Government of the People's Republic of Bangladesh

Ministry of Local Government, Rural Development and Co-operatives
(Local Government Division)

Environmental and Social Screening Report
On
Construction of Mini Piped Water Supply System Scheme including O & M

Location: DRP Camp_2E, Block_E-03, WDZ_2E.04

Sub-project (Package No): EMCRP/WD-03

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

Department of Public Health Engineering (DPHE)

Abbreviation and Acronyms:

ACF	Action Against Hunger
BBS	Bangladesh Bureau of Statistics
BD	Bangladesh
BoQ	Bill of Quantities
BMD	Bangladesh Meteorological Department
CIC	Camp in Charge
DC	Deputy Commissioner
DO	Dissolved Oxygen
DoF	Department of Forest
DPD	Deputy Project Director
DPHE	Department of Public Health Engineering
DRP	Displaced Rohingya Population
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
FAO	Food and Agriculture Organization
FGD	Community consultation
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	Ground Water
HDPE	High Density Polyethylene
HH	Household
IEF	Important Environmental Feature
IOM	International Organization for Migration
ISCG	Inter Sector Coordination Group
IUCN	International Union for Conservation of Nature

NGO	Non-Government Organization
LGED	Local Government Engineering Department
PD	Project Director
PMU	Project Implementation Unit
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
SH	Stakeholders
SMC	School 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
VfM	Value for Money
WASH	Water, Sanitation and Hygiene
WB	World Bank
WDZ	Water Distribution Zone
WFP	World Food Programme
WSC	Women's Studies Center

EMCRP (DPHE part)

Environmental and Social Screening Form

Sub-Project Description Form

Name of Sub-project: Construction of Camp based Mini Piped Water Supply System (MPWSS) including Operation and Maintenance (O&M) Scheme under Package WD-03 for Displaced Rohingya People (DRP) at Ukhiya Upazila, Cox's Bazar.

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

Estimated total cost of sub-project (in Taka): 185,15,057(Tk.)

Estimated construction period duration: 12 (Twelve) months.

Estimated Operation and Maintenance period (life of sub-project): 24 (Twenty-Four) months Operation and Maintenance period but project design life more than 10 (ten) to 15 (fifteen) years.

District: Cox's Bazar **Sub-District:** Ukhiya **Union:** Palongkhali

Name of Community/Local Area: Camp_2E, Block_E-03

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

Sub-project Activities: In the proposed sub-project areas Mini Piped Water Supply Scheme (MPWSS) activities the following interventions would be taken place:

- Exploratory drilling & Test Tube well (TTW)
- Installation of Production Tube well (PTW)
- Solar panel Installation
- Pump house construction (Industrial tin shed) with toilet
- Submersible pump Installation
- Water reservoir (plastic, 10,000L) tanks Installation
- HDPE pipe networking
- Fittings and fixing of community taps for water collection, etc.

Estimated footprint / land area: DRP peoples of 84,900 square meter area (Water Distribution Zone area) will be benefited after implementing the project. However, the land area may change during construction period. To construct different components of the scheme total 2770 sqm land will be required, out of this 2770 sqm land following land allocation will be made, among this around 230 square meter land require for establishing solar panel and pump house, approx. 247square meters for 8 nos. water tanks, around 2293 square meters for up to 72 nos. tap stands. Around 788m transmission & 2300m Distribution pipeline will be constructed for water supply networking system (the figure of water tank and tap stand is estimated not surveyed, surveyed figure is not available)

Natural Resources: For implementing the proposed intervention some natural resources will be consumed by the project activities (i.e., water and sand for concerting, making mortar etc.) and camp site worker (i.e., Water for drinking and kitchen work). Required water would be sourced from nearby the available GW source. Beside sand would be collected from local market. Considering the subproject natures and extent, it's predicted that approximately 300-350 litter/day water would be required for this scheme.

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

Camp based Mini Piped Water Supply System (MPWSS) is located at Camp_2E, Block_E-03. The proposed land is owned by government. Neither any tree, structures and community properties will be affected nor land requisition will be needed. The buildup infrastructures in and around the sub-project site includes learning center of BRAC, CiC Office, care office, health post, mosques, moktabs, food distribution center, bazar and residence of DRP as well. The selected site is plain land and the nearest top of the hill is 30-35ft away from the site. Herringbone bond and pucca road is very close to the site. In few places along the proposed pipe line pucca drains are observed.

Overall Comments:

The DRP of the sub-project areas are very much confident about the success of the project. The sub-project will environmentally sustainable and socially acceptable because expected environmental and social impact to be minimum and very much site specific for implementing the proposed intervention. DPHE, together with IWM Environmental & Social safeguard team, PMU Social & Environmental Consultant have conducted 03 (three) numbers of consultations with DRP communities and their community representative, CiC, Camp WASH focal, Camp area focal, SAE & Mechanic, and relevant stakeholders.

Considering the suggestion/opinion made by the participants of consultation meetings, potential environmental and social impact for implementing the proposed intervention and sensitivity of the site location to protected area/archeological sites/sensitive receptor, this site has been selected for constructing the proposed pipeline network and its associated facilities.

Most of the participants requested to involve the local community and DRP community during the construction work. In addition, suggestions/opinions received by the consultation meeting also considered in the design of ESMP. Most importantly, DRP communities were in favor of this subproject that may help to successful implementation of the subproject in sustainable manner.

There will be no significant impact on the ecosystem and biodiversity for constructing the planned intervention. No agricultural lands/ activities or fish farming will be disturbed, due to the construction of the sub-project. The water supply pipeline with reservoir tank, DTW and pump house construction works will be restricted to within the boundary of the camp.

Sub-project site selection process:

The ACF is leading WASH activity in camps as focal agency and The IOM is acting area focal agency and DPHE is implementing the project with the financial assistance of World Bank and the Government of Bangladesh. After establishing the proposed Mini Piped Water Supply Scheme in the area about 7200 peoples will benefit from receiving their water requirements.

DPHE officials along with EMCRP consultants, pipe line design engineer, environmental Specialist and Social Specialist was made their visit at Camp-2E at WDZ_2E.04 for selecting the site for constructing the mini-pipe water supply system including TTW, PTW, Pipe Line, Pump House, Solar panel, Water Reservoir and Tap stand facilities. In this regard, consultant team has given emphasis on the following issues for site selection:

- Accessibility of water to the household’s level;
- Availability of water sources in scheme area;
- Impacts on livelihood for lack of water supply;
- Social issues,
- Environmental sensitive location;

- Existing hygiene facilities in study area and so on.

With this view, survey team selected the location of pipe line and its other components through discussion with camp wash focal ACF and area focal agency IOM. Compared to alternative options, the proposed site and alignment is expected to have less impact (no significant impacts) on surrounding structures, maximum accessibility of water supply at household's level, and possibility of maximum livelihood restoration will be covered by the selected site.

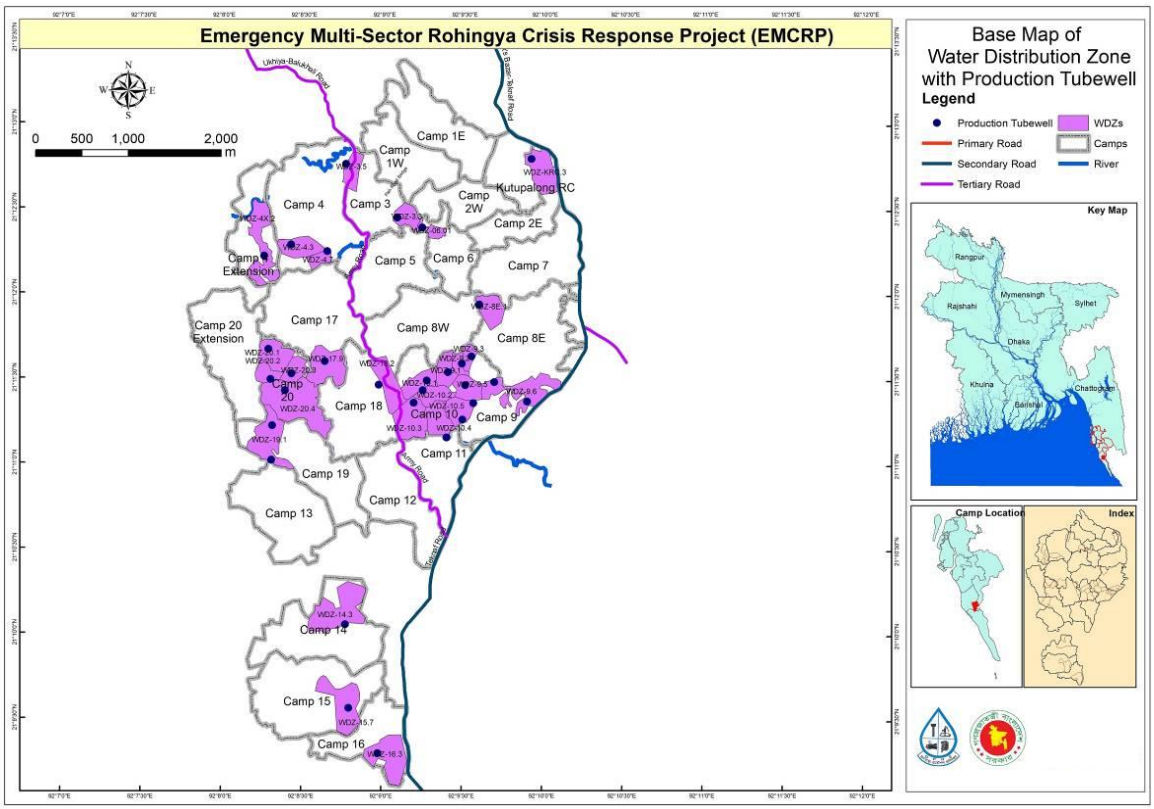
Types of wastes to be generated during construction and operation phases:

During construction phase, solid and liquid wastes will be generated due to construction activities. The types of wastes expected are: uPVC & HDPE pipe cuttings, concrete, iron bar/rod, earth, liquid drilling mud, lubricants, chemicals, etc.

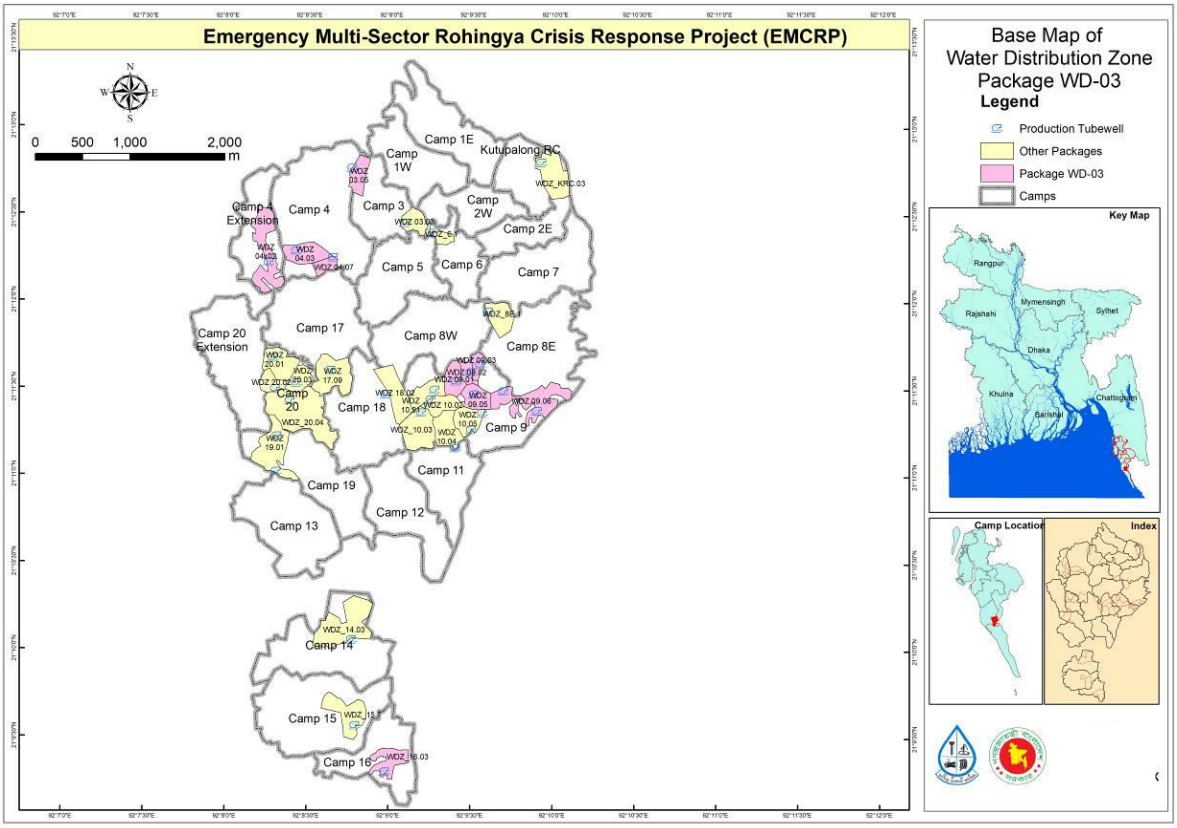
Sensitive environmental, cultural, archaeological, religious sites near (within 1km) of site including elephant migration routes and remaining forests:

There is no sensitive environmental or archaeological site within the 1.0 km periphery. But there are mosques and madrasah which have religious value. Along these religious institutes, within the sub-project influence area care office, food distribution center, learning center of BRAC, health post and bazars were identified. However, these structures will not be affected by construction work. There is no elephant migration route near the scheme site. But elephant migration routes existed approximately 4/5 km away from the scheme area confirmed by the discussion with IUCN representative and as per UNHCR/IUCN map attached in **Map-05.**

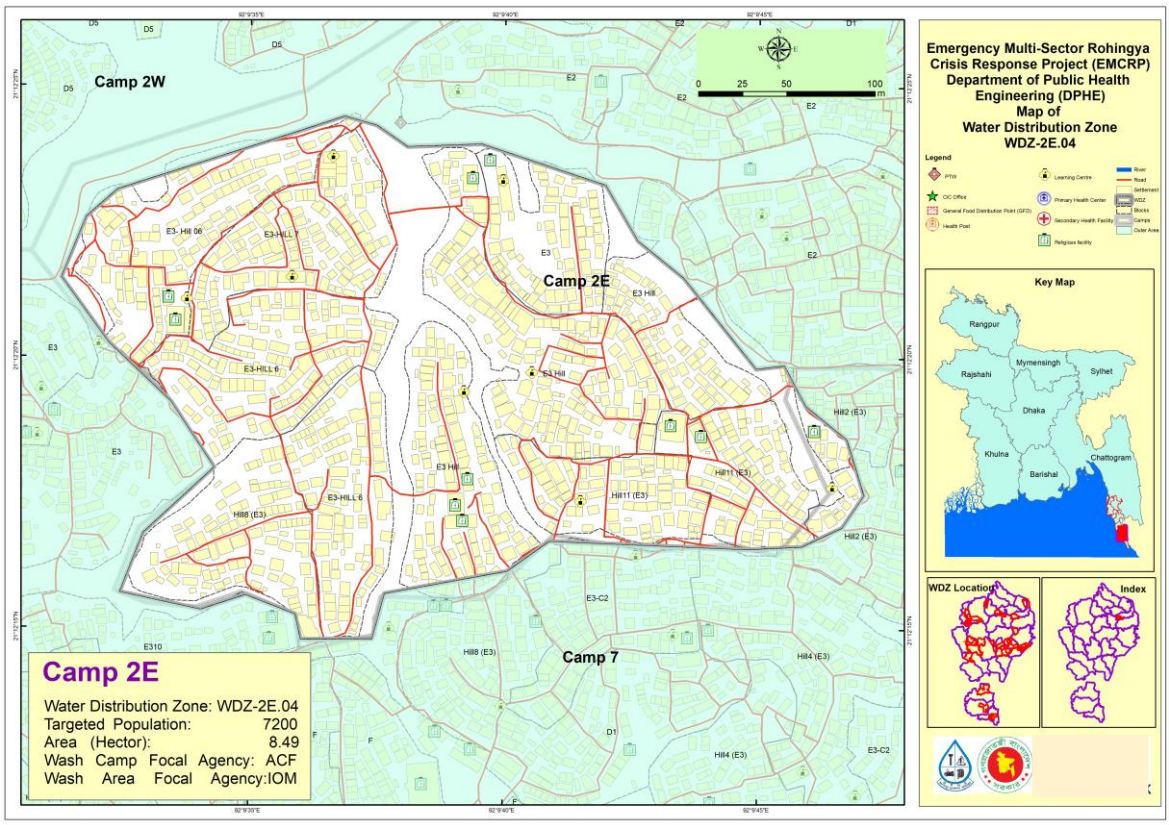
Figure-01: Proposed PTW Site location at WDZ_ 2E.04



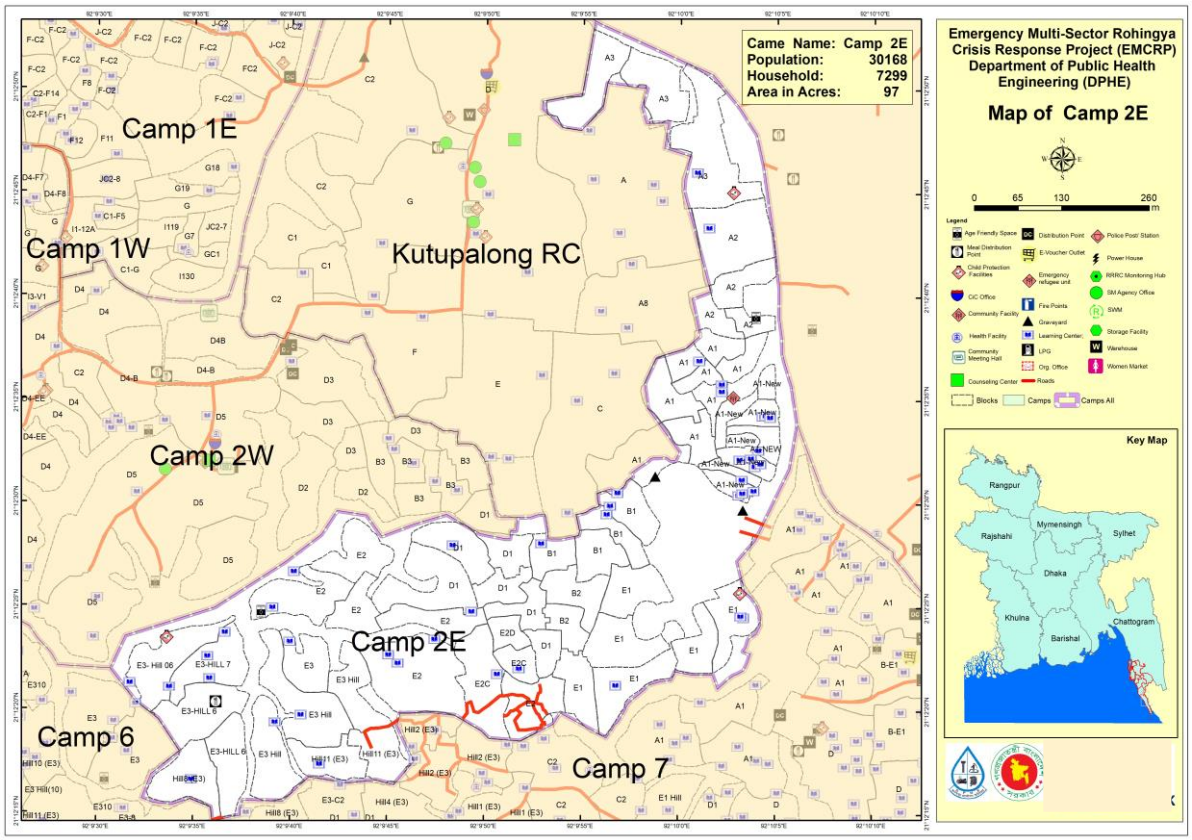
Map-01: Base Map of Water Distribution Zone with Production Tube well.



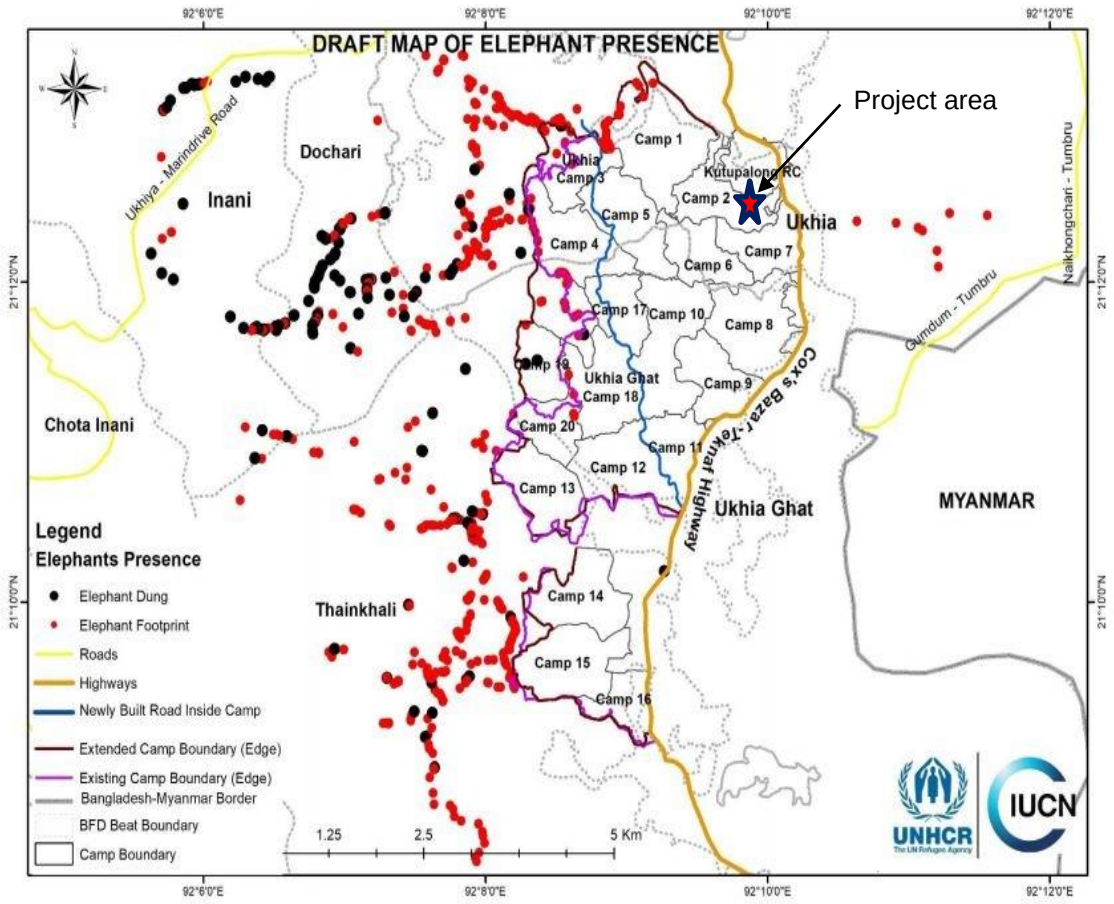
Map-02: Base Map of Water Distribution Zone Package WD-03



Map-03: Pipe Network Information M ater Distribution Zone (WDZ-2E.04)



Map-04: Important features within Camp_2E



Map-05: Elephant Migration Routes in and around the Camp Area

Environmental and Social Screening Form

Section A: Subproject Overview

Work Package: WD-03 (Mini Piped Water Supply Scheme)

Description of sub-project/component interventions:

Majority part of the camp are unable to provide the recommended daily water minimum of 20 liters' water per person per day especially at dry season when shallow aquifer goes down. As a result, scarcity of water becomes acute. The lack of water infrastructure makes it very difficult to transport sufficient amounts of water, and provide proper sanitation to all residents of a DRP camp. They are suffering lots about collecting water from bottom of the hill. Old women are facing problem to collect water that's why they are drinking less water. Do not washing hand and cloth regularly. Hence, to ensure minimum water accessibility (that meet up the basic need) to DRP of this study area, DPHE has been taken an initiative to construct a mini water supply pipe system with providing following facilities.

- Exploratory drilling for test tube well
- Installation of production tube well (PTW)
- Installation of submersible pump
- Installation of solar panel
- Pump house construction (Industrial tin shed) with toilet
- HDPE (High-density polyethylene) pipe network
- Fittings and fixing of water reservoir (plastic) tanks including community tap for water collection.

Sub-project Location:

The sub-project location is situated at Rohingya Camp_2E, Block_E-03 at Palongkhali Union under Ukhiya Upazila of Cox's Bazar District.

Land ownership: Land is owned by Government of Bangladesh.

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):

The proposed mini pipe water supply system is mostly located at the vacant land of camp. Places which are selected for tap stands are easily accessible for pregnant women and persons with disability. In and around the project intervention area covers mainly DRP settlement, few cultural institutes, some camp coordinator office of different NGO and Govt. office, relief distribution center etc. There is no environmental sensitive area (like protected area, reserve forest, elephant corridor etc.) within the sub project influence area. There is no evidence of presence of elephants in the sub-project influence area (checked with local IUCN representative). But there is some low land within the subproject influence area which are mainly remain dry over the year except monsoon season. Within the influence area of the sub-project no historical site found. Some institutes such as mosques, learning center are found there which convey socio cultural value to the DRP community.

Section B: Environmental Screening

B.1: Environmental feature of sub-project location

Description of cultural properties (if applicable, including distance from site): There are mosques and madrasah within the sub-project influence area (1km). Apart from this structure, there are no other sensitive cultural, archaeological, religious sites.
Location of environmentally important and sensitive areas: There is no environmentally important and sensitive location for instance protected forest, reserve park, etc. **(1) Within/near Elephant Migration Routes Yes/No*:** **No.** **(2) Potential impacts on remaining forests in/around camps Yes/No*:** **No**. There are no forests within the sub-project influence area. So, there will be no adverse impact on forest for implementing the proposed intervention of this sub-project. But positive impact is expected from the ongoing project of tree plantation undertaken by different organizations in sub-project area. **(3) Other issues:** No more mentionable issues raised.
Dust: Ambient air quality data are not readily available. In the proposed site the existing air quality is almost dust free except for few months in the dry season (November to March).

Noise:

Noise in the sub-project area is not a major concern based on the consultations. Noise is originating from the movement of vehicles of various NGO's to distribute relief among the Displaced Rohingya People (DRP) as well as for operation of construction vehicles and equipment of different construction project that is being implemented within the sub-project influence area.

Baseline soil quality:

Soil types are alluvial reddish brown muddy & sandy soil and Dupitila 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. As surface soil is sand-mud mixed so that potential erosion/land slide may occur when moderately to highly sloping terrains are disturbed for the construction of test tube well & production tube well, overhead tank, tap stand and pipe line construction. The impacts will be negative but short-term, small scale, site-specific within a relatively small area and minimized by mitigation measures.

Baseline surface water and groundwater quality (FE, TDS, fecal coli form, pH):

Surface water quality: flow

In few places along the proposed pipe line pacca drains are observed. But there will have no impact on the drains.

Groundwater quality:

Groundwater is the main source of potable water in the Sub-project area. The shallow depth is about 100 feet and deep tube well depth is 550ft to 800ft. In the sub-project area, groundwater is slightly saline but arsenic free. Tube wells of shallow depth carries high concentration iron in study area, these tube wells water aesthetically not pleasant and safe for drinking. Substantial amount of shallow tube wells already has been installed in the camp area to support drinking water facilities in DRPs confirmed by the local community. As a result, excessive withdrawals of water from the shallow aquifer are cause of drying up of some of the wells. Following concentration of different parameter here in below revels characteristic of study areas GW quality.

pH_7.00 to 8.00, DO_2.20 to 8.50mg/l, TDS_25.50 to 280 mg/l, EC_20 to 425 µs/cm, Fe_0.50 to1.50 mg/l, Mn_0.01 to 0.06 mg/l, Chloride_10 to 70 mg/l, Hardness_60 to 160 mg/l and As_ Nil to 0.001 mg/l. (Tube well depth: 550 ft. to 800 ft.)

Data source: Secondary data and field survey.

Status of wildlife movement:

Wildlife movement has previously been reported in that area. At present, due to deforestation and settlement of DRP, wildlife movement is no longer

there.

State of forestation:

To accommodate large numbers of Displaced Rohingya Population (DRP), hills have been cleaned and cut indiscriminately, and shelters have been set up on the hills. Steps have been cut into the slope to facilitate access to the shelters. Hill cutting loosen the soil and can result in soil erosion, sedimentation and siltation washing out of the valuable fertile top soil that will make the hills unsuitable for supporting any valuable vegetation cover. The eroded soil will also cause stream congestion, which might hinder stream flow, which in turn will result in habitat loss, water pollution and water scarcity. New plantations have been done by different organizations.

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) In the sub-project area, some new plantations have been done by different organizations.
ii) 20 liters/person/day water is allocated for drinking and cooking purpose for DRPs. Therefore, for 7,200 nos. of beneficiaries approx. 144,000 L/day.
iii) 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):*

Herringbone bond road is very close to the north side and pucca road is to the west side. Other than that, there is a footpath in the DRP. This road could ensure to reach the site and the most feasible option is to carry the construction materials (pipes, drilling equipment, bamboo, bricks, rods, gravel, wooden frame, bentonite sacks etc.) to the construction sub-project interventions site.

Requirement of accommodation or service amenities *(toilet, water supply, electricity)* to support the work force during construction:

Prior to commencement of construction work, contractor will arrange accommodation facilities with toilet, water supply, electricity for the associates working personnel. If there are women labour proper lighting facilities should arrange (during night time), by using solar light, charger light, etc. If there are women with children, then contractor will arrange child care space in the construction site.

Possible location of labor camps:

Within the scheme area and very close to the sub-project sites.
Requirement and type of raw materials *(e.g. sand, stone, wood, etc.):*   i) Bricks, ii) Sand iii) Cement iv) HDPE pipes v) uPVC pipe vi) Nut & bolt vii) PVC solvent cement viii) Gravel ix) water x) Bamboo & wood from mobilized materials by and other electro-mechanical equipment (small welding machine, small generator, etc.) are the most common type materials used in construction.
Identification of access road for transportation (Yes/No):   **Yes.** East side is pucca road and north side there is existing herringbone bond road are the access roads for transportation (both the roads are very close to the site).
Location identification for raw material storage: Raw material storage site would be very close to the site and in a vacant place. Stockpiling of raw material on the access road and footpath in camp area should be prohibited.
Type and quantity of waste generated *(e.g. Solids wastes, liquid wastes, etc.):*   At pre-construction phase, quantity of generation of waste would be minimum. Because except site clearing work there will have no other source of waste generation significantly. It is predicted that, approximately 100-150kg waste may be produced during site clearing work. During construction period solid and liquid waste will be generated.
Approx. area *(in square meters)* of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards: Considering the area of project intervention (approx. 2770 sq. meter land) there will be no impact on any privately/ public owned trees or vegetation in proposed construction area.
Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: *(High/Medium/Low with explanation):*   **Low.** There will be no possibilities of stagnant water unless site clearing wastes store on any natural/ man made surface drainage courses.
Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): *(High/Medium/Low with description):*   **Low.** In few places along the proposed pipe line pucca drains are observed. But the drains will not be affected due to pre-construction activities.

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

Low. Under this scheme establishment intervention, the effect of destruction or damage of lives and endangered species ecosystem will very low in the site area. Species and ecosystems have not been reported whose lives or movement may be disturbed (except some insects - ant, bees, earthworm, reptiles, birds etc.) by the scheme activities.

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

In pre-construction phase, stock piling of raw materials unlikely can lead to localized land slips by making muddy surface after rainfall. The impacts can be minimized by careful selection of stock pile locations and ensuring large amounts will not be 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 no air pollution can be occurred.

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.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) Nut & bolt vii) PVC solvent cement viii) Gravel ix) Bamboo & wood xi) excavated soil. It is difficult to figure out the exact amount of waste that to be generated from the construction activities of pipe water supply. However, 450 kg of waste may be produced.

Liquid waste: Mud and drilling waste water will be generated from drilling of tube well. In addition, during construction period, fecal sludge will be generated from labor camp. It is difficult to give exact figures of construction waste that to be produced at sites. However, 3,000 kg of waste may be produced.

Type and quantity of raw materials used *(wood, bricks, cement, water, etc.):*
Raw materials: A list of expected raw material that to be used so far for constructing the mini pipe water supply network are as follows) Bricks, ii) Sand iii) Cement iv) HDPE pipes v) uPVC pipes with fittings vi) Nut & bolt vii) PVC solvent cement viii) Gravel ix) water x) plastic tanks xi) Bamboo & wood
Quantity: Based on the extent of construction work, it is predicting that approximately 5,843 kg of raw materials may be required row for constructing the mini-piped water supply network. Beside these raw materials (brick, cement etc.), eight (08) plastic tanks having 10,000L capacity and 72 nos. tap stands, around 788m transmission & 2300m distribution pipeline will be constructed.
Approx. area *(in square meters)* of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards
Vegetation coverage along the proposed pipe laying alignment and in the location of other associates' infrastructures of pipe line networks is minimal. For temporary storage of generated waste from construction site, a total 20 sqm vacant place would be identifying nearby the site and accumulated waste would be disposed regularly in the designated waste dumping area by contractor. Depends on availability of getting vacant land nearby the site, contractor will arrange adequate and suitable place for equipment yard.
Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: *(High/Medium/Low with explanation)*
Low. Trenches for laying of pipelines will be required. These can potentially store stagnant water for short period of time during and after rain events. This stagnant water may cause of spreading mosquito breeding in camp area as well as contact with the stagnant water also may spreads different types of water borne diseases in study area peoples in small extent.
Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): *(High/Medium/Low with description)*
Low. In few places along the proposed pipe line pucca drains are observed. Impact on this drainage channels minimal because unless dispose of waste into the drains there will be no chance of contaminate the drain water as well as clogged the drainage network.
Activities that can lead to landslides, slumps, slips and other mass movements in road cuts:
Improper management of construction work such as stockpiling of material and trench cutting soil on the road side area may create muddy surface that may cause of slip. The impacts will be short-term and site-specific within a relatively small area and can be minimized by mitigation measures

Describe possible traffic movement impacts on (unwanted) light, noise and air pollution: Construction material carrying vehicles mobilization will follow schedule time mainly at day time. So, impact on light for traffic movement impacts is none. But movement of these vehicles may spread dust blowing and noise nuisance to the nearby sensitive receptor if any, thus some temporary, localized effects on noise and air pollution is expected 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: In operation phase of mini-piped scheme, improper use of personal protective equipment (PPE) and lack of safety procedures may cause injuries. Plant's growth in and around the site may hamper if construction dust accumulates on the leaf. This impact is expected to be insignificant because this will be a localized and temporary activity.
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 supply pipelines.
Possibility of odor and water, soil quality impacts from SWM and FSM disposal system*:* ***(High/Medium/Low with description):*** **Low.** Sludge from one toilet in pump house shed will be generated. The sludge will be disposed properly in camp waste management facilities.
Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: ***(High/Medium/Low with explanation):*** **Low.** There are low possibilities of stagnant water occurring in 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 labors will be involved in maintenance activities. Safe drinking water supply will be helpful reduce water scarcity crisis of the DRP which will improve their health and environment condition.
Activities leading to landslides, slumps, slips and other mass movements inroad cuts: Installed pipe channels can form preferential runoff paths, causing localized erosion. In addition, leaking pipes can lead to slope instability.
Describe possible traffic movement impacts on (unwanted) light, noise and air pollution: 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.

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?	The number of total skilled labor is 5-7 and unskilled labor 6-8. All the unskilled labor will be engaged from the DRP community. Since HDPE pipe will be used for water distribution network hence recruitment of skill labor from the outside of Cox's Bazar District will be needed because fitting fixing of HDPE pipe is recent trend in country that is to be difficult for local labor to implement. All the skilled labor will be staying at labor shed within the camp. The size of the labor shed will be 140 square feet with basic water and sanitation facilities. Outsider labor movement not to be allowed beyond of their work place and their labor camp.
Is the project located in a rural or remote area?	The project area is in a camp area demarcated by the Government and belongs to Camp_2E, Block_E-03 is a specialized area. The total scheme (WDZ_2E.04) population is 7,200. The frequency and extent of the contract, communication between the local community and outsiders will be limited, and controlled by the respective authority.
Based on the socioeconomic, cultural, religious and demographic qualities of the local community, Rohingya population and the	**No.** It is not expected that the presence of the skilled (local) and unskilled labor (DRP) may generate any adverse impacts. The project will benefit the DRP communities. There will be a code of conduct for the labors to follow, which will be monitored by the RPMU on a regular basis. Contractor will be responsible to arrange LPG gas for cooking in the labor camp so that tendency of consumption of fuel wood by the labor is

incoming workers, is there a possibility that their presence or interaction with the local community could create adverse impacts?	minimized.
Consultation with DRP Community People and relevant stakeholders (SH)	During screening and site identification DPHE, together with IWM Environmental & Social safeguard team, PMU Social & Environmental Consultants have conducted 03 (three) consultation meetings with primary and secondary stakeholders. The stakeholders include CiC, WASH Sector, Site Management Committee representatives, Contractor team and DRP Community. In addition to the above-mentioned meetings, the local DPHE has undertaken many consultations with male and female members of the DRP. Through the coordination and linkage activities of the project, the authorities have accomplished some formal 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
Involuntary Acquisition of Land/ Land Donation/ Land Taking				
1. Will there be any land acquisition?		√		Land acquisition is not needed.
2. Is the project construction site known?	√			The land is selected with the recommendation of CiC SMC & Local DPHE and assigned UN agencies.
3. Who manages the land?	√			The lands are solely owned by the GoB and currently vacant.
4. Will easement be utilized within an existing Right of Way (ROW)? CRP (Common Resource Property)	√			In the camp area Provision is available be utilized within an existing Right of Way (ROW) within this WDZ_2E.04 under EMCRP.
5. Will there be loss of DRP tent, agricultural carps, trees, and other productive or fixed assets due to project intervention?		√		No DRP shelters will be affected. However, during construction if any shelters require shifting, mitigation measures will be taken according to RPF. Consultations will be conducted with stakeholders, camp and block focal persons, and site management. During construction, if any shelters are affected, contractors are responsible to mitigate the impacts following the RPF as well.
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
Involuntary restrictions on land use or on access to legally designated parks and protected areas				
8. Will people lose access to natural resources, communal facilities and services?		√		No
Information on Displaced Persons:				
9. Any estimate of the likely number of persons that will be displaced by the Project? [√] No [ ] Yes **If yes, approximately how many?**				

10. Are any of them poor, female-heads of households, or vulnerable to poverty risks?	[√]No	[ ]Yes
11. Are any displaced persons from indigenous or ethnic minority groups?	[√]No	[ ]Yes

During Screening, project authority will conduct consultation with the primary and secondary stakeholders and provide their observations in the following sections (12 to 16)

12. Who are the stakeholders of the project*?* Please provide a summary of consultation meetings with stakeholders and the affected community.

The key stakeholders of this sub-projects are DRP, Labors, People/communities/organizations within the project influence area indirectly affected by project activities, relevant government departments/ agencies, Dept. of Environment and Forest Department, Development Partners (WASH Cluster, UNHCR, WFP, IOM) and Local and international NGOs working with local host communities/DRP.
For determining the environmental and social impacts associated with subproject implementation, DPHE, PMU unit give great importance on involving primary and secondary stakeholders of the subproject area. Therefore, to collect local knowledge for baseline conditions, understand perceptions of the community regarding impact significance, and propose meaningful mitigation measures during survey of Environmental and Social Screening, an attempt has been made to consult with relevant stakeholders and DPHE officials to obtain their views on subproject interventions.

The Community Consultation were conducted through a mix of conventional approach which involved as participatory, focus group discussions (FGD) and one-to one interview, during the environmental and social study of the proposed subproject in conformity with the WB's environmental guidelines. However, for better understanding the socio-economic and environmental condition four consultation meetings have been conducted in the subproject study area ***(Appendix-02).***

The Community consultations were conducted with the following objectives: (i) to intrude awareness of the stakeholders about the subproject and to collect their opinion, suggestions for planning and designing of the subproject (ii) to identify the need and concern of the DRP Community, (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 a subproject. The consultations were conducted at two different tiers of stakeholders: DRP people and different organization representatives who are concern about the subproject. All of the proceedings and interaction of consultation and FGD have been recorded and are to be considered in the design of ESMP. In addition, attended list of participants of consultation meeting recorded and it's been attached in ***Appendix-03.***

Individual level consultation with project interest and influence parties (CiC, Site Management Committee (SMC/Camp Wash focal team- ACF, IOM) representative were conducted in consistence with consultation objective during subproject selection stage to have their idea, concern, segregation about the proposed subproject. Consultation outcome with them is consolidated here in below:

Feedback, Suggestions, and Recommendations of the Participants FGD

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

- Community consultation confirmed that a pipe water supply network is needed to minimize acute water crisis in the camp area especially at dry season. They are suffering lots about collecting water from bottom of the hill. Old women are facing problem to collect water that's why they are drinking less water. Do not washing hand and cloth regularly.
- They addressed that due to scarcity of ground water (shallow tube wells) especially in dry season they become force to receive unhealthy and aesthetically unpleasant surface water i.e. pond, canal etc.
- Water of shallow tube wells contains iron. Some tube wells contain so much iron that water is not drinkable. So DRP peoples requested to supply iron free water.
- They emphasized for the construction of good quality of distribution pipe network so that they can receive nonstop water service;
- They stated number of proposed plastic water tank for the camp is not adequate. They wanted provision of more tank with large capacity;
- They also expressed their concern about employment opportunities. They said that, if possible, non-skilled worker should engage from DRP community so that they can manage their livelihood.

Responds of CiC

- Proper maintenance (protection from DRP child) of water collection tap should be ensured;
- Quality of fitting and fixing of tap must be ensured so that maximum durability assured;
- Always try to coordinate with related authority/group and give updates to CiC;
- CiC is ready to support you, if you face any obstacle to implement the scheme;
- After confirmation of site for schemes with the assistance of CiC and other related organization, site should be confined to avoid the neighboring disturbance
- After site section then try 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.
- COVID-19 issue should consider during construction period.

Wash Focal

- Leakage of pipe fitting may cause of soil erosion and lead to landslide. So, fitting and fixing of distribution pipe network should be well sealed.
- Construction laborers should use Proper PPEs during working time. Pipe laying trenches should not keep open long time. After pipe laying, contractor should backfill trenches as quickly as possible.
- Frequent maintenance and look after by the project owner need to be assured in their liability period;
- In shallow depth, GW carries high concentration of iron.

UNHCR

- Intervention site should not be located in the elephant migration corridor. Hence, elephant migration road map set by the IUCN/UNCHR should follow during site selection
- They requested to inform them, if project face any elephant incident during implementation.

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 with the respective stakeholders, DRP and 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?

Positive Impact:

There are suffering lots about collecting water from bottom of the hill. Old women are facing problem to collect water that's why they are drinking less water. Do not washing hand and cloth regularly. So, having adequate water storage tank along with new distribution pipe network, production well and sufficient stand tap, after construction of mini water supply network in the camp area will be helpful to the DRPs to minimize their scarcity of water. Minimizing the scarcity of water, adequate and equitable distribution of water, less gender-based violence and minimizing conflict will be ensured in camp area by proper layout and design of adequate water points. For this well-structured design of mini water pipe supply network, access and distance of to the collection point would be more convenient to the women and child and will reduce the amount of energy expenditure they had spent on this task and time. In fact, after construction of water supply network, practicing of power if any which used to abuse for sexual or commercial exploitation during collection of water will inactive through easy accessibility to water collection point. Further, adequate and nonstop water supply facilities to the DRPs will contribute to improve the hygiene practice in camp area as well.

Negative's impact:

Operation of this sub-project intervention will have no significant negative impact on the community unless excessive withdrawal of water depletes the GW level and consequently ineffectiveness of production well. Failure of distribution pipe network may interrupt the nonstop water services in the camp. However, there are some adverse impacts during project construction works, but all adverse impacts are very much site & time specific and with proper management plan those adverse impacts are manageable.

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

According to the outcomes of site visit and consultation meeting with DRP community, other organizations and representatives of the scheme area, it has been revealed and perceived that the following social risks might be affected to accomplish the scheme interventions.

Since the skilled labor will be engaged from the host community and unskilled laborers will be from the DRP, there may be some conflict between the two groups. To establish the scheme tasks, additional labor from outside such as technicians will be engaged. Thus, there may be risk of some social conflict. A complete Gender Action Plan (GAP) has already been developed and approved; a full time Gender Specialist for this project has been assigned to oversee the GBV based issues for this subproject. The gender and GBV issues (i.e. human trafficking, sexual harassment, etc.) are being addressed through mainstreaming activities. As a mitigation measure, the Social Safeguard team and grievance redress committee (GRC) has been following the respective GRM, is keeping abreast on GBV occurrences and will guide the community through consultation meetings and counseling. Given the sensitivities in the camps areas (social, cultural, religious, gender, disabilities, orphaned and vulnerable children, relationship with DRP and host community), if the site area will be used as the open play space for the DRP kids, it might hamper their movement and play time for the time being. Unexpected noise, dust pollution, waste materials due to scheme establishment activities, might affect general social, religious activity of the DRP community at site area. However, by adopting the project E&S safeguard and through community consultation, the CiC, community leader and local DPHE representatives may determine possible ways and options to overcome and mitigate the constraints and risks during the scheme implementation.

C.3. Social Capital Format:

The objective is to list various types of social institutes/bodies working in the camp, intended 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 RRC/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 and phone number	Primary areas of Work	Coverage areas in the camp and communities
Government Organizations	RRRC DPHE DC LGED, MoDR, DRP CIC	Mr. Shah Rezwan Hayat, RRRC Commissioner, CXB, Email: rrccox@yahoo.com …….. Engr. Ritthick Chowdhury, DPHE, Executive Engineer, CXB, Email: chowritthick@gmail.com …… Md. Mamunur Rashid dccoxsbazar@mopa.gov.bd …… Mr. Arif Faysal Khan Camp-in-Charge, Camp-2E (Asst. Secretary) anikkhan099@gmail.com	Overall Coordination of GoB dept., Dev. partners, NGO, INGO, UN Agencies, Volunteers, Management of DRP Crisis in BD. Refugee Relief and Repatriation, Site management, Ensuring DRP HH shelter, F/NFIs, WASH facilities, Education, Health, Livelihoods, Social security, power sources, renewable solar energy.	DRP Camps, Blocks, synchronizing with Host, E&S aspects, Elephant corridors, conserve NR. Establish proper road communication.
UN Agencies /INGOs	WSC IOM, UNICEF, WFP, FAO, UNHCR UNFPA	Martin Worth WASH Sector Coordinator UNICEF mworth@unicef.org …… Sarwar Jahan Khan Focal Person, Camp Focal Agency, WASH, DSK sarwar@dskbangladesh.org	Management of DRP Crisis in BD. Refugee Relief and Repatriation, Site management, Ensuring DRP HH shelter, F/NFIs, WASH facilities, Education, Health, Livelihoods, Social security, power sources, renewable solar energy.	DRP Camps, Blocks, synchronizing with Host, E&S aspects, Elephant corridors, conserve NR. Establish proper road communication.

Type of Social Institutes/bodies	Name of Institution	Contact Person and Address and phone number	Primary areas of Work	Coverage areas in the camp and communities
National Organizations	Not yet on boarded	the database web link https://www.humanitarianresponse.info/en/operations/bangladesh/document/wash-sector-coxs-bazar-members-contact-list-17-october-2017		
Community Based Volunteer Organizations are those, which constitute the members of the community working towards social development.	Not yet involved	Yet to develop the database	Ensuring DRP 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 interventions, on different parameters of environment and social with consequence mitigation measures and suggestive monitoring plan including the responsibilities parties of implementation and supervise the sub-project have been summarized in below.

Section	Main Environmental and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
1: Sub-Project Interventions	**Air Quality**	Under the subproject intervention the overall score is **low**.	• Limiting earthworks; • Watering of dry exposed surfaces and stockpiles of aggregates at least twice daily, as necessary; (spreading of crushed gravel over backfilled surfaces; • Limiting speed of construction vehicles in access roads and work sites to maximum of 20 kph. • More details provided in ESMP	Construction Contractor monitored by Environmental Consultant and PMU	• Location of stockpiles; • Number of complaints from stakeholders; Covering of trucks; • Records of air quality inspection;	Air quality test (CO, $PM_{2.5}$ and PM_{10}) once in construction period in winter season.
	Soil Erosion	Under the sub-project intervention, the overall score is **low.**	• Precautions to be taken when rainstorms are likely, when a rainstorm is imminent or forecast, and actions to be taken during or after rainstorms shall be developed by the Contractor. • The earthwork sites where exposed land surface is vulnerable to runoff shall be consolidated and/or covered. • Channels, earth bunds, netting, tarpaulin and or sand bag barriers shall be used on site to manage surface water runoff	Construction Contractor monitored by Environmental Consultant and PMU	• No visible degradation to nearby drainages, • Khals or water bodies due to soil erosion.	Weekly, especially after rain events

Section	Main Environmental and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			and minimize erosion. • 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. • More details provided in ESMP			
	Hydrology (surface and groundwater)	Under the sub-project intervention, the overall score is **low**.	• All precautions to store chemicals/oil/fuel properly so that no chance of spill. • Proper disposal of excess bleaching power and care should be taken to follow the appropriate procedure for chlorination. • Monitor water quality according to the environmental management plan. • Ensure drilling equipment is cleaned well and will be free of contaminants such as grease, and chemicals, prior to drilling; and properly dispose of spoils and wastes at the end of each day's work. • More details provided in ESMP	Construction Contractor and monitored by Environmental Consultant and PMU	• Areas for stockpiles, storage of fuels and lubricants and waste materials; • Records of water quality inspection; Water Quality Test (National Drinking Water Quality Standard Parameters); • No visible degradation to nearby drainages, khals or water bodies due to construction activities. • For surface water quality parameters: pH, EC, TSS, DO,	Water quality test (SW & GW) once in construction period and Operation period. Training records reviewed quarterly

Section	Main Environmental and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	**Frequency**
					BOD, COD, FC. • For groundwater quality parameters: pH, TDS, Chloride, As, Fe, Mn • Training records	
2. Pre-construction Phase	**Sanitation, water supply**	Under the sub-project intervention, the overall score is **low.**	• Provide suitable housing, adequate supplies of potable water, and toilet and bathing facilities within the housing area for the assigned laborer. • 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. • More details provided in ESMP	Construction Contractor and monitored by Environmental Consultant and PMU	• Site-specific H & S Plan; • Records of supply of uncontaminated water; • Record of Health & Safety orientation trainings; • Condition of sanitation facilities for workers	• Visual inspection monthly basis
	Transportation	Under the sub-project intervention, the overall score is **low.**	• All vehicle movement to be done during the day time • Speed needs to be limited to 20kmph • Contractor's responsibility to verify the suitability carrying, loading and unloading of materials by trucks or others transport and head load arrangement.	Construction Contractor and monitored by Environmental Consultant of PMU & IWM	• Check the vehicle pool. • Record of regular inspection. • Record of accidents/incidents	Monthly monitoring.

Section	Main Environmental and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			• More details provided in ESMP.			
	Storage of construction materials	Under the sub-project intervention the overall score is **low.**	• Obviously orient to the concerned person, team assigned for the construction work. • More details provided in ESMP	Contractor and monitored by Environmental Consultant of PMU & IWM	• List of materials and sources of materials; • Location of stockpiling material •	Weekly
	Destruction or damage of terrestrial or aquatic ecosystems	Under the sub-project intervention the overall score is **low.**	• Vegetation clearing work will be done only where subproject intervention will take place. • More details provided in ESMP	Contractor and monitored by Environmental Consultant of PMU & IWM	• Ground openness in the intervention area	Weekly
3. Construction Phase	**Wastes (earth, mud, HDPE cuttings, etc)**	Under the sub-project intervention the overall score is **medium.**	• Prepare and implement drilling mud and water runoff management plan approved by PMU. • Wastes must be placed in the designated bins which must be regularly emptied. • All waste must be removed from the site and transported to a disposal site. • More details provided in ESMP	Construction Contractor and monitored by Environmental Consultant of PMU & IWM	• Complaints from community; • Regular inspection of waste management activity; • Waste disposal record.	As work weekly progresses
	Storage of materials (Creating dust/ air pollution spillage of liquid/	Under the sub-project intervention, the overall score is **medium.**	• By the site management committee in Camp to identify the storage site and other requirements, which will be approved by PMU and consultants • More details provided in ESMP	Construction Contractor and monitored by Environmental Consultant of PMU & IWM	• List of materials and sources of materials;	Monthly basis during implementation phase.

Section	Main Environmental and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
	hazardous substance i.e. oil, drilling fluid, chemicals etc., Risk of crime)					
	Noise pollution	Under the subproject intervention the overall score is **low.**	• Consultation with affected people; not to operate noisy equipment during working and operations time (17:00 – 06:00); • Sound suppression for equipment; • Ear protection for workers. • Conduct noise quality monitoring as per ESMP.	Construction Contractor and monitored by Environmental Consultant of PMU & IWM	• Number of complaints from stakeholders; Use of silencers in noise-producing equipment and sound barriers; • Noise Level following decibel meter (dB)	Inspection by PMU and supervision consultants on monthly basis;
	Air pollution	Under the subproject intervention the overall score is **low**.	• 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. • More details provided in ESMP	Construction Contractor and monitored by Environmental Consultant of PMU & IWM	• Location of stockpiles; • Number of complaints from stakeholders; • Records of air quality inspection; Air quality test report	Air Quality: PM_{10} $PM_{2.5,}$ SPM and SO_2 test once in construction period.
	Health & Safety issue	Under the subproject intervention the overall	• Construction laborers should use Proper PPEs during working time. • Pipe laying trenches should not keep	Construction Contractor and monitored by Environmental	Construction area	Site inspection daily/weekly basis.

Section	Main Environmental and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
		score is **Medium.**	open long time. After pipe laying, contractor should backfill trenches as quickly as possible. • Open trench (required for thrush block & valve chamber) should be protected with safety tape. • During pipe trenching & earthwork for valve pit construction, working area should protect with marking tap • First aid boxes will be made available at each construction site. • More details provided in ESMP	Consultant of PMU & IWM		
4. Operational Phase	**Odor& waste disposal of sludge from toilet at Pump House Shed**	Under the issue the overall score **is low**.	• Use bin covers and/or tarpaulins during transport of wastes and end products (compost).	Construction Contractor for first 2 years monitored by Environmental Consultant and PMU Long-term responsibility to be determined by CIC/DPHE	• Complaints from communities	Site inspection daily/weekly basis.
	Erosion of land	Erosion/land slide may occur in small scale near	• 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	Construction Contractor for first 2 years monitored by	• No visible degradation to nearby drainages or water bodies due	Site inspection weekly and monthly basis.

Section	Main Environmental and Social Impacts	Impact Significance*	Suggested Mitigation Measures	Person/ Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
		distribution pipes due to runoff from rainstorms or from pipe leakages and the overall score is **low**.	taken during or after rainstorms.	Environmental Consultant and PMU Long-term responsibility to be determined by CIC/DPHE and PMU	to soil erosion in scheme area.	
	Air Pollution and Noise from Traffic Movement	Temporary, localized impacts. **Low**	• Properly maintained vehicles to be used. • Limit speed to 20kmph at/near work sites	Maintenance Contractor DPHE XEN	• Complaints by nearby DRPs	During maintenance works
	Stagnant water	From leaking pipes **Low**	• Ensure monthly inspections of pipelines for leakages	Camp WASH NGO staff DPHE XEN	• Water pooling along, community taps, pipe alignment, overhead towers and production well.	Monthly

**** 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 furnish the details of social screening, ESMF and RPF has been followed focusing on major social impacts & its significance (Equity, labor influx, population coverage, easy access, GBV, impact mitigation measures, referral, and monitoring suggestions) of the sub-projects. For this purpose, no land acquisition is required for this sub-project. Provision is available to utilize existing Right of Way within this Camp-2E (WDZ_2E.04). The sub-project location was found by the support of RRRC, CiC, SMC and local DPHE. Consultation meeting was organized with local representatives who will directly or indirectly be related in the sub-project. After visiting proposed site location by the assigned consultants and local DPHE, CiC representatives, SMC and WASH focal team the screening report has been prepared. Initially the team surveyed the locality and primarily sorted (2-3) places to establish the scheme. It has been sorted out the exact situation on safe water provision through consultation meeting with them. The foot of hill, natural drain or cannel, toilet and others environmental obstructions are not very close to the site.

Construction induced impact issues:

Since the Mini Piped Water Supply Scheme is being implemented in a government-owned area, there is no land acquisition, which will prevent any construction induced impacts. During construction, movements of heavy vehicles or construction materials may cause damages to the shelters or assets. If any damages are reported, DPHE will hold consultations with the site management along with contractors and camp focal points to take mitigation measures according to ESMF and RPF.

Labor issues:

The Mini Piped Water Supply Scheme executing contractor will be involved skill & unskilled labors. The unskilled labor will involve 6-8 people who will be engaged from the camp. Only 5-6 skilled laborers will be engaged from the local/host community/other places of Bangladesh.

To implemented the sub-project there will be no needed any foreign labors. Since the number of incoming workers will be very low and they will be working for short periods of time (more than 3 months), there will be no competition in the using of resources amongst the host and DRP communities. Thus, the sub-project will not be created any influx of workers. The unskilled labors will be hired from the DRP community of Camp_2E, who already reside in the camp. The skilled labors will be accommodated on site in the DRP camp by the contractors. The contractor will prepare a labor shed measuring 15ftX30ft for males and 15ftX20ft for females if necessary. All laborers (skilled and unskilled) must be giving appropriate training and capacity development to entail a multitude of codes of conduct pertaining to conflict, GBV and other issues. Labor's Code of Conduct is attached in ***Appendix-04.***

Linkage with other stakeholders:

The team has provided emphasis to keep better linkage with related stakeholders (*i.e.* RRRC, CiC, Camp focal, WASH focal, DRP & Host Community, INGO & Local NGO *etc.*). The team conducts several types of consultation meeting with them group/individually for any social issues.

GBV issues:

Proposed project activates includes drilling of test tube well, installation of deep tube well & submersible pump and laying of HDPE pipe line with necessary fittings. Beside few civil constructions works for constructing pump house and installation of solar panel will be done. Except some civil work most of the work for HDPE pipe laying will be required skilled labor from outside of the local area (Host and DRPs). In addition, distribution pipe line network (laying of HDEP pipe) covers the almost whole area of camp thus this pipe laying work may have potential exposure to sexual exploitation and abuse (SEA), sexual harassment (SHA) and GBV for females in the area though a strict labor code of conducted will be enforced. In these quoted context, GBV risk for the project is assessed as high.

Beyond of aforementioned negative issues on GBV, it is expected that impact of the sub-project on the various stakeholders, women and vulnerable groups is expected to be positive, as because they are suffering lots about collecting water from bottom of the hill, so it will create a friendly socioeconomic climate to implement the intervention.

However, a GRM will be established to deal with related issues. In the process of GRM, GRC will also be formed as per recommended structures in ESMF. If any odd situation arises, the GRC will attempt to minimize according to follow the ESMF GRM guideline. On the other hand, if any private land/land leases issues arise, the team will be conducted consultation meeting with the owner and related stakeholder according the ESMF & resettlement guideline.

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, MPWSS 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. Finally, strict 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 Mini Piped Water Supply Scheme site management. These include GIS specialist (initially), Hydrogeologist located in the scheme area, E&S consultants, local DPHE authorities, other development partners such as UN as well as the DRP community. These sessions covered topics such as WB introduced Social and Environmental safeguard issues, GRM, possible social environmental and economic effects, livelihoods options, discussions on minimizing the laborer conflict among DRP and local host communities, Infrastructure, WASH, hygiene, GBV, forestation & waste. Most importantly, the benefits of safe drinking water options through installing the mini pipelines were discussed. It was also determined that there is no Elephant corridor and no scope of Elephant/Human conflict in the site area. The DRP community were made aware and sensitized on E&S safeguard issues, precautions, child safety, avoid resettlement, relocations of local institutions (mosques, school/ learning centers & others) any restrictions for the DRP, compensation mechanism if any objection and complaints.

As a result of these consultations, the community very much welcomed and appreciated the DPHE EMCRP initiatives on WASH sector sub projects. As per their opinion, the safe water access into the DRP HH is one of the priorities needs for them for secured and better livelihoods aspects.
Thus, a future consultation during the lifetime of the project is expected to ensure that negative social and environmental 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 set up to serve as an integral tool for engaging the various stakeholders during the project activities and its implementation. There will a complaint book for stakeholders and the GRM will be instituted with qualified personnel trained in handling relevant complaints. The GRM will be available for a wide array of issues such as malpractice, labor issues and GBV.

Recommendation for further environmental and social assessment and/or site specific environmental and social management plan:

Currently globe is facing tremendous health risk for pandemic COVID-19, we are not out of this outbreak, hence to ensure precaution at working sites of EMCRP, additional management for Labour and Contractors in respect to COVID-19 is recommended and put as obligatory requirement until the normalcy of COVID-19

Labour 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.:

- DPHE has oriented the contractor and labor on Covid-19 management including OHS (Occupational Health Safety
- 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 include 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.

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 hand washing 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 adequate 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.

COVID Management Guidelines during implementation

A. **Labor, Workers and Working Conditions:**

Contractors are responsible to manage the labors, workers and working conditions. PMU with the support of superstition and monitoring firms will ensure implementation.

- Stop any Project Activities that may increase community exposure to COVID risks
- Communicate to communities about protective COVID risks and measures
- Monitor incidence and outbreak of communicable diseases
- Identify hotspots based on health data available

- Screen Security personnel for COVID
- Follow strict protocols in management of project interventions that may increase the COVID risk for human health (for instance in livestock and commercial farming)
- Undertake preventive measures in resettlement settlements
- Practice social distancing in meetings, workshops and consultations

B. Entry/Exit to the work site and checks on commencement of work:

- Entry/exit to the work site will be controlled and documented for both workers and other parties, including support staff and suppliers. Possible measures will include:
- Controlling entry/exit to the site, securing the boundaries of the site, and establishing designating entry/exit points. Entry/exit to the site will be documented.
- Training security staff on the (enhanced) system that has been put in place for securing the site and controlling entry and exit, the behaviors required of them in enforcing such system and any COVID -19 specific considerations.
- Training staff who will be monitoring entry to the site, providing them with the resources they need to document entry of workers, conducting temperature checks and recording details of any worker that is denied entry.
- Confirming that workers are fit for work before they enter the site or start work. Special attention will be paid to workers with underlying health issues or who may be otherwise at risk. Consideration will be given to demobilization of staff with underlying health issues.
- Checking and recording temperatures of workers and other people entering the site or requiring self-reporting prior to or on entering the site.
- Providing daily briefings to workers prior to commencing work, focusing on COVID-19 specific considerations including cough etiquette, hand hygiene and distancing measures, using demonstrations and participatory methods.
- During the daily briefings, reminding workers to self-monitor for possible symptoms (fever, cough) and to report to their supervisor or the COVID-19 focal point if they have symptoms or are feeling unwell.
- Preventing a worker from an affected area or who has been in contact with an infected person from returning to the site for 14 days or (if that is not possible) isolating such worker for 14 days.
- Preventing a sick worker from entering the site, referring them to local health facilities if necessary or requiring them to isolate at home for 14 days.

C. Land Acquisition and Involuntary Resettlement:

Though this sub-project will not require land acquisition and involuntary resettlement but during implementation if any involuntary resettlement issues arise, following steps will be followed:

- Identify vulnerable PAPs and Non-title holders who may have increased vulnerability due to COVID outbreak and (lockdown or loss of livelihood); particularly NTH

- Make accelerated payments for compensation and/or livelihood restoration to project affected persons, especially vulnerable households, non-titled holders to help them cope with lockdown;
- Employ local population on wage labor, make advance payments;
- Manage migrant labor for COVID related risks
- Invest in living conditions in relocation settlements

D. Community Health and Safety:

PMU and contractors are responsible to implement the following

- Stop any Project Activities that may increase community exposure to COVID risks
- Communicate to communities about protective COVID risks and measures
- Monitor incidence and outbreak of communicable diseases
- Identify hotspots based on health data available
- Screen Security personnel for COVID
- Follow strict protocols in management of project interventions that may increase the COVID risk for human health (for instance in livestock and commercial farming)
- Undertake preventive measures in resettlement settlements
- Practice social distancing in meetings, workshops and consultations

E. Stakeholders and Citizen and Grievance Mechanism:

- Disseminate COVID advisories over phones, texts, what's app groups, radio, TV, frontline workers Communication;
- Monitor existing grievance and public information mechanisms for any COVID related grievance, queries etc.;
- Widely disseminate material on those who have recovered from COVID to remove stigma
- Include Doctor or medical staff in the GRM
- Use more video conference facilities and conferences.

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 the impacts can be mitigated and monitored. ESMP is attached in **Appendix-1**

Appendix -01: Environmental and Social Management Plan (ESMP)

Considering the intervention wise construction activities of proposed site potential impact with consequence mitigation measures have been designed (as an ESMP) in the following table for Mini-Piped Water Supply System (MPWSS): Camp_2E, Block_E-03 (WDZ_2E.04).

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
Pre-Construction Stage	Assessment of Social Impacts and Risks	To meet the requirements for disadvantaged and vulnerable directive: • Include COVID positive individuals, households and clusters as vulnerable category in Social Assessment TORs, surveys and consultations (particularly relating to social stigma); • Consult with such COVID positive households to Identify specific support mechanisms that projects could support; • Add tribal communities in self isolation under vulnerable groups who may need suitable and socially acceptable support; • Use alternative and virtual and video means for consultations and interactions.	PMU	Social Development Consultant of PMU, IWM Supervision and monitoring firms.
Pre-Construction Stage	Construction and operation of ***labor camp*** for the workers will generated sewage and other form of waste, thereby surrounding environment pollution and health hazard of	• Provide suitable housing, adequate supplies of potable water, and toilet and bathing facilities within the housing area for the assigned laborer; • 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; • Comply with requirements of Government of Bangladesh labor law of 2006 and all applicable	Construction Contractor	Environmental and Social Development Consultant of PMU, IWM Supervision and monitoring

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
	worker may occur due to ***absence of safe sanitation and water supply***	laws and standards on worker's Health and Safety; • Conduct formal and unofficial discussion to increase awareness about hygiene practices among the workers;		
Pre-Construction Stage	**Soil erosion** may take place due to site clearing as well as natural drainage can alter for improper storage of construction material	• Vegetation clearing work not to be done more than required area of proposed intervention; • Selected site will be far away from any water bodies or natural water flow path to avoid the flash flood or any kind or surface runoff. • Minimize cut & fill operations, the site clearing and grubbing operations should be limited to specific locations only. • The existing slope and natural drainage pattern on the site should not be significantly altered because construction material/ equipment will be stored in selected place with sufficient earthen drainage facilities around to ensure continuous connection with nearby natural water body.	Construction Contractor	Environmental and Social Development Consultant of PMU, IWM Supervision and monitoring
Pre-Construction Stage	Loss of land/and other physical assets	• No land acquisition will be allowed inside the DRP camp.	PMU	Social Development Consultant of PMU, IWM
Pre-Construction Stage	Loss of livelihoods	• Under this sub-project, there is no scope of negative impact of DRP livelihoods.	Contractor	Social Development Consultant of PMU, IWM
Pre-Construction	Stakeholders	• All the project stakeholders will be engaged in	PMU &	Social Development

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
Stage	Engagement	consultation process • Individual/Separate community level consultation meeting will be held with the potential affected HHs • Consultation meeting with Rohingya male and female about the project safeguard documents will be disclosed to the stakeholders • DRP camp people will be involved with the GRM, formed GRC	Contractor	Consultant of PMU, IWM
Pre-Construction Stage	Loss of Access rights	• Project to ensure thorough analysis of alternatives that access enjoyed by the community remains intact. • In case of unavoidable circumstances, alternative access will be provided.	PMU	Social Development Consultant of PMU, IWM
Construction Activity	Construction Induced Impacts	• Any construction induced impacts must be mitigated following the guidelines of RPF and ESMF	Contractors	PMU, IWM
Construction Activity	**Noise pollution** will occur due to use of diesel-based construction equipment/vehicles movement	• Construction activity will be pat daytime, not more than 4.00 pm; • However, for some work like deep tube well drilling, contractor will be responsible for using noise abating gear such as mufflers for effective sound reduction in powered mechanical equipment and machineries development; • Contractor will confirm proper measures for avoiding any disturbance of residents as well as biodiversity; • Ensure use of the personal protective	Contractor	Environmental Consultant of PMU, IWM

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
		equipment's (helmet, goggles, gloves, safety boot) during cutting and welding of the reinforcement and during drilling work; • Availability and access to first-aid equipment and medical supplies in case of any accidents.		
Construction Activity	**Air quality** will degrade due to dust blowing from earthwork (trench cutting for pipe laying), transportation of waste or fine material and emission of construction vehicles.	• Construction machinery shall be properly maintained to minimize exhaust emissions of CO_2, particulate matter (SPM, $PM_{2.5}$ and PM_{10}) and Hydrocarbons. • Dust generated as a result of clearing, leveling and site grading operations shall be suppressed using water sprinklers. • Dust generation due to vehicle movement on haul roads/access roads shall be controlled through regular water sprinkling. • Carry the materials especially loose soil and sand with adequate cover. • Ensure use of masks to construction workers if dust content is high.	Contractor	Environmental Consultant of PMU, IWM
Construction Activity	Stagnant water in the trench cut or pump drilling location may pose **soil erosion and correspondingly land side** may occur	• All excess materials including debris generated from the trench backfilling operations are to be collected and reused in other segments quickly, and unusable debris shall be disposed of at designated dump site or locations for disposal of construction debris so that water cannot stagnant • Provision of submergible pump will be confirmed by the contractor at construction site to properly manage the stagnant water from erratic rain fall;	Contractor	Environmental Consultant of PMU, IWM

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
Construction Activity	**Safety Issues** may delaine due to careless effort for open trench cutting for pipe laying/inspection pit/ installation of DTW & PWT and operation of mechanical equipment	• Unauthorized entry to the site area is completely prohibited and the site will be properly fenced with a single entry, for this purpose; • Properly maintained and control store house, storages instruments as well as hazardous materials on the site; • Construction laborers should use Proper PPEs during working time. Pipe laying trenches should not keep open long time. After pipe laying, contractor should backfill trenches as quickly as possible. • Pipe line work should be performed section wise. 50-100m section should be considered to minimize disruptions to both pedestrians and vehicular traffic; • The HDPE pipe lowering, jointing operations and camp connection and installation of DTW can pose safety concerns; all work force deployed in operations shall be properly trained, and provided with all required PPEs mandatorily; • Health and safety training will be arranged for the Rohingya or other community's labors before project intervention started. • Labour will bring their proper IDs and wear when they will entry in the camp area. • Child labours will not be allowed for any kind of activities	Contractor	Environmental Consultant of PMU, IWM

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
		• Site shall be secured by fencing and maintained at entry points. • To avoid any accident and health hazard provision of lighting at inspection pit site during night time shall be arranged until covered up the pit.		
	Social conflict may arise between camp workers and local residence due to different behavior or custom of outsider worker (if any) as well as consumption of natural resource by the camp worker	• An alternate arrangement for fuel wood, heating and cooking required to meet fuel requirement of the labor camps; • Alternating cooking arrangement for the HHs living in the camp should be arrange by the contractor; • Contractor will closely monitor all workers so that workers do not involve with local politics as well as sexual harassment, trafficking of women and children. • Contractor will be arranged a awareness building training for the camp 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. • Work force should be prohibited from disturbing the flora, fauna including hunting of animals, wildlife hunting, poaching and tree felling. • If ground water is withdrawn, adequate approvals essential from the appropriate	Contractor	Environmental and Social Development Consultant of PMU, IWM

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
		department/authorities before setting up bore wells. • Labor code of conduct to be disclosed through consultation and FGD.		
Construction Activity	**Unplanned traffic management** (construction vehicles) may increase the road accident and traffic congestion	• Less busy road shall be identified for the movement of heavy machinery and equipment; • Ensure schedule deliveries of material/ equipment during off-peak hours; • Place traffic sign and cautionary sign at major junctions to avoid undue traffic congestion as well as accident; • Inform local people about the subproject activities including road diversions and closures well in advance; • Speed needs to be limited to 20kmph • The vehicular movement will be controlled near sensitive locations viz. schools, colleges, hospitals, mosques, learning center & DRP camps identified along designated vehicular transportation routes. • Awareness training on proper traffic management for local community including construction workers shall be arranged by the contractor with the assistance of PMU safeguard officer. Local community will be trained up about traffic management and awareness.	Contractor	Environmental and Social Development Consultant of PMU, IWM
	Generated wastes (earth, mud) from drill	• Wastes must be placed in the designated bins which must be regularly emptied;	Contractor	Environmental Consultant of PMU,

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
	of pump and trench cutting for pipe laying may cause of degrade the quality of nearby water quality (if any) and surrounding environment • Hazardous waste i.e. waste oil, grease from vehicle maintenance also can decline the nearby water quality if any and surrounding environment	• All waste must be removed from the site and transported to a disposal site; • Working areas are kept clean and tidy at all times; • Construction site is to be checked for spills of substances i.e. chemical, oil, paint, etc.; • Refueling and maintenance of equipment and vehicles should be done in selected confined area with base of impermeable layer (paved) so that waste could not spill and get contact with nearby water body and soil. Waste oil and mobile will be collected and subsequently sold to authorized recyclers. • The scrap material generated from the erection of structures and related construction activities including generated mud will be collected and stored separately in a stack yard and regularly disposed in designated waste dump area and residue that is carried value will sold to local recyclers; • Hazardous Waste Management Rules should be maintained by the responsible contractor; • Informal training on handling of hazardous waste shall be done regularly by the ES of PMU and Contractor's HSE.		IWM
Construction Activity	***Health & Safety Risks*** may pose due to following reason to	• All construction equipment will be properly inspected timely. • The risk assessment will be prepared time to	Contractor	Environmental Consultant as well as Social Development

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
	associates workers: • 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. • Exposure to health hazardous during construction activities such as manual handling and musculoskeletal disorders, hand-arm vibration, temporary or permanent hearing loss, heat stress, and dermatitis. Fire safety protection	time for all types of work activities on site by the HSE of contractor and to be validated by the ES of PMU. • Designated all walkways that to be used for subproject work, shall be ensured good conditions underfoot; signposted and with adequate lighting. • Suspected place for slippery at working sites shall be identified and installation of signpost are to be assured; • Fire risk assessment shall be done for the construction areas through identifying the sources of fuel and ignition and required precautions including, means of escape, warning and fighting fire are to be arranged by the contactor. • Pipe laying trenches should not keep open long time. After pipe laying, contractor should backfill trenches as quickly as possible. • Open trench (required for thrush block & valve chamber) should be protected with safety tape. Sufficient lighting system should be provided at night time • During pipe trenching & earthwork for valve pit construction, working area should protect with marking tap • First aid boxes will be made available at each construction site.		Consultant of PMU, IWM

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
		• This sub project has Proper communicative emergency response plan (ERP) with all parties, the ERP to consider such things as specific foreseeable emergency situations, organizational roles and authorities, responsibilities and expertise, emergency response and evacuation procedure, in addition to training for personnel and drills to test the plan. • Carefully operation of electrical equipment must be maintained. In addition, works shall not be carried out on live systems. • 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. • An adequate number of staff and first aiders shall be on site in accordance with Bangladesh Labor Law requirements. • 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. • Emergency evacuation response shall be prepared by the contractor and relevant staff shall be trained through mock-up drills. • Ensure all equipment is suitable for jobs (safety, size, power, efficiency, ergonomics, cost, user		

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
		acceptability etc.), provide the lowest vibration tools that are suitable and can do the works. • 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. • Adequate quantities of drinking water will be available at different locations within the sub-project area. • Provision to maintain proper PPEs wherever necessary and to ensure that there are satisfactory washing and changing facilities. • 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. • Ensure adequate fire safety protection. Fire extinguisher (with proper training to use), water, sand etc., will be reachable in the construction sites.		
Operation & Maintenance	Draw down of groundwater due to excessive withdrawals	• Coordination with other development agencies for groundwater extraction rates will be monitoring; • Regular third-party will be monitoring of groundwater levels; • Awareness training on optimum use of supply	Contractor for first 2 years Long-term responsibility to be determined	Environmental Consultant of PMU Long-term responsibility to be determined by CIC/DPHE

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
		water (without loss) at community level shall be arranged by DPHE, PMU so that they can become aware about suffering for miss use of water. • Encroachment of surface water course in the study area for accommodation of DRPs or other development purpose shall be discouraged.	by CIC/DPHE	
Operation & Maintenance	Improper disposal of solids wastes from solar powered systems can cause land and water pollution as well as air pollution from open burning of solar panel battery.	• Effective Waste Management Plan will be developed covering the following issues: • Rechargeable batteries shall be selected that life time is high; • For reducing the waste battery, instead of replacement, battery maintenance work shall be given priority; • Damaged battery throwing in to the water bodies or store under open sky shall be prohibited; • Destroying of waste battery by open burning shall be restricted; • Landfilling of damaged battery not to be allowed; • If possible, reuse of damaged batter to be done; • Contractor will ensure third party monitoring of nearby surface and underground water bodies for signs of contamination. Parameters. Test results are to be compared with Bangladesh Environmental Quality Standards of DoE.	Contractor for first 2 years Long-term responsibility to be determined by CIC/DPHE	Environmental Consultant of PMU Long-term responsibility to be determined by CIC/DPHE

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures/indicators	Institutional Responsibilities	Supervision Responsibility
Operation & Maintenance	• Possible failure of the system due to low pressure and fluctuation of the pressure; • Possible failure of the system due to pipe leakage and use of substandard fitting may cause of soil erosion	• Conduct pressure test just before the operation of the water supply line; • Use good quality of the HDPE pipe to avoid any leakage; • Use good quality materials and accessories for pipe joining, and tap connection to the consumers. • Ensure regular and proper maintenance the water supply line; • To avoid damage of collection tap by the DRP children, community leader (Majhi) shall be closely monitored accordingly.	Contractor for first 2 years Long-term responsibility to be determined by CIC/DPHE	Environmental Consultant of PMU Long-term responsibility to be determined by CIC/DPHE

Appendix-02: Consultation Meetings with DRP and Site Management at WDZ_2E.04

Figure_02: Community consultation Meetings: Camp-2E

Figure_03: Consultation with the DRP

Appendix 03: List of the Participants

Community Consultation Meeting of Environmental and Social Management Framework for Emergency Multi- Sector Rohingya Crisis Response Project (EMCRP), DPHE, Cox' Bazar.

List of Participants

Camp No.- 2E Block No.- E3 Sub project WDZ-2E-4 Date: 14.10.21 Time- 12.00

Venue: Majhee House.

Sl no	Name	Sex M	Sex F	Designation	Mobile Number	Signature	Remarks
1	Dil Mohmmad	✓		Majhee(B)	01856649128		
2	Nur Islam	✓		Majhee(B5)			
3	Syed Hossain	✓		DRP	—		
4	Nur Hossain	✓		"	—		
5	Nur Mohmmad	✓		"	—		
6	Mozzur Alam	✓		"	01884484755		
7	Md. Eliyas	✓		"	—		
8	Md. Amin	✓		"	—		
9	Eizzot Ali	✓		Majhee(B5)	01877716865		
10	Kaman Hossain	✓		DRP	—		
11	Ebrahim	✓		"	01828026673		
12	Syed Ahamad	✓		"	—		
13	Nur Bosher	✓		"	—		
14	Md Younus	✓		"	01830851822		
15	Khirul Bosher	✓		"	01896867357		
16	Sofic	✓		"	01871580567		
17	Aman Ulla	✓		"	—		
18	Sayedur Rahman	✓		"	—		
19	Syed Ulla	✓		"	—		
20	Eddris	✓		"	—		
21	Hamid Hassan	✓		"	—		
22	Md. Ahasan	✓		"	—		
23	SM Rahman	✓		SDS, IWM	01711964885		
24	Jubaer Ahmed	✓		ARE, IWM	01730876705		
25							

Prepared by:

Md. Mostamsirur Rahman
Social Development Specialist
Pkg. No. SD-14, IWM, EMCRP, DPHE

Appendix-4: Labor's Code of Conduct

অঙ্গীকার পত্র

স্থানঃ
ঠিকাদারী প্রতিষ্ঠানঃ

আমি..... এই মর্মে অঙ্গীকার করছি যে, কর্মরত থাকা অবস্থায় নিম্মোক্ত আদেশ, নির্দেশ ও নিষেধসমূহ সর্বদা মেনে চলবো।

১. সকল রোহিঙ্গা জনগোষ্ঠির সাথে সর্বদা নম্রতা, ভদ্রতা ও সম্মানের সাথে ব্যবহার বজায় রাখবো;
২. কোন অবস্থাতেই রোহিঙ্গা নারী, শিশুর সাথে কোন প্রকার সম্পর্ক তৈরী করবো না;
৩. রোহিঙ্গা জনগোষ্ঠির ইচ্ছাকৃত বা অনিচ্ছাকৃত কোন প্রকার সাহায্য সহযোগিতা নিবো না;
৪. কোন অবস্থাতেই রোহিঙ্গা জনগোষ্ঠিদের কোন প্রকার আশ্বাস প্রদান কিংবা অঙ্গিকারবদ্ধ হবো না;
৫. কর্মক্ষেত্রে কিংবা রোহিঙ্গা ক্যাম্প এলাকায় জীবজন্তু, গাছপালা ও পরিবেশের কোন প্রকার অনিষ্ট করবো না;
৬. কর্মক্ষেত্রে সর্বদা নিরাপত্তা পোশাক-আশাক ও উপকরণ পরিধান ও ব্যবহার করবো;
৭. সর্বদা নিজ নিজ পরিচয় পত্র (ID Card) প্রদর্শন ও সংরক্ষণ করবো;
৮. কোন অবস্থাতেই রোহিঙ্গা জনগোষ্ঠি ও স্থানীয় লোকদের সাথে কোন প্রকার অসামাজিক কর্মকান্ড ও কোন প্রকার বিবাদে লিপ্ত হবো না;
৯. যে কোন জরুরী অবস্থায় সিদ্ধান্ত গ্রহনের ক্ষেত্রে সংশ্লিষ্ট কর্মকর্তার শরণাপন্ন হবো।

উপরোক্ত বিষয় সমূহের যদি কোন ব্যতিক্রম ঘটে বা ঘটাই তাহলে এ বিষয়ে প্রশাসন আইনগত যে শাস্তি বা সমাধান গ্রহন করবে তা মেনে নিতে বাধ্য থাকবো।

.....
স্বাক্ষর ও তারিখ

প্রজেক্ট সাইটে যা যা অবশ্যই রাখতে হবে ঃ

১. শ্রমিক ও কর্মকর্তাদের তালিকা;
২. হাজিরা খাতা;
৩. ছুটির রেজিষ্টার;
৪. দূর্ঘটনার বিবরণী লিপিবদ্ধ করার রেজিষ্টার;
৫. অভিযোগ লিপিবদ্ধ করার রেজিষ্টার;
৬. কাজের বিবরণী;
৭. জরুরী অবস্থায় যোগাযোগের জন্য কমপক্ষে ২ জন কর্মকর্তার নাম-পদবীসহ মোবাইল নম্বর;
৮. বাংলা ও ইংরেজীতে বড় বড় অক্ষওে দৃশ্যমান স্থানে প্রদর্শনের জন্য স্থাপন;
৯. নিকটস্থ হাসপাতাল, পুলিশ ষ্টেশন এবং ডাক্তারের সাথে যোগাযোগের জন্য মোবাইল/টেলিফোন;
১০. নম্বর বাংলা ও ইংরেজীতে বড় বড় অক্ষওে দৃশ্যমান স্থানে প্রদর্শনের জন্য স্থাপন;
১১. কাজের সাইটে পূর্ণাঙ্গ তথ্য ও কাজের পরিধি ব্যানার আকারে দৃশ্যমান স্থানে প্রদর্শনের জন্য স্থাপন;
১২. নিরাপত্তা চিহ্ন, সর্তকতা তথ্য ও নিরাপত্তা বেষ্টনীর ব্যবস্থা করা;
১৩. নিরাপত্তা উপকরণ ও সর্রঞ্জামাদি এবং প্রাথমিক চিকিৎসার ব্যবস্থা রাখা;
১৪. জরুরী অবস্থায় ব্যবহারের জন্য গাড়ি কিংবা মোটর সাইকেলের ব্যবস্থা রাখা;
১৫. কাজের ঝুঁকিপূর্ণ স্থান দিনে-রাতে সহজে সনাক্ত করা যায় এমন চিহ্ন কিংবা সেফটি লাইটের ব্যবস্থা রাখা।

(বিঃদ্রঃ রেজিষ্টার খাতার উপর প্রত্যেক প্রতিষ্ঠানের নাম ও স্থান উল্লেখ করতে হবে।)

পরিবেশগত সর্তকতা সমূহ ঃ-

১) প্রয়োজন ব্যতীত কোন প্রকার আগুন ধরানো যাবে না;
২) কখনোই প্রাণীর অনিষ্ট করা যাবে না;
৩) সকল প্রকার দূষণ পরিহার করতে হবে;
৪) অনুমতি ব্যতীত কোন প্রকার গাছ কাটা যাবে না;
৫) যথাযথ সম্পদের ব্যবহার করতে হবে;
৬) নবায়নযোগ্য উৎস ব্যবহারের সর্বোচ্চ চেষ্টা করতে হবে;
৭) কাজের শেষে পূর্বের পরিবেশ ফিরিয়ে দিতে হবে।

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