture Department, Bangladesh Water Development Board, Upazilla Parishad, Export Import Bureau, and local NGOs working in flood polder areas. Secondary data were also gathered from research publications, articles in peer reviewed journal and research reports of research organizations, Khulna University and IWF, BUET.

Foremost focus was given on primary data collection, which was collected from the primary stakeholders of the study area. Primary stakeholders included small, medium and large farmers. These farmers were engaged in rice cultivation in the first decade of polder and until the shrimp farming was introduced. Now, the small farmers are displaced from their land. They became shrimp farm laborers, rickshaw van puller, daily wage labourers, and many migrated to cities. Other groups of primary stakeholders are landless and shrimp farm laborers, labors in shrimp processing factories, shrimp fry collectors, shrimp feed collectors (snail collectors), and labor in shrimp/fish landing markets. Another category of primary stakeholders were women from small and medium farmers' households and landless people.

Primary data were also collected from power group members like; shrimp farm owners, village leaders, political party leaders, local moneylenders, brokers, shrimp traders, outside investors, and local government (Union Council) representatives, police, and government officials.

The study followed several methods and techniques for primary data collection. Several PRA Tools such as Social Mapping, Focus Group Discussion, and Transect Walk were utilized for data collection. Other methods such as group discussion, individual interview, case study, and observation were also adopted during the study.

Data Collection Process

The field research was carried out during the period of March - November 2014. On the basis of literature review and scoping study, discussions with Khulna based journalists, NGO leaders (who run projects in flood polder areas), and researchers from Khulna University, it was convincing that Paikgacha Upazilla is more relevant for conducting this research. Paikgacha, which is located at about 35 km towards southwest of Khulna city consisted of 10 Unions (Union Parishad is the lowest tier of rural local government). All these 10 unions are located inside the

Polder no. 23. The whole polderized area was brought under intensive rice cultivation. But, at some point (after one decade of polderization), the rice fields were brought under shrimp farming over a period few years. The whole area under polder no. 23 has been experienced with socio-natural interplay processes.

The field research for primary data collection was conducted in the villages around the shrimp farms. Field research was conducted by the Postdoctoral Researcher Dr. Hamidul Huq with assistance of a Research Assistant. Help of local college students, school teachers, village leaders, officer of Bangladesh Fisheries Research Institute was taken in identifying the primary stakeholders and in organizing interviews, group discussions, focus group discussions, and field observations. Furthermore, a checklist/questionnaire was followed in conducting interviews with individuals and groups, and in conducting FGDs. Note book, audio recorder, flip chart paper, and camera were used to keep data recorded. The research assistant aided the research process by transcribing, organizing and processing field data.

Research Findings

This research found that the flood polders have been taken by the power groups (businessmen, politicians, moneylenders, large farmers, local government leaders) as advantage of creating scope and opportunities of introducing saline water shrimp farming. This has led to the transformation of rice fields into shrimp farms. This transformation generated complexities in biophysical systems and generated serious impacts on social processes, e.g., established hegemony of power groups, destructed institutions and social harmony, created food insecurity, displaced the marginal, small and landless people from agriculture, established power groups' hegemonic land tenure system, created coercive environment for the marginal and poor people, pushed the women in vulnerability, and made the farmers indebted to moneylenders; both traditional and microcredit NGOs. Following sections present findings related to impacts of polder on social processes.

Agriculture

For the first 10-12 years after polderization it did have a positive effect on the economic situation of the people from Paikgacha. Due to a comparatively successful management of the flood during monsoon, farmers in the area were able to grow rice. People of the area observed ample food production and thus food security was ensured to an extent. Though surplus food was not produced at that period, at-least people had enough to pounce on. Due to sufficient natural siltation there were enough crops, while the water eco-system services were also available in ample quantity. There were practices of shared cropping and the community used to have open access to fisheries. The bio-diversity and natural environment supported the livestock. As the farmers depended on each other for farming, there were limited, if not any, power exercise between themselves or by external forces. The landless farmers worked in the lands and earned living, while the rich bio-diversity and open access to the natural food sources allowed them to avoid conflicts with landlords or bigger farmers. The family structure was simple in a sense that

the work between men and women were segregated. The females looked after the household and in addition to that grew vegetables, fruits and took care of livestock adjacent to their household. The males on the other hand, were responsible for making the food available for the family through work outside household. The society was in harmony with the nature during the initial stages of the polderisation, which meant that there was no conflict over the usage of land or water bodies.

According to the gher owners (shrimp farm owners), who participated in the Focus Group Discussion (FGD), before shrimp farming was introduced in the area, the lifestyle was happy and peaceful life; and there were no scarcity of food or livelihoods. There were cattle almost in every household and fodder was available. Chicken, duck, goat were also there. Plenty of open water fish was there. There were lots of trees around this area. Lots of fruits were available. The participants of the FGD shared: *'We had food for the whole year; we did not buy anything except salt. Though we did not have cash money in hand always, but we were not indebted. We were happy and there was peace in our area'*.

Shrimp farming

After a decade of polderisation, external businessmen, in collaboration with local large farmers, party political leaders, started saline water shrimp (*Penaeus monodon*, locally known as *Bagda*) farming taking more lands on lease from the small and medium farmers applying force/muscle power. They brought saline water for shrimp farming by breaching the rules and regulations. Over a period of 10/12 years, the whole area was brought under shrimp farming. Highly profitable export market of shrimp was the main attraction of shrimp farming.

Land leasing

Initially when the farmers leased out their lands, they received money for two years and within a year or at times before, they finished the money. There were also conflicts with regards to the lease rate as initially farmers did not understand how much was enough for them and later when new investors arrived, they offered more money to the farmer/land owners. So, negotiation took place between the land owners (farmer) and the old party. During this period the whole region experienced such negotiations inducing conflict between old investors (generally outside parties) and middleman, while new opportunists (local investors) kept on offering higher prices for leasing out land. Dissatisfaction between shrimp *gher* owners (investors and middlemen brokers) and farmers intensified due to the mentioned complexities. During this whole process farmer lost control over their land and eventually the land had to be leased to the powerful shrimp *gher* owners.

Unemployment

The immediate implication of shrimp farming was displacement of rice cultivation, which generated unemployment of the farmers fast. Shrimp farming required only 10-15 labours for 30 acres of land annually, while at least 10 to 15 labours were employed by rice cultivation per .33 acre per season. Though the farmers earn money against leasing out their lands, but they had no

scope or very limited scope of investment for income generation. In the initial stage of shrimp farming leasing rate was taka 2000 (price of three *maund* rice/120 kg rice by which a family can run one month) per .33 acre land, currently it is around taka 8000 (price of five *maund* rice/200kg rice by which a family can run one month). A farmer who has three acre land can earn around taka 70000 - 72000 (Euro 700) per annum by which he can meet up only food for 8 - 9 months. But, a family has several other expenses. The respondents reported that the farmers can run family up to four to six months by the earned money against land leasing.

As the farmers, landless do not have access to natural sources anymore, such land and water, they became workless and idle. In this situation they are forced to migrate in search of work. They go to cities to work as rickshaw puller, construction labourer, etc. They also go to other inland districts to work in paddy fields during winter time. They return home in rainy season when there are some employment opportunities in the area.

Indebtedness

These conflicts with regards to control over land and water use led farmers towards borrowing money from multiple sources. They started taking loans from local money lenders and also forced their wives to borrow from micro-credit NGOs. As the official purpose of micro-credit is to invest in income generating activities, while they did not have access to their land where they could use it for farming or other purpose, the borrowed money is used for consumption. Hence, the loan from the NGOs became a burden for the family. The farmers migrate in search of income sources and also avoid the legal and social responsibilities associated with their loan. In the meanwhile, the women remain at home and face all the difficulties with regards to being responsible for the rest of the family (both financially and socially), bringing up her children and experiencing pressure from NGOs or money lenders. Furthermore, due to the financial responsibility of the family, the women are somewhat forced to choose to work in the shrimp gher in low wages. The migration of the males leads to multiple burden on the women as they are left alone to face family livelihoods burden, social oppression, and loan burden. Eventually, to suffice the multiple pressures the land has to be sold and loose the asset to shrimp gher owners.

Gender relation

Gender roles have changed over the period of changes through decades of shifting from rice cultivation to shrimp cultivation. Due to the regions' reasons for shifting to shrimp business, the women became vulnerable to oppression. They were oppressed economically by the shrimp gher owners, while their multiple-additional roles of a housewife and bread earner have made the women socially more vulnerable. Moreover, knowing that there are limited investment opportunities, male are forcing their wives to borrow money from NGOs. The female face pressure to payback borrowed money and are oppressed. So women's situation becomes far more oppressed, undermined, ignored, and discriminated in the region.

Dowry has increased along with divorce rate. Family ties have broken and mutual respect, cordiality has gone away. The family conflicts have increased and the social structure has changed, while the young generations have spoiled. Social ills like addictions, robbery, rape and women oppression has increased. Another decadence of the society is happening through employing women as daily wage laborers in the shrimp *ghers*, where the poor women are oppressed and abused.

Migration

After the initial first decade of polderisation, which led to an initial substantial production of crops, people in the locality did not migrate. The reasons behind not choosing to migrate were multiple; the prime reasons being the pull factors within the region. As the region, during that period, was observing increased crop production along with access to water eco-system services, the people of the region did not need to migrate. With the passing time, the region observed changes as consequences of interventions of shrimp aquaculture. The changes are crop cultivation replaced by shrimp farming; local peoples' access to open fisheries was closed with interruption by the power groups because the open fisheries systems were converted into shrimp farming system by them. Such changes resulted in the gradual diminishing of employment, livelihood options and opportunities. Consequently, the people in the region, mostly involved in crop cultivation, took up migration as an easy option. About 30 % people, who are landless, have left the area with bag and baggage. They migrated because they were weak.

Migration, which was taken as an easy option initially, gradually started to unfold the underlying problems associated with it. As the land owner-farmers leased out their lands, they lost control over their land to the powerful gher owners and their associates. Afterwards, when the money taken from leased out land started to fall short from the needs, the farmers started lending money from multiple sources. They took loans from local brokers/Arotdars/local money lenders and also forced their wives to lend through micro-credit. As the purpose of micro-credit is to assist in income generating activities, while they did not have access to their land where they could use it for farming or other purpose and increase income, the loan from the NGOs became a burden for the family. To avoid the legal and financial pressure associated with the loan, the farmers were forced to migrate. In the meanwhile, the women remain at home and face all the difficulties with regards to being responsible for the rest of the family (both financially and socially), bringing up her children and experiencing pressure from NGOs or money lenders. Furthermore, due to the financial responsibility of the family, the women are somewhat forced to choose to work in the *ghers*. The migration of the males leads to multiple burden on the women as they are left alone to face family livelihood burden, social oppression, and loan burden. Eventually, to suffice the multiple pressures the land has to be sold and loose the asset to gher owners.

Conflict

Due to the changes in the bio-physical state of the regions' environment, the social processes have undergone changes, which have resulted in power struggles between different interest

groups. Conflicts were observed between new gher owners and the old ones, insiders and outsiders, and also between insiders. The conflicts also took place between gher owners and land owners over the time in trying to have access to the land for shrimp farming, while crop growers (both land owners and landless) were also in persistent conflict with the gher owners and their alliance. There are different forms of conflict associated with shrimp farming in the region and three inside vicious cycles have eaten up all of the incomes generated from shrimp farming. The cycles are:

- Vicious Cycle of Middlemen
- Vicious Cycle of Terrorists, and
- Vicious Circle of NGOs.

Vicious Cycle of Middlemen: The middlemen are a group of people who are less educated, cleavers. They create conflicts in the societies and if anyone does a good work, they fit enemies against them. At the same time they do double-dealing with the enemies. The main purpose of the middlemen is to earn easy money. They are connected with the policemen, party politicians and NGOs in this regard.

Vicious Cycle of Terrorists: They are powerful and collect subscriptions directly. Even the police cannot escape from them and they also need to give subscriptions like the gher owners. The terrorists are backed by the local powerful group, UP chairman, and ministers of the parliaments. They are terrorists, they have arms, but are friends of police. If anybody goes against them, or denies giving subscriptions, they face a problem of life risk. They may take the positions of the gher owners, ransack the gher owners or office, take away the fish gathered for selling; sometimes family members (especially the female) may be tortured or kidnapped. Most of the times they drive away the outsiders (who come from other distance district and takes up gher business) by ruining them totally ruined and eventually taking away the positions of the gher owners.

Vicious Cycle of NGO: As the money flow in this area is good so hundreds of NGOs are grown in this area. The NGOs are dependent on the Middlemen to disburse loans and use help of the local terrorists to recover loans and interests. The NGOs are very much interested to give loan to the gher owners. They have their representatives and middlemen groups to keep close alliance with gher owners. NGOs' tendency is to give loans fewer amounts than the client require. For example, if a borrower needs a loan of taka five hundred thousand then the NGO will give him only taka one hundred and fifty thousands. Then this borrower is compelled to go to other lenders including the local Mohajan (local individual moneylenders). Mohajan charges interest rate about 60%, 80% or 100%. Once one borrows a loan, he must pay back the loan with the interest otherwise, he will lose his lands.

If an NGO gives a loan, its recovery installments start from next week of the loan received. The borrower must pay back the loan in 20 installments. NGO comes every week and per week installment is 10,000 taka for 150,000 taka loan. Often the borrower fails to manage this big

amount. A miss of installment, makes compound interest. Then NGOs come with terrorists groups and create pressure to pay loan installment with interests instantly. The borrower, who is a shrimp farmer, is then bound to sell his shrimps immature and in less price. At that time the middlemen and terrorists and gher owners come to an agreement that after one month one middleman will harvest shrimp later and he took paid advance to the borrower.

Economy

Because of the changes in the bio-physical situation of the region, the income sources have shifted from agriculture to shrimp farming initially, and now to a unique system where people of the region have adopted local initiatives to address the changes in the physical environment. As the poor and landless do not have access to income generating natural sources such as land and open water, they are forced to migrate in search of work during winter. According to an interview: *'they have less work then; at times they go to Gopalganj and work in paddy fields, while some people go to Dhaka or Khulna for other works and return in rainy season when there are some earning opportunities.'* The changed economic activities in the region have initiated the shift of power from the farmers and land owners to shrimp farm owners and investors. The big investors, both internal and external become economically and socially more powerful with the utilization of the land through this business. Whereas the middle class in the region, who are mostly people with limited land or poor laborers become victim of the hegemonic cycle. Most of them are forced to lease out their lands to the big gher owners, who are backed by partisan politicians and eventually they lose complete access of their land. Previously, prior to polderisation or immediately after polderisation, the people of the region were not unhappy and had ample food. They did not have huge amount of money but their economic situation were decent. As people had access to their own land and could avail open water sources, could survive in a decent manner. But with shrimp farming practices in the region, most of the small land owners have lost either access to their land or their lands are no more usable for crop cultivation. It is true, on the other hand, that several group of people have been financially benefitted from this business. The business chain involved have benefitted when the business has gone well. But at times due to the virus in the shrimps and loss due to several other reasons, a lot of gher owners have been left shattered.

Labor market

Prior to shrimp cultivation, the region experienced a market based around agricultural activities where farmers were directly involved in the market. Whereas, with the initiation of shrimp in the region has experienced the change in the market. Previously, where the labor market was full of men working in different parts and not centered towards one type of business only, now the labor market is not conducive for labors, regardless of male or female. The reason behind this is because the region was previously based on agriculture and thus required more labors and now in shrimp business the need for more labors has decreased comparatively. Moreover, the labor market was more sex-segregated previously, where mostly men dominated all aspects related to the aquiculture based business chain. With shrimp farming, the market requires less number of

male workers, which resulted in unemployment. This has created a market environment bringing females in the workforce not by choice but through the structural setting of the market.

Who are benefitted?

Though the region has experienced a decaying socio-economic situation due to the advent of shrimp farming, there are several levels of people who are benefitted as well. The investors, who invest money on shrimp farming usually, gain a lot if they are able to invest ample. There is a general understanding that if someone invests 25 lakhs then the return would be close to 125 lakhs. There are large land owners, who are investors as well who benefit from shrimp business. They utilize their lands as well as money to earn money from this business. Some fry collectors benefit from this chain of business. They collect shrimp fries and sell to the brokers and thus earn money. As a result the brokers are connected with this chain of gain. They work as a sort of middlemen as they buy fries from the field and sell it to the gher owners with profit. Shrimp exporters and traders are directly involved as beneficiary of this business, while the Mohajon enjoy multiple levels of benefits because of their roles. They lend money to the fish traders and collect money as an exchange of service from both the buyer and seller. As part of the total supply chain involved in the shrimp business, female labors, fish feed producers, and traders are benefitted financially. According to the informants, the people who belong to upper 20% are the main beneficiaries of shrimp farming (Figure 2). These people are capital investors or shrimp farm owners, large farmers/land owners, moneylenders, and traders.

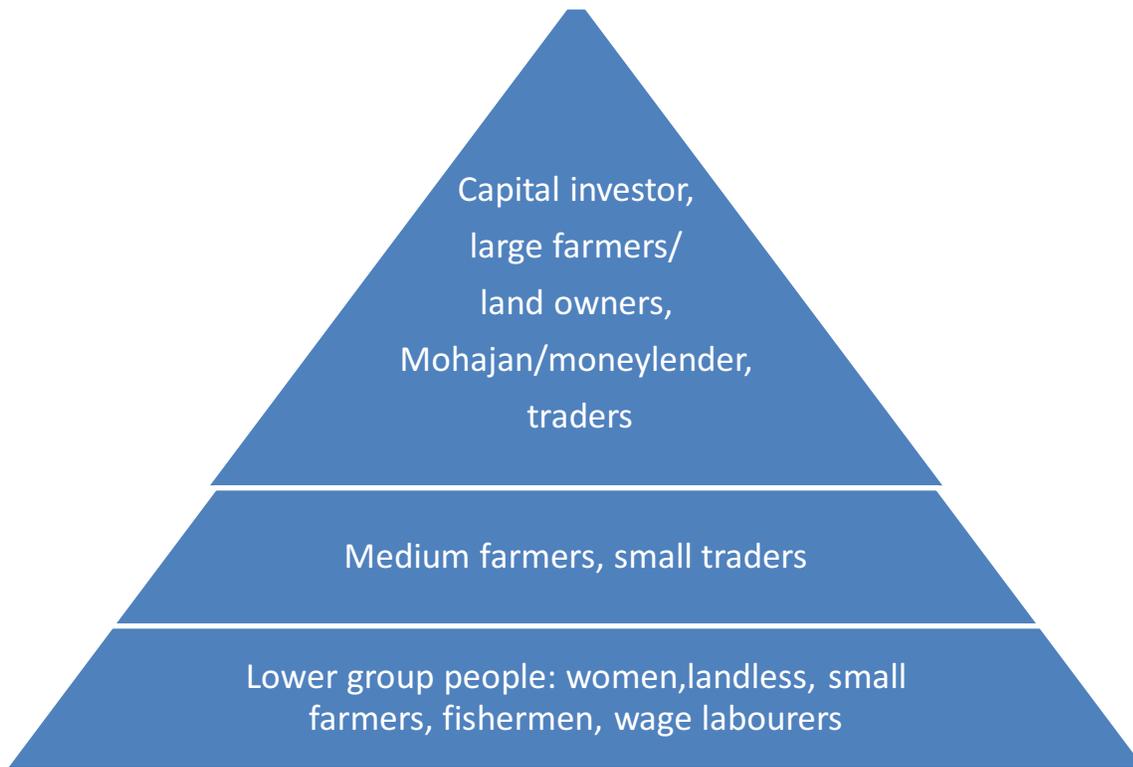


Figure 1: Distribution of Social Strata in flood polder area

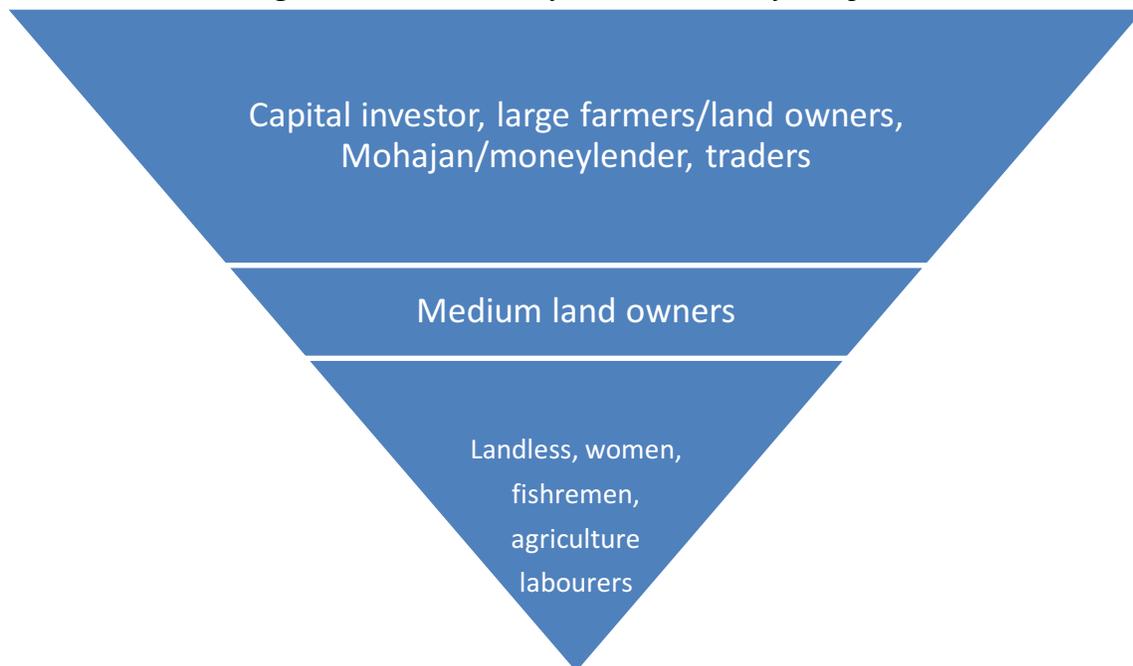


Figure 2: Distribution of benefits from Shrimp farming

During the first decade of flood polder or during the period of agriculture/crop production in polderised area, distribution of benefits looked like below (Figure 3):

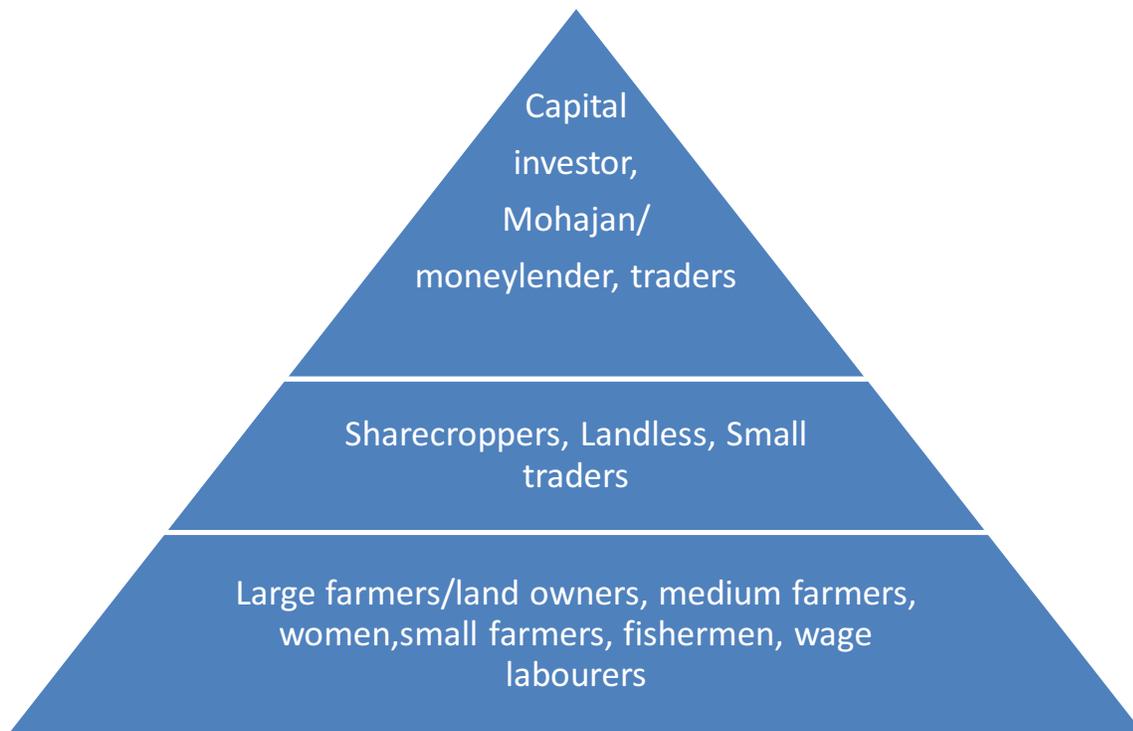


Figure 3: Distribution of beneficiaries in polderised area

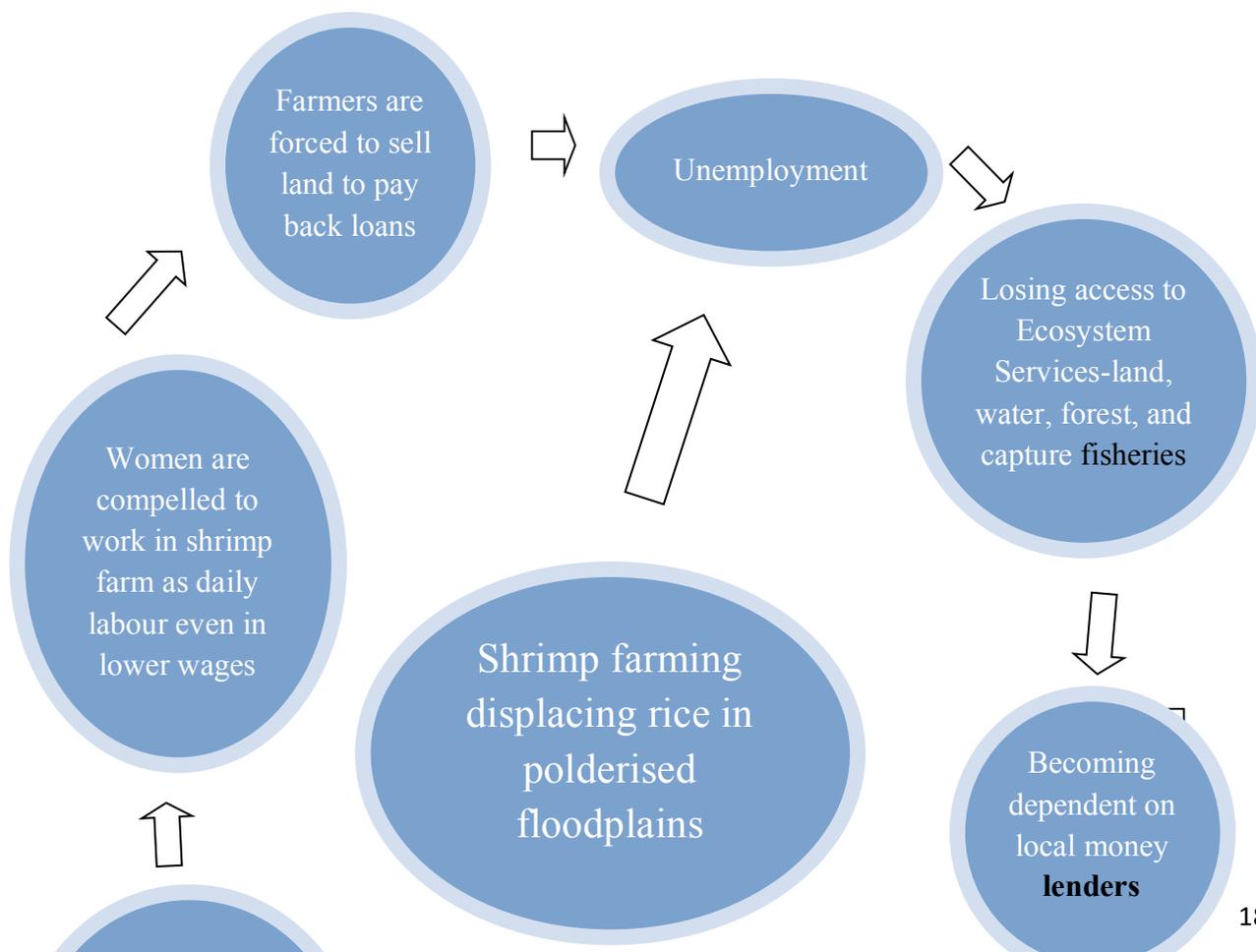


Figure 4: Vicious cycle that generated centering the shrimp farming

Role of government

The respondents opined, the polder was built with an intention to protect the land from saline water intrusion which happens with the emergence of tidal surge. The foremost goal of polderisation was increasing cropping intensity and for some years the farmers were vastly benefitted by polderisation. But with the introduction of saline water shrimp farming, the main objective of polderisation got slowly started to become dysfunctional. Government did not respond against the inclusion of shrimp farming in the region, nor did they consider the consequences. The respondents expressed, in one way government prohibited bringing saline water in to the cropland, and on the other hand allowed the investors to adopt shrimp farming in the same land. Such an unwanted situation could take place because the investors in shrimp farming belonged or associated with the political party leaders, elected parliamentary members, rich businessmen, and collaborated with the local administration including police and higher *mastans* (hooligans) assisted by the political party leaders. The respondents expressed their highly critical observations on government role in relation to using the advantages of flood polder. Government, seeing that the local people, especially the farmers, using land and water in line of official objectives of the flood polder, that is growing crops intensively, growing livestock and using the benefits of open water fisheries, allowed the commercial shrimp farming that displaced the agriculture all out. Bangladesh Water Development Board (BWDB) held back rather than taking any actions against the shrimp farm owners who breached the law – cut embankment, kept the sluice gates open the bring saline water in the croplands for shrimp farming. The respondents opined, if the law was enforced, shrimp farming would never have

possible by the outsiders in their area, and the area would have flourished with continued cropping intensity. The farmers, the land less, the fishermen, even the businessmen would have benefitted in terms of food security, economic growth and social harmony. Livelihoods of landless and the fishermen would have been better.