



Background

Sundarbans is an archipelago to the south of West Bengal. It is well known for its mangrove forests and as home to the famous Royal Bengal Tiger. It comprises of 19 blocks of which 13 are in the South 24 Paraganas District and 6 blocks are in the district of North 24 Paraganas of West Bengal, India, with a population of more than 4 million. An area well known for its vulnerability to floods aggravated further



Concrete embankment caved in and swept off to the agricultural field

because of global warming, was devastated by a cyclone called Aila that hit the coasts in the afternoon of 25th May, 2009. The storm which had an intensity of 110 kmph hit the Sagar islands in Sundarbans around 1.30 P.M. The resulting swelling of water which rushed inwards crossed or overtopped 1956 kms of

embankments and caved in another 400 kms of them, flooded the inland and washed away houses, animals, humans and livelihood of a vast section of

the population. Kultoli and Patharpratima, two blocks of Sundarbans in South 24 Paraganas faced the brunt of the storm and the flooding distributaries as did many other blocks with varying intensity.

As an immediate response to this crisis, along with several other organisations, Baikunthapur Tarun Sangha, a not-for-profit organisation working in the area for more than 25 years now, played an active role in rescue and relief by providing food, drinking water and plastic sheets to set up temporary shelter with the support from its funding partners which included Vibha, USA.

A house covered with plastic sheet given in Patharpratima by BTS through Sabuj Sangha as a part of immediate relief

Subsequently, the organisation submitted a project proposal to undertake significant works for rehabilitation and reconstruction of the pre primary schools that it runs and of houses of the school children and also for restoration of fishing ponds and agricultural lands of the same families through a variety of activities.

Vibha, USA in its process of verification requested a team of social activists with substantial exposure to rural development in West Bengal and in the Sundarbans in particular in the post Aila scenario to visit the sites and review the proposal.

Objectives

A team of four from diverse fields but with exposure and knowledge of rural development and needs, visited the geographical area and the sites in particular with a view to fulfil the following objectives.

- Assess Construction Needs specified in 'Project Proposal' given by BTS to Vibha
- Interact with flood victims to fathom their indirect and intangible losses in addition to the direct losses like damage of houses etc
- Understand needs in terms of the present scenario of exigency
- Review work being undertaken by BTS
- Recommend worthwhile and achievable solutions

Geographical Area/Sites Visited

- Purba and Paschim Sripatinagar of K Plot in Pathar Pratima Block
- Baikunthapur in Kultali Block
- Kishoromohanpur in Kultali Block
- Nogenabad in Kultali Block

Methodology Adopted

A scientific and sound methodology, given the constraints of time and situation was adopted to fulfil the above objectives. These include the following.

- Interview of Staff of BTS
- Interview of Staff of Partner NGOs like Sabuj Sangha and Kishori Sangha
- Interview of Creche Mothers

- Interview of School Children
- Interview of Other Villagers
- Focus Group Discussions
- Transect Walk
- On site Appraisal of Existing Buildings and Construction/Reconstruction Requirement



A large assembly at K Plot, Patharpratima

Brainstorming among Members of Assessing Team

Observations

General (with regard to BTS run Pre Primary Schools):-

The school run by BTS directly as in Baikunthapur or with the help of partner NGOs like in Sripatinagar of K Plot, Kishorimohanpur and Nogenabad are reasonably well equipped with tools and demonstration material. Registers are properly maintained. The crèche mothers who are young and energetic have well received the Montessori training imparted to them and were found to make use of tools like flash cards, pink towers,

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Register and teaching Aids maintained in the CCCs

brown stairs, long stairs, picture cards, charts etc.

Apart from these, other activities like singing,

dancing, rhymes etc that lead to social development of a child were also undertaken. The level of education imparted was found to be at par with that available in schools of similar standard in the urban areas.

It was learnt during the visit, that the schools provide meals to children in accordance to a routine, to ensure balance diet. The meal comprises of rice with vegetable on 2 days, Kichhri (a boiled mixture of rice and lentil) once a week, chickpeas or sprouts once a week and fruit/biscuit once a week. In all the centres, the school timings are from 10 A.M. to 3 PM. The age of children enrolled were



Nashima Khatun, the little girl in the photograph is a four year old pupil of BTS Centre in Sreepatinagar. When asked to count the number of students in the class, she went around confidently in the circle in which all the students were standing and counted up to 50 without hesitation. She made all assembled including the assessing team members proud.

between ages 3 and 6. All of them maintained wait lists of children eager to join and played a critical role in mainstreaming the children with the govt. run education system from the primary level. The schools in Sreepatinagar, Nogenabad and Kishorimohanpur also serve as centres of the Integrated Child Development Scheme (ICDS) of the government.

Periodic health camps are held for the children enrolled in the CCCs and homeopathic medicines are provided to them. It was told that vaccination records were also checked periodically.

Two centres (Nazrul CCC and Rammohan CCC) run together in 1 room in

Sreepatinagar in K Plot and another two centres Shishu Tirtha and Green Buds, run together in Baikunthapur in 1 room. Another 2 CCCs Sahapathi and Kishalay are run seperately in Nogenabad and Kishorimohanpur respectively.









From Top right, clockwise: Creche mothers in CCC Shishu Tirtha and Green Buds in Bainkunthapur; Dilapidated Centre in K Plot, Patharpratima, Kishalay CCC at Kishorimohanpur, Sahapathi CCC at Nogenabad,

Specific Observations (with regard to BTS run Pre Primary Schools or Child Care Centres):-

Name of Pre Primary Schools & Partner NGO (if any)	Location and Number of Boys and Girls	Names of Creche Mothers	Dimensions of Existing Building (approx)	Destruction Caused by Aila	Requirements	Budgetary Estimated Costs
Nazrul Child Care Centre; Sabuj Sangha Ram Mohan Child Care Centre; Sabuj Sangha	Purba Sreepatinagar, K Plot, Patharpratima; B 12; G13 Purba Sreepatinagar, K Plot, Patharpratima; B 13; G12	Tanusree Jana, Gita Burman, Shibani Naiya, Shamsunnesha Bibi	1 building of size 33 ft x 12 ft x 10 ft, the outer shed would be of another 6 ft on each side	Mud walls washed away. The structure on pillars stand in a dilapidated condition	Immediate reconstruction preferably with cyclone proof engineering with increase in size of pillars to serve as stilts as location is in flood prone area. Partitioning of room into two to facilitate simultaneous running of 2 classes divided on the basis of age group rather than centres. Need for toilet and tubewell	Reconstructi on of appropriate building with two rooms, tubewell and toilet with cess pit- Rs 4,00,000
Green Buds Shishu Tirtha	Baikunthapur, Kultoli ; B 16; G 9 Baikunthapur, Kultoli ; B 8; G 17	Sujata Duari, Rinku Naiya, Tapati Giri, Chandana	1 room with asbestos shed. Size 40ft x 24 ft	None	Replacement of Asbestos roof with brickwork.	Reconstructi on of Roof of Building and Construction

		Maity	x 10 ft.		Partitioning of room into two to facilitate simultaneous running of 2 classes divided on the basis of age group rather than centres Construction of toilet	of toilet with Cess Pit -Rs 1,00,000
Sahapa thi	Nogenabad, Kultoli, B 15; G 10	Sabita Mandal, Atasi Karan	Building with two rooms and a open corridor. Windows and Doors absent. Size 40 ft x 18 ft x 10 ft	Flooded with water. Damage of study material and teaching aids	The walls have to be plastered, doors and windows fitted and floor level has to be raised and cemented.	Reconstructi on of floor at a higher level, doors and windows, Building – Rs 2,00,000
Kishalay; Kishore Sangha	Kishorimohanpur, Kultoli; B15; G 10	Niyati Mandal, Sumitra Mandal	1 room with mud tiles on the roof. Has toilet and tubewell. Size 30ft x 14 ft x 10	None	Some damages in walls and floor needs to be repaired and whitewashed because natural light inside is not enough	Repair of Minor Damages in walls and floor and white washing - Rs 20,000

Foot Note: The Costs of construction or repair given in the table are only budgetary. If Vibha approves and desires, more accurate costs along with drawings can be given later.

Skills in the Villages



During the transect walk in K Plot in Patharpratima, a young boy in his late teens was found busy doing beadwork on a sari. When enquired, it was found that the family together undertakes the work. The remuneration for each sari of the kind he was working on, was Rs 700 and in a month the turnover is of 4-5 sarees. Around 15 families in

the village were engaged in this occupation through an intermediary.

Major Problems

The major cause of underdevelopment in the Sundarbans especially in this part was because of lack of roads and poor transportation system both in land and in water. Government facilities with regard to these were virtually non-existent. Electricity has neither reached these villages. Incentives for use of solar technology was given only for a short while and have been discontinued. Health facilities are grossly lacking. Primary schools exist but secondary schools are far away. Lack of infrastructure development has hindered industrial development and has limited livelihood activity to predominantly agriculture.

Recommendations with Rationale

One must remember that the Sundarbans is still an active delta, which implies that the land building process is still ongoing. Despite this, huge area of forests in the region have been denudated and converted into agricultural land by man. Later human civilisation in the region grew and to protect them from floods

The secretary of the BTS Centre in Patharpratima Sheikh Malik said that his grandfather, who is still alive had come to the island when forests were being cleared.

embankments were made. The strategies adopted by man to overcome minor floods resulted in bigger floods, the biggest one so far being evidenced during the cyclone Aila. The ideal strategy under such circumstances, in an area that will inevitably face more floods in the future would be to return the spill area to the distributaries through regulations on land use. But since this is a difficult and rather unfeasible solution, other courses of action need to be adopted to minimise future

flood losses. Some of these are recommended below in context of the proposal submitted by BTS to Vibha and on the basis of field survey combined with discussions and some desktop research.

- ✓ In view of the demand for reconstruction and repair of damaged houses of the 150 children attending the BTS run pre primary school, it is believed that such discretionary solutions for only a very small fraction of households during such exigency, would not only lead to social feuds but also alienate BTS or the local NGO as the case may be. This is because there is every possibility that there are households who are more adversely affected than that of the BTS children but would be deprived if such a policy is adopted. It is thus strongly felt that reconstruction and repair of damaged houses of only BTS children is not the appropriate strategy of intervention at present, when there is still need for relief. In view of these arguments, which were also discussed with the BTS staff, the assessing team is not recommending this part of the project proposal.
- Support for re excavation of ponds or desalination of agricultural fields or seed support program if adopted cannot be restricted to households of BTS children only during times of such exigency. Moreover, there is no proven variety of paddy that can be cultivated in the saline soils of Sundarbans. **Experiments** are being undertaken by several research teams but no proven results have been found yet. Howeve,r since the farmers are not willing to give up their livelihood, they are trying to recover their fields and ponds. Hence not much investment in these activities is

Paddy sown in saline fields are turning yellow, post Aila but farmers are not ready to give up

recommended at this stage. However if any partial support is extended for rejuvenation of land and re excavation of ponds, it is recommended for all affected villagers without any discretion being made on the basis of households related to CCCs, in Sreepatinagar in K Plot, Patharpratima Block and in Nogenabad of Kultoli Block.

- √ Schools, on the other hand must be reconstructed so that they are on stilts
 and are cyclone resistant and flood proof. Investment in these must be done
 in a manner that they can serve as community shelters in case of any disaster
 in future. In order of priority, the BTS school building in Patharpratima Block
 demands attention first, followed by that in Nogenabad. The Centres in
 Baikunthapur and in Kishorimohanpur have not been affected by the floods.
 But minor repair works and whitewashing in the latter and replacement of the
 existing asbestos (which is environmentally hazardous) roof with cementing in
 the former is also being recommended.
- √ Other measures that should be adopted include construction of tubewells and toilets of reasonable size (and not too small) in schools in the Patharpratima Centre and of toilet alone in the Baikunthapur Centre. It is believed that if children learn toilet habits from an early age, open defecation still prevalent in villages would reduce in the natural course of time and if safe drinking water is available in schools and simple hygiene like washing of hands is promoted then prevalence of disease would decline significantly.
- √ It is recommended that crèche mothers who are trained in techniques of
 joyful learning in turn impart elementary training to mothers of children who
 are in the wait list of BTS run schools. This would indirectly ensure that all
 children eligible for pre-primary education in the villages receive it to a
 certain extent.

√ The crèche mothers can also be provided a refresher or upgradation training once in every two years in future.

√ The old BTS building as in adjcaent photograph, (especially walls) which is damaged though not due to Aila, is also being recommended for repair works. The outer dimensions of the building are 60 ft x 22 ft x 10 ft. Estimated Cost Rs 1 lakh.

- √ Large scale appropriate plantation in the area especially along the banks and appropriate greening of the embankments that have been reconstructed is being strongly recommended as an effective and proven measure of flood abatement.
- √ It is strongly recommended to seek contribution from households of children attending BTS run pre-primary schools as well as from other willing villagers in the form of labour for undertaking all of the above construction works. This would not only reduce costs but would increase ownership and ensure better maintenance of the structures and the systems put in place.
- √ A similar approach of seeking contribution of villagers may be adopted for plantation activities as it would not only ensure a higher percentage survival but would also prevent deforestation.
- √ Vocational skill development and marketing assistance and linkage through capacity building programmes is also recommended. The existing school buildings could serve as such skill development centres after 3 P.M. till dusk. It would provide alternative livelihoods to a vast majority who have lost their only source of livelihood (agriculture) for at least 1 year from now and would be forced to become environmental refugees leading to urban problems, if not prevented. However it must be remembered that the choice of skills to be built must be market driven rather that production driven. Some professional expertise in skill development and marketing assistance should be sought for this.
- √ Promotion of village level micro enterprises through partial support or small loans is recommended for action.

A total of Rs 13 lakhs is being recommended for sanction as applied for in the proposal. Of this, apart from the money required for construction works, the remaining budget may be distributed among the other recommended activities like partial support for rejuvenation of agricultural fields and re excavation of ponds, appropriate plantation activities on a large scale, market driven vocational skill development, micro enterprise development, capacity building etc.