



**Government of The People's Republic of Bangladesh  
Ministry of Local Government, Rural Development and Co-operatives  
Department of Public Health Engineering (DPHE)**

**Environment and Social Screening Report  
on  
Installation of Community Water Options(CWO) Scheme including O&M  
for Host Community**



**Emergency Multi-Sector Rohingya Crisis Response Project (GoB-WB)**

**Location: KutubdiaUpazila, Cox's Bazar  
Sub-project: Work Package # EMCRP/AF/WD-25 (Vol.\_01)**



**Department of Public Health Engineering (DPHE)**

**Abbreviation and Acronyms:**

AF

Additional Financing



## EMCRP Environment and Social Screen Report (DPHE)

BBS	Bangladesh Bureau of Statistics
BHH	Beneficiary Household
BD	Bangladesh
BMD	Bangladesh Meteorological Department
CWO	Community Water Options (DTW)
DC	Deputy Commissioner
DO	Dissolved Oxygen
DoF	Department of Forest
DPD	Deputy Project Director
DPHE	Department of Public Health Engineering
DRP	Displaced Rohingya Population
DTW	Deep Tube well
EC	Electrical Conductivity
EMCRP	Emergency Multi-sector Rohingya Crisis Response Project
ERP	Emergency Response Plan
ESMF	Environmental & Social Management Framework
ESMP	Environmental and Social Management Plan
FGD	Focus Group Discussion
GBV	Gender-Based Violence
GoB	Government of The People's Republic of Bangladesh
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
GPS	Global Positioning System
GW	Groundwater
HBB	Herringbone Bond
HC	Host Community
HDPE	High Density Polyethylene
IEF	Important Environmental Feature
ISCG	Inter Sector Coordination Group
IUCN	International Union for Conservation of Nature
KII	Key Informant Interview
NGO	Non-Government Organization
LGED	Local Government Engineering Department
LGIs	Local Government Institutes
MPWSS	Mini Piped Water Supply System



PD	Project Director
PF	Parent Financing
PM	Particulate Matter
PMU	Project Management Unit
PPE	Personal Protective Equipment
PSC	Project Steering Committee
PTW	Production Tube well
PVC	Polyvinyl Chloride
ROW	Right of Way
RRRC	Refugee Relief and Repatriation Commission
SAE	Sub-Assistant Engineer
SMC	Scheme Management Committee
SW	Surface water
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
TTW	Test Tube Well
UN	United Nations
UNFPA	United Nations Fund for Population Activities
UNHCR	United Nations High Commissioner for Refugees
uPVC	Un plasticized Polyvinyl Chloride
WASH	Water, Sanitation and Hygiene
WB	World Bank
WDZ	Water Distribution Zone
WFP	World Food Program
WUG	Water User Group

## **EMCRP (DPHE part)**

### **Environmental and Social Screening Form**

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#### **Sub-Project Description Form**



**Introduction:** Under additional financing (AF) of Emergency Multi Sector Rohingya Crisis Response Project (EMCRP) 1800 nos. of Deep Tube Wells –DTW(with 4"X2" dia. submersible pump)will be constructed as Community Water Option (CWO) at different locations of host communities at Eight (8)Upazilasin Cox's Bazar district. The DTWs will be consider as Production Tube Well from where safe water supply will be provided to 8-12 neighboring families as cluster basis through construction of a Water reservoir(plastic tank) and 3 tap stands. The tap stands will be constructed at convenient location for easy water collection of the beneficiaries.

In KutubdiaUpazila,Cox's Bazar around 130 (One hundred thirty) Community Water Options (CWO) has been proposed to be constructed under EMCRP AF/WD-25 HC and all will be covered in a single E&S screening report with different volume as attachment at different time. All attachment will be considered as part of the report and will be developed sequentially (ref. volume wise) up to final counting of relevant work package. This E&S Screening report comprises of 130 (One hundred thirty) number of CWOatfive (5) unionsunder Cox's Bazar KutubdiaUpazila as **Volume-01**.

Under the ESMF screening process sequential screening process i.e.,proposed area survey–transect walk, stakeholders & community consultation, preparing meeting resolution was followed.Informationwascollected onrequiredhouseholds water supply coverage, water quality and availability, electricity facilities, access road, socio economic condition of the areaetc. and updatescreening format for construction of CWO for around 10 families each.

In order to construct the facilities around 3.35 sq. meterlandfor main structure(installation of DTWs, platform, water tank stand and relevant facilities) and another 3 spacesof around 1.50 sq. metereach for three water collection point/ tap stand will be required. For this purpose,ten neighboring familiesare considered as beneficiaries of CWO of the cluster. E&S screening team, local DPHE, LGI and WATSAN committee have observed the location and targeted households. As part of E& S screening process consultation meeting were held where proposed site for DTW boring with a submergible pump,space for overhead tankreservoir, 2/3 collection point/ tap stands etc., availability of three phase electricity, pipe line, space for tap stand or collection point platform, expected water table and quality, scarcity,beneficiaries HH contribution money 10,000 (ten thousand taka) etc.wereclearly spelt outfollowing ESMF of the project.**(Consent note form attached)**.

This E&S screening report is prepared exclusively for the proposed scheme ofcommunity water option (DTW with a submergible pump) siteunder package no. AF/WD–25for the targeted local host community at different unions of KutubdiaUpazila, Cox's Bazar. Entire area of the water option scheme is about 400 sq. meter.

As part of E&S Screening Union Parishad, Chairman,WATSAN committeemembers were visited and conductedseveral stakeholders'consultation meetings on the feasibility and potentiality of this proposed Community Water Option scheme over there. Through the consultation session and spot visit, water quality, scarcity, community eagerness etc. were observed and revealed the area feasible for the community water option -DTW scheme.

During the consultation meetings land was considered as an important issue which was clearlyspelt out among the participants. One of the beneficiaries group memberagreedto provide 3.35 m<sup>2</sup> land at his own premisesfor construction of DTW, reservoir and other relevant establishment including one Tap stand. Other two members of the group were also agreed to provide land (2.5 Sqm. each) for using construction of rest 2 tap stands under each CWO from their own land and accordingly they put signature on required screening format. The required space is located at homestead premises of nominated water user HHfollowing all required procedures of land allocation as per PMU & ESMF criteria.So, the E&S Safeguard team adopted the land using the process (targeted household consent paperattached) to provide safe water supply for ten HHs in the proposed areas. All members of the beneficiaries' group were



unanimously decided to provide one-time contribution money (BDT 10,000/- per CWO) and monthly tariff for carrying out O&M costs including electricity bill payment. The proposed water user group members will contribute the money proportionally and fixed up the rate considering socio-economic conditions.

After participating in detailed discussion all members came unanimously decided to have the CWO in their own cluster and put signatures in the relevant E&S Screening sheet. During the discussion participants were found confident that implementation of the scheme would have neither negative environmental impact nor social conflict. The wildlife existence and their movement (like Birds, Turtle habitat, Elephant movement corridors and other wild animals etc.) were observed and found neither negative impact on normal and natural livelihoods nor any social cohesiveness for implementation of the community water option DTW sub project.

**Name of Sub-project:** Installation of Community Water Option including (CWO) O&M for Host Community (DTW 4"X2" dia. with submersible pump) scheme under (AFWD-25) Kutubdia Upazila, Cox's Bazar District.

**Implementing Agency/Agencies:** Department of Public Health Engineering (DPHE)

**The estimated total cost of 400 Water Options sub-project Work Package:** 1225 Lac Taka. (Around BDT 3.03 Lac/CWO)

**Estimated construction period duration:** 12 (Twelve) months.

**Estimated Operation and Maintenance (O&M) period (life of sub-project):**

The Community Water Option concerned 'Water Users Group (WUG)' will be responsible for Operation and Maintenance. During the project (EMCRP) period operation and maintenance will be borne by the Contractor and local DPHE. The beneficiary's group (10 HHs) have to pay monthly electricity bill (Sharing by WUG) and other relevant cost if required. Note that the expected lifetime of each CWP scheme is more than 10 (ten) to 15 (Fifteen) years.

**District:** Cox's Bazar

**Sub-District (Upazila):** Kutubdia Upazila, Cox's Bazar.

**Name of Union:** Utter Dhurang, Dakkin Dhurang, Lemshikhali, Boroghop and Ali Akbor Dail.

**Name of Community/Local Area:** Utter Dhurang, Dakkin Dhurang, Lemshikhali, Boroghop and Ali Akbor Dail union under Kutubdia Upazila, Cox's Bazar District.

**Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):**

In the proposed CWP scheme areas following interventions would be taken place:

- Installation of 130 nos. of DTW (4"X2" dia.)
- HDPE pipe for connection with the Tap stands and Plastic Reservoir (2000 Litre)
- Fixing a submersible pump (electricity powered 0.5-0.75 HP, head- 30-40 Production Capacity 1-3 M<sup>3</sup> /H)
- Well development by air compressor (minimum 1 bar) until sand free, odor and turbidity free drinking water at a satisfactory yield.
- Disinfecting the well including supply of 50 gm of bleaching powder (33% strength), chlorinated water having 150 ppm available free chlorine complete as per standard specification
- Supplying, fitting & fixing of best quality materials and inspection of submersible pump (electricity powered) and submersible pump set should be satisfied by Test.



- Platform and Fixation of Stone Plate ID
- After ensuring proper well development, collect the water samples and sending the samples to the DPHE Cox's Bazar Zonal Laboratory for testing
- Environmental Mitigation Works
- Operation & Maintenance work
- Community household level water collection points or tap stand (3 nos.) etc.

#### **Estimated footprint / land area for this sub-project:**

Around 3.35M<sup>2</sup>(36sft.) land will be required for construction of main structure and 1.5M<sup>2</sup> for each tap stand / water collection point. Each CWO scheme has provision of 2/3 tap stands so total area of required land will be around 8 sq meter. The influence area and beneficiaries of each scheme would be around 150M<sup>2</sup> (According to the layout diagram) and 50-60 nos. (10-12 families) respectively. As per the ESMF E&S screening process the figure, number of water tank, pipeline and collection point or tap stand is estimated but not completely surveyed.

#### **Brief description of sub-project site: (e.g., present land use, Important Environmental Features (IEFs) near site, etc.:**

People of different religions and ethnicity live in the host communities at different unions of Kutubdia upazila. Most of the household pattern of the scheme area were found densely populated while some scattered households were found. It is revealed that, in the proposed areas both densely & scattered inhabitant will be benefitted from the proposed community DTW water option scheme territory. At present the union level local people meets up their daily safe water requirement from hand tube wells (shallow/ deep). Most of those shallow Tube Well water is contaminated with excessive iron and salinity. They have to collect safe water from the source of long distance.

Proposed locations were revisited and **six(06)** consultation meetings were conducted (Total participants - 115, M-67, F-48, disable 0) where UP Chairman, councilors, community and Local Elite persons participated. Through the consultation sessions along with proposed spot visit, it has been revealed that the area is feasible to establish the DTW water option scheme. In case of required land provision, one member of beneficiaries group of the 10 households agreed to provide required 3.35 sqm land space from his own land at his premises for construction of DTW, reservoir and other relevant establishment including one Tap stand. Other two members of the same group also agreed to provide land (2.5 sq. meter each) for the construction of rest 2 tap stands under each CWO from their own land and accordingly they put signature on required screening form at Utter Dhurang, Dakkin Dhurang, Lemshikhali, Boroghob and Ali Akbor Dail union. The E&S Safeguard team adopt the formal land allocation & using process by the land owner and user (land resolution attached as **Annex**). To establish the scheme no significant negative impact was found at said unions of Kutubdia Upazila.

#### **Major institutions, infrastructures, Forest land existence:**

At the proposed areas of community Water Option (CWO) Scheme Mosques, Madrasha, Habzokhana, Eatimkhana, High school, Primary School, Kutub Shorif Darbar, Mondir, Local Bazar, Grocery shop etc. were found. Apart from those some natural forest land, HH habitat, culvert and pucca road. It's an island of the Bay of Bengal.

Herringbone bond road (12-15 ft. width) and electric line run very close to the proposed sub-project area. No important Environmental Features (IEFs) were found near to the scheme site. No existing trees, bushes, shelters, wild animal – insect habitat or structures will be affected or removed for implementing of the project.





### Overall summary:

People of the sub-project area were found very much optimistic about the success of the CWO sub-project. The sub-project is environmentally sustainable and socially acceptable. Six (06) consultation meeting with host communities including community representative were held with local people and WATSAN committee, DPHE SAE & Mechanic, and relevant stakeholders. The outcomes of the consultation meetings were approval for the construction of the said CWO scheme in the construction- installation work as much as possible.

Natural and ecological features of the area were observed and found the territory surrounded by some low dense scattered forest area. Neither significant negative impact is expected on the ecosystem and biodiversity nor agricultural land/ activities i.e; fish farming, turtle, birds or other wild animals' habitat will be distressed for implementation of the CWO sub-projects.

### Sub-project site selection process:

The Site selection criteria ideally covered the technical, environmental and social aspects. Technical aspect includes road conditions for accessibility of the drilling rig and other heavy equipment; environmental aspect includes distance from residential areas, present and future land use, availability, buffer zones, ambient GW quality in respect of Fe, As, Mn, soil topography, salinity (content & dose illustrated at environmental screening section) etc. and social aspect through detail consultation with local Representative of mass people (irrespective of religion, income level, education, profession, caste etc. socio economic condition of the people, unserved & underserved area etc. were considered as major site selection criterion of CWO subproject.

Details feasibility survey has been done through transect walk, FGD, and series of consultation sessions with stakeholders and local communities. Proposed areas were visited recurrently to conduct the water option sub-project screening process. some Pipe Line, Water Reservoir and allied establishments, etc. were also visited as part of the E&S screening. Safe water scarcity territory. The site selection has been accomplished following existing site selection criteria of the ESMF and PMU consent. Water point is selected based on water crisis & quality problem, populous area to reach the highest no. of beneficiary. Minimum distance from one drinking water point to nearby drinking water point around 200m to 250m. Union parishad personnels, concerned WATSAN committee members, local elites etc. participated in the process along with support of DPHE.

Under Kutubdia Upazila, the CWO sub-project, Water User Group (WUG) and WATSAN Committee is the scheme operating focal agency. DPHE is implementing the Project with the financial assistance of The World Bank and The Government of Bangladesh. Implementing the proposed CWO scheme around 50-60 people will be benefitted through meeting their safe water requirements.

### Types of waste to be generated during construction and operation phase:

During construction phase solid and liquid waste will be generated due to construction activities. The types of wastes are uPVC pipe, concrete, earth and liquid drilling mud, etc.

### Sensitive environmental, cultural, archaeological, religious sites near (within 1km) of site including elephant migration routes and remaining forests:

At the proposed areas of CWO sub-project, Mosques, Madrasha, Habzokhana, Eatimkhana, High school, Primary School, Kutub Shorif Darbar, Mondir, Local Bazar, Grocery shop etc. were found in the scheme area. Apart from this, observed HBB, RCC Pucca road, culvert of Kutubdia Upazila

etc. were there. Being an isolated island of the Bay of Bengal, Kutubdia has no possibility of traffic during construction period for affect community property. Project intervention will cause neither harm to community property nor significant environmental or social disturbance. In this scheme area, no elephant migration routes exist (*ref. IUCN 20223 map-02*).

**Table -01: Union wise information Community Deep Tubewell Water Option Site Information, KutubdiaUpazila, Cox’s Bazar: At a glance**

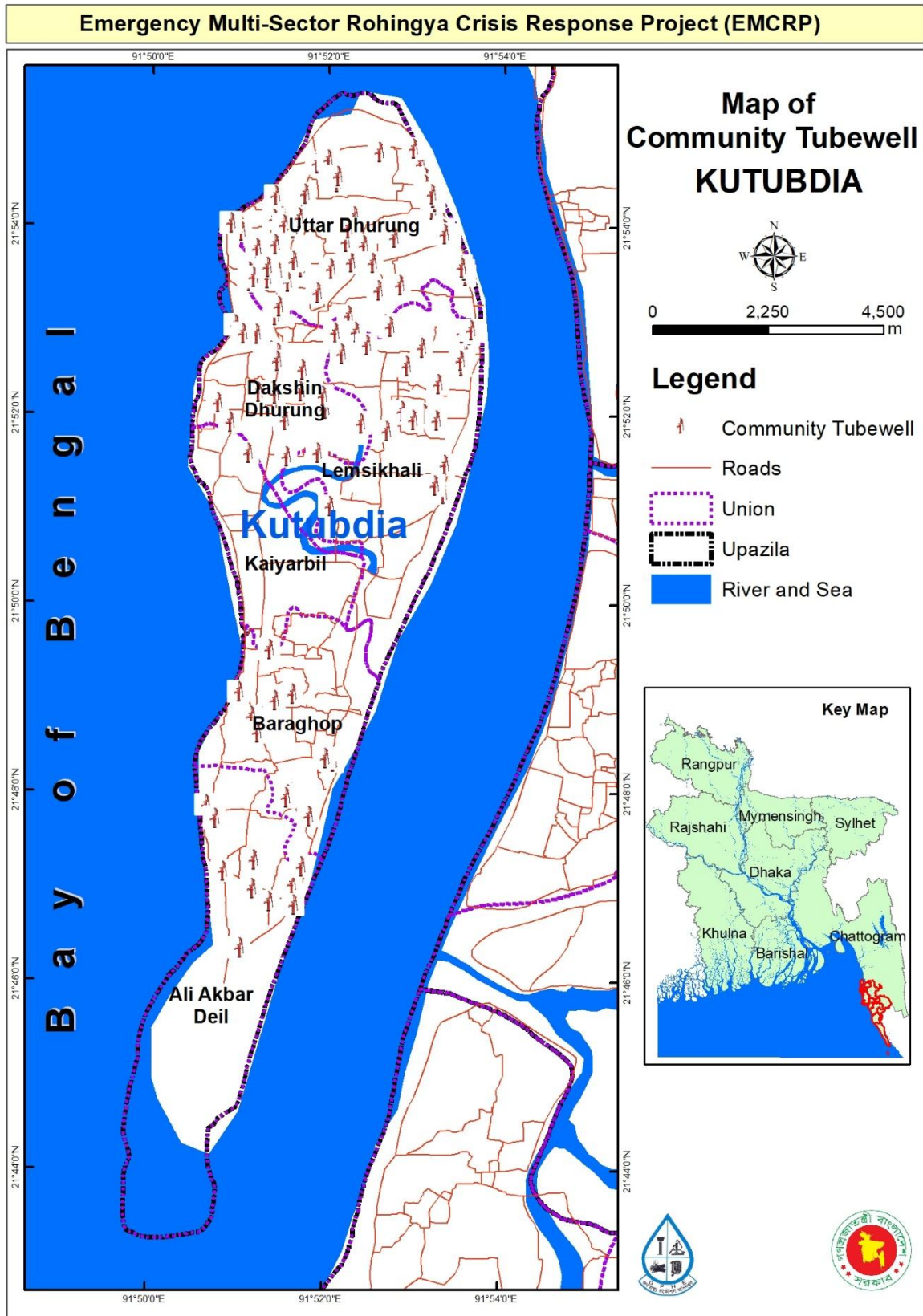
Upazila	Union	Numbers of CTW
KutubdiaUpazila	Uttar Dhurang	63
	Dakkin Dhurang	18
	Lamshikhali	23
	Boroghop	16
	Ali Akbor Dail	10
Total Community Tubewell		130



**Fig. 01: Proposed sites location of Com. Water Option, Kutubdia Upazila, Cox’s Bazar**







Map\_01: Proposed location Map for Community Water Option Scheme (DTW) at Kutubdia Upazila, Cox's Bazar



**Work Package:AF/WD-25(Installation of Community Water Option- DTW Scheme)  
Environmental and Social Screening Form**

**Section A: Sub-Project Overview**

**Description of sub-project/component interventions:**

In the proposed community water option including O&M sub-project (DTW) areas sub-project activities the following interventions would be taken place:

- Installation of 130 nos. of DTW (4"X2" dia.)
- HDPE pipe for connection with tap stands,
- 2000 Liter Water Reservoir (Plastic Tank)
- Fixing a submersible pump(electricity powered 0.5-0.75 HP, head- 30-40 Production Capacity 1-3 CM /H)
- Well development by air compressor (minimum 1 bar) until sand free, odor and turbidity free drinking water at a satisfactory yield.
- Disinfecting the well including supply of 50 gm of bleaching powder (33% strength), chlorinated water having 150 ppm available free chlorine complete as per standard specification
- Supplying, fitting & fixing of best quality materials and inspection of submersible pump (electricity powered)and submersible pump set should be satisfied by Test.
- Platform and Fixation of Stone Plate ID
- After ensuring proper well development, collect the water samples and sending the samples to the DPHE Zonal Laboratory for testing
- Environmental Mitigation Works
- Operation & Maintenance work
- Community household level water collection points or tap stand (3 nos.) etc.

**Sub-project Location:**

This sub-project area is located under Utter Dhurang, DakkhinDhurang, Lemshikhali, Boroghop and Ali AkborDail union under KutubdiaUapzila, Cox's Bazar. One hundred thirty(130)community water option (Deep Tubewell) will be constructed in this host community area. Most of the sites are plain and high land. Neither highway road nor LGED pucca road, HBB but earthen road or footpathis there.



**Land ownership:**

Water Users Group(WUG)with 10 beneficiary's households were proposed for every CWO Subproject. Among the 10 WUGs family one householdwillingto provide required 3.35 sq. meter land space from his own land at his premises for construction of DTW, reservoir and other relevant establishment including one Tap stand. Other two members of the same group were also willing to provide land (1.5 Sq. meter each) for construction of rest 2 tap stands under each CWO from their own land and accordingly they put signature on required screening format following all required procedures of land allocation as per PMU & ESMF criteria. **Water point is selected based on populous area to reach the highest no. of beneficiary.** So, the E&S Safeguard team adopt the land using process (targeted household consent paperattached) to provide safe water supply for ten HHs. Establishing ofCWO schemewill cause no significant negative impact. The required land issue processing was completed as per EMCRRP/ESMFand formalsystem. Noted that anofficialand use permission/allocation related resolution has been accomplished by the ten-household cluster water user group, UP and Union WATSAN committee.

**Expected construction period:**12 (Twelve) months.

**Description of project intervention area and project influence area with schematic diagram(where relevant, indicate distance to sensitive environmental areas such as elephant corridors, water bodies, etc. and historical or socio-cultural assets):**

Adjacent to the scheme site under the water option sub-project intervention area:

- i) Impacted area: Approx. 6.45 square meter per water option Deep Tube-well and three water collection center / tap stands
- ii) No structures, trees and livelihood will be affected.
- iii) Host community habitat, other assets relocation is not required.
- iv) Influence area: According to Layout diagram, the influence area is within the scheme area of 150 square meter per community Water option (Deep Tubewell)
- v) Environmental sensitivity: Within the influence area of the sub-project no historical sites were identified. There is no evidence of presence of elephants in the sub-project influence area (checked with local IUCN representative).
- vi) All selected Deep tube-well locations have a one alternative location and 10 meters to 50 meters away from the final selected location. Alternative locations are narrow, congested, low land and close to the HH toilet.

**Section B: Environmental Screening**

**B.1: Environmental feature of sub-project location**

**Description of cultural properties (if applicable, including distance from site):**

At the proposed areas of Community Water Option sub-project Primary Schools, Local Bazar, Club, KutubSorifDarbar, Grocery shop, etc. were found



in the scheme area. Apart from this, some natural forest land, BHH, culvert and RCC pucca, HBB or earthen road etc. are also found. In this scheme area, no wild animals (elephant), birds, turtle migration, habitat routes exist. However, none is going to be affected due to project intervention within 1-2 km from proposed scheme site. No significant environmental or social disturbance is anticipated due to construction activities.

**Location of environmentally important and sensitive areas:**

This location is not environmental important and sensitive. It is situated on a populous area. It's an island of the Bay of Bengal. The impacts are negligible and small scale, site-specific within a relatively small area and minimizable by mitigation measures.

**(1) Within/near Elephant Migration Routes Yes/No\*:**

**No.** According to UNHCR/IUCN prepared elephant migration route map (map attached), at present there is no Elephant corridor/ route due to deforestation.

**(2) Potential impacts on remaining forests in/around unions Yes/No\*:**

**No.** At present the area has no natural forest.

**(3) Other issues:**

No more mentionable issues raised

**Dust:**

Ambient air quality data was not readily available, but the quality is apparently good. As there is no motorized transportation facilities in the Island so neither Traffic nor sound or dust pollution would be there..

**Noise:**

Noise in the sub-project area is not a major concern because noise level is within the tolerance level. As no motorized vehicle will move so sound pollution will not be there.

**Baseline soil quality:**

The sub-project area is located mainly in reddish brown, muddy & sandy soil formation. The soils developing from the weathered sandstones tend to be sandy to clay loams. Presence of organic matter content in the soil is moderate.

**Landslide potential:**

**(high/medium/low, with explanation):**

**Low.** Potential Erosion/land slide may occur if highly sloping terrains would be constructed for deep tubewell, overhead tank and pipes line construction. Very few negative impact are there which is very small scale, site-specific within a relatively small area and to minimize by the necessary mitigation measures as per EMSF.



**Baseline surface water and groundwater quality (FE, TDS, fecal coliform, pH):**

**Surface water quality:**

No surface waters.

**Groundwater quality:**

Groundwater is the main source of potable water in the Sub-project area. The shallow depth is about 100 ft. to 130 ft. and deep tube well depth is 600ft to 950 ft. In the sub-project area, groundwater is free of saline and arsenic. Shallow tube well of surrounding the sub-project area are iron concentration is little high. pH\_6.5 to 8.0, Fe\_0.05-7.50mg/l, Mn\_0.02-0.80mg/l, Chloride\_10-580 mg/l, and As Nil to <0.001 mg/l. (Tube well depth: 600ft. to 950ft.) Many shallow tube wells have been installed in the union area. Excessive withdrawals of water from the shallow aquifer resulted drying up the wells at dry season.

\*Data source: Secondary data and field survey

**Status of wildlife movement:**

None of the information was found about the wildlife movement in or across the area.

**State of forestation:**

It has been observed that, at the proposed areas and surrounding locations is clustered & scattered, but man-made tree plantation is covered the targeted HC habitats presents over there.

**Summary of water balance analysis (For water supply scheme only):**

Please consider (i) water requirements of newly forested areas for plants' total evapo-transpiration, (ii) new settlements water supply requirement for drinking water, household use, bathing and sanitation, (iii) replenishment rate from annual rainfall etc.

- i) After installation the proposed water option schemes (Deep Tubewell) in the area about 40-50 people (10 Household) will be benefited per Deep Tubewell (DTW) to meet their water requirements.
- ii) The average Annual rainfall in Cox's Bazaar 3,524.1mm, average relative humidity 80%. Record high temperature was 37.2°C and low was 7.8°C (Data source BMD & BBS)

**B.2: Pre-construction Phase**

**Information on Ancillary Facilities (e.g., status of access road or any other facility required for sub-project to be viable):**

RCC /Pucca and earthen road is very close to the proposed water option locations. Few herringbone bond, pucca, earth road are also run by the sub-project area which is the most feasible way of carrying construction materials (pipes, rigs, bamboo, bricks, cement, rods, gravel, overhead tank,





wooden frame and bentonite sacks, etc.) to the construction site.
<p><b>Requirement of accommodation or service amenities (toilet, water supply, electricity) to support the work force during construction:</b></p> <p>Prior to commencement of construction work, contractor will arrange accommodation facilities with toilet, water supply, electricity for the associates' working personnel.</p>
<p><b>Possible location of labor camp:</b></p> <p>Within the scheme area and very close to the sub-projectsites.</p>
<p><b>Requirement and type of raw materials (e.g., sand, stone, wood, etc.):</b></p> <p>i) Bricks, ii) Sand iii) Cement iv) uPVC pipe v) Gravel vi) water vii) Bamboo &amp; wood viii) Pump set etc. Are the most common type materials used in construction.</p>
<p><b>Identification of access road for transportation (Yes/No):</b></p> <p><b>Yes.</b>A 10-12ft wide HBB road close to the proposed most of the Deep Tubewell and overhead tank sites.</p>
<p><b>Location identification for raw material storage:</b></p> <p>Adjacent to the water option schemes (Deep Tubewell) location and very close to the construction sites and away from steep slopes.</p>
<p><b>Type and quantity of waste generated (e.g., Solids wastes, liquid wastes, etc.):</b></p> <p><b>Solid type waste:</b>i) Bricks, ii) Sand iii) Cement iv) uPVC pipes v) Nut &amp; bolt vi) PVC solvent cement vii)Bamboo &amp; wood viii) Gravel.It is difficult to give exact figures of pre-construction waste produced on a mini pipe water supply construction site. However, 100 kg of waste may be produced for each site.</p>
<p><b>Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards:</b></p> <p>No valuablevegetation presence in proposed construction sites (approx. 3.35 sq. meter land per water option scheme (DTW).</p>
<p><b>Possibility ofstagnantwaterbodiesinborrowpits,quarries,etc.,encouragingformosquitobreedingandotherdisease vectors: (High/Medium/Low with explanation):</b></p> <p><b>Low.</b>Very low possibility of stagnant water bodies accumulation in borrow pits reported around or adjacent to the sub-project area.</p>
<p><b>Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description):</b></p> <p><b>Low.</b>It's an isolated island of the Bay of Bengal which will not be affected due to pre-construction activities.</p>



**Destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development:  
(High/Medium/Low with description):**

**Low.** Under these scheme establishment interventions, the effect of destruction or damage of lives and endangered species ecosystem is very low in the site area. Species and ecosystems have not been reported whose lives or movement may be disturbed (i.e., Insects - Ant, bees, earthworm, reptiles, turtle, birds etc.) by the scheme activities.

Major Terrestrial Fauna species found in sub-project area are Common Toad (*Bufo melanostictus*), Yellow Speckled Wolf Snake (*Lycodon zara*), Red-vented Bulbul (*Pycnonotus cafer*), Red-wattled Lapwings (*Vanellus indicus*) and Hoopoe (*Upupa epops*). Some Aquatic fauna also found in the sub-project area are Pond Heron (*Ardeola*), Little Cormorant (*Phalacrocorax niger*), White-breasted kingfisher (*Halcyon smyrnensis*), Common King Fisher (*Alcedo althia*) and Catla (*Catla catla*).

Major Terrestrial Fauna species flora in sub-project area are Acacia (*Acacia mangium*), Eucalyptus (*Eucalyptus citriodora*), Bamboo (*Bambusa* sp.), Areca nut (*Areca catechu*), Fern (*Drynaria quercifolia*) and Khejur (*Phoenix sylvestris*). Some Aquatic flora also found in the sub-project area are Floating Gress (*Echinocloa colonum*), Kalmi (*Ipomoea aquatic*), Kachurypana (*Eichhornia crassipes*) and Topapana (*Pistia stratiotes*).

**Activities that can lead to landslides, slumps, slips and other mass movements in road cuts:**

In pre-Construction phase, stock piling of raw materials can lead to localized land slips. The impacts can be minimized by careful selection of stock pile locations and ensuring large amounts are not stored in one place.

**Describe possible traffic movement impacts on (unwanted) light, noise and air pollution:**

No traffic movement impacts on light but low effects of noise and air pollution.

High = Likely to cause long-term impacts or over large area (>1.00sqkm); Medium = Likely to cause temporary damage or over moderate area (0.5 to 1.00 sqkm); Low = Likely to cause little, short-term damage and over small area (<0.50 sqkm)

**B.3: Construction Phase**

**Type and quantity of waste generated (e.g., Solids wastes, liquid wastes, etc.):**

**Solid waste:** i) Bricks, ii) Sand iii) Cement iv) HDPE pipes v) uPVC pipes vi) Iron nut & bolt vii) PVC solvent cement viii) Gravel ix) Bamboo & wood and. It is difficult to give exact figures of construction waste produced on a community water option- DTW water supply construction site. However, 150 kg of waste may be produced for each site.

**Liquid waste:** Drilling mud and drilling fluid wastewater. During construction period, fecal sludge will be generated from labor camp. It is difficult to give exact figures of construction waste produced on a mini pipe water supply construction site. However, 500 kg of waste may be produced for each site.



<p><b>Type and quantity of raw materials used (wood, bricks, cement, water, etc.):</b></p> <p><b>Raw materials:</b> i) Bricks, ii) Sand iii) Cement iv) HDPE pipes v) uPVC pipes with fittings vi) Nut &amp; bolt vii) PVC solvent cement viii) gravel ix) water x) plastic tanks xi) Bamboo &amp; wood and other electro-mechanical equipment by the concerned contractor firm.</p> <p><b>Quantity:</b> It is difficult to provide exact figures of construction materials that will be used on a mini pipe water supply construction site. However, 500 kg of raw materials may be required for each site.</p>
<p><b>Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards:</b></p> <p>No valuable vegetation presence in proposed sub-project construction sites. So, vegetation will not be affected by construction work.</p>
<p><b>Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: (High/Medium/Low with explanation):</b></p> <p><b>Medium.</b> Trenches for laying of pipelines will be required. These can potentially store stagnant water for short period of time during and after rain events. The top soils in the sub-project are sandy and the water should drain away quickly.</p>
<p><b>Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description):</b></p> <p><b>Low.</b> It's an island of the Bay of Bengal. But it should not be affected due to construction activities.</p>
<p><b>Destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development: (High/Medium/Low with description):</b></p> <p><b>Low.</b> Under these scheme establishment interventions, the effect of destruction or damage of lives and endangered species ecosystem is very low in the site area. Species and ecosystems have not been reported whose lives or movement may be disturbed (i.e., Insects - ant, bees, earthworm, reptiles, turtle, birds etc.) by the scheme activities.</p>
<p><b>Activities that can lead to landslides, slumps, slips and other mass movements in road cuts:</b></p> <p>Construction of the sub-project components can lead to low scale effects of land slide/slips. The impacts are expected to be negative, short-term, site-specific within a relatively small area and can be minimized by mitigation measures.</p>
<p><b>Erosion of lands below the road bed receiving concentrated outflow carried by covered or open drains: (High/Medium/Low with description):</b></p> <p><b>Low.</b> Potential erosion may occur when moderately to highly sloping terrains are disturbed for the construction of Deep tubewells and pipe lines. The impacts are expected to be negative, small scale, site-specific within a relatively small area and minimized by mitigation measures.</p>
<p><b>Describe possible traffic movement impacts on (unwanted) light, noise and air pollution:</b></p> <p>No traffic movement impacts on light as all vehicular movement will be during day time. Some temporary, localized effects of noise and air pollution can</p>



occur due to truck movements.

High = Likely to cause long-term impacts or over large area (>1sqkm); Medium = Likely to cause temporary damage or over moderate area (0.5 to 1sqkm); Low = Likely to cause little, short-term damage and over small area (<0.5sqkm)

### B.4: Operation Phase

**Activities leading to health hazards and interference of plant growth adjacent to roads by dust raised and blown by vehicles:**

Increase in dust may cause health problems to workers at O & M period. Improper use of personal protective equipment (PPE) and lack of safety procedures may cause injuries. Site-specific within a relatively small area and adjustable by mitigation measures.

**Chance of long-term or semi-permanent destruction of soils:  
(High/Medium/Low with description):**

**Low.** Some localized semi-permanent destruction of soils may occur during maintenance of water option and collection points.

**Possibility of odor and water, soil quality impacts from SWM and FSM disposal system  
(High/Medium/Low with description):**

N/A

**Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging mosquito breeding and other disease vectors:  
(High/Medium/Low with explanation):**

**Low.** There are low possibilities of stagnant water occurring in the operation period if there are leakages in the water supply scheme, including overflow of overhead tanks.

**Likely direct and indirect impacts on economic development in the project areas by the sub-project:**

Local labor will be involved in maintenance activities. Safe drinking water supply will be helpful reduce water scarcity crisis of the host community and improve their health condition.

**Extent of disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes):  
(High/Medium/Low with description):**

**Low.** It's an island of the Bay of Bengal. But it should not be affected due to construction activities.

**Extent of destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development:  
(High/Medium/Low with description):**

**Low.** Operation and maintenance activities of community water option scheme will be localized and temporary in nature. Species and ecosystems have not been reported whose lives or movement may be disturbed (i.e., Insects - Ant, bees, earthworm, reptiles, turtle, birds etc.) by the scheme activities.



<p><b>Activities leading to landslides, slumps, slips and other mass movements in road cuts:</b></p> <p>Buried pipe channels can form preferential runoff paths, causing localized erosion. Also, leaking pipes can lead to slope instability.</p>
<p><b>Erosion of lands below the road bed receiving concentrated outflow carried by covered or open drains: (High/Medium/Low with explanation):</b></p> <p><b>Low.</b> Low possibility to erosion of land at pipe line and deep tubewell plat =form area.</p>
<p><b>Describe possible traffic movement impacts on (unwanted) light, noise and air pollution:</b></p> <p>Temporary, localized impacts on noise and air pollution from maintenance vehicles movement can occur. All maintenance works will be conducted during daytime – so no light impacts expected.</p>
<p><b>Type and Chance of hazards affecting sub-project and labor camp location (e.g., flooding, landslides, cyclones, etc.): High/Medium/Low with description):</b></p> <p>Hazard Type(s): Cyclone, Flash Floors and the chance of natural hazards affecting Community Water Option structure and labor sheds is <b>Low</b> and only possibility as seasonal based.</p>
<p><b>Accessibility to the closest disaster shelter (Easy/Difficult with description):</b></p> <p>In the Community Water Option scheme operations phase the accessibility to the closest disaster/ cyclone shelter is almost easy for the community. Noted that active cyclone shelters, fire service center are closer to the sub-project areas.</p>

High = Likely to cause long-term impacts or over large area (>1sqkm); Medium = Likely to cause temporary damage or over moderate area (0.5 to 1sqkm); Low = Likely to cause little, short-term damage and over small area (<0.5sqkm)

## Section C: Social Screening





### C.1 General Labor Influx Screening

Key Screening questions	Aspects to Consider
Will the project potentially involve an influx of workers to the project location, and will the influx be considered significant for the local community?	<b>No.</b> Require number of total skilled and unskilled Labor for each Deep Tubewell is respectively 1-2 and 2-5. All the skilled & unskilled labor will be engaged from the Host community. No additional foreign labor will be engaged. All the skilled labor will be staying at labor shed if required. The size of the labor shed will be 120 square feet. So, no significant influx to be considered for the local community.
Is the project located in a rural or remote area?	<b>Yes.</b> The project location is in a host community area demarcated by the targeted HHs. Local Government (Union Parishad) authority and belongs to the under Utter Dhurang, Dakkin Dhurang, Lemshikhali, Boroghob and Ali Akbor Dail union level semi forward to remote area. Population is estimated around 50-60 per CWO. The frequency and extent of the contract, communication between the local community and outsiders are normal, and not specially controlled by the respective LGI (union/Upazila) or any other authority.
Based on the socioeconomic, cultural, religious and demographic qualities of the local community, population and the incoming workers, is there a possibility that their presence or interaction with the local community could create adverse impacts?	<b>No.</b> It is expected that the presence of the skilled and unskilled local labor (HC) will not create any adverse impacts. The project will benefit the targeted host communities. There will be a code of conduct for the labors to follow, which will be monitored by the PMU and local DPHE on a regular basis.
Consultation with Host Community People and relevant stakeholders (SH)	During screening and site identification local DPHE and PMU has conducted six(6) consultation meetings with primary and secondary stakeholders and HCs. The stakeholders include LGIs (UP Chairman, Councilors, WATSAN committee) Local Elites, Contractor team and targeted host community. In addition to the above-mentioned meetings, the E&S team & local DPHE has undertaken many consultations with male and female members of the concerned host communities. Through the coordination and linkage activities of the project, the authorities have accomplished some formal view exchange meetings, individual household visits, FGD, Tea Stall discussion and other consultation meetings.



### C.2 Land acquisition and stakeholder screening

Probable Involuntary Resettlement Effects	Yes	No	Not Known	Remarks
<b>Involuntary Acquisition of Land/ Land Donation/ Land Taking</b>				
1. Will there be any land acquisition?		√		No. Only around 8 sq. meter (for installation DTW, Reservoir tank) and 2/3 sq. meter for Water tap stands will be required which will be provided among members of respective Water Users Group from their own land (within 10 HH cluster) at homestead premises among concerned WUG.  The land allocation process is followed (meeting resolution of ten HH members of the concerned water options scheme).
2. Is the project construction site known?	√			The site is known and has been selected with the consent of respective user HH & concerned stakeholders.
3. Who manage the land?	√			Land is owned / possesses by the HH as homestead land within 10 HHs under concerned WUG. No land acquisition required. (see site location photos).
4. Will easement be utilized within an existing Right of Way (ROW)? CRP (Common Resource Property)	√			Proposed HC has a provision of utilizing existing Right of Way (ROW) within the CWP (DTW) scheme under EMCRP.
5. Will there be loss of Community people house, agricultural crops, trees, and other productive or fixed assets due to project intervention?		√		No habitat/ shelters will be affected. During construction – DTW and Tap stands installation, if any habitat or asset, crop land is affected, contractors are responsible to mitigate the impacts following the RPF.
6. Will there be loss of businesses or enterprises due to project intervention?		√		No
7. Will there be loss of income sources and means of livelihoods due to project intervention?		√		No
<b>Involuntary restrictions on land use or on access to legally designated parks and protected areas</b>				
8. Will people lose access to natural resources, communal facilities and services?		√		No
<b>Information on Displaced Persons:</b>				



9. Any estimate of the likely number of persons that will be displaced by the Project? If yes, approximately how many?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
10. Are any of them poor, female-heads of households, or vulnerable to poverty risks?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
11. Are any displaced persons from indigenous or ethnic minority groups?	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
During Screening, project authority will conduct consultation with the primary and secondary stakeholders and provide their observations in the following sections (12 to 223)	
<b>12: Who are the stakeholders of the project? Please provide a summary of consultation meetings with stakeholders and the affected community.</b>	
<p>Under EMCRP additional Financing Community Water Option sub-project of KutubdiaUpazila the key stakeholders are local community, Labors, communities/organizations within the project influence area indirectly affected by project activities. Relevant Government departments/agencies, Environment and Forest Department and, NGOs involved at WASH interventions of the proposed local host communities are also considered as secondary stakeholders. In order to identify environmental and social impacts associated with Water Option sub-project implementation, DPHE, PMU has been providing importance on involving primary and secondary stakeholders of the scheme area. Therefore, to collect local knowledge for baseline conditions, understand perceptions of the community regarding impact significance, propose meaningful mitigation measures during survey of E&amp;S Screening, an attempt has been made to consult with relevant stakeholders and DPHE officials to obtain their views on Water Option sub-project interventions.</p> <p>The Community consultations were conducted through a mix of conventional approach which involved as Participatory Community Consultations (PCC), Focus Group Discussion (FGD), Key Informant Interview (KII) and one-to one interview, during the environmental and social study of the proposed sub-project in conformity with the WB's ESMF guidelines. However, for better understanding the socio-economic and environmental condition 6 <b>(six)</b> consultations meeting with local community have been conducted in the sub-project study area <b>(Appendix-2)</b>.</p> <p>Aiming to establish the Community Water Option(CWO) scheme consultation meetings was held with UP and DPHE assigned HC area by the respective WATSAN Committee, under EMCRP (DPHE part) .After site selection a series of consultation meetings with concerned stakeholders on the following issues: Project introduced Social and Environmental safeguard issues, grievance redress mechanism (GRM), possible social environmental and economic effects, livelihoods options, discussions on minimizing the laborer conflict among local host communities, Infrastructure WASH, hygiene, gender-based violence (GBV), forestation, elephant corridor, waste, sludge management, benefits of safe drinking water options by establishment of CWOs and other WASH schemes. People from all group irrespective of male, female, age, cast, religion, reach, poor, vulnerable group,local elites, community ,profession participated in the consultations.</p> <p>Noted that, most of these interventions are to be situated on the HC areas and water user group (WUG) HH member (among water user 10 HHs) occupied land. During E&amp;S screening due process of ESMF- RPF and PMU consent were followed.</p>	



In the consultation session E&S aspects of the project interventions, above-mentioned issues were discussed as potentially occurring at the project sites of HC. The community welcomed and appreciated the EMCRP initiatives on WASH sub projects. Safe water and improved sanitation were considered as one of their priority needs for secured and better livelihoods aspects. They opined that there is no Elephant corridor and no scope of Elephant/Human conflict over there. Through the consultation meeting, the host community were made aware of and sensitized on E&S safeguard issues, precautions, child safety, any chances of displacement of various structures, relocations of local institutions if any objection and complaints.

The community consultations were conducted with the following objectives: (i) to intrude awareness of the stakeholders on Community Water Option-DTW and to seek suggestions for planning and designing of the water option sub-project (ii) to identify the need and concern of the local public, (iii) to assess cultural patterns and behavior of local communities. Stakeholder consultation was targeted at people/communities who may – directly or indirectly, positively or negatively- be affected by the outcomes of the Community Water Option. The consultations were conducted at two different tiers of stakeholders: Local people and different organization representatives who are concerned about the sub-project. All of the proceedings and interactions of consultation and FGD have been recorded.

#### **Feedback, Suggestions, and Recommendations of the Participants FGD:**

The participants' feedback, suggestions, and recommendations listed below:

- During consultation the participants were requested to provide support to establish Community Water Option to have provision of safe water at KutubdiaUpazilaand cooperate in O&M of the water options.
- The participants expressed their concern about employment opportunities and requested to engage labor from local community so that they can manage their livelihood.
- They also requested to maintain proper safety and security measuresduring construction work.

Most of the participants opined that community water option will make them benefitted through providing safe water facilities at proposed areas.

Individual level consultation with project interest and influence parties (UP, WATSAN Committee, Local DPHE) representatives were conducted in consistence with consultation objective during sub-project selection stage to have their idea, concern, segregation about the proposed sub-project. Consultation outcome with them is consolidated here in below:

#### **Responds of WATSAN Committee members / UP Chairman:**

- UP and WATSAN Committee members are ready to support EMCRP-DPHE, if they face any obstacle to implementing the water option (DTW) scheme;
- To keep boundary of the scheme areas and hang a signboard as soon as possible including name of executing agency, types of intervention, address of contractor, project duration, funding agency name and so on.
- Engage the Local community to implement the Community Water option sub-project.
- To keep temporary bin for waste collection during scheme implementation should arrange and regular disposal also need to be assured;
- Community water option boring and collection point sites not to be allowed in the bank of natural water body except ensuring adequate mitigation;
- Construction wastes that to be generated should be disposed regularly at designated sites.



**13: What social and cultural factors affect the ability of stakeholders to participate or benefit from the proposed policy or project?**

None.

**14: Are project objectives consistent with their needs, interests and capacity?**

Yes, the EMCRP project objectives are consistent with the respective stakeholders, host community, needs, interests and capacity in the project areas.

**15: What will be the impact of the project or sub-project on the various stakeholders, especially women and vulnerable groups?**

In the whole E&S screening process it has been revealed that establishing the Community (DTW) Water option sub-project will bring a very positive impact. The scheme will help to minimize the vulnerability of the host community especially the old aged person, disabled, children as well the women with safe water supply. Under the sub-project of the host community, the stakeholder's perception is that the overall project impacts will be positive and they expected to have the project be implemented. The influx is straining existing infrastructure and degrading an already resource-constrained social service delivery system and the environment at HC areas. Access to improved water quality and quantity is a priority. Need-based Social Protection system would be organized for the victim vulnerable groups.

**Positive Impact:**

After implementing the CWO scheme at different location of Kutubdia Upazila area people will get sufficient safe water for drinking & other domestic uses, which will minimize their sufferings in many folds i.e; lessen sufferings from water borne diseases, time savings for water collection, reduce GBV and many others. This deep tubewell will ensure pollution free potable water for them.

**Negative Impact:**

Due to operation of CWO scheme adverse impact would be minimal. Except for the chance of muddy surface near the tubewell location during supply of water and limited interference for ablutions where tube well is adjacent to the site, there will have no significant impact. Beside there will be medium level of negative impact, from waste (mud, liquid waste) that to be generated by constructing the tubewell. However, the anticipated impact will be short-term and negative and localized. Further, if construction site is not fenced properly then children of office staff may face accident. During construction COVID-19 issues may hamper the construction work.





**16: What social risks might affect project or sub-project success?**

As per the visit findings and consultation meeting with targeted host community and different stakeholders, Under the Community Water Option (CWO) scheme screening process it has been revealed and perceived that some social risks might occur to establish the scheme interventions.

Noted that this E&S screening report is prepared exclusively for the proposed CWO scheme area site for the targeted local host community. The scheme area has been covered with around 10 households. In the proposed area the habitat host communities with different religions and ethnicity. Most of the household pattern of the scheme area were found densely while some scattered households were found. In the proposed areas both densely & scattered inhabitant will be benefitted from the proposed water option scheme. At present the targeted local host community people meet their daily water requirement from hand tube wells (shallow/deep), which are mostly contaminated with excessive iron and light turbidity. In order to mitigate the safe water scarcity in this proposed area they need implement CWO scheme. During CWO installation or construction period some social obstacles might be occurred i.e; possibility of theft construction materials, local and outsider labor or community conflicts etc.

In order to implement the CWO scheme tasks, additional labor from outside such as technicians, masons will also be engaged which may cause as a risk of local social conflict. The gender and GBV issues (i.e., human trafficking, eve teasing, etc.) are being addressed through need-based activities. As a mitigation measure, the Social Safeguard team and grievance redress committee (GRC) has been developed. A complete Gender action plan has already been developed and approved, a full time Social Development consultant has been assigned to oversee and solicitate /mitigate the GBV based issues for this community water options sub-project. The respective ESMF based GRM, is keeping abreast on GBV occurrences and will guide the community through consultation meetings and counseling. The E&S team and local DPHE will concern consideration on the proposed host community areas on social, cultural, religious, gender, disabilities, orphaned and vulnerable children's related sensitive issues. However, by adopting the project E&S safeguard and through community consultation, the LGIs-UP, community leader and local DPHE representatives may determine possible ways and options to mitigate the constraints and risks during the community water option scheme implementation.



### C.3. Social Capital Format

The objective is to list various types of social institutes/bodies working in the host community, intended Community DTW project influence areas to enlist them for the possible inclusion in the management, and monitoring of the projects. List the name of social institutes/ bodies under the given categorization along with the following information. Use separate sheet for each category of social institute/body. The information can be collected through secondary sources such as LGIs and UN agencies or different development organizations that are involved with the Rohingya crisis projects, etc.

Type of Social Institutes/bodies	Name of Institution	Contact Person and Address	Primary areas of Work	Coverage areas in the communities
Government Organizations	UNO	Dipongkar Tang changya UNO, Kutubdia Upazila, Cox's Bazar <a href="mailto:unokutubdia@gmail.com">unokutubdia@gmail.com</a> .....	Overall Coordination of GoB dept, LHIs, Dev partners, NGO, INGO, UN Agencies, Volunteer. HH shelter, F/NFIs, WASH facilities, Education, Health, Livelihoods, Social security, power sources, renewable energy.	synchronizing with Host, E&S aspects, Elephant corridors, conserve NR. Establish proper road communication.
	SAE, DPHE	Md Al Amin Sub-Assistant Engineer, DPHE, Kutubdia, Cox's Bazar <a href="mailto:alaminbiswas.bd@gmail.com">alaminbiswas.bd@gmail.com</a>		
	EE, DPHE	Engr. Md. Mostafizur Rahman, DPHE, Executive Engineer, Cox's Bazar, <a href="mailto:eng.mostafiz@gmail.com">eng.mostafiz@gmail.com</a> .....		
	DC	Md. Mamunur Rashid DC, Cox's Bazar <a href="mailto:dccoxsbazar@mopa.gov.bd">dccoxsbazar@mopa.gov.bd</a>		
LGIs	Upazila Chairman	ATM Nurul Bashar chy. Upazila Chairman, Kutubdia, Cox's Bazar <a href="mailto:kutubdiauzp@gmail.com">kutubdiauzp@gmail.com</a>		
National Organizations	Not yet on boarded	the database web link <a href="https://www.humanitarianresponse.info/en/operations/bangladesh/document/wash-sector-">https://www.humanitarianresponse.info/en/operations/bangladesh/document/wash-sector-</a>		



Type of Social Institutes/bodies	Name of Institution	Contact Person and Address	Primary areas of Work	Coverage areas in the communities
		<a href="#">coxs-bazar-members-contact-list-17-october-2017</a>		
Volunteer Organizations are those, which constitute the members of the community working towards social development.	Not yet involved	N/A. Prohibited by the GoB.	Ensuring HC HH shelter, F/NFIs, WASH facilities, Education, Health, Livelihoods, Social security, power sources, renewable solar energy.	



## Section D: Environmental and Social Screening Summary

### Environmental Screening Summary:

Based on the above environmental and social screening, potential impact for implementing the proposed intervention on different parameters of environment and social with consequence mitigation measures and suggestive monitoring plan with mentioning the responsibilities parties of implementation and supervise the Community Water Option- DTW sub-project have been summarized as below:

Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
1: Sub-Project Interventions	<b>Air Quality</b>	Under the subproject intervention the overall score is <b>low</b> .	<ul style="list-style-type: none"> <li>Limiting earthworks;</li> <li>Watering of dry exposed surfaces and stockpiles of aggregates at least twice daily, as necessary; (spreading of crushed gravel over backfilled surfaces;</li> <li>More details are provided in ESMP</li> </ul>	Construction Contractor monitored by Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>Location of stockpiles;</li> <li>Number of complaints from stakeholders;</li> <li>Records of air quality inspection;</li> </ul>	If possible, air quality test (CO, PM) once in the construction period in the winter season.
	<b>Soil contamination and erosion</b>	Under the sub-project intervention, the overall score is <b>low</b> .	<ul style="list-style-type: none"> <li>Make sure to schedule excavation to reduce erosion when there is minimal rainfall</li> <li>During excavation adequate drainage system shall be provided at the excavated area if applicable and at the stockpiling locations, sediment barriers will be provided to prevent the erosion of excavated material.</li> <li>Disturbed soil will be covered with vegetation/geotextile membrane to hold the soil</li> <li>When a rainstorm is imminent or forecast, the Contractor shall act as</li> </ul>	Construction Contractor monitored by Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>No visible degradation to nearby drainages,</li> <li>Khals or water bodies due to soil erosion.</li> </ul>	Weekly, especially after rain events.



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			<p>per plan.</p> <ul style="list-style-type: none"> <li>The earthwork sites where the exposed land surface is vulnerable to runoff shall be consolidated and/or covered.</li> <li>Channels, earth bunds, netting, tarpaulin and or sand bag barriers shall be used on site to manage surface water runoff and minimize erosion.</li> <li>The overall slope of the works areas and construction yards shall be kept to a minimum to reduce the erosive potential of surface water flows elsewhere.</li> <li>More details provided in ESMP</li> </ul>			
	<b>Hydrology (surface and groundwater)</b>	Under the sub-project intervention, the overall score is <b>low</b> .	<ul style="list-style-type: none"> <li>All precautions to store chemicals/oil/fuel properly so that no chance of spill.</li> <li>Monitor water quality according to the environmental management plan.</li> <li>If Iron, arsenic &amp; Coliform is found in the water of any Community Deep tubewell, the water will be treated and then be used.</li> <li>Ensure drilling equipment is cleaned well and will be free of contaminants such as grease, and chemicals, prior to drilling; and properly dispose of</li> </ul>	Construction Contractor and monitored by Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>Areas for stockpiles, storage of fuels and lubricants and waste materials;</li> <li>Records of water quality inspection; Water Quality Test (National Drinking Water Quality Standard Parameters);</li> <li>No visible</li> </ul>	<p>If need and possible water quality test (SW &amp; GW) once in construction period and Operation period.</p> <p>Training records reviewed quarterly</p>



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			spoils and wastes at the end of each day's work. <ul style="list-style-type: none"> <li>• More details provided in ESMP</li> </ul>		degradation to nearby drainages, khals or water bodies due to construction activities. <ul style="list-style-type: none"> <li>• For surface water quality parameters: pH, EC, TSS, FC.</li> <li>• For groundwater quality parameters: pH, TDS, Chloride, As, Fe, Mn</li> <li>• Training records</li> </ul>	
2. Pre-construction Phase	Sanitation, water supply	Under the sub-project intervention, the overall score is <b>low</b> .	<ul style="list-style-type: none"> <li>• Provide suitable housing, adequate supplies of potable water, and toilet and bathing facilities within the housing area for the assigned laborer.</li> <li>• Provide means for disposing of wastewater from toilets, baths and food preparation areas either through a septic tank and soak away, or holding tank with removal by vacuum truck.</li> <li>• More details provided in ESMP.</li> </ul>	Construction Contractor and monitored by Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>• Site-specific H &amp; S Plan;</li> <li>• Records of supply of uncontaminated water;</li> <li>• Record of Health &amp; Safety orientation trainings;</li> <li>• Condition of sanitation facilities for workers</li> </ul>	Visual inspection monthly basis
	Impact on Existing drainage: drain may block, due to	Under the sub-project intervention, the	<ul style="list-style-type: none"> <li>• The Contractor will not be allowed to store construction materials beside drains</li> <li>• Regular monitoring is essential</li> </ul>	Contractor and monitored by Environmental	<ul style="list-style-type: none"> <li>• List of materials and sources of materials;</li> <li>• Storage site away</li> </ul>	Weekly





Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
	storage of construction materials on or next to the drain.	overall score is <b>low</b>	<ul style="list-style-type: none"> <li>If any materials fall within the drain, contractor will clean the drain immediately.</li> </ul>	Consultant and PMU	from the drain	
	<b>Transportation impacts</b>	Under the sub-project intervention, the overall score is <b>low</b> .	<ul style="list-style-type: none"> <li>All vehicle movement to be done during the day time</li> <li>Speed needs to be limited to 20kmph</li> <li>Contractor's responsibility to verify the suitability carrying, loading and unloading of materials by trucks or others transport and head load arrangement.</li> </ul>	Construction Contractor and Environmental Consultant and PMU	<ul style="list-style-type: none"> <li>Check the vehicle pool.</li> <li>Record of regular inspection.</li> <li>Record of accidents/ incidents</li> </ul>	Monthly monitoring.
	<b>Storage of construction materials</b> can cause pollution or land slips	Under the sub-project intervention, the overall score is <b>low</b> .	<ul style="list-style-type: none"> <li>The contractor shall submit a method statement and plans for the storage of hazardous materials (fuels, oils, and chemicals) and emergency procedures.</li> <li>Proper stockpiling/ storage of construction materials at the site proposed by the contractor &amp; approved by the Environmental Consultant of PMU.</li> <li>Proper covering of dust producing materials with polythene sheet,</li> <li>Spills/ hazardous substances should be disposed of at the site proposed by the contractor &amp; approved by the Environmental Consultant of PMU to avoid soil/ water contamination.</li> </ul>	Contractor and Environmental Consultant and PMU	<ul style="list-style-type: none"> <li>List of materials and sources of materials;</li> <li>Storage site away from steep slopes and has proper bonding</li> </ul>	Weekly
	<b>Destruction or</b>	Under the sub-	<ul style="list-style-type: none"> <li>Vegetation clearing work will be</li> </ul>	Contractor and	Ground openness	Weekly



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions		
					Indicators	Frequency	
	damage of terrestrial or aquatic ecosystems	project intervention, the overall score is low.	done only where subproject intervention will take place. <ul style="list-style-type: none"> <li>More details provided in ESMP</li> </ul>	monitored by Environmental Consultant of PMU		in the intervention area	
3. Construction Phase	Wastes (earth, mud, HDPE cuttings, etc.)	Under the sub-project intervention, the overall score is medium.	<ul style="list-style-type: none"> <li>Prepare and implement drilling mud and water runoff management plan approved by PMU.</li> <li>Wastes must be placed in the designated bins which must be regularly emptied.</li> <li>All waste must be removed from the site and transported to a disposal site.</li> <li>More details provided in ESMP</li> </ul>	Construction Contractor and monitored by Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>Complaints from community;</li> <li>Regular inspection of waste management activity;</li> <li>Waste disposal record.</li> </ul>	As work weekly progresses	
	Stagnant water risk	Earth excavation will be required for pit placement. Water stagnant may occurs if the place keeps open for long time after earth excavation. Low.	<ul style="list-style-type: none"> <li>Water stagnant area should fence with marking tape</li> <li>The top soils in the sub-project are sandy, the water should drain away quickly</li> <li>The contractor should arranger proper water facilities</li> <li>Proper PPEs are essential during construction work.</li> </ul>	Construction Contractor foreman and monitored by Consultant and PMU	<ul style="list-style-type: none"> <li>Water stagnant beside household toilet area</li> </ul>	Daily during construction	
	Storage of materials (Creating dust/ air pollution spillage of liquid/ hazardous substance i.e. oil,	Under the sub-project intervention, the overall score is medium.	<ul style="list-style-type: none"> <li>By the union parishad and DPHE to identify the storage site and other requirements, which will be approved by PMU and consultants</li> <li>More details provided in ESMP</li> </ul>	Construction Contractor and monitored by Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>List of materials and sources of materials;</li> </ul>	Monthly basis during implementation phase.	



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
	drilling fluid, chemicals etc., Risk of crime)					
	<b>Impact on Drain &amp; Aquatic Environment</b> by discharging solid & liquid wastes from construction site & labor camp into nearby drain & through the drain those wastes can fall into canal water	Under the sub-project intervention, the overall score is <b>Low</b>	<ul style="list-style-type: none"> <li>Generated waste and construction debris shall be properly disposed in accordance with the approved designated disposal site(s);</li> <li>Acceptable quality of excavated soil shall be mostly reused for the backfilling, with the surplus portion, if any, disposed in the approved designated disposal site(s).</li> <li>Separate waste collection bins, for organic and inorganic wastes, shall be provided throughout the construction sites, whereby all waste collection bins be regularly emptied and cleaned;</li> <li>Contractor will be responsible to control the workers from discharging of construction waste into water bodies.</li> </ul>	Contractor monitored by Environmental Consultant and PMU	<ul style="list-style-type: none"> <li>Frequency of emptying the waste bin</li> <li>Existence of waste bin</li> </ul>	Monthly basis during implementation phase.
	<b>Erosion of land</b>	Under the sub-project intervention, the overall score is <b>Low</b>	<ul style="list-style-type: none"> <li>During construction work (especially for earth excavation) proper slope protection is essential.</li> <li>During backfilling work proper compaction is essential (as per spec.)</li> <li>Avoid earthwork during monsoon</li> <li>Control surface run off to reduce Safe disposal of the drainage water or providing temporary</li> </ul>	Construction Contractor foreman and monitored by Consultant and PMU	<ul style="list-style-type: none"> <li>No visible degradation to nearby drainages or water bodies due to soil erosion at/near sub-project site.</li> </ul>	Daily during earth excavation work & work below GL



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			retaining walls made of bamboo and sheet or safe disposal of the drainage water, prevent erosion by planting vegetation, mulching, and spreading awareness about the issue instead of “Proper PPEs are essential during construction work”.			
	<b>Noise pollution</b>	Under the subproject intervention the overall score is <b>Low</b> .	<ul style="list-style-type: none"> <li>• Consultation with affected people; not to operate noisy equipment during working and operations time (17:00 – 06:00);</li> <li>• Sound suppression for equipment;</li> <li>• Ear protection for workers.</li> <li>• Conduct noise quality monitoring as per ESMP.</li> </ul>	Construction Contractor and Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>• Number of complaints from stakeholders; Use of silencers in noise-producing equipment and sound barriers;</li> <li>• Noise Level following decibel meter (dB)</li> </ul>	Inspection by PMU and supervision consultants on monthly basis;
	<b>Air pollution</b>	Under the subproject intervention the overall score is <b>Low</b> .	<ul style="list-style-type: none"> <li>• Water spraying from test tube well for dust control; construction materials with potential for significant dust generation shall be covered; no smoke emitting equipment; and limiting speed of construction vehicles in access roads and work sites to maximum of 20 kph.</li> <li>• More details provided in ESMP</li> </ul>	Construction Contractor and Environmental Consultant of PMU	<ul style="list-style-type: none"> <li>• Location of stockpiles;</li> <li>• Number of complaints from stakeholders;</li> <li>• Records of air quality inspection; Air quality test report</li> </ul>	Air Quality: PM <sub>10</sub> , PM <sub>2.5</sub> , SPM and SO <sub>2</sub> test once in construction period.
<b>4. Operational Phase</b>	<b>Health &amp; Safety Hazard</b>	Site staff can be seriously hurt by accidents and	<ul style="list-style-type: none"> <li>• Ensure proper training given to all staff</li> <li>• Ensure PPE used by staff</li> </ul>	DPHE, XEN	<ul style="list-style-type: none"> <li>• Accidents register</li> </ul>	During containment cleaning work.



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
		overall score is <b>Low.</b>				
	<b>Destruction of soil</b>	The operation period may be possible soil damage problems in the project areas by rainstorms and overall score is <b>Low.</b>	<ul style="list-style-type: none"> <li>Safeguards to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during rain storms shall be developed by the Contractor.</li> <li>More details are provided in ESMP</li> </ul>	Construction Contractor weekly monitored by Environmental Consultant and PMU	<ul style="list-style-type: none"> <li>No visible degradation to nearby drainages or water bodies due to soil damage at pipe laying area.</li> </ul>	If need or possible, Site inspection weekly/2-weekly in rain season.
	<b>Odor &amp; waste disposal</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>	<b>N/A</b>
	<b>Impact on existing drainage &amp; Aquatic Environment</b>	<b>N/A</b>	<ul style="list-style-type: none"> <li><b>N/A</b></li> </ul>	<b>N/A</b>	<ul style="list-style-type: none"> <li><b>N/A</b></li> </ul>	<b>N/A</b>
	<b>Noise pollution</b>	Under the subproject intervention the overall score is <b>Low.</b>	<ul style="list-style-type: none"> <li>limiting speed of maintenance vehicles in access roads and work sites to maximum of 20 kph.</li> <li>Transportation of the fecal sludge &amp; other liquid waste have to be carried during the scheduled times, and mainly during the day</li> </ul>	Long-term responsibility to be determined by DPHE	<ul style="list-style-type: none"> <li>Noise from maintenance vehicle</li> </ul>	If needed or possible, During Maintenance work
	<b>Air pollution</b>	Under the sub-project intervention, the overall score is <b>Low.</b>	<ul style="list-style-type: none"> <li>Limiting speed of construction vehicles in access roads and work sites to maximum of 20 kph.</li> <li>More details provided in ESMP</li> </ul>	Construction Contractor up to defect liability period. Consultant and PMU	<ul style="list-style-type: none"> <li>Dust due to vehicular movement</li> </ul>	If need or possible, During Maintenance vehicle movement



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
<b>5: Potential Natural Hazards</b>	<b>Cyclone</b>	Seasonal or weather depression and the overall score is <b>medium</b> .	<ul style="list-style-type: none"> <li>Measures to be taken at any time of year when cyclones are likely to happen.</li> <li>People need to ensure the safety of valuable resources before increasing the signal.</li> <li>The public should regularly listen to the latest special weather bulletins and public disaster warnings and take steps to take action in accordance with these regulations.</li> <li>Organizations concerned with disaster management must be prepared. The disaster management committee at all levels should meet in a meeting and keep all preparations for possible response activities.</li> </ul>	Construction Contractor for monitored by Environmental Consultant and PMU Long-term responsibility to be determined by DPHE and PMU	<ul style="list-style-type: none"> <li>Weather Forecasting procedure/ Depression</li> </ul>	Site inspection weekly and monthly basis.
	<b>Flash Flooding</b>	May occur due to runoff from rainstorms and the overall score is <b>low</b> .	<ul style="list-style-type: none"> <li>Protection to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent.</li> <li>If there is a heavy rainfall in a higher area, it affects the lower areas. Therefore, if there is heavy rainfall in any high area, advance warning measures should be taken in the lower areas.</li> <li>The embankment should be constructed considering the damage</li> </ul>	Construction Contractor for monitored by Environmental Consultant and PMU Long-term duties to be determined by DPHE and PMU	<ul style="list-style-type: none"> <li>Weather Forecasting procedure, Rainstorms</li> </ul>	Site inspection weekly and monthly basis on rainy season or during heavy rainfall.





Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			caused by flash floods.			
<b>Fire</b>	The main cause of fire is carelessness. Ignorance goes hand in hand with carelessness. The overall score is <b>low</b> .		<ul style="list-style-type: none"> <li>Remember that fire prevention is better than firefighting. Therefore, there should be a fire prevention system everywhere including homesteads, government-private offices-courts, mills-factories.</li> <li>Turn off the stove after cooking. Avoid using open lamps.</li> <li>Continue to extinguish the fire until the arrival of the fire service vehicles.</li> <li>Old fittings should be checked at least once a month and replaced if necessary.</li> <li>All equipment must be earthed. Experienced people should be employed in the handling of chemicals and fuels.</li> <li>Establishments should have adequate fire extinguishers stocked and trained personnel.</li> </ul>	Construction Contractor up to defect liability period. Consultant, CIC, DPHE and PMU	<ul style="list-style-type: none"> <li>Recorded any fire.</li> <li>Recorded complaint if any</li> </ul>	Regular visual monitoring will be required.
<b>Land sliding</b>	Land slide may occur due to runoff from rainstorms and the overall score is <b>low</b> .		<ul style="list-style-type: none"> <li>Protection to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms.</li> <li>Identification of vulnerable populations living in hilly areas.</li> </ul>	Construction Contractor for first 2 years monitored by Environmental Consultant. Long-term responsibility to be determined by DPHE and PMU	<ul style="list-style-type: none"> <li>Visible sliding prone Land (Hill or Tilla) area to nearby sites scheme area.</li> </ul>	Site inspection weekly and monthly basis on rainy season or during heavy rainfall.



Section	Main Env. and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			<ul style="list-style-type: none"> <li>Establish clear accountability in private ownership for relocation of vulnerable populations from mountains owned by private organizations or individuals.</li> <li>Prohibition of human settlement and other social activities in hilly areas.</li> <li>Planned intensive afforestation in hilly areas.</li> </ul>			

\* Overall Impact Score: High = Likely to cause long-term E&S impacts; Medium = Likely to cause temporary impacts; Low = Likely to cause little, short-term impacts

### Social Screening Summary:

To deliver the details of Community Water Options (CWO) scheme’s social screening, the ESMF has been followed focusing on major social impacts and significance of the sub-projects (equity, labor influx, population coverage, easy access, GBV, impact mitigation measures, referral, monitoring suggestions). No land acquisition is required for the sub-project. Provision of utilizing existing Right of Way is available for the sites within this area. CWO sub-project location was selected by the respective HHs with the support of E&S screening team, UP Chairman, WATSAN Committee and local DPHE. Some need-based consultation meeting has also been conducted **6(six)** with local HHs along with water users, related to the community DTW water option sub-project. The E&S consultants and local DPHE, UP Chairman and member’s team have visited the proposed DTW and targeted ten HH homesteads and surroundings and site of DTW – Reservoir main structure with boring. Initially the E&S team have surveyed the locality and primarily sorted (2-3) sites to establish – installation of the water option scheme. Exact situation on safe water provision has been sorted out through consultation meeting with the community HHs. The targeted households are being using almost unsafe (light iron, turbidity contaminated) water for their daily drinking and water purposes. As per SDG -6 Bangladesh the DPHE (Government) is obviously committed to ensure safe water for all within 2030.

### Construction induced impact issues:

#### Land Issues:

Details of the CWO scheme especially the land issue was clearly spelt out among the group members and other relevant stakeholders. One members of beneficiaries group of the 10 households agreed to provide required 3.35 sq. meter land space from his own land at his premises for construction of



DTW, reservoir and other relevant establishment including one Tap stand. Other two members of the group were also agreed to provide land (1.5 Sq. meter each) for construction of rest 2 tap stands under each CWO from their own land and accordingly they put signature on required screening format as their consent. The required space is located at homestead premises of nominated water user HH following all required procedures of land allocation as per PMU & ESMF criteria. So, the E&S Safeguard team adopt the land using process (targeted household consent paper attached) to provide safe water supply for ten HHs of proposed areas. All members of the beneficiaries' group were unanimously decided to provide one-time contribution money (BDT 10000/- per CWO) and monthly tariff for carrying out O&M costs including payment of electricity bill. The group discussed themselves and fixed up the rate considering socio economic condition. The poor and vulnerable families of the groups were given exemption from providing one-time contribution and even in monthly O&M cost. After participating detail discussion all the members come to the conclusion of having the CWO in their own cluster and put signature in the relevant E&S Screening sheet. The E&S screening team have followed the formal beneficiaries land allocation process, as per the PMU and ESMF policy (**attached the consent paper as annex**). The required land space will be used for DTW boring, Tank, tap stand/water collection center. In the CWO interventions, no any induced significant negative impact will be appeared. During construction, movements of heavy vehicles or construction materials may cause damages to the assets. If any damages are reported, local DPHE will hold consultations with the HHs, LGIs or WATSAN committee representatives along with contractors to take mitigation measures according to ESMF and RPF. By the active participation of concerned Scheme stakeholders, community consultation meeting was conducted by the E&S Safeguard team for stakeholder engagement, as they informed officially. All of the CWO structures are situated at selected local host community of Utter Dhurang, Dakkin Dhurang, Lemshikhali, Boroghop and Ali Akbor Dail union areas of Kutubdia Upazila, Cox's Bazar.

#### **Labor issues:**

For every Community Water Option-Deep Tubewell Scheme, the assigned contractor team will engage skilled & unskilled labors. The number of unskilled labor 3-5 and 1-2 skilled labor will be engaged from the local/host community/other places of Bangladesh. No foreign labors will be needed to install Deep Tube Well. Since the number of skilled & unskilled workers will be very few and working for short periods of time (more than 3 months). The sub-project will not create any influx of workers. The contractor will prepare labor shed with sufficient facilities for both male (15ftX15ft) and females (15ftX12ft), if necessary. **All laborers (skilled and unskilled) who will be engaged must be trained on the Code of Conduct (CoC), GRM procedures, GBV, OHS and other issues etc.**

#### **Linkage with other stakeholders:**

The team has provided emphasis to keep better linkage with related stakeholders (*i.e.*, LGIs, UP, WATSAN Committee, Host Community, INGO & Elites etc.). The team conducts required consultation meeting with them group/individually for any social, geographical issues.

#### **GBV issues:**

The GBV risk for the project is assessed as low at host community. The proposed project activities will involve major civil works through skilled and unskilled laborer from the local host community. Although a strict labor code of conducted will be enforced, a key concern is the potential exposure to sexual exploitation and abuse (SEA), sexual harassment (SHA) and GBV for females in the area. During the construction of the CWO, many women and vulnerable groups in the project location may be exposed to male laborers, which may lead to sexual harassment of varying degrees. A GRM will



be established to deal with related issues. The team will conduct consultation meetings with the Host communities, contractors and labor to address GBV. In this meeting, another topic of discussion was the 'do's and don'ts' during implementation of the sub-project intervention to mitigate all the cross-cutting issues. The expected impact of the sub-project on the various stakeholders, women and vulnerable groups is expected to be positive and will create a friendly socioeconomic climate to implement the intervention. If any odd situation appears, the GRC will minimize the issue following the ESMF GRM guideline. On the other hand, if any private land/land leases issues required, the team will be conducted consultation meeting with the owner and related stake holder according the ESMF & resettlement guidelines.

This project is a part of the Gender Component of the UNFPA 9th Country Program and will contribute to achieve the CP outcome 3 "Advanced gender equality, women's and girls' empowerment, and reproductive rights, including for the most vulnerable and marginalized women, adolescents and youth". In case of any GBV it will be communicated with UNFPA through proper channels to resolve the issue as earliest possible. In this project, WFS will be fully operationalized, providing comprehensive GBV case management services such as lifesaving information, community and outreach initiatives, community-based psycho-social support, community engagement in GBV prevention activities through SASA, community engagement in safety audit, and strengthening of community-based support mechanism for women and girls through women support groups and adolescence support groups. The staff's capacity will be developed to adequately handle GBV case management, coaching, mentoring, supervision, GBVIMS and GBVIMS+ to ensure comprehensive case management services through proper supervision. Capacity development will also focus on inclusion of people with disability into response and prevention work for GBV. Various tools will be developed/adapted to facilitate GBV services, MHPSS services and engaging men and boys into GBV prevention work. Along with the GBV case management services mentioned above, GBV and labor code of conduct awareness programs will be implemented, where all stakeholders including the host communities, labor engaged for the project, site management, the WB and project clients such as DPHE and LGD can participate. They will also implement the preparedness/ contingency plans for any and upcoming disasters. Finally, close monitoring and supervision initiatives will be in place to ensure any arising issues are averted and to facilitate smooth project processes.

### **Consultations and Future Consultations:**

Under the EMCRP, the DPHE has initiated elaborate consultations with various stakeholders of this project for the Community Water Option point source (DTW) schemesite management. These include GIS specialist (initially), hydrogeologist located in the scheme area, E&S consultants, local DPHE authorities, other development partners. **During consultation meeting the topics were discussed and disclosed among the relevant stakeholders about the EMCRP introduced E&S safeguard issues, CoC, GRM, possible social environmental and economic effects, livelihoods options, ESMP, OHS and laborer conflict mitigation measures among host communities.** The benefits of safe drinking water options through installing the CWO were discussed. It was also determined that there is no Elephant corridor and no scope of Elephant/Human conflict in the site area. The local community were made aware and sensitized on E&S safeguard issues, precautions, child safety, avoiding resettlement, relocations of local institutions (mosques, school & others), any restrictions for the host community, compensation mechanism if any complaints. The targeted local host community welcomed and appreciated the EMCRP initiatives on WASH sector community water options sub project. In their opinion, the safe water and improved sanitation is considered one of the priorities needs for them for secured and better livelihoods aspects.



Thus, future consultations during the lifetime of the project are expected to ensure that negative E&S impacts are being mitigated and community needs and opinions are being considered. Consultations will involve determining with the site management team whether proper signage is being used (e.g., for occupational hazard) and whether a properly GRM system is being implemented through an efficient GRC. The GRM will be developed to serve as an integral tool of engaging various stakeholders during project activities and its implementation. A complaints book will be kept for stakeholders and institutionalization of GRM with qualified personnel having adequate training in handling relevant complaints should be ensured. Each and every complaint and way of addressing the complaints will clearly be spelled out in the complaint book. The GRM will be available for a wide array of issues such as malpractice, labor issues and GBV.

### **Labor and Contractors management during COVID-19:**

For projects involving construction/civil works, contractors will develop specific procedures or plans so that adequate precautions are in place to prevent or minimize an outbreak of COVID-19, and what should be done if a worker gets sick.:

- Assessing the characteristics of the workforce, including those with underlying health issues or who may be otherwise at risk
- Confirming workers are fit for work, to including temperature testing and refusing entry to sick workers
- Considering ways to minimize entry/exit to site or the workplace, and limiting contact between workers and the community/general public
- Training workers on hygiene and other preventative measures, and implementing a communication strategy for regular updates on COVID-19 related issues and the status of affected workers
- Treatment of workers who are or should be self-isolating and/or are displaying symptoms
- Assessing risks to continuity of supplies of medicine, water, fuel, food and PPE, taking into account international, national and local supply chains
- Reduction, storage and disposal of medical waste
- Adjustments to work practices, to reduce the number of workers and increase social distancing
- Expanding health facilities on-site compared to usual levels, developing relationships with local health care facilities and organize for the treatment of sick workers
- Building worker accommodations further apart, or having one worker accommodation in a more isolated area, which may be easily converted to quarantine and treatment facilities, if needed
- Establishing a procedure to follow if a worker becomes sick (following WHO guidelines)
- Implementing a communication strategy with the community, community leaders and local government in relation to COVID-19 issues on the site.



### Health and Safety Issues:

The Contractors must carry out a risk assessment and do what's needed to be taken care of the health and safety of labors, employees and visitors. Incidents or accidents must be recorded and reported to the Bank through PMU, EMCRP within 24 hours. If any incident happen that should be informed to concerned authorities.

**For supporting health facilities**, plans or procedures will be in place to address the following issues:

- Obtaining adequate supplies of medical PPE, including gowns, aprons, curtains; medical masks and respirators (N95 or FFP2); gloves (medical, and heavy duty for cleaners); eye protection (goggles or face screens); hand washing soap and sanitizer; and effective cleaning equipment. Where relevant PPE cannot be obtained, the plan should consider viable alternatives, such as cloth masks, alcohol-based cleansers, hot water for cleaning and extra handwashing facilities, until such time as the supplies are available
- Training medical staff on the latest WHO advice and recommendations on the specifics of COVID-19
- Conducting enhanced cleaning arrangements, including thorough cleaning (using disinfectant) of catering facilities/canteens/food/drink facilities, latrines/toilets/showers, common areas, including door handles, floors and all surfaces that are touched regularly
- Training and providing cleaning staff with adequate PPE when cleaning consultation rooms and facilities used to treat infected patients
- Implementing a communication strategy/plan to support regular communication, accessible updates and clear messaging to health workers, regarding the spread of COVID-19 in nearby locations, the latest facts and statistics, and applicable procedures.

**Recommendation for further environmental and social assessment and/or site specific environmental and social management plan: Yes/No** (\*If yes, please specify what assessments/plans would be required. Mention some recommendation on E&S assessment .... ESMP)

**Yes.** If site specific environmental and social management plan (ESMP) is followed, any negative impacts can be mitigated and monitored. ESMP is attached.





### Appendix -01 Environmental and Social Management Plan (ESMP) of this Sub project (site-specific)

Considering the intervention wise installation activities of proposed site potential impact with consequence mitigation measures have been designed (as ESMP) in the following table for Community Water Option Point Source (DTW):Utter Dhurang, Dakkin Dhurang, Lemshikhali, Boroghop and Ali Akbor Dail union under Kutubdia Upazila, Cox's Bazar.

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
Pre-Construction Stage	Assessment of Social Impacts and Risks	<p>To meet the requirements for disadvantaged and vulnerable directive:</p> <ul style="list-style-type: none"> <li>• Include COVID 19 positive individuals, clusters as vulnerable categories in Social Assessment TORs, surveys and consultations (particularly relating to social stigma);</li> <li>• Consult with such COVID 19 positive households to identify specific support mechanisms that projects could support;</li> <li>• Add tribal communities in self isolation under vulnerable groups who may need suitable and socially acceptable support;</li> <li>• Use alternative and virtual and video means for consultations and interactions.</li> </ul>	PMU	Social Development & Hygiene Promotion Consultant of PMU
Pre-Construction Stage	Loss/source of livelihoods	<ul style="list-style-type: none"> <li>• Under this sub-project, there is no scope of negative impact of host community livelihoods.</li> <li>• Ensure engagement of local labor as unskilled worker.</li> </ul>	Contractor	Social Development & Hygiene Promotion Consultant of PMU
Pre-Construction Stage	Loss of land/and other physical assets	<ul style="list-style-type: none"> <li>• No land acquisition will be required.</li> <li>• As, there were no any mitigation measures according to this impact.</li> </ul>	PMU	Social Development and Hygiene Promotion Consultant of PMU
Pre-Construction Stage	Stakeholders Engagement	<ul style="list-style-type: none"> <li>• All the project stakeholders will be engaged in consultation process</li> <li>• Individual/Separate community level</li> </ul>	PMU & Contractor	Social Development & Hygiene Promotion



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
		<p>consultation meeting will be held with the potential affected HHs</p> <ul style="list-style-type: none"> <li>• Consultation meeting with HC male and female about the project safeguard documents will be disclosed to the stakeholders</li> <li>• HC people will involve with the GRM, formed GRC</li> <li>• Consultation meeting with will be held contractors and labors about safe guard issues.</li> </ul>		Consultant of PMU
Pre-Construction Stage	Loss of Access rights	<ul style="list-style-type: none"> <li>• Prior to start the work, contractor will inform the community people to use alternative roads;</li> <li>• Construction work will be completed in quick time as much as possible to reduce the hassle of community</li> <li>• Project to ensure thorough analysis of alternatives that access enjoyed by the community remains intact.</li> <li>• In case of unavoidable circumstances, alternative access will be provided.</li> </ul>	Contractor	Social Development & Hygiene Promotion Consultant of PMU
Pre-Construction Stage	Improper site selection for proposed intervention can be a cause of HEC at subproject site.	<ul style="list-style-type: none"> <li>• Selection of sub-project sites will be outside of the elephant route/corridor/influenced area.</li> <li>• Before finalized the location of sub-project must be contact with UP Chairman &amp; SAE, DPHE.</li> <li>• Every Union Parished area already delineation the union boundary. Sub-project Interventions will be also included in this area. So, no need to take any further consent for those purpose, if any circumstance arisen.</li> </ul>	PMU	Environmental Consultant of PMU



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
Pre-Construction Stage	Site Preparation: Soil Erosion; Alteration of natural drainage	<ul style="list-style-type: none"> <li>• Selected site will be far away from any water bodies or natural water flow path to avoid the flash flood or any kind of surface runoff.</li> <li>• For deep tubewell sinking a minimum 10 meters distance from latrines' soak well to be maintained.</li> <li>• A minimum aerial distance 150 - 200 meters to be maintained among deep tube wells installation for cone depression and optimizing the production of wells etc.</li> <li>• Minimize cut &amp; fill operations, the site clearing and grubbing operations should be limited to specific locations only.</li> <li>• Always try to avoid any disruption of socially sensitive areas with regard to human and biodiversity.</li> <li>• The existing slope and natural drainage pattern on the site should not be significantly altered.</li> <li>• If trees on private lands are damaged during construction operations, compensation shall be paid to the owner as determined by the appropriate authority.</li> <li>• The contractors shall ensure that site preparation activities not lead to disruption of activities for the local residents and biodiversity.</li> </ul>	PMU& Contractor	Environmental Consultant of PMU, SAE, DPHE
Pre-Construction Stage	<b>Accommodation, Sanitation &amp; Water Supply for labor.</b>	<ul style="list-style-type: none"> <li>• The contractors shall provide suitable housing, adequate supplied of potable water, toilet and bathing facilities within the laborer housing area.</li> <li>• Safe drinking water will be made available at site for the drinking purpose of laborer.</li> <li>• The contractors shall provide the disposing</li> </ul>	PMU & Contractor	Environmental Consultant of PMU, SAE, DPHE



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
		<p>of waste water from toilets, baths and food preparation areas either through a septic tank and soak away, or holding tank with removal by vacuum truck.</p>		
Pre-Construction Stage	Transportation	<ul style="list-style-type: none"> <li>• Contractors to provide transportation management plans to be approved by relevant authorities.</li> <li>• All vehicle movement be done during the day.</li> <li>• Speed needs to be limited to 20kmph.</li> <li>• Adequate road signs to be planted on access roads signs to limit vehicular speeds.</li> <li>• Contractors' responsibility to verify the suitable carrying, loading and unloading of materials by trucks or others transport and head load arrangement.</li> </ul>	PMU & Contractor	Environmental Consultant of PMU, SAE, DPHE
Pre-Construction Stage	Storage of construction materials	<ul style="list-style-type: none"> <li>• Orient to the concerned person, team assigned for the construction work.</li> <li>• The constructors will control unauthorized entry to the site area is completely prohibited and the site will be properly fenced with a single entry, for these purposes.</li> <li>• The contractors will properly maintain and control store house, storages instruments as well as hazardous materials on the site.</li> </ul>	PMU & Contractor	Environmental Consultant of PMU



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
Construction Activity	Noise pollution will occur due to use of diesel-based construction equipment/vehicles movement	<ul style="list-style-type: none"> <li>Construction activity will be finished at daytime. Proper measures will be taken to avoid any disturbances. But some works will be continuing for 24 hours schedule like DTW drilling, development &amp; testing.</li> <li>Contractor will confirm proper measures for avoiding any disturbance of residents, biodiversity.</li> <li>Personal Protective Equipment (PPE) will be ensured in sub-project site before starting any kind of construction activities.</li> </ul>	Contractor	Environmental Consultant of PMU
Construction Activity	Air quality will degrade due to dust blowing from earthwork, transportation of waste or fine material and emission of construction vehicles.	<ul style="list-style-type: none"> <li>Construction machinery shall be properly maintained to minimize exhaust emissions of CO<sub>2</sub>, particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>) and Hydrocarbons.</li> <li>Dust generated as a result of clearing, leveling and site grading operations shall be suppressed using water sprinklers.</li> <li>Dust generation due to vehicle movement on haul roads/access roads shall be controlled through regular water sprinkling.</li> </ul>	Contractor	Environmental Consultant of PMU
Construction Activity	Safety Issues /impact may be decline if construction management not works rightly	<ul style="list-style-type: none"> <li>Unauthorized entry to the site area is completely prohibited and the site will be properly fenced with a single entry, for this purpose.</li> <li>Properly maintained and control store house, storages instruments as well as hazardous materials on the site</li> <li>Health and safety training will be arranged for the HC communities' labours before project intervention started.</li> <li>Labour will bring their proper IDs and wear when they will entry in the sub-project area.</li> <li>Child labours will not allow for any kind of</li> </ul>	Contractor	Environmental Consultant of PMU



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
		<p>activities</p> <ul style="list-style-type: none"> <li>• Site shall be secured by fencing and maintained at entry points.</li> </ul>		
Construction Activity	Traffic Management	<ul style="list-style-type: none"> <li>• Contractors to provide traffic management plans to be approved by relevant authorities.</li> <li>• If need adequate alternative arrangements will be made to minimize impact on motorists and pedestrians.</li> <li>• Adequate road signs to be planted on access roads to limit vehicular speeds.</li> <li>• For access roads, speed ramps will be construct by proper design.</li> <li>• Traffic signs will be made in Bangla language.</li> </ul>	Contractor	Environmental Consultant of PMU
Construction Activity	Increase in road accidents	<ul style="list-style-type: none"> <li>• The movement of heavy machinery and equipment will be restricted to defined routes.</li> <li>• Proper signage to be displayed at major junctions.</li> <li>• Road diversions and closures to be informed well in advance to the local community.</li> <li>• The vehicular movement will be controlled near sensitive locations viz. schools, colleges, hospitals, mosques identified along designated vehicular transportation routes.</li> <li>• Local community will be trained up about traffic management and awareness.</li> </ul>	Contractor	Environmental Consultant of PMU
Construction Activity	Social conflict may arise between outsider workers and local residence due	<ul style="list-style-type: none"> <li>• An alternate arrangement for fuel wood, heating &amp; cooling required to meet fuel requirement of the labor camps.</li> </ul>	Contractor	Social Development & Hygiene Promotion





Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
	to different behavior or custom of outsider worker (if any) as well as consumption of natural resource by the local worker	<ul style="list-style-type: none"> <li>• Alternating cooking arrangement for the HHs living in the camp should be arrange by the contractor;</li> <li>• Contractor will closely monitor all workers so that they do not involve with local politics as well as sexual harassment, trafficking of women and children.</li> <li>• Contractor will be arranged an awareness building training for the workers about nutrition, disaster risk resilience or mitigation, adoption of clean energy for cooking; and prevention of child abuse, child marriage, GBV, sexual harassment, trafficking of women and children as well as illegal drug trade.</li> <li>• Work force should be prohibited from disturbing the flora, fauna including hunting of animals, wildlife hunting, poaching and tree felling.</li> </ul>		Consultant of PMU
Construction Activity	<p><b>Construction Waste:</b> Generated wastes (earth, drilling mud) from drill of pump may cause of degrade the quality of nearby water quality (if any) and surrounding environment</p> <p>-Hazardous waste i.e., waste oil, grease from vehicle maintenance also can decline the nearby water quality and surrounding environment if these are not properly managed</p>	<p>Preparation of a waste management plan covering the following aspects:</p> <ul style="list-style-type: none"> <li>• Ring slab septic tank will be installed before starting construction works in order to provide a better sanitation facility to the workers and staffs. A set of designated toilets in the present office building can be used by the labor, instead.</li> <li>• Working areas are kept clean and tidy at alltimes.</li> <li>• Construction site is to be checked for spills of substances i.e., chemical, oil, paint,etc.</li> <li>• Drilling mud &amp; fluid will be collected and stored in the paved and bounded area. when dry the drilling mud, the mud will be used for site development.</li> </ul>	Contractor	Environmental Consultant and Social Development & Hygiene Promotion Consultant of PMU, and DPHE



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
		<ul style="list-style-type: none"> <li>Bins and/ or skips should be emptied regularly and waste/ debris should be disposed of at waste disposal areas and/ or at the site. Hazardous waste viz. waste oil etc. will be collected and stored in the paved and bounded area and subsequently sold to authorized recyclers.</li> </ul>		
Construction Activity	<p><b>Health &amp; Safety Risks:</b></p> <ul style="list-style-type: none"> <li>The potential for exposure to safety events such as tripping, working at height activities, fire from hot works, smoking, failure in electrical installation, mobile plant and vehicles, and electrical shocks.</li> <li>Exposure to health events during construction activities such as manual handling and musculoskeletal disorders, hand-arm vibration, temporary or permanent hearing loss, heat stress, and dermatitis.</li> </ul>	<ul style="list-style-type: none"> <li>All construction equipment will be properly inspected.</li> <li>The risk assessment will be prepared time to time for all types of work activities on site.</li> <li>Proper walkways that are clearly designated as a walkway; all walkways shall be provided with good conditions underfoot; signposted and with adequate lighting.</li> <li>Proper signpost any slippery areas will be ensured in construction site.</li> <li>Carry out fire risk assessment for the construction areas, identify sources of fuel and ignition and establish general fire precautions including, means of escape, warning and fighting fire.</li> <li>A system to alert for workers will be setup on site. This may be temporary or permanent mains operated fire alarm.</li> <li>Fire extinguishers will be located at identified fire points around the site. The extinguishers will be appropriated to the nature of the potential fire.</li> <li>This sub-project has Proper communicative emergency response plan (ERP) with all parties. The ERP considers such things as</li> </ul>	Contractor	Environmental Consultant and Social Development & Hygiene Promotion Consultant of PMU



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
		<p>specific foreseeable emergency situations, organizational roles and authorities, responsibilities and expertise, emergencies response and evacuation procedure, in addition to training for personnel and drills to test the plan.</p> <ul style="list-style-type: none"> <li>• Electrical equipment must be safe and properly maintained; works shall not be carried out on live systems.</li> <li>• Only competent authorized persons shall carry out maintenance on electrical equipment, adequate Personal Protective Equipment (PPE) for electrical works must be provided to all personnel involved in the tasks.</li> <li>• An adequate number of staff and first aiders shall be on site in accordance with Bangladesh Labor Law requirements.</li> <li>• First aid kit with adhesive bandages, antibiotic ointment, antiseptic wipes, aspirin, non-latex gloves, scissors, thermometer, etc. shall be made available by the contractor on site.</li> <li>• Emergency evacuation response shall be prepared by the contractor and relevant staff shall be trained through mock-up drills.</li> <li>• Ensure all equipment is suitable for jobs (safety, size, power, efficiency, ergonomics, cost, user acceptability etc.), provide the lowest vibration tools that are suitable, can-do works.</li> <li>• All safety equipment will be available in sub-project site (safety, size, power, efficiency, ergonomics, cost, user acceptability etc.), the lowest vibration tools</li> </ul>		



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
		<p>will be provided that are suitable and can do the works.</p> <ul style="list-style-type: none"> <li>• Regulated noise exposure assessments and noise level surveys of noisy areas, processes and equipment shall be carried out in order to form the basis for remedial actions when necessary.</li> <li>• Contractor will provide Awareness training to all personnel involved during the construction phase in order to highlight the heat related illnesses of working in hot conditions such as heat cramps, heat exhaustion, heat stroke, and dehydration.</li> <li>• Adequate quantities of drinking water will be available at different locations within the sub-project area.</li> <li>• Provision to maintain proper PPE wherever necessary and to ensure that there are satisfactory washing and changing facilities.</li> <li>• Provision to ensure all workers exposed to a risk are aware of the possible dangers and also given thorough training in how to protect themselves and there should be effective supervision to ensure that the correct methods are being used.</li> </ul>		
Operation & Maintenance	Noise disturbances to fauna	<ul style="list-style-type: none"> <li>• Provision to maintain noise from the O&amp;M of machinery and equipment by noise dampeners</li> <li>• Provision to take necessary lighting, caution for the works and most of the time contractor will avoid the night time construction works.</li> <li>• Contractors will ensure device to determine the noise level in sub-project area.</li> <li>• Regularly third-party will be monitored the</li> </ul>	<p>Contractor for first 2 years</p> <p>Long-term responsibility to be determined by DPHE</p>	Environmental Consultant of PMU



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
		noise level in this sub-project area.		
Operation & Maintenance	<p><b>Negative impacts on ground water (if any)</b></p> <ul style="list-style-type: none"> <li>• Drawdown of groundwater due to excessive withdrawals</li> <li>• Contaminated surface water runoff or subsurface leakages from underground chemical like arsenic, Iron &amp; Coliform</li> </ul>	<ul style="list-style-type: none"> <li>• Coordination with other development agencies for groundwater extraction rates will be monitored. Regular third-party will be monitoring of groundwater levels</li> <li>• Drinking water parameter will be tested (before use or during operation with defined frequency and parameters)</li> <li>• If arsenic, Iron &amp; Coliform are found in the water of any Community Deep tube well, the water will be treated and then the water will be used.</li> </ul>	Contractor for first 2 years. Long-term responsibility to be determined by DPHE	Environmental Consultant of PMU
Operation & Maintenance	Odor & waste disposal of sludge	<ul style="list-style-type: none"> <li>• Ensure effective use bin covers and/or tarpaulins during transport of wastes and end products (compost).</li> </ul>	Contractor for first 2 years. Long-term responsibility to be determined by DPHE	Environmental Consultant of PMU
Operation & Maintenance	Injuries to operation and maintenance workers	<ul style="list-style-type: none"> <li>• Ensure proper training given to all O &amp; M staff</li> <li>• Ensure PPE used by all O &amp; M staff</li> </ul>	Contractor: up to contractor's liability period. Long-term responsibility to be determined by DPHE	Environmental Consultant of PMU
Operation & Maintenance	Erosion of land	<ul style="list-style-type: none"> <li>• Ensure effective protection to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast and actions to be taken during or after rainstorms.</li> <li>• Regularly third-party will be monitored the land erosion in this sub-project area.</li> </ul>	Contractor for first 2 years. Long-term responsibility to be determined by DPHE	Environmental Consultant of PMU
Operation & Maintenance	Improper disposal of solids wastes from solar powered systems can cause land and water	<ul style="list-style-type: none"> <li>• Contractor will ensure third party monitoring of nearby surface and underground water bodies for signs of contamination. Parameters. Test results are to be</li> </ul>	Contractor for first 2 years. Long-term responsibility to be	Environmental Consultant of PMU



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
	pollution	compared with Bangladesh Environmental Quality Standards of DoE. <i>(Solar system is not applicable for (DTW) water options)</i>	determined by DPHE	
Decommissioning	The impacts are similar to those listed in construction stage: <ul style="list-style-type: none"> <li>• Pollution from waste materials</li> <li>• Health &amp; Safety risks to workers and local community</li> </ul>	<ul style="list-style-type: none"> <li>• Provision to proper measure of mitigation and monitoring to minimize or reduce the environmental and social impacts during decommissioning are anticipated to be similar to those identified for the construction phase.</li> <li>• Third-party monitoring of air quality as well as on receiving land and water bodies, may be undertaken, if the condition of those compartments seems to be significantly worse.</li> </ul>	Long-term responsibility to be determined by DPHE	Environmental Consultant of PMU, DPHE
<b>Potential Natural Hazards</b>	<b>Cyclone</b>	<ul style="list-style-type: none"> <li>• Measures to be taken at any time of year when cyclones are likely to happen.</li> <li>• People need to ensure the safety of valuable resources before increasing the signal.</li> <li>• The public should regularly listen to the latest special weather bulletins and public disaster warnings and take steps to take action in accordance with these regulations.</li> <li>• Organizations concerned with disaster management must be prepared. The disaster management committee at all levels should meet in a meeting and keep all preparations for possible response activities.</li> </ul>	Construction Contractor for monitored by Environmental Consultant and PMU. Long-term responsibility to be determined by DPHE and PMU.	Environmental Consultant of PMU



Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
Potential Natural Hazards	Flash Flooding	<ul style="list-style-type: none"> <li>• May occur due to runoff from rainstorms and the overall score is low.</li> <li>• Protection to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent.</li> <li>• If there is a heavy rainfall in a higher area, it affects the lower areas. Therefore, if there is heavy rainfall in any high area, advance warning measures should be taken in the lower areas.</li> <li>• The embankment should be constructed considering the damage caused by flash floods.</li> </ul>	<p>Construction Contractor for monitored by Environmental Consultant and PMU. Long-term responsibility to be determined by DPHE and PMU.</p>	<p>Environmental Consultant of PMU</p>
Potential Natural Hazards	Land sliding	<ul style="list-style-type: none"> <li>• Land slide may occur due to runoff from rainstorms and the overall score is low.</li> <li>• Protection to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms.</li> <li>• Identification of vulnerable populations living in hilly areas.</li> <li>• Establish clear accountability in private ownership for relocation of vulnerable populations from mountains owned by private organizations or individuals.</li> <li>• Strengthen inter-departmental coordination in landslide early warning and early action.</li> <li>• Prohibition of human settlement and other social activities in hilly areas.</li> <li>• Planned intensive afforestation in hilly</li> </ul>	<p>Construction Contractor for monitored by Environmental Consultant and PMU. Long-term responsibility to be determined by DPHE and PMU.</p>	<p>Environmental Consultant of PMU</p>





Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/Indicators	Institutional Responsibilities	Supervision Responsibility
<p><b>Potential Natural Hazards</b></p>	<p><b>Fire</b></p>	<p>areas.</p>		
		<ul style="list-style-type: none"> <li>• Land slide may occur due to runoff from rainstorms and the overall score is low.</li> <li>• Remember that fire prevention is better than firefighting. Therefore, there should be a fire prevention system everywhere including homesteads, government-private offices-courts, mills-factories.</li> <li>• Turn off the stove after cooking. Avoid using open lamps.</li> <li>• Continue to extinguish the fire until the arrival of the fire service vehicles.</li> <li>• Old fittings should be checked at least once a month and replaced if necessary.</li> <li>• All equipment must be earthed. Experienced people should be employed in the handling of chemicals and fuels.</li> <li>• Establishments should have adequate fire extinguishers stocked and trained personnel.</li> </ul>	<p>Construction Contractor for monitored by Environmental Consultant and PMU.</p> <p>Long-term responsibility to be determined by DPHE and PMU.</p>	<p>Environmental Consultant of PMU</p>

### Appendix-02: Consultation Meeting Photos and Participants list with UP Chairman, Members, Local Elites & WATSAN Committee Representatives



**Figure\_02: Consultation Meeting with UP Chairman, Members, Local Elites & WATSAN Committee Representatives**



Appendix-03: List of personnel to attended Consultation Meeting at Kutubdia Upazila

Attendance Sheet  
Orientation Workshop of Union WATSAN Committee (for dissemination of Project implementation modality, Site selection, Operation and maintenance, Roles and responsibilities of concerned stakeholders etc. of EMCRP)

Venue: Dhakkin Dhurang UP Hall Room      Time: 10.30      Date: 23/11/22

Sl No.	Name	Designation	Organization	Cell No.	Signature
1	ALA UDDIN AL AZHAB	Chairman South Dhurong	"	01713-627670	
2	Md. Al-Amin	SAE	DPHE	01818-649901	
3					
4	Sayed Masfuzsirar Khan	SD RHP consultant	DPHE, Co's Bgr	01825635707	
5	Md. Humain Kabir	MUP	South Dhurong	01836107372	
6	Md. Forkan	MUP	"	01866-884988	
7	Md. Zeber Mujib	MUP	"	01811-985086	
8	Md. Sostimuddin	MUP	"	01813-164060	
9	Md. Hossain	MUP	"	01740-802533	
10	Md. Tofail Ahmed	MUP	"	01814-831805	
11	Muzul Afsar	MUP	"	01826-505509	

Attendance Sheet  
Orientation Workshop of Union WATSAN Committee (for dissemination of Project implementation modality, Site selection, Operation and maintenance, Roles and responsibilities of concerned stakeholders etc. of EMCRP)

Venue: Dhakkin Dhurang UP Hall Room      Time: 10.30      Date: 23/11/22

Sl No.	Name	Designation	Organization	Cell No.	Signature
12	Md. Saha Alam	MUP	South Dhurong	01834-951020	
13	Homida Begum	MUP	"	01838-632786	
14	Soheda Begum	MUP	"	01882-287119	
15	Kohinur Akter	teacher		01782-766052	
16	Kohinur Akter	Head teacher		01782-928237	
17	Farzana Kawsar	ISO		01795-66978	
18	Kanis Fatema	MUP		01828-407160	
19	Md. Minirussoman	Respectable		01783-760105	
20	MD: SAHEL	mechanic	DPHE	01818-75512	
21	Sazzwan Hossain	Interpener	South Dhurong	01818-584724	
22	Mohammad Hossain	NVO	shushilan	01712-493860	





# EMCRP Environment and Social Screen Report (DPHE)

Department of Public Health Engineering (DPHE)  
Emergency Multi-sector Rohingya Crisis Response Project (EMCRP)  
RPMU, Mohajerpura, Cox's Bazar

### Community Consultation Meeting Attendance sheet

Name of Topic: A. Hoque pana  
Name of Sub-project: Word No: 01 Union: Lemshikhi Upazila: Kuldodia  
WD No: Date:

Sl. No.	Name	Designation	Sex		Address	Mobile No.	Signature
			M	F			
1	Genwana Begum	Housewife	✓		A. Hoque pana 1 no word		[Signature]
2	Solimu lla	Day Labourer	✓		u		[Signature]
3	Md. Akter	u	✓		u		[Signature]
4	Abdur Rouman	Fishery	✓		u		[Signature]
5	Fanida Begum	Housewife	✓		u		[Signature]
6	Md. Ilias	Foreman	✓		u		[Signature]
7	Mohakena Begum	Housewife	✓		u		[Signature]
8	Laila Begum	u	✓		u		[Signature]
9	Saken Hossain	Fishery	✓		u		[Signature]
10	Hlima Panvin	House wife	✓		u		[Signature]
11	Sonu Akter	u	✓		u		[Signature]
12	Sansida	u	✓		u		[Signature]
13	Genwana	u	✓		u		[Signature]
14	Ruma Akter	u	✓		u		[Signature]
15	Tahrana Akter	u	✓		u		[Signature]
16	Nurul Bashar	Day Labourer	✓		u		[Signature]
17	Riba Akter	Housewife	✓		u		[Signature]
18	Mohavou Alom	Day Labourer	✓		u		[Signature]
19	Sahida Begum	Housewife	✓		u		[Signature]
20	Panvin Akter	u	✓		u		[Signature]
21	Ety	u	✓		u		[Signature]

Department of Public Health Engineering (DPHE)  
Emergency Multi-sector Rohingya Crisis Response Project (EMCRP)  
RPMU, Mohajerpura, Cox's Bazar

### Community Consultation Meeting Attendance sheet

Name of Topic: Puno Lemshikhi  
Name of Sub-project: Word No: 05 Union: Lemshikhi Upazila: Kuldodia  
WD No: 5 Date:

Sl. No.	Name	Designation	Sex		Address	Mobile No.	Signature
			M	F			
1	Mofiz Alom	Day Labourer	✓		Puno Lemshikhi 5 no word		[Signature]
2	Md. Abu Bakar	u	✓		u		[Signature]
3	Md. Ashraf	u	✓		u		[Signature]
4	Md. Sak Jahan	Foreman	✓		u		[Signature]
5	Md. Hossain	u	✓		u		[Signature]
6	Anisur	u	✓		u		[Signature]
7	Mohammeduloh	u	✓		u		[Signature]
8	Tosol Islam	Day Labourer	✓		u		[Signature]
9	Abu Bakar Siddik	u	✓		u		[Signature]
10	Abu Taher	u	✓		u		[Signature]
11	Sinas Khan	Housewife	✓		u		[Signature]
12	Roshida Begum	u	✓		u		[Signature]
13	Sobaida Begum	u	✓		u		[Signature]
14	Murul Alom	Day Labourer	✓		u		[Signature]
15	Md. Molekhat	u	✓		u		[Signature]
16	Md. Solim	u	✓		u		[Signature]
17	Tosmumaton	Housewife	✓		u		[Signature]
18	Sofone Alom	Foreman	✓		u		[Signature]
19	Abdul Bari	u	✓		u		[Signature]
20	Pura Akter	Housewife	✓		u		[Signature]
21	Md. Rafik	Foreman	✓		u		[Signature]

Department of Public Health Engineering (DPHE)  
Emergency Multi-sector Rohingya Crisis Response Project (EMCRP)  
RPMU, Mohajerpura, Cox's Bazar

### Community Consultation Meeting Attendance sheet

Name of Topic: DDKin Amjakhali  
Name of Sub-project: Word No: 04 Union: Boroghpor Upazila: Kuldodia  
WD No: 04 Date:

Sl. No.	Name	Designation	Sex		Address	Mobile No.	Signature
			M	F			
1	Md. Alom	Labourer	M		DDKin Amjakhali	01901-674500	[Signature]
2	Geno Atea	Housewife	F		Amjakhali	01	[Signature]
3	Kalim Nissa	Housewife	F		Amjakhali	01888-697401	[Signature]
4	Soukat Atea	Housewife	F		Amjakhali	01888-697401	[Signature]
5	Sanjida Begum	Housewife	F		Amjakhali	01801-018007	[Signature]
6	Sahidulak	Labourer	M		Amjakhali	01831-020046	[Signature]
7	Amerna Begum	Housewife	F		Amjakhali	01888-244697	[Signature]
8	Shahab Uddin	Labourer	M		Amjakhali	01888-244697	[Signature]
9	Mohu Atea Begum	Housewife	F		Amjakhali	01701-437249	[Signature]
10	Shahadat Hossain	Labourer	M		Amjakhali	01701-437249	[Signature]
11	Nasir Uddin	Labourer	M		Amjakhali	01645-105510	[Signature]
12	Buwal Akter	Housewife	F		Amjakhali	016080-12578	[Signature]
13	Zamal Uddin	Labourer	M		Amjakhali	016080-12578	[Signature]
14	Fatema Begum	Housewife	F		Amjakhali	01	[Signature]
15	Shahzoda Khan	Housewife	F		Amjakhali		[Signature]
16	Rahana Akter	Housewife	F		Amjakhali	0160-0550400	[Signature]
17	Ferdous Akter	Housewife	F		DDKin Amjakhali		[Signature]
18	Nurul Alom	Labourer	M		DDKin Amjakhali	0160-0450400	[Signature]
19	Atop Mia	Labourer	M		Amjakhali		[Signature]
20	Alom Mia	Labourer	M		Amjakhali	0160-0512203	[Signature]
21	Murmuur Hoque	Labourer	M		u		[Signature]

Department of Public Health Engineering (DPHE)  
Emergency Multi-sector Rohingya Crisis Response Project (EMCRP)  
RPMU, Mohajerpura, Cox's Bazar

### Community Consultation Meeting Attendance sheet

Name of Topic: DDKin Maghail  
Name of Sub-project: Word No: 05 Union: Boroghpor Upazila: Kuldodia  
WD No: Date:

Sl. No.	Name	Designation	Sex		Address	Mobile No.	Signature
			M	F			
1	Delowate Hossain	Day Labourer	M		DDKin Maghail	01874-708000	[Signature]
2	Rahana Begum	Housewife	F		DDKin Maghail		[Signature]
3	Tosmin Akter	Housewife	F		u		[Signature]
4	Hairana Akter	Housewife	F		u	01945-670200	[Signature]
5	Md. Atis Rahman	Labourer	M		u	01960-76689	[Signature]
6	Hosina Begum	Housewife	F		u	01874-708000	[Signature]
7	Azizate Rahman	Labourer	M		u	0160-0550400	[Signature]
8	Sadha Begum	Housewife	F		u	0160-510070	[Signature]
9	Md. Alom	Labourer	M		u	0186-1051000	[Signature]
10	Ahmanur Akter	Housewife	F		u	016080-1051000	[Signature]
11	Bekal Hossain	Labourer	M		u	01831-051000	[Signature]
12	Rahana Akter	Housewife	F		u		[Signature]
13	Nekal Islam	Housewife	F		u	01608-5710	[Signature]
14	Ferdous Alom	Labourer	M		u		[Signature]
15	Hadiqa Begum	Housewife	F		u	01870-051000	[Signature]
16	Nahana Akter	Housewife	F		u		[Signature]
17	Delowate Hossain	Labourer	M		u		[Signature]
18	Shahzoda Akter	Housewife	F		u	01808-02000	[Signature]
19	Sahin Akter	Housewife	F		u		[Signature]
20	Rahmatul Rahman	Labourer	M		u		[Signature]
21	Rima Akter	Housewife	F		u		[Signature]







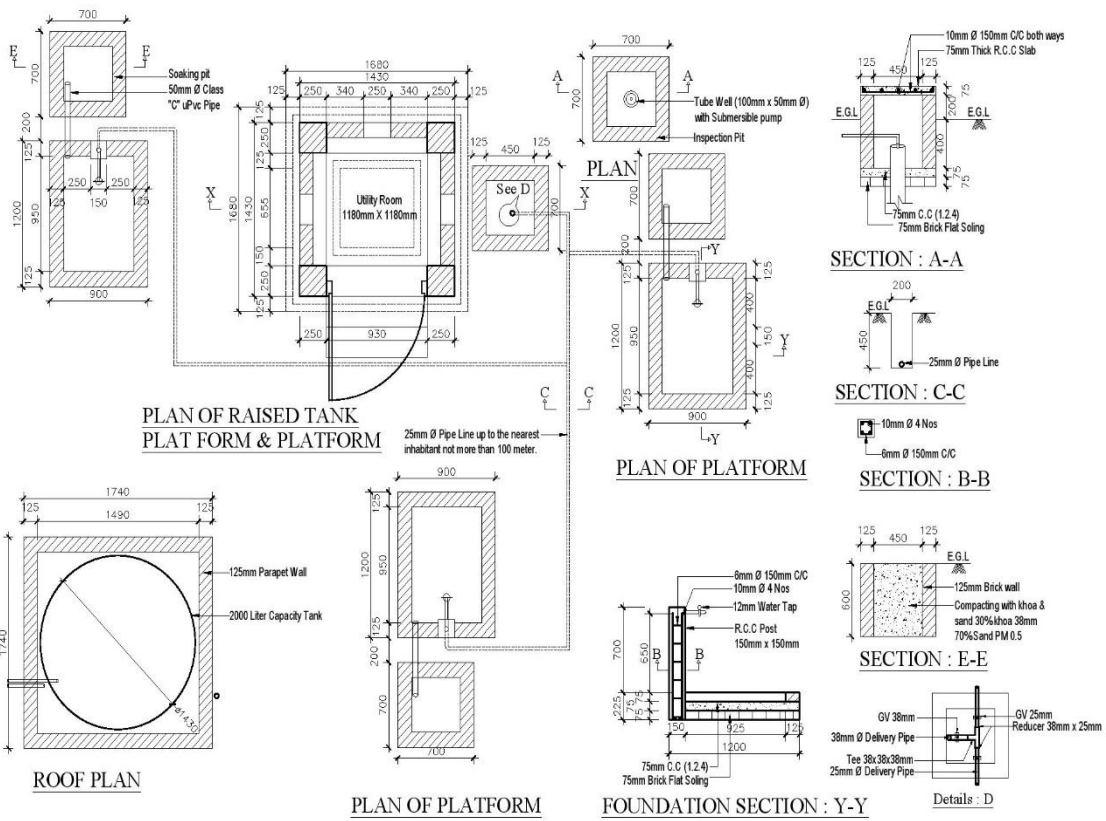





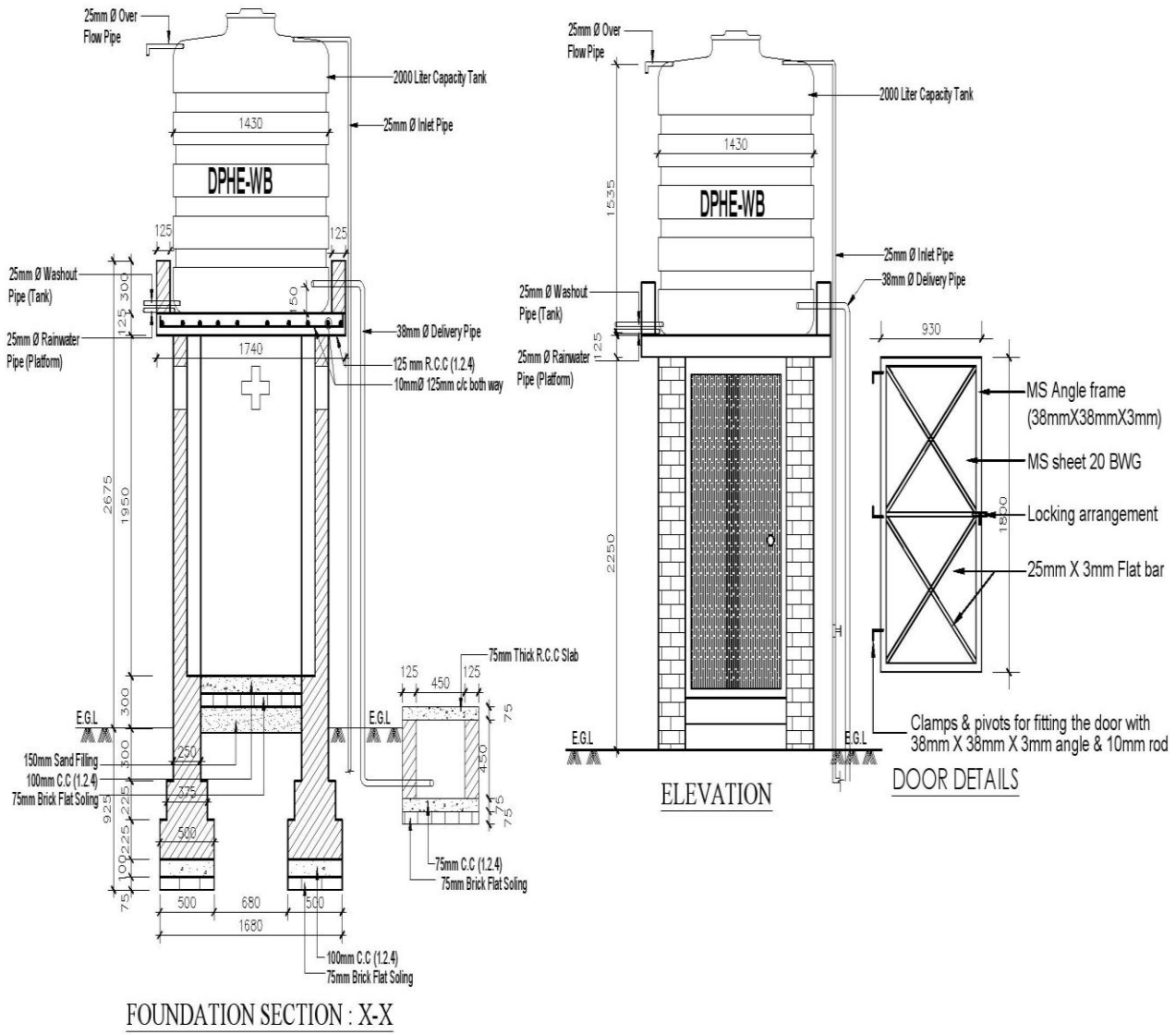




Appendix-05: Proposed design of Community Water Options (DTW)



DEPARTMENT:	NAME OF PROJECT:	DESIGNED BY:	VALIDATED BY:	CHECKED BY:	PROJECT DIRECTOR:	DRAWING TITLE:	CONSULTANTS:	DRG. NO:
 DEPARTMENT OF PUBLIC HEALTH ENGINEERING	MINISTRY OF LOCAL GOVERNMENT SURYA DEVELOPMENT & COOPERATION AGENCY MULTI-SECTOR ROHINGYA CRISIS RESPONSE PROJECT (EMCRP)					POTABLE WATER TANK DETAILS. (2000 LITERS)	Institute of Water Modelling Water-401, Road-13, Miralal Bazar, Dhaka-1001, Bangladesh.	EMCRR-01  SCALE: As shown



DEPARTMENT:	NAME OF PROJECT:	DESIGNED BY:	VALIDATED BY:	CHECKED BY:	PROJECT DIRECTOR:	DRAWING TITLE :	CONSULTANTS :	DRG. NO:
 MINISTRY OF LOCAL GOVERNMENT RURAL DEVELOPMENT & COOPERATION MULTI-SECTOR ROHINGYA EMERGENCY CRISIS RESPONSE PROJECT (EMCRP)						POTABLE WATER TANK DETAILS. (2000 LITERS)	 Institute of Water Modelling House - 601, Road - 32, Mirshat Road, Dhaka-1206, Bangladesh	EMCRP-01
DEPARTMENT OF PUBLIC HEALTH ENGINEERING								SCALE: As shown



## Appendix 06: Labor's Code of Conduct (CoC):

### Agreement/Terms of Reference

Location:

Contracting Organization:

I am ..... undertake to abide by the following orders, instructions and prohibitions at all times while working at the site.

1. Always treat all local communities with courtesy, courtesy and respect.
2. Under no circumstances will create any kind of relationship with local women, children.
3. Will not take any kind of help or assistance from local people intentionally or unintentionally.
4. Under no circumstances shall give any assurance or undertaking to the local people.
5. Will not harm animals, plants and the environment at work.
6. Always wear and use safety clothing and equipment at work.
7. Always display and save ID Card in the work place.
8. Under no circumstances will indulge in any kind of anti-social activities and any kind of disputes with local people.
9. In case of taking any emergency decision will prior discuss with concerned officer.

If any exception to the above matters occurs or occurs, then I will be obliged to accept the legal punishment or solution taken by the administration in this regard.

.....  
Signature and Date



**What must be kept in the project site are as follows:**

1. List of workers and officers
2. Attendance Register
3. Leave Register
4. Register for recording details of accidents
5. Register for recording complaints
6. Contract Related particulars
7. In case of emergency contact mobile numbers with names and designations of at least 2 officials shall be displayed in large letters in Bengali and English at visible place.
8. For emergency contact with nearest hospital, police station and doctor their mobile/telephone number shall be displayed at visible place in Bengali and English big letters.
9. Placement of full information and scope of work at work site shall be displayed with a banner at visible place.
10. Provision of safety signs, warning information and safety fencing shall be provided.
11. Keeping safety materials and equipment and first aid arrangements.
12. Provision of arrangement of car or motor cycle for emergency use.
13. Provision of easily identifiable signs or safety lights at work hazardous places for day and night.

(N.B. The name and location of each organization should be mentioned on the register book)

**Environmental Precautions for the work place: -**

1. No fire shall be ignited unless necessary
2. Animals should never be injured
3. Shall avoid all types of pollution
4. No tree can be cut or damaged without permission
5. Resources should be used appropriately
6. Try to use renewable resource at the best possible way
7. At the end of the work, the previous environment should be in place as much as possible.



**Report Prepared by:**

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