**Bandarban Biodiversity, Environmental Risk and Vulnerability Assessment**

**Scope of Work**

**Overview:**

The Chittagong Hill Tracts (CHT) represents about 10% of the total land area of Bangladesh and contains 43% of Bangladesh’s forested area. CHT is comprised of three districts, Rangamati, Bandarban and Khagrachari and has about 1.58 million inhabitants (Bangladesh Population and Housing Census, 2011). This area falls within the Indo-Burma biodiversity hotspot (Rahman, 2015), containing multiple species listed as threatened or endangered. Extensive deforestation and forest degradation has occurred due to unsustainable livelihoods and unplanned settlement, increasing vulnerability to manmade and natural disasters.

The Bandarban district has steep hills with narrow valleys providing limited potential for cultivation. Only about six percent of Bandarban’s land is considered arable. With a per capita income of USD290, Bandarban is considered to be one of the poorest districts in Bangladesh (UNDP, n.d). Two ecologically and economically important rivers originate from its Reserve Forests, Sangu and Matamuhuri, which are key to the livelihoods of many residents and downstream economic activity.

The purpose of this activity is to provide USAID/Bangladesh (also referred to as ‘the Mission’), its partners and other stakeholders with a comprehensive assessment of the environmental conditions in Bandarban, a time series analysis of environmental change, socio-economic study of the population, identification of disaster prone areas and areas vulnerable to environmental change or degradation, and recommendations for improving sustainable livelihoods and addressing weaknesses in natural resources management.

The estimated LOE necessary to provide these deliverables is expected to be 180 days from the date of award. The geographic scope of this study will be limited to Bandarban district, including all upazillas.

**Background:**

In CHT poverty, ethno-demographics, settlement and tensions concerning land tenure are major challenges that have acted as drivers for conflict and degradation of natural resources. Rohingya migration into CHT has occurred for over three decades especially during the years – 1978, 1992, 2016 and 2017. Over 350,000 Rohingyas are estimated to have crossed from Myanmmar to Bandarban during the 2017 influx.

Over 40 percent of Bandarban is forested, the highest proportion among the three districts. Around 15.5 percent of this land is used for shifting cultivation, 27.9% for horticulture, 15.5% for rice and 0.9 per cent for other uses (MoCHTA, 2017). Hossain and Ahmad (2017) indicate that Bandarban hill dwellers lag behind much of Bangladesh in education, farming knowledge, access to agricultural inputs and loan facilities (Hossain, 2017). Their livelihoods analysis indicated the region needed efficient, smallholder crop production systems with conservation techniques for the sustainable management of vegetation, soil, and water resources.

The CHT, including Bandarban, has two primary administrative systems for forest resource management: (1) Village Common Forests, also known as, *mouza* forests that are under traditional authorities per the 1900 CHT Regulation and Hill District Councils, under the 1989 Hill District Council Act; and (2) Reserved Forests that are managed by the Bangladesh Forest Department. Forest areas under both administrative systems provide critical habitat for CHT’s unique biodiversity.

Continued degradation and depletion of natural resources and unsustainable resource use and extraction could affect the overall ecological balance of CHT. A further increase in internal migration and settlement could significantly impact Bandarban’s land use. This could exacerbate the nature and extent of natural and manmade disasters (e.g., floods, storms and landslides) and diminish the ecosystem services people receive from the environment.

**Purpose:**

This assessment will provide USAID/Bangladesh, its partners and other stakeholders with an assessment of the environmental conditions in Bandarban, a time series analysis of environmental change, socio-economic study of the population, identification of disaster prone areas and areas vulnerable to environmental change or degradation, and recommendations for improving sustainable livelihoods and addressing weaknesses in natural resources management. This information will be used to inform current and future USAID programming.

**Deliverables & Specific Tasks:**

1. Comprehensive biodiversity, environmental risk and vulnerability assessment of Bandarban by reviewing land use change, socio-economic, demographic and ecological factors.
2. Temporal and spatial analysis using remote sensing and satellite imagery tools to assess land use change, forest cover and ecosystem vulnerability to disasters.
3. Identify gaps and opportunities for USAID investment in Bandarban to reduce environmental vulnerability and improve living standards of people, thereby improving resilience of local communities.

Detailed Description of Deliverable 1:

**Comprehensive biodiversity, environmental risk and vulnerability assessment by reviewing land use change, socio-economic, demographic and ecological factors**

Through research and consolidation of existing literature, mapping, data collection and analysis, the research team will provide:

1. A desk review (maximum 10 pages, excluding annexes) analysis and summary of existing land use, socio-economic, political and environmental studies related to Bandarban, including compilation of data, reports and available maps from USAID/other donor-funded activities.
2. Overview (maximum 5 pages with a 1 page executive summary) – A brief report summarizing the findings, analysis and recommendations from this study.
3. Assessment body (45 pages, excluding annexes) – Detailed description of the context, methodology, analysis, findings (desk review and field level), and recommendations based on the overall assessment. The assessment will help identify gaps and opportunities in Bandarban that may include, but are not limited to environmental conservation and governance, restoration, rehabilitation livelihoods and economic activities.

Information about the following sectors should be covered as part of the analysis in consultation with USAID:

* + Demography per union or upazila
	+ Income sources (household level survey covering a representative number of community members and key stakeholders in all upazilas)
	+ Land Use – forestry, agriculture, settlement, infrastructure (health, education etc), road and highways (constructed and planned) etc
	+ Private Sector Investment (past, current and future)
	+ Tourism
	+ Development Intervention (Donors, Government of Bangladesh, INGOs, NGOs etc)
	+ Areas at risk for natural disasters
	+ Extent of disaster preparedness within communities

The assessment team will consult with USAID’s Contracting Officer Representative to identify information needs and the final methodology for this study. The above list is proposed, and is subject to change based on this consultation.

Detailed Description of Deliverable 2:

**Temporal and spatial analysis for mapping using remote sensing and satellite imagery tools to assess land use change, forest cover and ecosystem variations.**

Mapping should include:

* Identification of USAID intervention sites in Bandarban from upazilla to union to household level
* Identification of disaster prone areas (landslides, flood, drought prone areas, other forms natural disasters, cyclone winds etc.)
* Extent of disaster vulnerability (area and communities)
* Current forest cover, identifying historic changes in cover
* Waterbodies and terrain type
* Land use and change due to settlement, agriculture, deforestation or other interventions
* Settlement and frequency of re-location including its drivers
* Soil erosion and productivity
* Precipitation levels
* Roads (dirt, concrete, or other, and completed vs planned)
* Government offices
* Education and health facilities
* Other infrastructure
* Community based committees
* Local markets
* Any other features that the research team and USAID considers appropriate through technical discussions

Detailed Description of Deliverable 3:

**Identify gaps in ongoing support and opportunities for future USAID investment in Bandarban to reduce environmental vulnerability and degradation, to improve the living standards of residents, and support disaster preparedness.**

The Contractor will identify land use alterations and impact of these changes on the environment (biodiversity and ecosystem function) and on the people living there. The contractor will identify development gaps and opportunities in Bandarban that can help reduce environmental risks and vulnerability along with improving the living standards of people.

Recommendation Paper (5 -10 page report with a 1 page executive summary, and an in-person presentation of findings) - In order to help shape and inform future programming design and current program implementation, the contractor will create examples and provide a series of prioritized recommendations at the end of this consultation to USAID/Bangladesh. The recommendations should be practical in nature with a focus on sustainable interventions. The recommendations should prioritize sectoral interventions where USAID could have the greatest impact.

Through the assessment and deliverables, the consultant(s) must:

1. Share the findings of the comprehensive assessment;
2. Develop a common understanding of the present state of Bandarban and how current projects funded by USAID and other donors individually and collectively address various development challenges within the district and where gaps remain;
3. Identify existing Mission/partner data sources and indicators that capture the contribution of programs that address development needs in Bandarban;
4. Deliver a set of maps (including shapefiles) with accumulated data that can inform development strategies in Bandarban;
5. Identify opportunities to reduce environmental risks and vulnerability and improve biodiversity conservation in Bandarban;
6. Identify sources of current and potential conflict and activities which may mitigate tensions and improve social cohesion.

**USAID Inputs**:

The following inputs may be incorporated into the comprehensive risk and resilience capacity review:

* **USAID assessments & recommended documents**: USAID/Bangladesh will compile a list of relevant assessments, information, and other documents, that may be used as inputs for this assessment. The USAID/Bangladesh Contracting Officer’s Representative will give this information to the contractor once there is a signed contract.

The consultant(s) will be expected to use additional research including, but not limited to, publications, meetings, interviews, and focus group discussions for data collection.

**Level of Effort (LOE):**

The estimated LOE necessary to provide the deliverables is expected to be 180 days from the date of award o/a August 31, 2019. Domestic travel may be required. The consultant(s) will gather any data and conduct communication remotely or within the Mission.

**Timeline:**

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| --- | --- | --- |
| Deliverables  | Timeline  | Delivered product |
| Inception period | 15 days | Work Plan |
| Work Plan Finalization | 15 days  | Work Plan finalization, End of inception, consultant(s) will meet with USAID to provide a progress update.  |
| Progress Report | 85 days  | End of data collection, consultant(s) will meet with USAID to provide a progress update within this timeline in consultation with Contracting Officer’s Representative |
| Progress Updates  | Every two weeks  | Include maps and meeting plans |
| Final Report Draft | 150 days | First draft – presented to USAID for comment and review; Presentation draft and first set of maps to be submitted to USAID for joint review. |
| Final draft of all reports  | 180 days  | All deliverables in final form, including data and shapefiles, presentation at USAID and exit debrief. |

**Application Format:**

* + - 1. A proposal, no more than ten pages (excluding annexes and CVs), describing how the assessment objectives will be met through every stage within the specified timeframe, methodology and technical approach;
			2. Technical qualifications of the individual team members, including CVs and references for all proposed personnel. The technical team must include, but is not limited to:
* A team lead with at least 8 -10 years of environment/forestry and natural resources management experience. Demonstrated understanding of Bandarban or regions with similar dynamic will be considered as an added strength.
* A disaster management specialist with 5 - 10 years of relevant experience.
* A private sector specialist with 5 – 7 years of relevant experience.
* A Geographic Information System Specialist with 3 – 7 years of experience.
	+ - 1. Tentative work schedule and timeline;
			2. Budget including description of costs for personnel, travel (domestic only, international travel will not be required), logistics, workshops, and report presentation costs. Applicant should consider budget for household level data collection as part of its field work.

**Proposal Evaluation:**

USAID will evaluate proposals based on the following criteria:

* + - 1. Technical approach and feasibility. (50%)
			2. Qualifications of assessment team members. (40%)
			3. Organizational experience demonstrated through successful completion of similar nature in developing countries and prior experience in Bangladesh. (10%)

**Procurement Method:**

This procurement to engage a contractor or consulting group will be made through simplified acquisition in accordance with FAR part 13.

Submission of Technical and cost proposal:

Please submit your technical and cost proposal to dhakaprocurement@usaid.gov by Close of Business 06 August, 2019.