

ADDITIONS AND REMODELS OF A SUSTAINABLE FUTURE



Bangladesh's biologically important areas continue to shrink in size, their biodiversity is threatened and their aesthetic beauty declining. Climate change and deliberate human activities such as agriculture, urban expansion and natural resources exploitation are all to blame. Stopping and reversing these trends can be greatly assisted by means of further investments in well planned construction focused on ecosystem restoration, creating facilities for inclusive management of protected areas, ensuring that basic human needs of adjacent communities are met to leverage their time and commitment for conservation efforts, and preparing for current and likely increases in tourism to these unique areas.

TESTIMONIALS

"CREL project's intervention of re-excavation of Koyer Kona Beel sanctuary has brought tremendous improvement in ecosystems, livestock, biodiversity, regeneration of swamp forest, fish production, irrigation, as well as it's ensuring water availability during the dry season."

Suleman Ahmed

General Secretary, Halla Bohumukhi Samobay Samiti Ltd., Hakaluki Haor

"Renovation of Teknaf CMC office not only made the office a productive work place for conducting meetings and training, but also it became important for keeping necessary documents which is helping the CMC manage natural resources of the Teknaf Wildlife Sanctuary."

Md. Shafiq Meah

President, Teknaf CMC, Cox's-Bazar

"Building an embankment, a pond sand filter and re-excavation of Kalinagar Pond is providing the community incredible support with access to fresh drinking water throughout the year for 1,200-2,500 people of two villages. This water was previously undrinkable. The community will do regular maintenance"

Ausim Kumar Mandal

Community Member, Munshiganj, Satkhira

"Community patrol group members and visitors can now take rest in the forest after CREL constructed resting sheds at the Dudpukuria trail and Dudpukuria Beat Office areas. These resting sheds contribute to forest conservation and eco-tourism efforts."

Firoj Ali

Forest Department Range Officer, Kurushia Range, Chittagong

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Department of
Environment



Introduction

Efforts to conserve natural resources can be strengthened by means of investing in construction of physical structures that directly as well as indirectly contribute to sustainable natural resource conservation efforts. This includes structures that provide for: physical restoration of degraded environments particularly in wetlands and forests where ecosystem functioning has been compromised; development of facilities for tourists that improve opportunities to appreciate and enjoy Bangladesh's natural landscapes and biodiversity; ensuring that the local people responsible for protecting ecosystems have offices and facilities that support their efforts; and construction of water, sanitation and other facilities for communities who live adjacent to protected areas and are affected by climate change in order to leverage the time and energy needed to contribute to conservation activities.

By completion CREL will have made enabling investments of just over US\$1 million to construct more than 200 items in four categories across four regions of Bangladesh.

Ecological Restoration

Restoring degraded environments to ensure they are better able to deliver ecosystem services is critical, especially where heavy population pressure and climate change has resulted in ecological damage. Reductions in wetland area and water depth that hamper ecosystem functioning, reduced connectivity between water bodies which compromises seasonal fish movement and excessive soil erosion are examples of ecosystem degradation which has been restored via judicious construction activities in wetlands and forests.

Future Pathways:

Ecosystem restoration work that includes construction and repair of low embankments to retain water in wetland sanctuaries, deepening of silted waterways and establishing erosion control structures in fragile forest environments will be continue to be needed.

Climate Change Resilience

Communities living adjacent to protected areas require that basic human needs be met before they have the freedom to invest and commit time and resources to participating in natural resources management efforts. These communities are also highly vulnerable to climatic stresses and hazards such as salinization and cyclones. Resilience to climate change has been strengthened via the installation of tube wells, construction or deepening of ponds, construction of water filtration systems and maintenance of cyclone shelters.

Future Pathways:

Investments in infrastructure that support leveraging community time and energy and make them more resilient to climate change will continue to be a priority.



CMO and CBO Infrastructure Development

Government and community stakeholders involved in the management of protected areas need basic infrastructure that provides a productive work environment. Construction and renovation of office facilities, access roads, water supplies and toilet facilities that enable more efficient, equitable and improved stewardship of natural resources have been a focus of CREL construction efforts.

Future Pathways:

Maintenance and upgrading of current facilities and improved access to management hotspots are all areas where additional infrastructure development will continue to be needed

Eco-tourism Infrastructure Development

Ensuring that tourists have access to, learn about and have positive interactions with the nation's unique biologically important environments requires considerable infrastructure investment. This includes walking trails, foot bridges, entrance ticket counters and gates, student dormitories, picnic areas, children's play areas, resting huts, interpretation centers, tourist shops, toilet and water facilities, car parking and other facilities that incorporate sharing of visitor fees between co-managers (communities and government).

Future Pathways:

Expansion, maintenance and planning for facilities will ensure that tourism makes a positive contribution to the sustainable management of the country's protected areas, tourists have a very positive experience and damage does not result from increased and unregulated tourism.

Environmental Mitigation Considerations

The major types of construction that have been undertaken in CREL are associated with environments that are ecologically important and sensitive to environmental change. These include national parks, protected forest areas, protected wetlands, marine and riverine environments and locations within ecologically critical areas. Each area has its own environmental risks and sensitivities. To ensure that construction activities do no harm, specific USAID and GoB approved mitigation measure are taken to include:

- Detailed documentation of the area before and after construction including photo evidence of any negative environmental impacts.
- Avoiding construction in sensitive areas except for structures designed specifically for improving ecosystem functioning.
- Employing strategies to protect trees, watercourses, plant or animal species, their habitats and important historical and archaeological features to ensure the least possible impact on the local area.
- Adhering to strict sanitary guidelines for installation and construction of tubewells and latrines to avoid contamination of surrounding areas and water tables.
- When necessary, installation of erosion control structures during the construction phase.
- Revegetating construction areas using native plants.
- Using construction materials that avoid chemical residue pollution of surrounding areas, water and soil with special emphasis on avoiding materials such as lead-based paints, asbestos and treated wood.
- Recycling of building and construction materials to the extent possible.