

Participatory Embankment Maintenance and Resettlement of Destitutes: Learning from Self-Sustained Embankment Maintenance Program at Bhola

Introduction:

Bangladesh is one of the world's oldest flood plains and alluvial delta formed basically by the silt carried by three mighty rivers – the Ganges (Known as the Padma in Bangladesh), Brahmaputra and Meghna. These three mightily rivers flow towards the Bay of Bengal with all the ferocities and circulate the residue of their flow through a network of almost 150 rivers and tributaries of different length and breadth all over the country. As a result, Bangladesh is regarded as a basin which provides an outlet to the major riverine system of the sub-continent to reach to the sea on the one and also a country with well-knit web of rivers on the other. The major rivers together drain the rainfall of an area about 14 times that of the country itself.

The rivers and tributaries stretch over 2400kms of shore or coast line in two sides of their natural flow. Out of this 2400kms, 1200kms of coast line is identified vulnerable to severe inundation and erosion. Every year about 283 identified spots along the coastline covering 85 number of towns and river ports face the problem of erosion at different proportion and intensity. An estimate shows that within the period of 34 years from 1954 to 1988, 2000kms of land had already been completely or partially lost into the rivers and deep water of the Bay of Bengal. Another survey of the Bangladesh Development Partnership Centre (BDPC) also reveals that within the period of four years from 1990 to 1994 almost 2.7 million people from 51 districts (out of total 64 districts) had been displaced from their ancestral land and 0.55 million acres of land had also been lost due to inundation and erosion.

Besides recurrent calamity of erosion (causing loss of property and shelter), seasonal flood, cyclone, tornado together with tidal surges with a ferocious regularity bring with them destruction, death and suffering on an unimaginable scale. According to the BDPC estimates, river erosion, tidal surges, cyclone, etc. so far made 3.5 million people homeless and every year on an average 0.25 million more are added to the total figure. These homeless and shelterless floating people take shelter in places like embankments, roadside marginal lands, railway stations, newly raised islands (*chars*), khas land, squatters and create resources shanties in the major cities.

The problems of erosion, flood, cyclone, tornado and tidal surges had been making the government and the world community concerned since the decade of 1950s. As a result of which the East Pakistan Water and Power Development Authority (EPWAPDA) and later on the Bangladesh Water Development Board (BWDB) has been established for water resources management and also for building flood protection infrastructures in the country. Construction of cross dams and embankments have been considered as one of the appropriate infrastructures to protect coastal low land from flood water as well as occasional intrusion of saline water and tidal surges. During the last 35 years, various coastal districts have been brought within the protection of about 10,000kms of embankment. Both construction and maintenance of those embankments are very expensive. Though the construction could have been completed gradually within the range of 35 year, maintenance need arises every year with equal emphasis to all constructions hitherto made.

The article has been divided into two major sections. The first section basically describes the issues relating to embankment maintenance and embankment dwellers as well as various strategies to address the issues under a pilot program. The second section presents the empirical result of the pilot program along with some recommendations for replication elsewhere.

Statement of the Problem

- I. During the various construction phases huge quantities of arable land had been acquisitioned from private owners and the expensive venture of construction have been commissioned by mobilizing enormous amount of resources from various bilateral and multilateral donors and agencies. At present, maintenance of these huge area of embankment demands budgetary allocation of an unimaginable magnitudes which strain the scarce financial resources of the country. The operational status of most of the water resources infrastructure in Bangladesh is deficient due to the lack of proper and timely maintenance. To bridge the resource gap and also to establish an accountable system for operation and maintenance, currently the government is looking for a suitable arrangement with local accountability and supervision of beneficiaries may be promoted under a sustainable institutional framework. The water sector agencies currently responsible for planning, construction and maintenance of water resources development infrastructures lack knowledge, experience and skill to involve the local people to plan, manage and supervise those infrastructures.
- II. The coastal embankment normally occupy an area of average 500ft. in width covering top of the embankment, river side and country side slopes and borrow-pit in both the sides. The slopes are in most cases illegally occupied by the homeless and displaced destitutes on the one hand and the borrow-pit lands by locally influentials on the other. Indiscriminate use and abuse of embankment by those people add to the damage to the embankment thus escalate the cost of maintenance work further. They make the routine maintenance difficult too, as the maintenance work is bound to damage many of the permanent structures erected by them on the embankment.
- III. A section of the lower level employees of the BWDB, local vested interest group, corrupt officials of general administration and law enforcing agencies have formed a vicious circle or a coalition of corruption which prevent the initiation of welfare oriented steps in the embankment area.
- IV. It has been estimated that on an average 3.5 million destitute families live permanently and seasonally on the embankments throughout the country.
- V. In Bhola alone 12,000 landless families with over 60,000 population are forced to take shelter on 250km long coastal embankment surround the island.
- VI. They are illegal occupants and a constant source of damage and deterioration to the embankment. They rear cattle, plant trees like banana and papaya, grow bushes around their houses and make holes by themselves and also create safe abode for mice which make holes on the embankment.
- VII. The rich and influential as well as the BWDB always keep these poor settlers under the threat of eviction. The rich, in the name of so called leases, use the borrow-pit and slopes for different purposes and damage the embankments without any consideration for its maintenance.

An Avenue Explored for Participatory and Low Cost Maintenance of Embankment

The landless and homeless people presently living on the embankment may be organized and engaged effectively for the maintenance work under certain conditions which may also be mutually beneficial. Under the present circumstances the poor settlers are enjoying the benefit of living on the embankment but do not maintain it. Because they feel that land in which they live does not belong to them. Being illegal occupants the threat of eviction from government as well as from the local influential always haunt them. Generally, properties irrespective of movable and immovable are best maintained when they are private and when they belong to the individuals. Having a piece of land for a shelterless embankment dweller is a life time dream. If some sorts of usufructuary property could be given to the landless settler already living on the embankment, it may create a sense of belongingness and thus responsibilities of maintenance may be vested on them.

The embankment and the adjacent land including apron and borrow-pit belong to the government. Those government land may be leased out to the embankment dwellers without cash money but with the condition to maintain the embankment according to the standard and specification set by the BWDB. The above idea was mooted by a multi-disciplinary expert team commissioned by Asian Development Bank in 1996 (BETS/Euro. Consultant, 1996).

Genesis of a Pilot Project: The Self-Sustainable Embankment Maintenance Programme (SSEMP)

Under the second Bhola Irrigation Project (BHIP-II) the financial assistance aims at addressing the issue of strengthening the Operation and Maintenance (O&M) capabilities of the BWDB for incorporating beneficiary participation as an essential and integral part in the formulation and implementation of the project. Besides the BWDB, Bangladesh Rural Development Board (BRDB) is also involved in the BHIP-II from the very inception of the project. The BRDB has been implementing the rural credit programme for the small farmers and landless men and women in the project area. As the landless, the women and the marginal farmers were expected to form the core group of beneficiaries to be mobilized under the pilot project, it was expected that the BWDB would play a major complementary role parallelly with NGOs in organizing and mobilizing such target group (BETS/Euro Consultant July 1996). A pilot project was conceived keeping a lease maintenance agreement between the landless embankment dwellers and the BWDB under which the target group will enjoy the following facilities with the condition of maintaining the embankment.

The Benefit Package and Responsibilities Embodied in the Project are:

- a) They get a legal right to live and a sizeable plot of GOB land including borrow-pit which they can use for various income generating activities, such as production of paddy, vegetables, fishery, duck, poultry, etc.
- b) They will be helped by NGOs and the other GOB agencies for the improvement of the quality of their life and eradication of their poverty.
- c) They will also contribute to give labour to maintain and protect embankment from all sorts of damages and deteriorations which BWDB and NGOs will jointly supervise on the basis of a contract.

Three NGOs have been involved with the implementation of a pilot project called Self-sustained Embankment Maintenance Pilot Programme (SEMP) in Charfassion Thana of Bhola district. The three NGOs involved with the SEMP are Inter Life (Bangladesh), DORP and Action Aid (Bhola) presently Known as COAST Foundation.

Scope of Work by the NGOs

The general scope of work of the NGOs will include but not necessarily be restricted to the following:

- i. To mobilize, organize and train the embankment dweller families on their respective reaches/stretches of embankment in various activities aimed at O&M of the embankment.
- ii. To train the dweller families in various suitable income generating activities such as crop production, plantation, fish farming, duck rearing etc. which are non-harmful to the embankment.
- iii. To organize of the embankment dweller families into manageable informal/pre-cooperative groups and propagate and motivate the embankment dweller families to come forward to execute lease maintenance agreement. They have to be made familiar and conversant with the contents of the lease maintenance agreement.
- iv. To help the dweller families (in group) to do the required formalities such as applying for the lease and execution of the lease agreement and also be made familiar, through training, with the nature of embankment maintenance required of them, etc. (the standard and level given by BWDB).
- v. To extend help and cooperation to the BWDB personnel, as required, in demarcating the leased area of the embankment.
- vi. To help the embankment dweller groups in proper utilization of the embankment and the adjacent acquired and without causing any physical damage for planting trees which otherwise will make whole on the embankment, and advise the dwellers to keep the embankment clear of bushes so that rats and other such animals cannot make holes on the embankment.

- vii. To ensure that the dweller families maintain their stretches of the embankment regularly and in case of default BWDB will issue a warning notice. Then the NGOs will help motivate the families to come up to the satisfaction of BWDB.
- viii. To organize and implement motivation techniques by arranging competition in matters of maintenance of embankment and other socio-economic activities between the groups.
- ix. To train the dwellers in adopting and using improved variety seeds, fertilizer, pesticides etc. They will also train them in other economic activities such as duck, poultry, fish farming, etc. They will provide credit to the families for the purpose.
- x. To prepare their respective proposals on the basis of the followings:
 - a) The stretch of the embankment to be covered should be long enough to gain relevant experience but short enough to guarantee proper implementation and management.
 - b) As far as possible, the embankment dwellers should be involved in preparing the proposal.
- xi. To make motivational effort during implementation of the project to shift the dwellers' houses from river side to the country-side of the embankment which will ensure better safety to them in case of cyclone and tidal bore etc. where it is possible.

Out of the total length of each stretch under each project proposal 50% will be given full project support in terms of investment, training, etc. The remaining will get only propagation, motivation and promotion of lease agreement support. The selected agencies are expected to contribute to improve overall socio-economic condition of the groups under the complete programmes. They will therefore, have a role in general awareness building, provision of safe drinking water, latrines, training and credit for income generating activities. Support in credit, infrastructure etc. will be made dependent on the progress of the groups in embankment maintenance and also use and improvement of embankment plus adjacent land.

The system of judging the progress of improvement of the embankment will be developed by the different groups of the lessees. The system will take the form of competitions on who is the best caretaker of the embankment. Competitions among families of one group will be organized by the group leaders/executive committees. Competition among the groups on similar issue will be organized by a joint committee of the embankment lessees. The selected agencies will help to organize such competitions. The competitions will take shape of festivity where prominent public leaders/government officials may be invited to distribute prizes.

Scope and objectives of the Study

The present study is designed to assess the experiences gained and lessons learnt from the area allocated to the Action Aid in Charfassion Thana of Bhola district. The Action Aid started work within an area of 11km in Char Manika union of Charfassion Thana since September 1996. Later on the embankment area has been reduced to 9.52km due to the legal problem arose between the BWDB and the original owners of embankment adjacent land. The Action Aid has organized all the 480 families living within the area of 9.52km of embankment. The study is confined within the area and beneficiaries covered by the Action Aid only. In short, the study has been designed with the following specific objectives in mind:

- i) Documentation of various process of the project activities so far undertaken;
- ii) Critical assessment of the impact of the project on the maintenance of embankment as well as the quality of life and living of the people;
- iii) Formulation of recommendations by identifying the strength and weakness of the project; and
- iv) Exploration of potential for replicating the model elsewhere in the country.

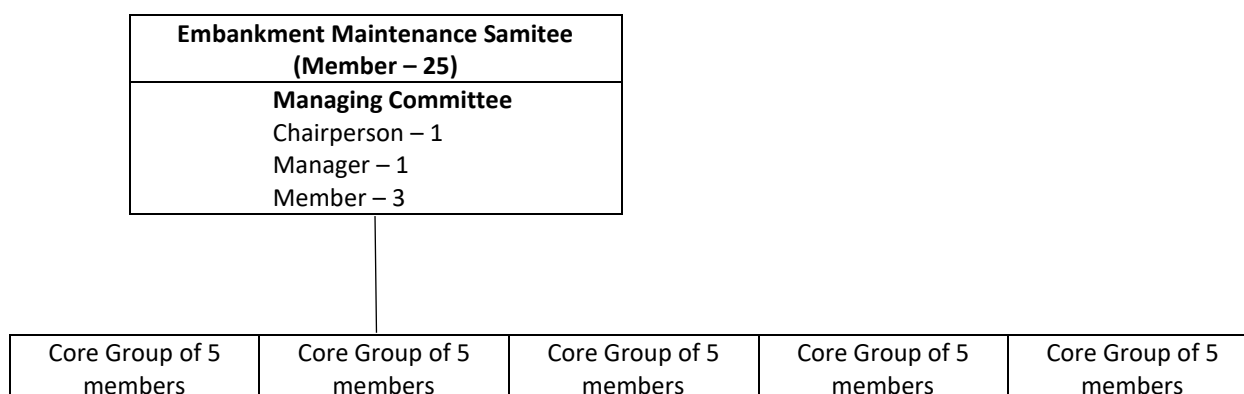
The SSEMP Model: An Assessment of Major Activities

Among the three NGOs (DPRP, Inter Life and Action Aid), former Action Aid Bhola and present COAST Foundation started implementing the programme in Char Manika Union which covers BWDB embankment kilometer post 119 to 130, a total area of 11km. During the initiation of the programme in July 1996 in all 480 families were living within the 11km embankment areas allotted to Action Aid. All the 480 families were brought within the fold of 19 informal group organizations called by individual Embankment Samitees by November 1996. Ten organizations with 255 families receive input support and various development interventions and the rest organizations with 225 families did not get project intervention except the lease agreement.

Organization and Management of Groups

Twenty five beneficiary families form a group organization. The family is represented by a single member, male or female. There are eight female groups and eleven male groups each having 25 members with only one exception having 30 members. Each group of 25 member divide themselves into 5 member core groups. One of the five is designated as group leader. On the other hand, a five-member Managing Committee is elected by all the 25 members of the Samitees. A nine-member Central Coordination Committee has also been formed to deal with the matters of mutual interest at the higher levels.

Figure 1: Samitee Organogram



Of the Samitees, to look after the management from amongst five, one is elected as chairperson and another one as manager. The other three remain as members of the committee. The chairperson calls and presides over the meetings and is held responsible for overall supervision of the group. The manager keeps accounts, drafts proceedings of the meetings and preserve the books of records. Both the chairperson and the manager also maintain liaison with project personnel. The group meetings are held weekly in a pre-fixed day and time.

Saving and Loan Activities

The group members regularly saves some money with the group. They already agreed to save a minimum amount of Tk. 5.00 each week. The weekly savings are deposited during the weekly meeting to the manager. Every member holds a passbook which keeps records of all financial transactions of every individual member who carries it. Later on the project personnel collect the money from the manager and deposit them in the Samitee's account. Until December, 1997 they saved a total amount of Tk. 1,48,645.00 which they never thought of before joining the Samitee.

The credit programme has also been started with 10 Samitees. So far 206 members were brought under micro-credit programme until December 1997. A total amount of Tk. 9,10,600.00 has been distributed and Tk. 4,28,800.00 has already been realized through regular weekly installments. The rate of recovery is 100% according to the realization target set by the project. The beneficiaries invested the credit money in ten different areas of income generating activities best suited to their traditional occupations as well as local condition. The following tables may be seen for general assessment of organizational as well as economic activities of the Embankment Maintenance Samities formed under the sponsorship of Action Aid/COAST Foundation.

Table-1: Organizational Activities Including Savings and Credit Programme of 19 SSEMP Samitees

A. Samitees Covered by Investment

Sl. No.	Name of Samitees	Date of Formation	Male/Female	Total member	Total savings (in Tk.)	Disbursed	Recovered	Loanees
1	Banga Tir	24.10.96	F	25	18,125	103,300	52,870	22
2	Shapla	20.10.96	F	25	11,070	69,400	25,695	19
3	Januna	20.10.96	F	25	10,715	47,000	26,200	13
4	Golap	04.11.96	F	25	15,075	122,400	52,420	25
5	Meghan	04.11.96	F	25	15,940	86,000	43,675	22
6	Jaba	06.11.96	F	25	18,965	15,300	70,515	26
7	Upakul	12.11.96	F	25	15,655	79,000	46,450	17
8	China Mul	13.11.96	M	25	17,605	110,400	53,185	22
9	Suezipur	15.11.96	M	25	12,480	64,800	21,745	20
10	B. Gauranga	24.11.96	M	25	13,015	74,000	36,125	20
	Total			25.0	148,645	9,10,600	4,28,880	206

B. Non-invested Samitees

11	Joie	05.09.96	F	25	-	-	-	-
12	Gazir Bad	05.09.96	M	25	-	-	-	-
13	Shimul	06.09.96	M	25	-	-	-	-
14	Akata	06.09.96	M	25	-	-	-	-
15	Shatata	07.09.96	M	25	-	-	-	-
16	Paduma	07.09.96	M	25	-	-	-	-
17	Kank capa	08.09.96	M	25	-	-	-	-
18	Surja moki	08.09.96	M	25	-	-	-	-
19	Sagar par	09.09.96	M	25	-	-	-	-
	Total			22.5	-	-	-	-

Source: SSEMP (COAST) Jan, 1998.

Table-2: Areas of Investment and Credit Programme

Sl. No.	Areas of Investment	No. of Loanees	Amount of Loan	Percentage
1	Hilsha Fish Catching	83	2,70,200	23
2	Small Business	100	2,49,000	27
3	Agriculture/Farming	45	1,10,000	12
4	Goat Rearing	14	27,600	03
5	Rickshaw	13	29,400	03
6	Paddy Husking	02	2,000	22
7	Fishery	04	1,000	11
8	Interest Free Loan	85	93,000	10
9	Cow Rearing	70	1,91,400	21
	Total	416	9,10,600	99.33

Note: All the loanees received loan more than once.

Awareness, advocacy and other Social Development

Among all the awareness, advocacy and social development programmes, training activity initially received utmost priority. So far nine separate training courses were arranged which ultimately resulted in initiating a new culture among the beneficiaries. They are now able to think and act differently in normal and crisis time. For example, in normal time they are thinking of engaging themselves in multiple economic activities and in crisis time, whether man made or natural, they stand united to face them which was unprecedented before. They have also become aware of maintaining various social development programmes such as education, health, sanitation, etc. The following table may be seen to observe the training activities of the project.

Table-3: Training Activities

Sl. No.	Areas of Training	Duration (in days)	Male	Female
1	Team Building	5	75	175
2	Leadership Development	5	06	14
3	Primary Health Care	5	75	175
4	Homestead Gardening	3	05	20
5	Embankment Maintenance	3	75	175
6	Livestock Development	3	10	30
7	IGA (Poultry, duck, goat, cow, fish culture)	3	75	125
8	Disaster Management	3	75	175
9	Social Forestry	2	75	175

A base line survey was conducted in April, 1996 just before the initiation of the project. The social and economic condition reflected in the survey was very depressing. Within one year remarkable progress have been achieved in various aspects of social development. Table-4 may be seen to assess the progress in the social sector. Five adult learning centers are being run with the help of the project in which the adult males and females learn how to read and write. The embankment dwellers are eager to start one primary school within their vicinity for their children. Because primary school is too far to send their small kids as they were saying with utter frustration. They were also asking for more tubewells and ring slab latrines during discussions. The male members were asking for increasing the amount of credit to enable them to acquire fishing boats and nets. The female members seconded the view and seemed quite happy with their new role in the family and the society.

Table-4: Comparative Situation in Social Development

Sl. No.	Area of Intervention	Situation reflected in the base line survey April, 1996 (In %)*	Situation reflected in the present survey December, 1997 (In %)
1	Population able to sign	24	60
2	Able to read and write	07	20
3	Diarrhoeal incidence	34	20
4	Knowledge of ORS preparation/use	62	100
5	Use of pit or water sealed latrine	09	50
6	Adoption of family planning	57	Accurate figure not available
7	Disaster preparedness	17	100
8	Use of safe water	Not clear	100
9	Paying of illegal taxes to mastans/ influentials	05	None

Lease Agreement and Maintenance of Embankment

Apart from organizational and socio-economic upliftment the core function of the project consists mainly of two activities: (1) Arranging lease agreement between the BWDB and the illegal but landless occupants live on the embankment which will offer them usufructuary right on government land and also land adjacent to embankment; and (2) In return the lessee families and samitees will take up responsibilities of preventive maintenance of embankment earmarked for them.

The lease maintenance agreement for selected stretches of the embankment was handed over in February and March 1997. But it took altogether three to four more months to take possession of land. Problems are still there, as a result of which all the claims of land as per the agreement could not be brought under lessess's possession. Table-5 may be seen for assessing the lease maintenance situation up to August, 1997. The situation was improved at the end of the year and detail land-wise possession may be seen in Table-5.

Table-5: Position of Lease Management and Agricultural Land Under Possession of Embankment Samittee Members (land in acres)

Sl No.	Name of Samitees	Male/Female	Total members	Total land		Per capita land	
				Allocation	Possession	Allocation	Possession
1	Banga Tir	F	25	19.72	19.72	0.74	0.78
2	Shapla	F	25	26.40	26.40	1.05	1.05
3	Januna	F	25	24.10	24.10	0.95	0.95
4	Golap	F	25	27.09	15.00	1.11	0.60
5	Meghan	F	25	27.02	27.02	1.08	1.08
6	Jaba	F	25	16.57	09.00	0.55	0.30
7	Upakul	F	25	20.52	20.52	0.82	0.82
8	China Mul	M	25	34.72	34.72	1.38	1.38
9	Suezipur	M	25	20.09	20.09	0.80	0.80
10	B. Gauranga	M	25	25.94	25.09	1.03	1.03
Total and average per capita land			25.5	242.17 (0.94)	222.52 (0.87)	-	-
11	Joie	F	25	14.76	-	-	-
12	Gazir Bad	M	25	14.18	-	-	-
13	Shimul	M	25	18.45	18.45	0.73	0.73
14	Akata	M	25	13.22	13.22	0.52	0.52
15	Shatata	M	25	14.76	14.76	0.58	0.58
16	Paduma	M	25	13.43	13.43	0.53	0.53
17	Kank capa	M	25	10.46	10.46	0.40	0.40
18	Surja moki	M	25	15.33	05.00	0.62	0.20
19	Sagar par	M	25	15.10	04.00	0.60	0.06
Total and average per capita land			25.5	129.45 (0.57)	78.83 (0.43)	-	-

Note: Land shows in this table exclude slope, pond, top of the embankment and village side land.

source: COAST Trust, Jan, 1988

Out of 19 samitees six are facing various problems in getting possession of the agricultural land which have been legally given to them under the lease agreement. It was initially thought that each of the family may get average 0.58 acres of land for their use. After the implementation of the lease agreement it has been found that the quantity of land in different settlement area vary from place to place. In spite of variation, after the recovery of the total quantity of land from the possession of previous occupants of influential and rich social background per capita cultivable holdings have become even higher than the original estimate made by the Technical Assistant Team (Table-6 may be seen).

Nature of Problems and Ways Followed to Resolved the Land Problem

Land is such a precious commodity in Bangladesh for which people are even ready to spare their lives. Especially in the newly emerged char areas bloody conflicts of interest between the new lessees and old possession holders or lessees are often found. Problems so far faced were of generally three types. Firstly, in the initial periods of the project the destitute settlers could not be made believe that they would be given lands to live on. Secondly, the rural rich and the influential who were either former lessees or illegally enjoying the harvest of those land in collaboration with the local officials left no stone unturned to retain their old control. Thirdly, (as reported in the field) the corrupt lower level officials of BWDB, some petty officials at the district and the thana land office and the officials of the department of fisheries did not like the idea and indirectly tried to sabotage the programme by applying various delay tactics, misrepresentation of facts, etc. Ultimately all those problems have been overcome through the direct intervention from high officials of the BWDB, Deputy Commissioner, Thana Nirbahi Officer, Superintendent of police and Officer-in-Charge of the local Thana.

It has been found that 22 local persons created problems of various types and tried to prevent the poor people in taking possession of the leased land. Out of them, 16 are actively related with three main political parties (11

with ruling party AL, 3 with Jatiya Party and 2 with BNP). Among the litigants there was one Union Parishad (UP) Chairman and two UP members as well. At some stage the encounter took a fierce turn, people from both sides were preparing to confront each other with lethal weapons. One of the key project personnels was kidnapped. Few court cases were also instituted.

The Action Aid personnel handled the crisis very efficiently. They mobilized public opinion, established close contact with relevant government officials and maintained constant touch with local and national press as well as with local political activist. They held meetings and public rallies explaining the objectives of the project and also to show their strength to the opposing parties on the one hand and bringing courage and confidence to the poor settlers on the other. The Deputy Commissioner Bhola, Additional Deputy Commissioners, Thana Nirbahi Officers, Assistant Commissioner (Land) and police officials visited the area and assured the settlers of all possible legal help. The BWDB high officials clearly and quickly finished the lease formalities. The Action Aid officials maintained a constant vigilance over the whole situation and monitored the day to day events. Still two court cases are pending trial which the COAST Foundation (former COAST Trust) is regularly pursuing.

Ownership and Uses of Land

As of August 1997, in all 430 families living on embankment got land in their possession. It was expected that 50 more would will also get possession soon. After getting possession of land and right to shelter legitimately on the embankment, they are now free from the threat of eviction. The borrow-pit area was brought under paddy cultivation. Many of the families did not have plough, bullocks and necessary fund for other inputs. In some cases it was found that those lands are leased out on share cropping arrangement. One of the families is found cultivating almost 3 acres of land on share cropping arrangement. Some of the members are also planning to start small fishery project. There are 41 ponds covering an area of almost 12 acres. The World Food Programme already approved a project to re-excavate 11 of them for pisciculture. Massive plantation with the help of project has also begun in the slopes. Presently, BWDB leased out whole of the embankment slope to the Department of Forestry. They planted trees few years back on the embankment. The trees are matured by now and the department has been requested to harvest the trees as per the agreement. The local forest office is waiting for the decision from the head quarter for last six months.

The latest position of land distribution among 19 Embankment Maintenance Samittees along with the quantity of paddy produced in the borrow-pit lands may be seen in Table-6.

Table-6: Types of Land in Possession and Quantity of Paddy Produced in Last Amon Season by 19 Samittees

Names of Samittee	Land in Possession (in decimal)					Paddy Produced (in mds.)	Types
	Slope	Pond	Cultivable	Other	Total		
Upakul	410	-	800	841	2052	106	Invested
Meghna	540	-	1620	542	2702	143	"
Banga Tir	394	-	1180	398	1972	185	"
Chinnamul	664	711	1407	710	3492	184	"
Shapla	525	50	1575	490	2640	138	"
Suezpar	401	-	1200	408	2009	128	"
Jamuna	402	-	1446	562	2410	124	"
B. Gauranga	518	25	620	500	1663	67	"
Golap	515	-	525	510	1550	Not Available	"
Joba	331	-	900	350	1581	"	"
Sagarpar	300	-	240	540	1080	"	Non-invested
Surjamukhi	300	-	-	325	625	"	"

Kanakchapa	201	-	100	615	916	"	"
Padma	268	-	650	425	1343	"	"
Satata	293	265	585	324	1467	89	"
Akata	264	-	792	266	1322	83	"
Gazir Bad	283	135	-	344	762	Not Available	"
Joie	300	-	240	325	865	"	"
Shimul	368	90	1192	195	1845	106	"
Total	7276	1276	15172	8571	32295	1353	"
Average per family	15.15	2.65	31.60	17.85	67.28	2.9	"

Source: The COAST Trust (later renamed as COAST Foundation), January, 1998

Embankment Maintenance Activities

The lease maintenance agreement for selected stretches of the embankment was handed over only in March 1997 and it took another four months to take possession of land. Therefore, the maintenance work did not start as planned earlier by the project. In the meantime, all the equipment necessary for earth cutting and labeling have been given to them. They were also given training on the maintenance work. All the embankment dwellers made aware of the effect of the harmful tree plantations such as banana, papaya, etc. on the embankment.

A brisk preparation has been seen in the month of August 1997 for starting the maintenance work. The first drive of maintenance work have been completed in October, 1997. The second schedule for maintenance was made in March, 1998 just before the monsoon.

Though 11 km embankment area was earmarked for 480 members under 20 Embankment Maintenance Society, the area has been reduced to 9 km later on. Out of these 9 km maintenance work has been carried out in 6 km area of embankment till January 1998. Ten of the societies belong to the invested area took part in maintenance and nine other societies of the non-invested area did not comply to their maintenance obligation during the period under review.

Regarding the standard and quality of maintenance, we could not compare the Water Development Board's findings. As to our assessment, the maintenance work so far done were of poor standard. The area covered by invested societies has been found relatively clean but the area under non-invested societies were found unclean. Moreover, bushes, Jungles and many other harmful plants were still being grown in those areas.

We had very fruitful and open discussions with the leaders of various societies belong to the invested area including the project personnel. All the discussions were held on the embankment sites. In all the discussions embankment society members admitted the fact of their sub-standard maintenance performance without any question. While analyzing the reason they brought the following issues which were responsible for their sub-standard performance:

- a) Many of the societies and members individually did not follow the guidelines provided by the project. For example, all the members of the respective societies did not work together at the same day and time. Individual member finished his/her part of maintenance at his/her own time. As a result, uniformity in leveling and compaction has not been maintained.

It is agreed that in future maintenance work has to be arranged in one fixed day for all the members. No individual member will be allowed to work isolatedly.

- b) In some cases the member who received training on embankment maintenance did not participate in actual maintenance work. Somebody else from his/her family did the actual maintenance work. As non-trained persons participated in the maintenance work, they were not in a position to follow the project's specification and instruction.

In future, non-trained members of the family would not be allowed to participate in the work it should be only under the supervision of the trained person.

- c) Maintenance work has been started after almost six month of the training programme. As a result, many of the participants might have forgotten the massages of the training and ultimately resulted in poor quality of work.

There was a request from the beneficiaries to the project authority to arrange a one-day refresher's course just one week before the next maintenance is implemented.

- d) No inspection has been done from the BWDB during and after the first maintenance work.

The beneficiaries requested the project personnel to bring the BWDB officials during maintenance for spot supervision and guidance in future.

The Views of the Members of the Non-Invested Area

There are nine Embankment Maintenance Societies within a total of 225 members in the area designated as non-invested area. According to the latest land distribution figure as depicted in table-6, nine of the societies of non-invested area (Sagar par, Surjamuki, Kanak Chapa, Padma, Satata, Akata, Gajir Badh, Joie and Shemul) got allocated of 102 acres of different categories of land. They also signed contact to maintain an embankment area of little over 3 km. But ultimately they did not take part in the maintenance work. They also did not remove many of the harmful structures, harmful plants and trees and clear up the bushes from the embankment within their command.

While contacted, some of their leaders said that they would start maintenance work soon but they had lot of many other things to sort out with the project. Two of the issues came up very dominantly in the discussion.

Firstly, many of their members did not get possession of the land given to them officially. Two of the societies namely Surjamuki and Gazir Badh did not get any borrow-pit land. It was decided earlier that Water Development Board will install boundary pillers to demarcate the land allotted to them. No boundary pillar or demarcation pillar has been given either from the Project or from the Board and as a result they were confused and still the insecurity or threat of losing land were haunt them.

Secondly, there prevails a sense of deprivation and discrimination between the invested and non-invested area. People of the non-invested area, though live in the same area, do not get the social investment support which their neighbors in the invested area are getting. They also said that project staff also pay very minimum attention to their problems.

As per provision of the contract signed between the beneficiaries and the BWDB, the embankment dwellers in the non-invested area are also legally bound to maintain the embankment. But due to the above mentioned reasons they seemed less enthusiastic (though not reluctant) to start proper maintenance work.

The project personnel were of the opinion that if social investment programme had not been started in those areas, it would be very difficult to make them engage in proper maintenance.

The core issue of this experiment is to develop a viable participatory embankment maintenance model. Keeping the core issue and also the strategies and objectives of the SSEMP in vision the following recommendations are made to accelerate the project activities.

1. A system of quarterly review meeting should be introduced in which the local officials of the BWDB, project personnel for three NGOs and beneficiary leaders should participate. The review meeting should be hosted at the embankment site by the three NGOs in a rotation. The proceedings of the review meeting should be circulated to all the concerned persons and agencies.
2. A yearly maintenance calendar has to be prepared well ahead of the maintenance time.
3. The land problem should be solved with utmost priority. The BWDB should complete its obligation by putting boundary pillars and should also take necessary steps to hand over the possession of allotted land.
4. The project implementing NGOs should arrange annual maintenance week adding some festivity in which prizes may be distributed among the best performing societies.
5. The local administration, press and various other civil society forums should be informed about the outcome of the project.
6. The system of dividing the beneficiaries between invested and non-invested areas is not necessary for the experimentation purpose even. The division created anger, frustration and a sense of deprivation among the destitutes. The implementing NGOs themselves should invest their own money in credit programme in the hitherto designated non-investment area.

Conclusion

The project employees had to fight in different fronts during last one year in implementing the land distribution programme. The battles were fought against vested interest groups, local landlords, political mastans, corrupt officials and also in the court premises. As a result, adequate attention could not have been given in monitoring and supervision of many of the very essential components of the project. In the struggle for procuring lands from the clutches of land hungry local elites, government officials such as Deputy Commissioner, Thana Nirbahi Officer, Police and local Journalist took the embankment dwellers' side which made the initiation of the project possible. In all the future similar projects their role and function should also be formalized.

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