Project Proposal

Strengthening Resilience of Climate Change-Affected Communities in South-western Coastal Area of Bangladesh

Submitted for

Community Based Adaptation to
Climate Change in Bangladesh (CBA) Small Grants Project

Submitted by

Practical Action
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PROPOSAL SUMMARY

Project Title	Strengthening Resilience of Climate Change-Affected Communities in South-western Coastal Area of Bangladesh
Project Site	Four villages (Chhotokupot, Boyarshing, Borokupot and Uttar Atulia) of Shyamnagar upazila of Satkhira district
Proponent	**Practical Action, Bangladesh Country Office** Practical Action aims to eradicate poverty in developing countries through the development and use of technology, by demonstrating results, sharing knowledge and influencing others. It has been working in Bangladesh as an International NGO since 1990 being registered with NGO Affairs Bureau. It works under three major thematic areas: 1) Reducing Vulnerability and Natural Resource Management; 2) Markets and livelihoods; and 3) Infrastructure and services. Practical Action has been working on climate change adaptation in Bangladesh as well as in the global arena over the last six years. In Bangladesh, a climate change adaptation project – one of the first few CBA projects in the country – started in 2005 in the north. Since then Practical Action Bangladesh has 'climate-proofed' all its DRR, livelihoods and food security projects for the poor and extreme poor by incorporating community-based climate resilience components. Climate change has also been considered as a cross-cutting issue in Practical Action's current Global Strategy (2007-2012). The on-going 'Climate Change Action Research Project in the South Western Coastal Region of Bangladesh' project in Satkhira district has entered in its 2nd year and will compliment the proposed project activities. The problems, risks and some potential solutions illustrated in this proposal were identified since the mid-2009 through repeated community consultations and have been good bases for the proposed project. Practical Action Bangladesh's current key donors are DFID, European Union, Big Lottery Fund, Unicef, GTZ, DGIS, States of Jersey, Allachy Trust, World Bank and Waterloo Foundation including our individual supporters in UK. The total budget of PAB for the current financial year (April 2010-March 2011) is around 4.0 million Pound.
Authorized Representatives	1. Ms. Veena Khaleque, Country Director 2. Mr. S.M. Wahiduzzaman Babur, Head of Finance, Admin and HR 3. Dr. Haseeb Md. Irfanullah, Team Leader, Reducing Vulnerability and Natural Resource Management
Cooperating Organizations	Not applicable
Project Dates	January 2011-December 2012

Total Project Cost (USD) (local currency)	**USD 110,481 (BDT 7,917,476)** (The total cost, included CBA funding and co-financing in cash from Practical Action. Value of in kind contributions from community is not added here)
Amount Requested from CBA (USD) (local currency)	**USD 48,990 (BDT 3,510,790)**
Co-financing (USD) (local currency)	**USD 61,491 (BDT 4,406,686) (in cash)** Community contribution (in kind): USD 19,645 (BDT 13,82,000)
Project Objective	**Goal** Resilience of coastal communities of Bangladesh under climate change regime strengthened through ecosystem and livelihoods protection. **Purpose** Adaptive capacity of four villages (400 households directly) of Atulia union of Satkhira district improved by introducing appropriate knowledge and technologies to cope with increased salinity conditions by December 2012. The main objective of the proposed project is to demonstrate relevant adaptive measures, approaches, and interventions that will build resilience of the salinity-affected vulnerable communities in terms of biodiversity and ecosystem management thereby reducing their climatic risks and securing their employment, food and income.
Brief Project Description	The project envisages attaining the following outcomes and outputs (long-term and short-term benefits). **Outcomes (long-term benefits):** 1. Improved capacity and representation of local people and institutions to influence climate change adaptation and biodiversity protection plans. 2. Sustainable aquaculture practiced in salinity-affected fish and shrimp farms mitigating at least 30% loss. 3. Negative pressure on natural aquatic animals (at least 5 species) reduced to a measurable extent. 4. Local ecosystem and peoples' resilience improved as a whole through plantation. 5. Project lessons captured and mainstreamed with NAPA 2005, BCCSAP 2009 and Biodiversity Programme of Action 2020 for up scaling. **Outputs (short-term benefits):** 1. Understanding and awareness of the communities, 10 local NGOs, and local government institutions of Atulia union on the impacts of climate change, climate variability and biodiversity conservation enhanced.

	2. Thirty skilled volunteers developed as ambassadors to climate change adaptation and biodiversity monitoring. 3. Adaptive model of biodiversity and environment sensitive shrimp farming demonstrated in salinity-affected increasing 40% household income. 4. Adaptation of selected aquatic animals and recent changes in fish-farming due to salinity intrusion in Atulia union recorded 5. Participatory aquatic biodiversity monitoring system practiced by community people, Union Parishad, local NGOs and at least 3 government line departments. 6. Off-farm activities practiced by 10% of 400 households (mostly women) to divert pressure from natural resources. 7. Two community nurseries of suitable plant species (wind-resistant and salinity) established with women-headed households. 8. Rehabilitation of mangrove plant species at 2,500 households and institution premises. 9. Project learning documented & widely disseminated in coastal regions.

1.0 RATIONALE

1.1 Community/Ecosystem Context

Project area

The project will direct work with 400 vulnerable households (about 2,000 people) in four villages of Atulia union of Shyamnagar upazila of Satkhira district. The upazila, with 1968.24 sq km area and population of 2,65,004[1], is one of the most vulnerable coastal upazilas of Bangladesh. It consists of 13 union parishads and 216 villages. The four villages where the project will be implemented are Chhotokupot, Boyarshing, Borokupot and Uttar Atulia with total population of 2440. Land ownership of a significant number of families varies from landlessness living on *khas* land to having own homestead but negligible amount of cultivable. In almost all cases, housing is very congested.

Livelihoods

The project area is agriculture depended. Rice cultivation and aquaculture/trading are two main areas on which most of the local people are depended upon. Other professions include businessmen/traders, day-labourers, fishermen, van puller, poultry & livestock rearing, boatman, mason, nursery owners and service-holders/teacher. The recent FGDs highlighted the fact that although women are mostly appeared to be housewives, but in some areas they are also involved in agriculture, aquaculture (collection of shrimp juvenile/post larvae and crab collection, sorting and processing of fish), day labour, homestead gardening etc. (e.g. Hindu communities in Borokupot and Uttar Atulia villages). Earning women spend 50% of their income independently. Early marriage is negligible in the area. Findings also indicated that almost 73% of the people depended upon loan from various sources. More than 56% of the people of this area are food deficit for 2-6 months a year.

Target groups

The project will primarily focus on people associated with shrimp farming, crab farming (resource poor and landless farmers), and fishermen and collectors of wild shrimp juvenile (post larvae) and crab larvae as the direct project participants. These are the people who are also directly affected by

[1] Banglapedia 2006 (http://www.banglapedia.org/httpdocs/HT/S_0367.HTM)

climate variability, salinity intrusion and often by extreme events due to their profession and dependency on weather and natural resources. Female-headed households are another vulnerable group with limited resources. All these groups will be targeted under the present project.

Ecosystems and people

Terrestrial ecosystem of the project area is dominated by cultivable land. Aquatic ecosystems are dominated by fish/shrimp ponds (*gher*). Natural aquatic ecosystems include distributaries of rivers and associated canals (*khal*) criss-crossing the whole area. In the past, the project area was under Sundarbans mangrove forest, but now the forest boundary is pushed further south. Nonetheless, mangrove species can bee seen the proposed project area along the canals as the area is under tidal zone. The recent increase in salinity has also changing the plant diversity/coverage in the area. All these ecosystems are highly prone to climate-induced hazards, especially salinity, flood, drought, water-logging, cyclone, tidal surge, and arsenic.

An on-going study of Practical Action in Satkhira identified the change in abundance of wild aquatic animal in open system and stocked species in farms including change in land use pattern in the area. Exploitation of wild shrimp juvenile and crab from rivers is potential alarming. Aquaculture farmers found to be confused with both stocked and non-stocked species combination of various aquatic animals at different levels of salinity. People believe these changes are happening because of tidal surge, cyclone and salinity intrusion. On a social context, short-term leasing of *ghers* does not allow the lease-holders to consider biodiversity issues. Similarly, intervention, like plantation, around the *ghers* by the neighbours is also not encouraged.

1.2 Current (Baseline) Climate and Risks

Climate of project area

The climatic data available from Bangladesh Meteorological Department (BMD) for Satkhira district showed declining trend over 1986 and 2005 (31.9 °C in 1986-1990; 31.16 ° C in 1981-1985)[2]. The long-term trend (1976-2005) in average maximum temperature on average reduced by 0.009°C/year. Similar decline (0.0001°C/year) can be seen in average annual minimum temperature of this region. But such decline in average temperature may not reflect the high temperature spells in different years. On the other hand, the annual rainfall increased by 9.5 mm. The pattern of total rainfall of different years of 1997-2005 was very irregular. Unpredictability in weather events is an increasing trend.

Current climate risks and impacts

As identified by the local community in recent FGDs, November to February is drought period in the proposed area. According to the people, rainy season is now basically spread over September and October. Cyclones, sometime accompanied by tidal surges, now occur in May to July (although as general weather pattern it was frequent in April-May and October-November). In the recent years, the northern Bay of Bengal remains rough almost all year round due to small and medium depressions. In May 2009, the last cyclone called *Aila* hit Satkhira. As a result, the entire soil and water ecosystems in the area became vulnerable and the lives and livelihoods of the poor affected immensely. The salinity in the soil ranges 10-15 ppt. The weather is becoming more and more unpredictable.

Reports showed that saline water has penetrated about 100 km from the sea to inland through the coastal rivers. The total saline-affected area has increased from 125,000 ha (2000) to 131,000 ha (2009) in Satkhira. As a result of *Aila*, the target people of the proposed area were the victims of the devastation of the cyclone and of increased salinity, particularly those who were food insecure for 3-4

[2] Climate Change Cell. 2008. Climate Change Adaptation Research. Climate Change and Health Impacts in Bangladesh.

months with poor consumption of vegetables, fruits, and having low income (2,500-3,000 Tk/household/month; on average <30 taka per capita income/day)[3].

Vulnerabilities and immediate responses

From the FGDs, the major vulnerabilities identified for the area were natural calamities/extreme events (cyclone and tidal surge), saline water intrusion in surface and ground water, serious scarcity of safe drinking water, problems in production systems (crops, livestock, and fresh water fish culture), water logging, problems with embankments. The combined impact of very low cropping intensity, soil-water degradation, unusual disaster and climate change factors made the food security, income and employment situation of the poor very complex in Shatkhira district- one of the most vulnerable coastal districts with huge population living in extreme poverty. People are suffering from lack of job opportunity, malnutrition, skin diseases, increased poverty, and out-migration. These vulnerabilities also matches with previous studies in this area[4].

The major coping measures to these vulnerabilities are (examples from recent FGDs):

1) *Water crisis and salinity:* construction of PSF, desalinate land, drill deep tube well, rainwater harvest, desalinization of river water, excavation of canals, and lift water using sluice gate, etc.;
2) *Water logging and tidal surge:* repairing and increasing height of embankment and roads, stronger houses;
3) *Crop production:* cultivation of suitable rice variety; and
4) *Aquaculture:* mixed fish culture suitable for salt water, freshwater shrimp culture in fresh water extracting through deep tube wells, etc.

After the cyclone *Aila* (May 2009), along with the Government a number of national and international NGOs started working in this area. Some local social networks or community based groups/organizations were also promoted by these organizations to deliver support to the community as a part of emergency response and rehabilitation: food support, infrastructure (housing, road reconstruction, irrigation, drinking water, sanitation), financial (loan support, mandatory saving schemes), livelihoods (poultry/livestock, fisheries, vegetable), plantation, and energy (solar) (findings of recent FGDs). But no long-term strategies or organized measures are known to be employed by the local people to deal with climate-related risks at the moment.

1.3 Future Climate Risks

Bangladesh NAPA[5] document highlighted that some coastal area of the country was already facing problems of increased salinity. Occurrence of extreme events (cyclones, tidal surges) is also predicted to be more frequent in the coming years. Such events along with gradual sea level rise and reduced flow from the upstream would lead to increase salinity in the area. This is particularly true for Satkhira given its low topography[6]. Variability in rainfall and temperature will be more and more evident as well so is shifting of seasons.

As learnt from the recent FGDs, local experience also supports the climatic predictions in terms of unpredictability of rainfall, shifting in seasons, change in aquatic fisheries resources, farming practice, etc.

1.4 Impacts Context

[3] Report on 'Climate Change Action Research Project in the South Western Coastal Region of Bangladesh' project of Practical Action, Bangladesh, Dhaka. (unpublished)

[4] Ahmed, A.U. 2008. Assessment of Vulnerability to Climate Change and Adaptation Options for the Coastal People of Bangladesh. Practical Action Bangladesh, Dhaka

[5] MoEF. 2005. National Adaptation Programme of Action (NAPA). Ministry of Environment and Forest, Government of the People's Republic of Bangladesh. (40 p)

[6] MoEF. 2009. Bangladesh Climate Change Strategy and Action Plan (BCCSAP). Ministry of Environment and Forest, Government of the People's Republic of Bangladesh. (Map 4)

A number of changes are predicted due to climatic change as suggested by different scientific studies and national documents[7]. In the proposed project area, salinity intrusion and its impact on aquatic resources and mangrove species are highlighted. These changes and possible impacts on local people are registered in the table below.

Changes	**Impacts/Responses**
• Loss of freshwater species from natural ecosystems.	• Low freshwater fish catch, low supply to the local/regional markets; high price. • Increased income may not possible for fishermen due to middlemen.
• Shift in aquatic biodiversity from freshwater to saltwater species.	• New/better market of saltwater fish. • Increased income for fishermen if market linkage is appropriate.
• Decrease in freshwater aquaculture production due to salinity intrusion.	• Negative impacts on people's earning who are directly involved. • Change in professions, out-migration.
• Increased opportunity to adopt salt water aquaculture (combination of shrimp and fish).	• Demand for labourers trained on new production system. • New/increased pressures on natural fisheries as a source of aquaculture (shrimp juvenile). • Changes in input supply chain. • Opportunities for new markets.
• Higher fisheries production due to higher water levels and higher temperature regimes.	• Increased income is possible if suitable saltwater farming is adopted.
• Decrease in freshwater vegetation.	• Reduced availability of plant products (food, fuel, timber, etc.). • Increased opportunity to introduce mangrove species to improve/maintain/ encourage vegetation coverage.

It has been widely predicted that the extreme natural events will be more frequent in the project area in the near future. As a result the mentioned changes in ecosystems and related impacts will also aggravate. If impacts intensify, adoption to suitable aquatic farming system is vital. Similarly, due to increased salinity, changes in tree coverage will also be evident in the project area; therefore, plantation with mangrove and salt-tolerant species are needed to meet local demands for timber and fuel. Such species will also improve the overall environment by reducing soil erosion and improving silt deposition.

The people of the project are very strong minded, surviving natural calamities for centuries. But their capacity has proved to be insufficient, if extreme events occur frequently. Long-term strategy is thus needed to cope with climate change. But at the moment, no sufficient interventions have been undertaken in the proposed area for long-term benefits. Some efforts have been made to overcome the damages of *Aila*, which has proved not to be sufficient. Till now focus is directly on human and his livelihoods without considering its relationship with the ecosystems.

Therefore, thorough understanding is needed to monitor the impacts of climate variability and change on natural resources, especially aquatic biodiversity as people's nutrition and livelihoods depend upon these. In addition to that, innovative aquaculture production system needs to be introduced to cope with the changes due to salinity intrusion. Bangladesh NAPA[8] suggested 'Promoting adaptation to coastal fisheries through culture of salt tolerant fish special in coastal areas of Bangladesh' as one of

[7] MoEF. 2005. NAPA
[8] MoEF. 2005. NAPA.

the 15 priority initiatives to adapt to climate change (Project No. 14). Zoning for environment-friendly saltwater aquaculture has also been highlighted in Bangladesh NAPA.

1.5 Project Approach

Global Environmental Benefits (GEB)

The baseline threats to GEB are on biodiversity – aquatic animals and plants – due to increase in salinity. Due to climate change, the sea level is rising, upstream flow is decreasing due to unexpectedly low rainfall, and frequency of calamities like cyclone and tidal surge is increasing. All these are collectively causing increased salinity in the project area, thus affecting local aquatic and terrestrial biodiversity.

Under the changing trend in aquaculture, there is a risk of introducing alien-farmed fish species to tackle loss from salinity and meeting ever increasing demand for animal protein. The fisheries sector has seen the negative impact of introducing certain exotic species without proper risk assessment. Under changing climatic such maladaptation could pose additional threat. The proposed project will introduce and promoted knowledge and technologies is such a way so that positive adaptation is promoted for the benefits of biodiversity and ecosystems by considering people's livelihoods, food demand, income and climate related risks.

Ecosystem resilience

The project is expected to keep the ecosystems of target areas more resilient in three main ways:

1. Reduced pressure on natural aquatic animals by providing alternative options (adaptive biodiversity-sensitive aquaculture model, campaigns, and off-farm options) and awareness building.
2. Increased vegetation cover with suitable species despite salinity intrusion.
3. Reduced extraction of ground water for forced-freshwater-fish-farming as adaptive aquaculture model is available.

Communities' benefits

The community will be benefited from the initiative in a number of ways.

1. Improve their understanding on climate change, biodiversity and impacts on livelihoods under the changing climatic regime. It will consequently help them to influence local climate change adaptation and biodiversity protection plans.
2. Equip them with an adaptive aquaculture model under increased salinity. This will mitigate the loss due to salinity and increase household income.
3. Reduce their risk in aquaculture as the new adaptive model will have combination of several salt-tolerant species. This will minimize unforeseen climate-related risks, like new disease in fish/shrimp.
4. Promote off-farm activities as alternative livelihoods options with special consideration of women's needs.
5. Enhance a group of community extensionists (volunteers) to support the community in agriculture sub-sectors and food security under climate change.
6. Reduce pressure on their natural resource bases.
7. Improved vegetation coverage, especially at household level, despite salinity intrusion, thus leading to healthy and secure environment.
8. Improve their linkages with government line departments.

Capacity building and awareness

Change in climate & climatic variability, how these influence biodiversity and how to adapt to these changes – are less understood at the community level[9]. Lack of awareness and limited understanding can also be seen among the local government, NGOs (including local microfinancing institutions) and government service providers on these issues as well. Capacity building and awareness programmes specifically designed to improve the knowledge and understanding of the target groups will be conducted to overcome these limitations.

Contributions to national action plans and strategies

The proposed project activities will directly contribute to the Project No. 14 outlined in Bangladesh NAPA[10]. BCCSAP[11] document has clearly identified six Themes and 44 Programmes to build the capacity and resilience of Bangladesh to meet the climate change challenges over 2009-2018. The proposed CBA project will directly contribute to Theme 1 (Food security, social protection and health, Programme 1.2 – Develop climate change cropping systems…., fisheries and livestock systems to ensure local and national food security) and Theme 4 (Research and knowledge management, Programme 4.3 – monitor and research the impacts of climate change on ecosystems and biodiversity). Moreover, the proposed initiative contributes to a couple of projects outlined in Government of Bangladesh's Biodiversity Programme of Action 2020 (Focal Area 6: Biodiversity Conservation in the face of Climate Change; Projects 4 & 6)[12].

Communications for scaling up

A target-oriented communications plan will be developed and implemented over the project period. Lessons, for example, on the effectiveness on capacity building programmes for community and other target groups on biodiversity conservation in light of climate change, usefulness of community extensionists/volunteers in participatory biodiversity monitoring and climate change adaptation, appropriateness of adaptive aquaculture model, and changing role of women under changing climate could be captured, analysed and widely shared with greater audience for future scaling up. These lessons and best practices will be disseminated through Practical Action and other networks on climate change, environment and DRR, in the form of web-stories, booklets, briefs, and through workshops and campaigns. Cross-visits will be facilitated for interested organizations and groups.

The 'Union Council Based Knowledge Resource Centre' promoted by Practical Action in the project area (Atulia union) would also be used to disseminate climate change adaptation knowledge and experience in the union and adjacent areas. This centre can also be used for institutional capacity development of other Union Parishads and local NGOs to face the challenges of climate change and biodiversity issues for greater practice.

The lessons from this project along with others will contribute to the CBA programme of UNDP; through this national policy and practice will be influenced in an effective manner.

2.0 COMMUNITY OWNERSHIP

2.1 Project Formulation

Practical Action has been implementing two projects on pro-poor knowledge information service and climate change adaptation in Atulia union under Shatkhira district since 2008. Recently (July 2010), it has conducted a household survey (100 households) on impact of climate change on food security in

[9] IUCN, UNEP, UNU. 2009. Biodiversity conservation and response to climate variability at community level. IUCN, UNEP, UNU, Dhaka, Bangladesh.
[10] MoEF. 2005. NAPA.
[11] MoEF. 2009. BCCSAP.
[12] MoEF. 2010. Biodiversity National Assessment and Programme of Action 2020 (BNAPA). Department of Environment, Ministry of Environment and Forests, Government of the People's Republic of Bangladesh. (74 p.)

three unions in the same area. Practical Action has also been receiving farmer enquires (around 1800 per year) on various farming problems for the last two years.

Under an action research in the proposed project area, Practical Action conducted a Participatory Community Appraisal including vulnerability and risk assessment with around 100 households and directly demonstrated some adaptation solutions such as Union Council Based Village Information Centre, soil desalinization plant nursery, shrimp *(gher)* farming, crab fattening, and drinking water security issues. During the community level consultation with farmers, traders, shrimp farmers, fishers and women groups, participants demanded suitable livelihoods options with adequate income but do not damage environment and protect biodiversity. They have asked for improved knowledge to face the adverse impact of salinity in the area. Particularly in shrimp farms, they need new knowledge to cope with the shift of aquatic biodiversity due to increased salinity (from freshwater species to more marine/brackish water species, same with plants), and need to know the adaptive practice of using salt-tolerant fish and shrimp in their improved traditional shrimp farms.

The context of exploitation of wild shrimp juvenile often with destructive practices is a well-known issue associated with biodiversity, ecosystem and livelihoods concerns. In a similar way, increased harvest of crab from rivers for crab fattening could be a threat to the wild crab population. Proposed project intended to address these issues securing the livelihoods of the salinity and tidal surge-affected people.

It was clear that affected community people, local Union Parishad (Union Council), and local service providers need more capacity to respond to the adverse impacts of climate change. They need to know management of some salt-tolerant fish in their shrimp farms same in their homesteads and crop lands. They should reduce or stop potential unsustainable exploitation of crab and wild shrimp juveniles having alternative income generating options in the area. People need to monitor unsustainable harvesting of crabs and wild shrimp juvenile from the rivers to keep the aquatic ecosystem healthy and protect biodiversity for their long-term interest. While consulting various stakeholders it was clear that farm and natural resource-dependent households were the more vulnerable group compared with others. Many of the shrimp juvenile and wild crab collectors are women, need alternative suitable income generating options to reduce such practices. The main concept of the proposed project builds on these direct experiences.

2.2 **Project Implementation**

Having clear understanding on the climate change adaptation context of the project targeted four villages in Atulia union, a comprehensive village level plan will be finalised with the selected community people and will be endorsed by the relevant stakeholders supporting the implementation of the plan. An upazila level Project Inception Workshop will be organised followed by the village level planning workshops with specific interest groups within two months of the project start up.

Interest groups such as shrimp *gher* (special type of pond) farmers, crab and shrimp juvenile collectors, off-farm groups, community extensionists/volunteers, shrimp and product specific other value chain actors will be organised for motivational, planning and formal/informal training and bi-monthly action-reflection monitoring throughout the project period.

Interest groups will be institutionally linked with the Union Council Base Knowledge Resource Centre Governing Body. They will be also organised under a semi-active or already existing community-based organisation (CBO) or under professional groups existing in the project area.

Around 30 community extension workers / extensionists / volunteers (25 men and 5 women) having advance training in climate change adaptation, knowledge information management will directly support the 400 target households including many other indirect households beyond four villages who need the service. From our experience, from a Union Council Based Knowledge Resource Centre

equipped with 25-30 extensionists we can reach around 2,500 households per year with improve knowledge and information on climate change adaptation and other services.

The project will develop five women community extension workers/volunteers to strengthen the existing team of 25 community extensionists (volunteers) addressing gender issues. The project will also facilitate suitable non-farm income generating options for the women involved in shrimp juvenile and crab harvesting; plant nursery establishment, shrimp processing will be encouraged. Women's representation in the professional groups, CBO and in the Knowledge Resource Centre Management Committee will be considered.

The project will be operated from a local field office having one Field Co-ordinator, two Group Facilitators in the field and one part-time Manager based in Dhaka. Time cost of an accountant & administrative staff will be shared with other projects. An assignment-based monitoring person will support during baseline analysis and mid-term and project closing final assessment. Although three project staff will be based in the local project office, main driver of all functions will be from the Union Council Based Knowledge Resource Centre, with CBO Committee and community extensionists (volunteers) so that the key functions continue beyond the project period.

2.3 **Phase-Out Mechanism, Sustainability**

From the beginning of the project, the interest groups will be linked with community extensionists to get necessary services and will not be dependent upon the project staff. This is a proven project exit strategy based on building community capacity. It is, therefore, envisaged that at the end of the project, the project participants will be able to continue simple, improved copping practices which require minimum investment and technical support can be provided by the local government departments and skilled community extensionists (volunteers).

The main investment of the project is on community capacity building which will have long term impacts. Low cost investment on demonstrating best practice of adaptive shrimp farming and biodiversity monitoring is expected to continue. There will be sharing of investment from the target households. Socially, there will be no negative impact. The project will address the interest of the most vulnerable and socially excluded group (e.g. crab collector women, shrimp juvenile collectors and shrimp farm labourers).

Union Parishad and local NGO's capacity on salinity and other adaptation issues will be developed to respond to climate hazards planning and supporting people. Government line departments, self-employed community extensionists (they are private service providers) or volunteers will be involved in service provision to the beneficiaries on a cost recovery basis.

Although environmental issues often rose in expansion of shrimp farming, with the changing climatic context coastal aquaculture would be a more viable strategy to adapt with climate change (against increased temperature, increased water level, increased salinity). The practices adopted will be biodiversity-environment-sensitive.

The project will take the opportunity of having an established Union Council Knowledge Resource Centre in the project location established by an on-going Practical Action project. This centre has enough resources and can run without any external project support. Therefore, project direct and indirect beneficiaries will continue to get knowledge service from the Centre beyond the project period. The community extensionists/volunteers will be a part of this Centre; and will continue to get access to updated knowledge and information on climate change and other livelihoods issues. Moreover, Union Council Resource Centres will be linked with the national Access to Information Program being implemented by UNDP and the Government of Bangladesh. A follow-up phase, however, for impact monitoring of the initiative would be useful to understand the future challenges, constraints and gaps after project is withdrawn.

Contribution of the volunteers to the CBA Project												
Project Activities (abridged) (to which persons plan to contribute on a voluntary basis)	Description of the voluntary contribution (capacities, knowledge, know-how, manual labor, materials, tools, etc.)	Total number of volunteers to be mobilized	*Women*	*Men*	*Elderly persons (older than 60)*	*Youth (younger than 25)*	*People with disabilities*	*Local*	*National*	*International*	Number of volunteer days anticipated	Monetary value of the voluntary contribution including labor and materials (enter as co-financing in the budget)
Activity 1.2.2. 30 community extension workers (volunteers) trained. Activity 1.1.5. Village level lessons sharing with different interest groups on a bi-monthly basis. Activity 3.2.2. Training on & inputs to practice catch monitoring.	Community Extension Workers (Volunteers): - Participating and conducting training programme - Lesson sharing meetings - Support in biodiversity and climate change monitoring	30	5	25	-	30	-	30	-	-	2,100 (@ 70 days)	Tk 3,15,000 (@ Tk 150)
Activity 1.1.5. Village level lessons sharing with different interest groups on a bi-monthly basis	Shrimp farmers, crab and shrimp juvenile collectors, off-farm group, and shrimp and product specific other value chain actors take part in meetings (4 groups X 20 people X 9 meetings)	80	40	40	-	-	-	80	-	-	720 (@ 9 meetings)	Tk 1,08,000 (@ Tk 150)
Activity 1.1.1. Local Inception Workshop. Activity 1.1.2. Training sessions at the union level. Activity 1.1.3. VRA implementation workshops in four villages. Activity 1.1.6. Cross visit. Activity 3.2.1. Campaign against destructive harvesting and farming practices. Activity 4.2.1. Distribution of mangrove & suitable trees saplings.	Community people, local government, NGOs, etc. participating in different project events (workshops, meetings, campaigns, cross-visit, etc.).	3000	1000	2000	-	-	-	3000	-	-	3000 (@ 1 day)	Tk 4,50,000 (@ Tk 150)
Activity 2.1.2. Input support to 80 farmers for adaptive farming.	Farmers adopting new aquaculture technology will contribute @ Tk 6,000 from their own sources.	80	-	80	-	-	-	80	-	-		Tk 4,80,000 (@ Tk 6,000)
Activity 3.3.3. Dialogue with service providers, market	Service providers, market actors, etc. attending discussions.	25	-	25	-	-	-	25	-	-	25 (@ 1day)	Tk 5,000 (@ Tk 200)

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Project Activities (abridged) (to which persons plan to contribute on a voluntary basis)	Description of the voluntary contribution (capacities, knowledge, know-how, manual labor, materials, tools, etc.)	Total number of volunteers to be mobilized	*Women*	*Men*	*Elderly persons (older than 60)*	*Youth (younger than 25)*	*People with disabilities*	*Local*	*National*	*International*	Number of volunteer days anticipated	Monetary value of the voluntary contribution including labor and materials (enter as co-financing in the budget)
channels.												
Activity 4.2.2. Campaign & linkages on plantation with other projects & institutions.	Project personnel, institutions, etc. attending discussions and giving follow up support.	10	-	10				10	-	-	20 (@ 2 day)	Tk 4,000 (@ Tk 200)
Activity 5.1.3. Knowledge products developed.	'Union Council based Knowledge Resource Centre' in Atulia equipped with: photocopier, scanner, computer, printer, digital camera, internet, and refrigerator (Total value of assets is around 15 lac taka) for general use. One entrepreneur & one assistant. They can contribute as volunteers in different project activities.	2		2	-	2	-	2	-	-	100	Tk 20,000 (@ Tk 200)
											TOTAL	**Tk 13,82,000**
For reference: What are the mechanisms for volunteerism that already exist in the community before the CBA project (for example, traditional mechanisms for mutual assistance, associations, etc.)? 25 volunteers (community extension workers/extensionists) are already engaged in the community in the agriculture sub-sectors before the CBA project. Eight-member Governing Body of the 'Union Council based Knowledge Resource Centre' in Atulia before the CBA project. They meet on a quarterly basis.												
For reference: Number of volunteers in the community already engaged in climate change adaptation activities before the CBA project. No volunteers are involved in climate change adaptation activities before the CBA project.												
For reference: What are the opportunities or obstacles that could facilitate or impede people from engaging in voluntary activities? Opportunities: Demand for extension services. Access to information. Scope to deliver advice, input and service. Obstacles: It is often difficult for poor/extreme poor people to engage in voluntary activities.												

3.0 PROPONENT DESCRIPTION

3.1 Organization's background and capacity

Practical Action aims to eradicate poverty in developing countries through the development and use of technology, by demonstrating results, sharing knowledge and influencing others. It has been working in Bangladesh as an International NGO since 1990 being registered with the NGO Affairs Bureau. Practical Action works under three major thematic areas: 1) Reducing Vulnerability and Natural Resource Management: helps reduce the vulnerability of poor people affected by natural disasters, conflicts and environmental degradation, also addresses climate change issues; 2) Markets and livelihoods: helps poor people to make a better living – by enabling producers to improve their production, processing and marketing; focuses on agro-product based market system development for the poor involving all stakeholders; and 3) Infrastructure and services: helps poor communities gain access to basic services – water, sanitation, waste management, housing and electricity.

Practical Action has been working on climate change adaptation in Bangladesh as well as in the global arena over the last six years. In Bangladesh, a climate change adaptation project – one of the first few CBA projects in the country – started in 2005 in the north. Since then Practical Action Bangladesh has 'climate-proofed' all its DRR, livelihoods and food security projects for the poor and extreme poor by incorporating community-based climate resilience components. Climate change has also been considered as a cross-cutting issue in Practical Action's current Global Strategy (2007-2012).

Recent climate change and disaster risk reduction-related publications:

Ahmed, A.U. 2008. Assessment of Vulnerability to Climate Change and Adaptation Options for the Coastal People of Bangladesh. Practical Action Bangladesh, Dhaka, pp. 1-40.

Practical Action Bangladesh. 2009. Good practices for Community Resilience. Practical Action Bangladesh, Dhaka, pp. 1-46.

Rahman, K.M.M., J. Ensor and R. Berger. 2009. River erosion and flooding in northern Bangladesh. In: J. Ensor and R. Berger. Understanding Climate Change Adaptation: Lessons from community-based approaches. Practical Action Publishing, UK, pp. 39-54.

Practical Action Bangladesh, 2010. Elements in disaster resilience: Lessons from Bangladesh. Practical Action Bangladesh, Dhaka.

The on-going 'Climate Change Action Research Project in the South Western Coastal Region of Bangladesh' project in Satkhira district has entered in its 2nd year and will compliment the proposed project activities. The problems, risks and some potential solutions illustrated in this proposal were identified since the mid-2009 through repeated community consultations under this action research. These as well as recent studies have been useful bases for the proposed concept. Through the Practical Answer Project, Practical Action also supports people of Atulia with agro-based information from its hub – *Gayner Haat* (Union Based Knowledge Resource Centre), and rural service providers (community extensionists/volunteers) – a concept being practiced by the organization for more than 10 years.

Practical Action Bangladesh has been successfully implementing projects funded by EU and DFID and other UK based trusts (restricted funds). The sources of fund include charity from supporters (unrestricted funds). The total budget of PAB in the last financial year (April 09-March 10) was around 2.0 million Pound and the budget for current year (April 10- March 11) is around 4 million Pound. Practical Action Bangladesh's key donors are DFID, European Union, Big Lottery Fund, Unicef, GTZ, DGIS, States of Jersey, Allachy Trust, World Bank and Waterloo Foundation including our individual supporters in UK.

4.0 PROJECT DESCRIPTION

4.1 **Objective, Outcomes, Planned Outputs, Activities:**

Project Objective: **Goal** Resilience of coastal communities of Bangladesh under climate change regime strengthened through ecosystem and livelihoods protection. **Purpose** Adaptive capacity of four villages (400 households directly) of Atulia union of Satkhira district improved by introducing appropriate knowledge and technologies to cope with increased salinity conditions by December 2012.		
Outcome 1.0: Improved capacity and representation of local people and institutions to influence climate change adaptation and biodiversity protection plans.		
	Output 1.1: Understanding and awareness of the communities, 10 local NGOs, and local government institutions of Atulia union on the impacts of climate change, climate variability and biodiversity conservation enhanced.	
		Activity 1.1.1: Local Inception Workshop
		Activity 1.1.2: Training sessions on climate change, climatic variability, biodiversity conservation, participatory monitoring at the union level for local government representatives, NGOs and other stakeholders
		Activity 1.1.3: VRA implementation workshops in four villages
		Activity 1.1.4: Baseline survey/ Household profile
		Activity 1.1.5: Village level lessons sharing with different interest groups (e.g. shrimp farmers, crab and shrimp juvenile collectors, off-farm group, community extensionists, and shrimp and product specific other value chain actors) on a bi-monthly basis
		Activity 1.1.6: Cross visit for project stakeholders and beneficiaries to other CBA sites in the coast
	Output 1.2: Thirty skilled volunteers developed as ambassadors to climate change adaptation and biodiversity monitoring.	
		Activity 1.2.1: Five new women community extension workers (volunteers) developed
		Activity 1.2.2: Thirty community extension workers (volunteers) working for Practical Action (including 5 new) trained on climate change adaptation, biodiversity monitoring & other issues
		Activity 1.2.3: Innovation in climate change adaptation awarded at local level on two occasions
Outcome 2.0: Sustainable aquaculture practiced in salinity-affected fish and shrimp farms mitigating at least 30% loss.		
	Output 2.1: Adaptive model of biodiversity and environment sensitive shrimp farming demonstrated in salinity-affected increasing 40% household income.	
		Activity 2.1.1: Training sessions on the model for 80 farmers
		Activity 2.1.2: Input support to 80 farmers for adaptive farming
Outcome 3.0: Negative pressure on natural aquatic animals (at least 5 species) reduced to a measurable extent.		
	Output 3.1: Adaptation of selected aquatic animals and recent changes in fish-farming due to salinity intrusion in Atulia union recorded.	
		Activity 3.1.1: Changes in fish farming and/or natural aquatic animals over last 5 years followed; reasons, challenges and opportunities (including off farm) explored
	Output 3.2: Participatory aquatic biodiversity monitoring system practiced by community	

	people, Union Parishad, local NGOs and at least 3 government line departments.	
		Activity 3.2.1: Campaign against destructive harvesting and farming practices
		Activity 3.2.2: Training on & inputs to practice catch monitoring
	Output 3.3: Off-farm activities practiced by 10% of 400 households (mostly women) to divert pressure from natural resources.	
		Activity 3.3.1: Training provided to 40 families on off-farm activities
		Activity 3.3.2: Inputs provided to 40 families
		Activity 3.3.3: Dialogue with service providers, market channels for linkage & sustainability
Outcome 4.0: Local ecosystem and peoples' resilience improved as a whole through plantation.		
	Output 4.1: Two community nurseries of suitable plant species (wind-resistant and salinity) established with women-headed households.	
		Activity 4.1.1: Supporting two suitable nurseries with training and/or input support
	Output 4.2: Rehabilitation of mangrove plant species at 2,500 households and institution premises.	
		Activity 4.2.1: Distribution of mangrove & suitable trees saplings to communities, schools, NGOs, local government, etc. for plantation
		Activity 4.2.2: Campaign & linkages on plantation with other projects & institutions
Outcome 5: Project lessons captured and mainstreamed with NAPA 2005, BCCSAP 2009 and Biodiversity Programme of Action 2020 for up scaling.		
	Output 5.1: Project learning documented & widely disseminated in coastal regions.	
		Activity 5.1.1: Assessment & evaluation
		Activity 5.1.2: National/regional conference & media to grassroots
		Activity 5.1.3: Knowledge products developed (digital knowledge content on climate change solutions, brochures, best practice book, etc)

4.2 **Timetable**

	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Outcome 1.0																								
Output 1.1																								
Activity 1.1.1																								
Activity 1.1.2																								
Activity 1.1.3																								
Activity 1.1.4																								
Activity 1.1.5																								
Activity 1.1.6																								
Activity 1.1.7																								
Output 1.2																								
Activity 1.2.1																								
Activity 1.2.2																								
Activity 1.2.3																								
Outcome 2.0																								
Output 2.1																								
Activity 2.1.1																								
Activity 2.1.2																								
Outcome 3.0																								
Output 3.1																								
Activity 3.1.1																								
Output 3.2																								
Activity 3.2.1																								
Activity 3.2.2																								
Output 3.3																								
Activity 3.3.1																								
Activity 3.3.2																								
Activity 3.3.3																								
Outcome 4.0																								

	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
Output 4.1																								
Activity 4.1.1																								
Output 4.2																								
Activity 4.2.1																								
Activity 4.2.2																								
Outcome 5.0																								
Output 5.1																								
Activity 5.1.1																								
Activity 5.1.2																								
Activity 5.1.3																								

4.3 **Risks and Barriers**

Potential barriers to project implementation	**Measures to overcome these barriers**
Internal barrier 1. Limited capacity of the community to tackle climate-induced changes and loss of biodiversity. 2. Inadequate capacity and understanding of local government bodies on climate change adaptation especially through biodiversity conservation. 3. Lack of understanding of local micro-financial institutions on climate change adaptation to support communities' adaptive efforts.	1. Undertake awareness programmes for the communities, local government, NGOs, micro-financial institutions and micro-financial institutions. 2. Development of volunteerism in project intervention. 3. Working with local government institutions from planning through implementation. 4. Inclusion of project volunteers in disaster and environment committees in Union Parishad.
External barrier 1. Separating man-made effects from climate-induced effects.	1. Be attentive to climate change risks and baseline pressures in the planning phase.

Potential risks to project implementation	**Measures to overcome these risks**
Internal risk 1. Frequent staff turnover. 2. Local stakeholders' capacity and commitment weak. 3. Beneficieries' participation and commitment. 4. Limited resource for quality planning, management and monitoring.	1. Staff motivation. 2. Quality facilitation from the project to overcome capacity and commitment constraints of the stakeholders and beneficiaries. 3. Strong motivation, visible actions. 4. Maximum use of internal M&E system.
External risk 1. Local government election. 2. Natural calamities hit the project area. 3. Price hike of materials to be purchased. 4. National policy/action plan/strategy changes	1. Build rapport with the new local government members. 2. Modify project interventions/targets in the line with changed situation due to natural calamities. 3. Modify project targets to accommodate increased price. 4. Government's commitment towards climate change continues.

4.4 Monitoring and Evaluation Plan

4.4.1 Initial Vulnerability Reduction Assessment (VRA) Analysis

Vulnerability Reduction Assessment Reporting Form					
Indicator	*Question/Questions Used*	*Score*	*Reasons for Negative Responses*	*Reasons for Positive Responses*	*How could the score be improved?*
1. Vulnerability of livelihood/welfare to existing climate change and/or climate variability.	Do you identify any economic problem due to climatic change, like increased salinity, drought, change in temperature and rainfall pattern?	2	Visible climatic change have been observed by the community		Enhance income opportunity, safe shelter, sufficient safe drinking water supply
2. Vulnerability of livelihood/welfare to developing climate change risks.	Do you identify any future threat regarding economic condition/welfare due to present negative climatic condition?	4	It is beyond their assumption		As above and future educated generation
3. Magnitude of barriers (institutional, policy, technological, financial, etc) barriers to adaptation.	What kinds of support from local institutions, Government etc. would be helpful to mitigate the threat of climate change?	4	Muscle man influence on aquaculture and common resources		Strengthen the linkage with local Government & other support services and togetherness to raise joint voice
4. Assets available to community for adaptation (volunteers, skills, commitment, indigenous knowledge, community leadership, etc.)	What are your strengths to cope with vulnerable situation?	6		Indigenous coping knowledge, some sorts of unity & sharing mentality within the community	Development of skilled human resource, promotion of modern technology and market linkage
5. Ability and willingness of the community to continue to manage climate change risks	Do you want to fight with the problem?	8		To get smooth, breathing environment	Model demonstration
VRA Score (average)		**4.8**			

4.4.2 Project M&E Plan

VRA:

	Approximate timing of VRA sessions	**Who ran/ will run the VRA meeting**	**Who will be responsible for collecting VRA data**
First	January 2011	Implementing Agency (IA) with help from community	IA
Second/ midterm	January 2012	Community with help from IA	IA
Final	November 2012	Community	Community with help from IA

IAS:

IAS Indicator to be measured	How it will be measured	When it will be measured	Target value to be achieved by project end
GEB Focal Area: Biodiversity			
Number of globally significant species protected by project	• Select 2 aquatic animal species to monitor population change. • Participatory monitoring system will be followed to follow the change. • Photographs will be collected for scientific validation at the beginning and end of the project by experts. • Factors/barriers causing threat/ negative pressure on the species monitored.	• Baseline: April 2011 • Follow-up: bi-monthly • Final: October 2012	Increase by the end of project. Removal/ reduction of causal factors/ barriers.
Number of innovations/ new technologies developed/ applied	• At least one adaptive biodiversity and environment-sensitive aquaculture model will be promoted. • Off-farm options promoted. • Rate of uptake will be monitored during field visits.	Throughout the project period.	At least 4 innovations/ new technologies demonstrated. 25% of the feasible farms practicing the model.
Number of national policies informed in biodiversity focal area	Policy narrative shared addressing: • NAPA 2005 • BCCSAP 2009 • Biodiversity Programme of Action 2020 • National Fisheries Policy	Throughout the project period.	1 policy narrative shared.

4.5 Project Management

4.5.1 Management Structures

Operational Management:

Designation (no.)	Months	Remark
Project Manager (1)	2	Part-time (based in Dhaka)
Project Coordinator (1)	21	Based in Satkhira [To be selected]
Community Organizer (2)	42	One for 200 households [To be selected]

* CVs attached (see Section 6).

The strategic management will be supported by the senior management and experts of Practical Action Bangladesh and UNDP.

4.5.2 Relationship and Responsibilities of Proponent and Project Partners

The proponent, Practical Action, will directly implement the project in the field. However, the project will be implemented through close collaboration with the Union Parishad of Atulia, Shyamnagar upazila, Satkhira district.

5.0 PROJECT COSTS AND OTHER SOURCES OF FUNDING

5.1 **Total Project Cost and Amount Requested:**

Total Project Cost and Amount Requested table:

Project Duration: 2 Years

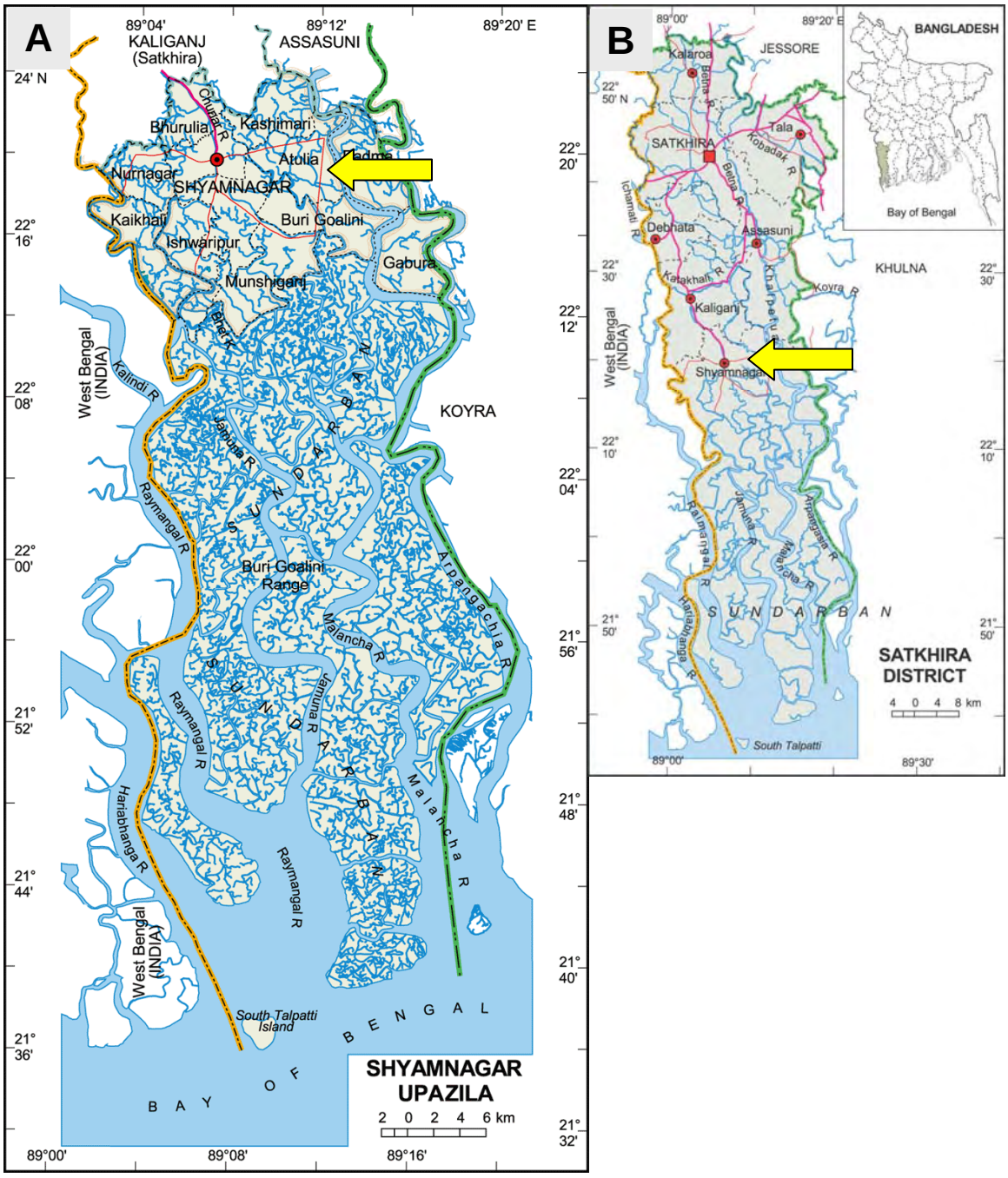
Please see the budget in excel file attached

*** Community contribution (in kind) = USD 19,645 (BDT 13,82,000)**

6.0 EXHIBITS/ATTACHMENTS

6.1 Mandatory

a) Location map of project site. A) Shyamnagar upazila (arrow indicating Atulia Union); B) Satkhira district (arrow indicating Shyamnagar upazila)[13].



[13] Banglapedia 2006. www.banglapedia.org.

b) Financial statement of Practical Action, Bangladesh Country Office (2009-2010)

Hoda Vasi Chowdhury & Co

Practical Action
Registered with NGO Affairs Bureau, Bangladesh
Consolidated Balance Sheet
as at 31 March 2010

	Notes	2010 Taka	2009 Taka
Assets			
Non current assets			
Fixed assets (Annexure "D")		5,628,095	7,560,680
Current assets			
Cash and bank balances	4	60,888,670	961,113
Receivable from PKSF	5	788,472	497,284
Receivable from SHIREE	6	1,300,794	-
Receivable from other local donors	7	4,014,218	2,321,921
Advance,deposits and prepayments	8	13,424,635	11,051,100
Loan provided to other projects-per contra		6,103,485	2,819,205
		86,520,274	**17,650,623**
Less: Current liabilities			
Loan taken from other projects-per contra		6,103,485	2,819,205
Due to / (from) local donors	9	1,539,049	-
Accruals and withholding VAT & Tax	10	409,152	5,499,838
		8,051,686	8,319,043
Net current assets		**78,468,588**	**9,331,580**
Net assets (Annexure"A")		**84,096,683**	**16,892,260**
Fund account (Annexure"A")			
General fund	11	**84,096,683**	**16,892,260**

These Financial Statements should be read in conjunction with the annexed notes

Head of Finance, Admin & HR **Country Director**

Auditors' Report
See annexed report of date

Dhaka, 05 OCT 2010

Chartered Accountants

M Munjurul Hassan
Partner

Independent Correspondent Firm to Deloitte Touche Tohmatsu

c) Brief curriculum vitae or résumé of project manager/coordinator and person in charge of accounting for the funds.

Project staff based in the field:

1. Project Coordinator – 1 position (full-time; to be appointed)
2. Community Organizers – 2 positions (full-time; to be appointed)

Project staff based in Dhaka:

1. Project Manager – 1 position (part-time)

***Ms. Farhana Sharmin**, Programme Manager, Reducing Vulnerability and Natural Resource Management Programme*

With an educational background of environmental studies and water resource development, Farhana Sharmin has nearly 10 years' working experience in the development field. Before joining her present position, Farhana was associated with UN (ILO), international (CARE) and national organizations & apex networking bodies (VERC, NGO Forum) with responsibilities in project management, strategic direction, M&E and documentation. Her project implementation experiences include environment, livelihoods, water, disaster and child labour sectors, in rural and urban settings. She received several international and national training on disaster, environment, monitoring and gender. Farhana also conducted a number of research projects, published several papers/publications, and was associated with Newsletter publication and development of various communication materials.

Head, Finance, Admin & HR:

Mr. S.M. Wahiduzzaman Babur

S.M. Wahiduzzaman Babur has 30 years of experience in the financial sector of which he has been heading the Finance, Admin, HR and IT departments of Practical Action for the last 17 year. He obtained his Master and Bachelor degrees in Accounting from the University of Dhaka. In addition, he has obtained numerous professional training on financial and HR systems from reputed organizations in home and abroad. His current responsibilities encompass leading organizational budgeting, financial reporting, auditing, donor liaison, HR management, office management, and IT system improvement, thus contributing to overall growth of the organization.

Letter from a partnering organization if one will assist in accounting for funds.

Not applicable.

d) Document/letter showing proof of approved co-financing

PRACTICAL ACTION
Technology challenging poverty

12th November 2010

Dear Sir

Re: Strengthening Resilience of Climate Change-Affected Communities in South-western Coastal Area of Bangladesh

Total Budget USD 99,500 (BDT 6,965,000)

I understand that CBA will be funding USD 49,500 (BDT 3,465,000) for the above named project.

I can confirm that that Practical Action will meet the co-financing requirement to the amount of USD 50,000 (BDT 3,500,000) (in cash and in kind) in order to fund the remainder of the project.

Yours faithfully,

Gita Patel
Financial Controller.

Registered office: The Schumacher Centre for Technology and Development, Bourton on Dunsmore, Rugby, Warwickshire, CV23 9QZ, UK
T +44 (0)1926 634400 | F +44 (0)1926 634401 | E practicalaction@practicalaction.org.uk | W www.practicalaction.org

e) Photographs of community project development meeting and of the project area

Focused group meeting for project formulation, Atulia

Discussion with local community, Atulia

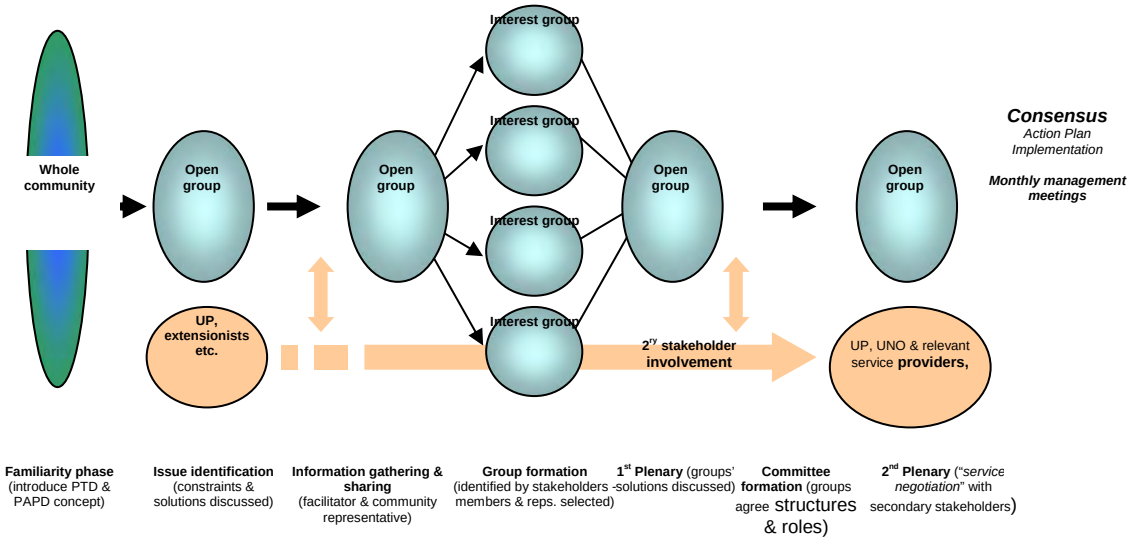
Fishing by woman, Atulia

Fish market in Atulia

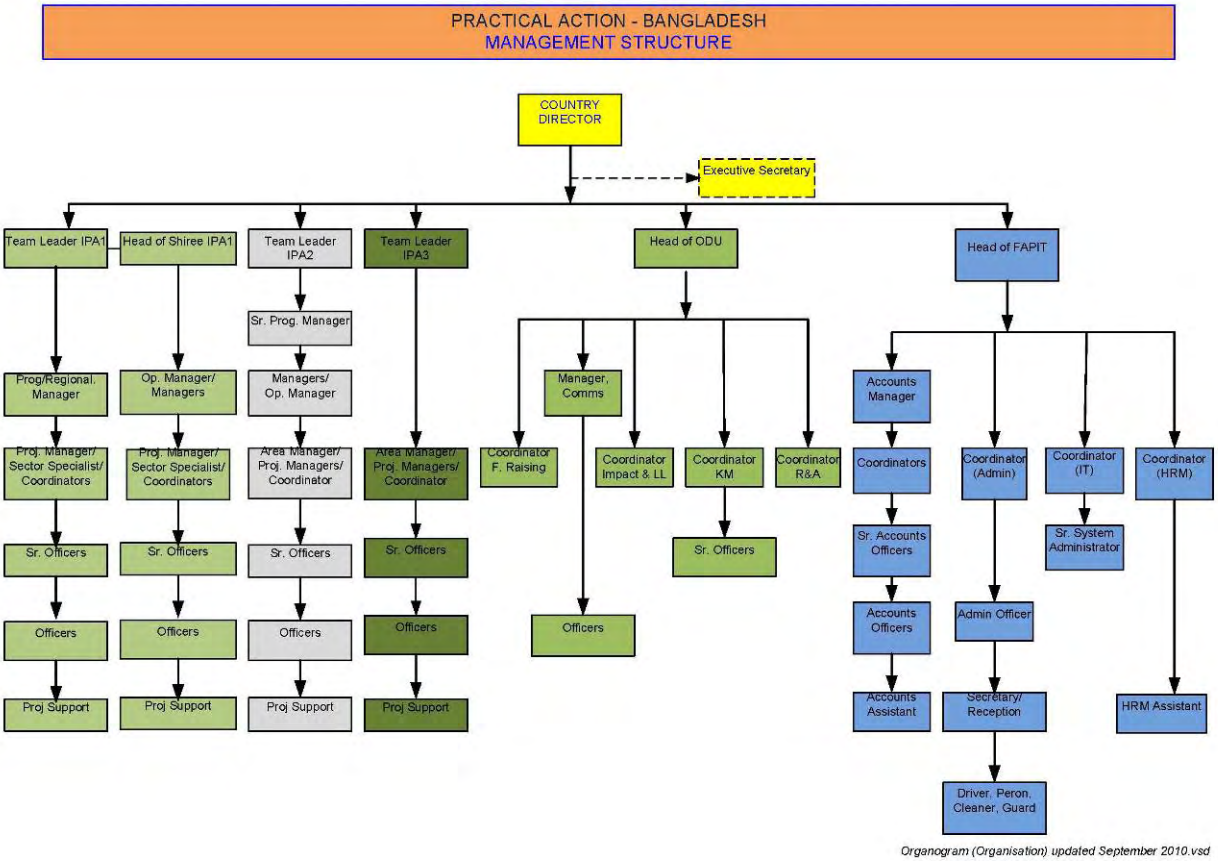
6.2 **Optional**

6.2.1. Topical outline of training modules or other capacity building activities

a) Participatory Action Planning steps /grassroots planning tool tested, adopted and practiced by Practical Action.



b) Organizational Chart of NGO/CBO



Name of the Project: Strengthening Resilience of Climate Change -affected communities in South Western Coastal area of Bangladesh
Project Duration: 2 Years

http://www.oanda.com/currency/converter/

Total Project Cost and Amount Requested table

71.6639

		Outcome/Output/Activity	Budget Items				Amount requested from CBA	Amount from Community		Amount from other organizations, Practical Action			Total in BDT	Total in USD
			(Description)			(Cost)								
			For materials (unit cost X no. of units) For labor (no. of days X daily rate)				In cash	In cash	In kind	Name of organization	In cash	In kind		
			Unit	Qty	Rate	Amount				Practical Action				
Outcome 1.0		**Outcome 1.0. Improved capacity of local people and institutions to up take climate change adaptation and biodiversity protection interventions.**												
	Output 1.1	***Output 1.1: Understanding and awareness of the communities, local NGOs, and local government institutions on the impacts of climate change, climate variability and biodiversity conservation enhanced.***	event										-	
		1.1.1. Local Inception Workshop	event	1	30,000	30,000	30,000							419
		1.1.2. Training sessions on climate change, climatic variability, biodiversity conservation, participatory monitoring at the union level for local government representatives, NGOs and other stakeholders	event	1	60,000	60,000	60,000							837
		1.1.3. VRA implementation workshops in four villages	event	2	20,000	40,000	40,000							558
		1.1.4. Baseline survey/ Household profile	event	1	50,000	50,000	50,000				-			698
		1.1.5. Village level lessons sharing with different interest groups (e.g. shrimp farmers, crab and shrimp juvenile collectors, off-farm group, community extensionists, and shrimp and product specific other value chain actors) on a bi-monthly basis	event	30	2,000	60,000	60,000				-			837
		1.1.6 Cross visit for Project stakeholders and beneficiaries to other CBA sites in the coast	event	2	50,000	100,000	100,000							1,395
		Sub Total				**340,000**	**340,000**				**-**			4,744
	Output 1.2	***Output 1.2: Skilled volunteers developed as ambassadors to climate change adaptation and biodiversity monitoring***											-	-
		1.2.1 5 new women community extension workers (volunteers) developed	number	5	15,000	75,000	75,000							1,047
		1.2.2 30 community extension workers (volunteers) working for Practical Action (including 5 new) trained on climate change adaptation, biodiversity monitoring & other issues	event	1	55,000	55,000	55,000							767
		1.2.3 Innovation in climate change adaptation awarded at local level on two occasions	number	2	20,000	40,000	40,000				-			558
		Sub Total				**170,000**	**170,000**				**-**			2,372
Outcome 2.0		**Outcome 2.0. Sustainable aquaculture practiced in salinity-affected fish and shrimp farms**											-	-
	Output 2.1	***Output 2.1: Adaptive model of biodervisity-sensetive shrimp farming demonstrate in salinity-affected area***											-	-

		Outcome/Output/Activity	Budget Items				Amount requested from CBA	Amount from Community		Amount from other organizations, Practical Action			Total in BDT	Total in USD
			(Description)			(Cost)								
			For materials (unit cost X no. of units) For labor (no. of days X daily rate)				In cash	In cash	In kind	Name of organization	In cash	In kind		
		2.1.1 Training sessions on the model for 80 farmers	event	4	40,000	160,000	160,000							2,233
		2.1.2 Input support to 80 farmers for adaptive farming	person	80	10,000	800,000	800,000							11,163
		Sub Total				**960,000**	**960,000**				**-**			13,396
Outcome 3.0		**3.0. Negative pressure on natural aquatic animals reduced to a measurable extent**											-	-
	Output 3.1	***Output 3.1. Adaptation of selected aquatic animals and recent dynamics of fish-farming due to salinity intrusion in the locality recorded***											-	-
		3.1.1. Changes in fish farming and/or natural aquatic animals over last 5 years followed; reasons, challenges and opportunities (including off farm) explored	event	1	150,000	150,000	45,000				105,000			2,093
		Sub Total				**150,000**	**45,000**				**105,000**			2,093
	Output 3.2	***Output 3.2: Participatory aquatic bioderversity monitoring system practised by local bodies***											-	-
		3.2.1. Campaign against destructive harvesting and farming practices	event	3	20,000	60,000	60,000				-			837
		3.2.2. Training on & inputs to practice catch monitoring	month	12	1,600	19,200	-				19,200			268
		Sub Total				**79,200**	**60,000**				**19,200**			1,105
	Output 3.3	***Output 3.3. Off-farm activities practised to divert pressure from natural resources***												-
		3.3.1. Training provided to 40 families on off-farm activities	Event	3	22,000	66,000	66,000							921
		3.3.2. Inputs provided to 40 families	Person	40	10,000	400,000	200,000				200,000			5,582
		3.3.3. Dialogue with service providers, market channels for linkage & sustainability	event	1	20,000	20,000	-				20,000			279
		Sub Total				**486,000**	**266,000**				**220,000**			6,782
Outcome 4.0		**Outcome 4.0. Local ecosystem and peoples' resilience improved as a whole through plantation**											-	-
	Output 4.1	***Output 4.1: Community nurseries of suitable plant species (wind-resistant and salinity) established with women-headed households***											-	-
		4.1.1 Supporting two suitable nurseries with training and/or input support	number	2	15,000	30,000	30,000							419
	Output 4.2	**Output 4.2. Revival of coastal mangrove forest through plantation of suitable tree saplings**					-							-
		4.2.1. Distribution of mangrove & suitable trees saplings to schools, NGOs, local government, etc. for plantation	saplings	20,000	15	300,000	300,000				-			4,186
		4.2.2. Campaign & linkages on plantation with other projects & institutions	event	2	25,000	50,000	50,000				-			698
		Subtotal				**380,000**	**380,000**				**-**			5,303
Outcome 5.0		**Outcome 5: Project lessons captured and highlighted for up scaling**												-
	Output 5.1	***Output 5.1. Project learning documented & widely disseminated***												-
		5.1.1 Assessment and Evaluation	event	1	300,000	300,000	120,000				180,000			4,186
		5.1.2 National/regional conference & media to grassroots	event	1	300,000	300,000	210,000				90,000			4,186

		Outcome/Output/Activity	Budget Items				Amount requested from CBA	Amount from Community		Amount from other organizations, Practical Action			Total in BDT	Total in USD
			(Description)			(Cost)								
			For materials (unit cost X no. of units) For labor (no. of days X daily rate)				In cash	In cash	In kind	Name of organization	In cash	In kind		
		5.1.3 Knowledge products developed (digital knowledge content on climate change soluations, brochures, best practice book, etc)	lumpsum	1	342,500	342,500	171,250				171,250			4,779
		Subtotal				**942,500**	**501,250**				**441,250**			13,152
		Total Programme Cost				**3,507,700**	**2,722,250**				**785,450**			48,947
		Project Support Cost (Direct)												-
		Equipment and Furniture												-
		Computer	No.	2	50,000	100,000	100,000				-			1,395
		Printer	No.	1	20,000	20,000					20,000			279
		Furniture	No.	1	40,000	40,000					40,000			558
		Others Project Support Costs												-
		Rent of Field Office	month	22	4,000	88,000					88,000			1,228
		Local travel allowance for field staff	month	22	5,000	110,000	27,500				82,500			1,535
		Domestic travel, accommodation, food and DSA	visit	8	25,000	200,000	110,000				90,000			2,791
		Office stationary and utilities	month	22	4,000	88,000	44,000				44,000			1,228
		Communication and knowledge services (Phone, cell, fax, courier, etc.)	month	22	4,000	88,000	44,000				44,000			1,228
		Audit and Professional Fees	event	2	40,000	80,000	80,000				-			1,116
		Sub-total				**814,000**	**405,500**				**408,500**			11,359
		Human Resources Costs												-
		Project Manager 25%	Man month	6	104,500	627,000					627,000			8,749
		Project Coordinator (1)	Man month	21	81,510	1,711,710	-				1,711,710			23,885
		Group Organizer (2)	Man month	42	15,200	638,400	383,040				255,360			8,908
		Finance & Admin Officer 8.33%	Man month	2	50,350	100,700	-				100,700			1,405
		Sub total				**3,077,810**	**383,040**				**2,694,770**			42,948
		Sub Total project Costs				7,399,510	3,510,790				3,888,720			103,253
		Management Overhead Cost 7%				517,966					517,966			7,228
		Total project Costs				**7,917,476**	**3,510,790**				**4,406,686**			110,481
		Actual budget in USD				**110,481**	**48,990**				**61,491**			**110,481**

Calculation of Overhead Recov	618,666	-
Rate of %	8.36%	0.00%

Grand Total Project Cost			PA	CBA	PA	CBA	PA	CBA
Year Wise	**Amount in BDT**	**Amount in USD**	**Amount in BDT**		**Amount in USD**		**Amount in £**	
Year -1	3,562,864	49,716	1,983,009	1,579,856	27,671	22,045	17,002	13,546
Year -2	4,354,612	60,764	2,423,677	1,930,935	33,820	26,944	20,781	16,556
	7,917,476	**110,481**	**4,406,686**	**3,510,790**	**61,491**	**48,990**	**37,783**	**30,101**