



**Government of the People's Republic of Bangladesh
Ministry of Local Government, Rural Development and Co-operatives
(Local Government Division)**

**Environmental and Social Management Screening Report
On
Construction of Non-Piped Deep Tara Tubewell including O&M**



**Sub-Project (Package No.): EMCRP/WD-07B, Location: Camp-04
Emergency Multi-Sector Rohingya Crisis Response (GoB-WB) Project**



Department of Public Health Engineering (DPHE)

Abbreviation and Acronyms:

| | |
|-------|---|
| ACF | Action Against Hunger |
| BBS | Bangladesh Bureau of Statistics |
| BD | Bangladesh |
| 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 |
| DTTW | Deep Tara Tubewell |
| EC | Electrical Conductivity |
| EE | Executive Engineer |
| 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 | Focus Group Discussion |
| GBV | Gender-Based Violence |
| GoB | Government of The People's Republic of Bangladesh |
| GRC | Grievance Redress Committee |
| GRM | Grievance Redress Mechanism |
| GPS | Global Positioning System |
| GW | Ground Water |
| HDPE | High Density Polyethylene |
| IEF | Important Environmental Feature |
| IOM | International Organization for Migration |
| ISCG | Inter Sector Coordination Group |
| IUCN | International Union for Conservation of Nature |
| LGD | Local Government Division |



| | |
|-------|---|
| LGED | Local Government Engineering Department |
| NGO | Non-Government Organization |
| PD | Project Director |
| PMU | Project Implementation Unit |
| PM | Particulate Matter |
| PMU | Project Management Unit |
| PPE | Personal Protective Equipment |
| PSC | Project Steering Committee |
| PTW | Production Tubewell |
| PVC | Polyvinyl Chloride |
| ROW | Right of Way |
| RRRC | Refugee Relief and Repatriation Commission |
| SAE | Sub-Assistant Engineer |
| 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

Introduction:

EMCRP (DPHE components) will install 400 nos. non-piped water options (Deep Tara Tubewell) at different DRP camps. This report prepared for the sites of 21 nos. Deep Tara Tubewells (DTTW) at different blocks of camp -04.

Name of Sub-project:

Installation of camp based Non-piped water options (Deep Tara Tubewell) scheme including Defects & Liabilities period under Cont. no. WD-07B for Displaced Rohingya Population (DRP) at Ukhiya Upazila under Cox's Bazar district of Bangladesh.

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

Estimated total cost per Deep Tara Tubewell (in Taka): 144,336 (Tk.)

Estimated construction period duration: 06 (Six) months.

Estimated Operation and Maintenance period (life of sub-project): 12 (Twelve) months operation & 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_4 and Block_B-18, B-19, B-20, B-21, B-22, C-18, C-22, C-25, C-26, C-28, C-29, D-06, D-07, D-08, D-15, D-19, D-20

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

In the proposed sub-project areas Non-Piped Deep Tara Tube well Schemes activities the following interventions would be taken place:

- Installation of 21 nos. Deep Tara tube well. As per BOQ, estimated depth of each tube well was considered 875 feet, but this depth may change as per ground water level during installation.
- Well development by air compressor (minimum 1 bar) until sand free, odor and turbidity free drinking water at a satisfactory yield
- Disinfecting the well including supply of 50 gm of bleaching powder (33% strength), chlorinated water having 150 ppm available free chlorine complete as per standard specification
- Supplying, fitting & fixing of best quality materials and inspection of pump head and cylinder set should be satisfied by Crown agent
- Platform and Fixation of Stone Plate ID
- After ensuring proper well development, collect the water samples and sending the samples to the DPHE Zonal Laboratory for testing
- Environmental Mitigation Works
- Operation & Maintenance work

Estimated footprint / land area for this per Deep Tara Tube well: Around 3.00 square meter land required for the establishing per Deep Tara Tubewell. 15 to 20 families (80 to 100 people) shall use each deep tube well. Typical design of Deep Tara Tube well is attached in Appendix: 4.

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

Rohingya Camp based Deep Tara Tube well is located Camp-4 and Block: B-18, B-19, B-20, B-21, B-22, C-18, C-22, C-25, C-26, C-28, C-29, D-6, D-7, D-8, D-15, D-19, D-20. Deep Tara Tube wells will be installed in this camp. The projected land is government land and no trees, structures and community properties will be affected. The accumulate infrastructures in and around the proposed site, it is mainly DRP houses, earthen drain, low land, hills, health post, drains, etc.

The sites are hilly and height about 25 ft. to 35 ft. from plain land. DPHE follows installation guidelines of distance of 30 ft. from closest toilet. The observation seemed that the expected impact in proposed areas is too less and excellent potential for community.

| Sl. No | Deep Tubewell ID | Camp | Block | Lat | Long |
|--------|------------------------|------|-------|-----------|-----------|
| 1 | EMCRP_WD_07B_DTTW_4.1 | 04 | B-18 | 21.211955 | 92.142358 |
| 2 | EMCRP_WD_07B_DTTW_4.2 | | B-19 | 21.211428 | 92.141425 |
| 3 | EMCRP_WD_07B_DTTW_4.3 | | B-20 | 21.211303 | 92.14107 |
| 4 | EMCRP_WD_07B_DTTW_4.4 | | B-20 | 21.210945 | 92.140308 |
| 5 | EMCRP_WD_07B_DTTW_4.5 | | B-21 | 91.211088 | 92.139315 |
| 6 | EMCRP_WD_07B_DTTW_4.6 | | B-21 | 21.212498 | 92.140425 |
| 7 | EMCRP_WD_07B_DTTW_4.7 | | B-22 | 21.210543 | 92.140772 |
| 8 | EMCRP_WD_07B_DTTW_4.8 | | C-18 | 21.20804 | 92.14498 |
| 9 | EMCRP_WD_07B_DTTW_4.9 | | C-22 | 21.208132 | 92.144567 |
| 10 | EMCRP_WD_07B_DTTW_4.10 | | C-29 | 21.210132 | 92.143793 |
| 11 | EMCRP_WD_07B_DTTW_4.11 | | C-25 | 21.208987 | 92.142997 |
| 12 | EMCRP_WD_07B_DTTW_4.12 | | C-28 | 21.207072 | 92.143828 |
| 13 | EMCRP_WD_07B_DTTW_4.13 | | C-26 | 21.208513 | 92.142088 |
| 14 | EMCRP_WD_07B_DTTW_4.14 | | D-06 | 21.21017 | 92.138825 |
| 15 | EMCRP_WD_07B_DTTW_4.15 | | D-06 | 21.20977 | 92.138353 |
| 16 | EMCRP_WD_07B_DTTW_4.16 | | D-07 | 21.207137 | 92.138782 |
| 17 | EMCRP_WD_07B_DTTW_4.17 | | D-07 | 21.206565 | 92.1389 |
| 18 | EMCRP_WD_07B_DTTW_4.18 | | D-08 | 21.205748 | 92.139873 |
| 19 | EMCRP_WD_07B_DTTW_4.19 | | D-15 | 21.20666 | 92.14246 |
| 20 | EMCRP_WD_07B_DTTW_4.20 | | D-19 | 21.207498 | 92.139118 |
| 21 | EMCRP_WD_07B_DTTW_4.21 | | D-20 | 21.206763 | 92.143445 |



Overall Summary:

It is our observations and opines that the DRP of the sub-project areas is definitely relating to the success of the project. The work is ecologically defensible and having local acceptance. The DPHE, along with IWM Environmental & Social safeguard Team, PMU Social & Environmental Consultant, has conducted five (05) consultation meetings with DRP communities and DRP representatives, CiC, Camp WASH Focal, Camp area focal, SAE & Mechanic, and relevant stakeholders.

Considering recommendation and suggestion of those participants of consultation meetings, potential environmental and social impact for the proposed intervention, and judging sites should protect archeological sites/sensitive receptor.

They also requested to include both host and DRP community member during the installation work as a labor.

In terms of natural, ecological features of the area, it was observed that before establishing DRP camp, roads and other essential establishment, it was a forest area. Most of the natural forests were damaged during establishment of this Camp. No further significant impact is expected on the ecosystem and biodiversity, no agricultural land/activities or fish farming will be disturbed, due to the construction of the sub-projects. The Non-Piped Deep Tara Tube well schemes construction work is restricted to within the boundary of camp.

Deep Tara Tube well site selection process:

IWM Specialist, DPHE Officials along with EMCRP Consultants jointly visited the proposed DRP Camp area (Camp-4) to conduct the project screening process. The team primarily selected the site on the basis of transect view, community opinion, existing structures, improved water supply coverage. Also considered the initial probable E&S impact, easy access to the DRP, especially the children, women and old aged. So, the team finally proposed location (with GPS) among the other alternative locations. The issue of pregnant women, person with disability, elderly is also taken in consideration. So, the team finally proposed location (with GPS) among the other alternative locations.

The OXFAM is leading WASH activity in camps as focal agency. The UNHCR is performing area focal agency. And the DPHE is executing the project under the financial assistance of World Bank and GoB. After establishing the proposed per Deep Tara Tubewell schemes in the area about 100 people (20 HH) per Tubewell will be benefitted to meet their water requirements.

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

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

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

Within the Deep Tara Tube well areas health post, Mosque, Madrasa, meal distribution point, learning center, fire points, SM Agency Office, child protection facilities, graveyard and information center is identified. However, none is going to be affected due to project intervention. No significant environmental or social disturbance is anticipated due to construction activities. In this scheme area, no elephant migration routes exist (ref. IUCN). Elephant migration routes are within 1km of recorded elephant movement locations (Map-3).



1. Block-B_21.

ID: EMCRP_WD_07B_DTTW_4.1



2. Block-D_19.

ID: EMCRP_WD_07B_DTTW_4.2



3. Block-D_7.

ID: EMCRP_WD_07B_DTTW_4.4



4. Block-D_15.

ID: EMCRP_WD_07B_DTTW_4.6



5. Block-C_22.

ID: EMCRP_WD_07B_DTTW_4.8

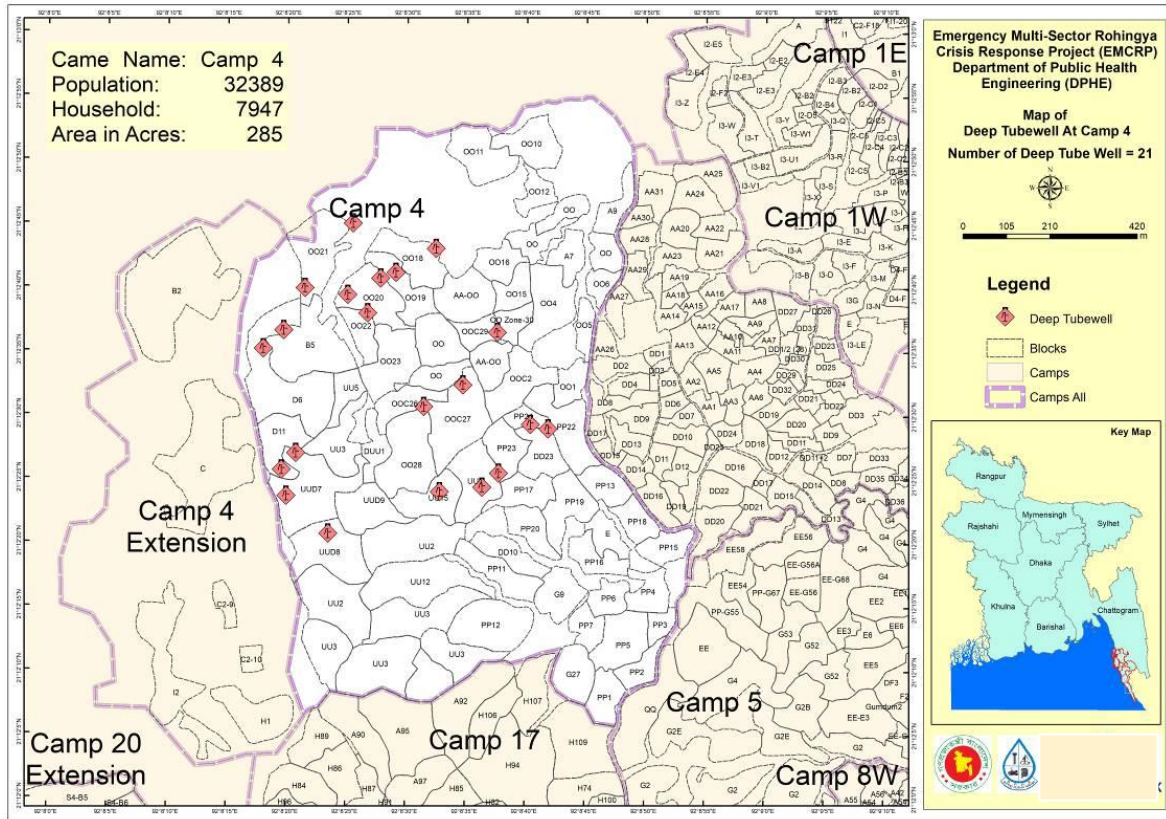


6. Block-C_29.

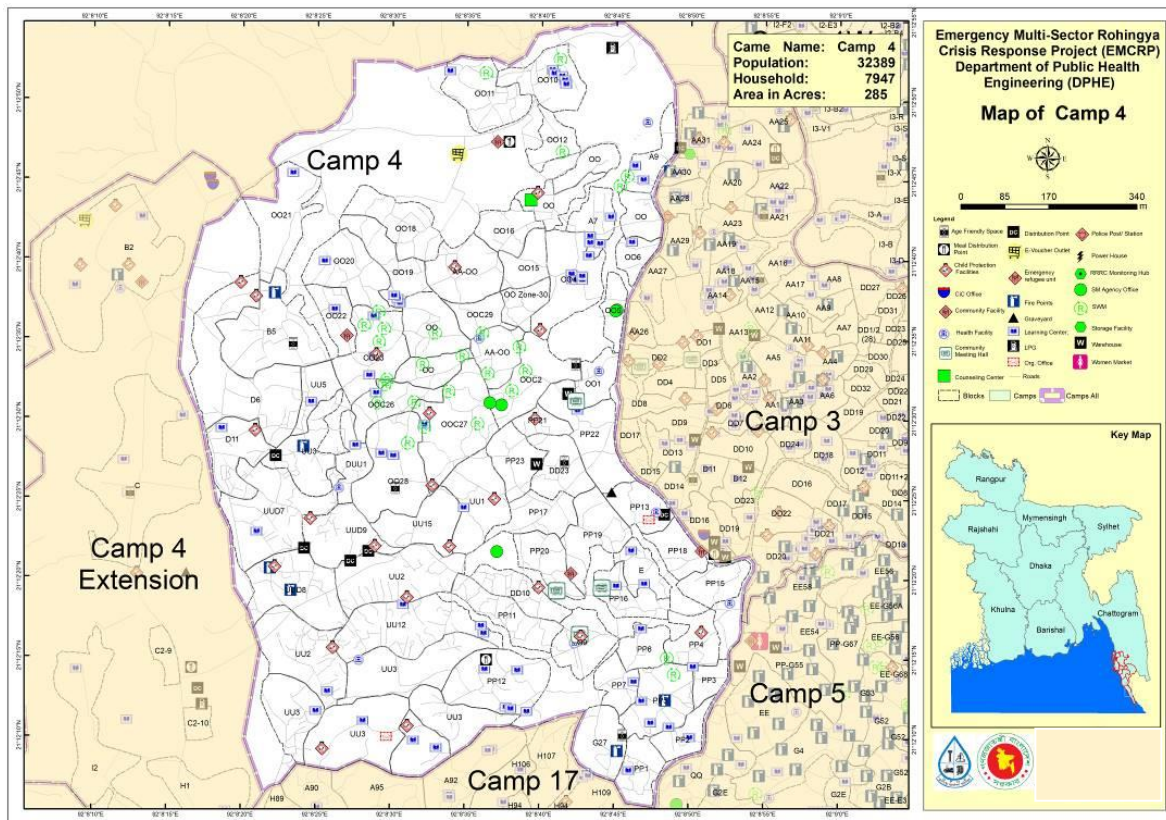
ID: EMCRP_WD_07B_DTTW_4.9



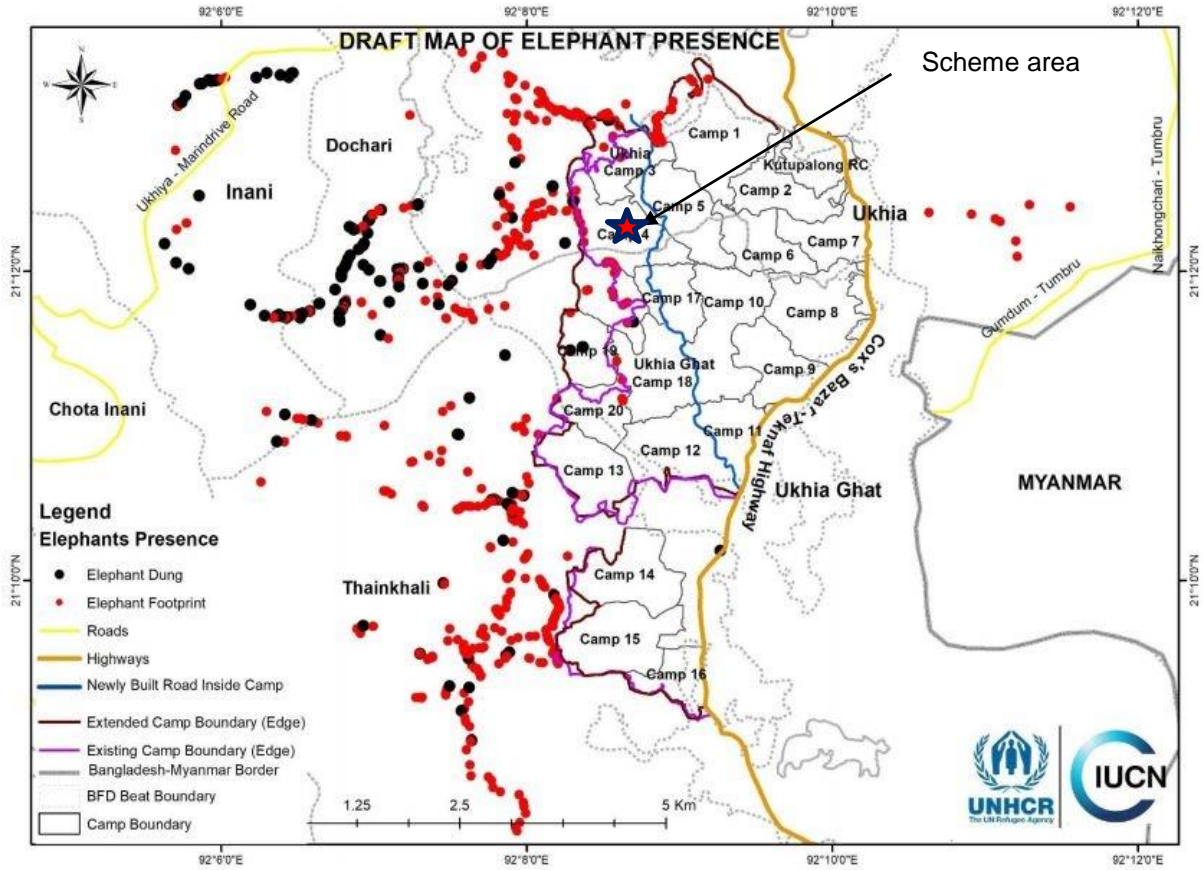
Figure-01: Proposed Deep Tara Tubewell sites at Camp_04



Map-1: Site selected for Deep Tara Tube well at camp- 4



Map-2: Social Information Map of Camp - 4



Map-3: Map of Elephant Presence in Camp area



EMCRP (DPHE part)

Environmental and Social Screening Form

Work Package: WD-07 B Installation of 21 nos. Deep Tara Tube well.

Section A: Sub-Project Overview

Description of sub-project/component interventions:

- I. Installation of 21 nos. Deep Tara Tubewell
- II. Well equipped air compressor (minimum 1 bar) until sand free, odor and turbidity free drinking water at a satisfactory yield
- III. Disinfecting the well including supply of 50 gm of bleaching powder (33% strength), chlorinated water having 150 ppm available free chlorine complete as per standard specification
- IV. Supplying, fitting & fixing of best quality materials and inspection of pump head and cylinder set should be satisfied by Crown agent
- V. Platform and Fixation of Stone Plate ID
- VI. After ensuring proper well development, collect the water samples and sending the samples to the DPHE Zonal Laboratory for testing
- VII. Environmental Mitigation Works
- VIII. Operation & Maintenance work

Sub-project Location:

This sub-project area is located at Camp_04 and Block: B-18, B-19, B-20, B-21, B-22, C-18, C-22, C-25, C-26, C-28, C-29, D-6, D-7, D- 8, D-15, D-19, D-20 at Palongkhali Union under Ukhiya Upazila of Cox's Bazar District. Twenty-one (21) nos. Deep Tara Tube well will be installed in this camp. Most of the proposed sites are in hilly land. No road but footpath is existed close to the sub-project area.

Land ownership: Land is owned by Government of Bangladesh

Expected construction period: 06 (Six) 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):

- i) Adjacent to the scheme site under the sub-project intervention area: Camp_4 and Block: B-18, B-19, B-20, B-21, B-22, C-18, C-22, C-25, C-26,



C-28, C-29, D-6, D-7, D- 8, D-15, D-19, D-20.

- ii) Impacted area: Approx. 3.00 square meter per Deep Tara Tubewell
- iii) No structures, trees and livelihood will be affected.
- iv) DRP shelter relocation is not required.
- v) Influence area: The influence area is within the scheme area of 150 square meter per Deep Tara Tubewell (According to Layout diagram)
- vi) Environmental sensitivity: Within the influence area of the sub-project no historical sites were identified. There is no evidence of presence of elephants in the sub-project influence area (checked with local IUCN representative).
- vii) Every selected Deep Tara Tubewell locations have a one alternative location and 10 meters to 15 meters away from the final selected location. Alternative locations are narrow, congested, low land and close to the toilet.

Section B: Environmental Screening

B.1: Environmental feature of Deep Tara Tubewell location

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

1 (one) kilometre surrounding of scheme area include health post, mosque, food distribution centre, learning center, CiC office and information centre. Apart from this structure, there are no other sensitive cultural, archaeological, religious sites.

Location of environmentally important and sensitive areas:

This location used to be environmentally important and sensitive for protected forest area but now these locations have no forest. Erosion/land slide may occur when moderately to highly sloping terrains are disturbed for the construction of Deep Tara Tubewell. The impacts are negative but very small scale, site-specific within a relatively small area is manageable by practical mitigation measures.

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

Proposed site locations are “Within/near Elephant Migration Routes “

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

No. There is no forest in this area at present. Some plantation activities have been started under afforestation program by different organizations.

(3) Other issues:

No more mentionable issues raised.



Dust:

Ambient air quality data was 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 communication among the DRP, service providers and relief distributors.

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. Potential erosion/land slide may occur when moderately to highly sloping terrains are disturbed for the construction of Deep Tara Tubewell. The impacts are negative but very small scale, site-specific within a relatively small area and minimized by mitigation measures.

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

Surface water quality: No surface water.

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 500ft to 750ft. In the sub-project area, groundwater is saline and arsenic free. Shallow tube well of surrounding the sub-project area are iron concentration is little high.

pH_7.50 to 8.50, DO_2.20 to 8.50mg/l, TDS_25.50 to 350 mg/l, EC_25 to 375 μ s/cm, Fe_0.50 to1.0 mg/l, Mn_0.01 to 0.08 mg/l, Chloride_10 to 65 mg/l and As _ Nil to 0.001 mg/l. (Tubewell depth: 500 ft. to 750 ft.)

Many shallow tube wells have been installed in the camp area. This has resulted in excessive withdrawals of water from the shallow aquifer and a drying up of some of the wells.

***Data source: Secondary data and field survey**

Status of wildlife movement:

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



there.

State of forestation:

To accommodate large numbers of DRP, the hills made clean through deforestation 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 loosens the soil and can result in soil erosion, sedimentation and siltation. Washing out of the valuable fertile top soil make the hills inapt 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 made 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 newly plantation has been done by different organizations.
- ii) After establishing the proposed Deep Tara Tubewell schemes in the area about 100 people (20 HH) will be benefitted per tubewell to meet their water requirements.
- iii) Average Annual rainfall in Cox's Bazaar 3,524.1mm. Average relative humidity 80%. Record temperature high 37.2°C and low temperature 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):

Regarding ancillary facilities at the concerned Deep Tara Tubewell schemes area under this sub-project the main camp connecting roads (newly developed brick made herring bone) is there but the specific approach road / lane is not available over there. Only foot path exists in the sub- project area. However, it is possible to reach the sites and the most feasible option is to carry the construction materials by head load (uPVC pipes, drilling materials, bamboo, breaks, cement, sand and 6 nos. head tubewell etc.) to the construction site.

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

Toilet and water supply available but no electricity supply system in the sub-project area.



| |
|--|
| <p>Possible location of labor camps:</p> <p>Within the scheme area and very close to the sub-project sites.</p> |
| <p>Requirement and type of raw materials (e.g., sand, stone, wood, etc.):</p> <p>i) Bricks, ii) Sand iii) Cement iv) uPVC pipe vi) Gravel vii) hand pump set etc. are the most common type materials used in construction.</p> |
| <p>Identification of access road for transportation (Yes/No):</p> <p>Yes. For unloading point of materials foot path/ narrow earthen road about 5 feet wide is the main way for transportation of the materials by head load from unloading point to sub-project location.</p> |
| <p>Location identification for raw material storage:</p> <p>Adjacent to the Deep Tara Tubewell location and very close to the construction sites and away from steep slopes.</p> |
| <p>Type and quantity of waste generated (e.g., Solids wastes, liquid wastes, etc.):</p> <p>Solid waste: i) Bricks, ii) Sand iii) uPVC pipes vi) earth or mud. It is difficult to give exact figures of pre-construction waste produced on a Deep Tara Tubewell construction site. However, 100 kg of waste may be produced per Deep Tara Tubewell construction site.</p> |
| <p>Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards:</p> <p>No valuable vegetation presence in proposed sub-project construction sites (approx. 3.00 square meter land per Deep Tara Tubewell).</p> |
| <p>Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: (High/Medium/Low with explanation):</p> <p>None.</p> |
| <p>Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description):</p> <p>Low. Natural drainage system is not found. But within 5 to 30 feet, manmade drains are there. The pre-construction work has low impact, if construction materials not storing over the drain.</p> |
| <p>Destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development:</p> |



| |
|---|
| (High/Medium/Low with description): None. |
| Activities that can lead to landslides, slumps, slips and other mass movements in road cuts: None |
| Describe possible traffic movement impacts on (unwanted) light, noise and air pollution: No traffic movement impacts on light but low effects of noise and air pollution. |

High = Likely to cause long-term impacts or over large area (>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) uPVC pipes vi) earth or mud. It is difficult to give exact figures of construction waste produced on a Deep Tara Tubewell construction site. However, 250 kg of waste may be produced per Deep Tara Tubewell construction site. Liquid waste: Drilling mud and drilling fluid waste water. During construction period, fecal sludge will be generated from labor camp. It is difficult to give exact figures of construction waste produced on a Deep Tara Tubewell construction site. However, 750 kg of waste may be produced. |
| Type and quantity of raw materials used (wood, bricks, cement, water, etc.): Raw Materials: Bricks, ii) Sand iii) Cement iv) uPVC pipe vi) head pump set, v) water, vi) Pre-gravel etc. It is difficult to provide exact figures of construction materials that will be used on a Deep Tara Tubewell construction site. However, 500 kg of raw materials may be required per Deep Tara Tubewell construction. |
| Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards: No valuable vegetation presence in proposed sub-project construction sites. So, vegetation will not be affected by construction work. |
| Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: |



(High/Medium/Low with description)

Medium. Water tank for tube well drilling to be required. These can potentially store stagnant water for short period of time during and after rain events. The top soils in the sub-projects are sandy and the water should drain away quickly. During tube well progress work, possibility to stagnant of water.

Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes):

(High/Medium/Low with description)

Low. There is no natural drainage system. Within 5 to 30 feet, there are road side manmade drains. Those drains may block if construction waste & construction materials fall within drain. However, it would be minimal because contractor will dispose the generated waste into designated waste dump site regularly.

Destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development:

(High/Medium/Low with description):

Low. There is no natural drainage system. Within 5 to 30 feet, there are road side manmade drains. Outfalls of those drains are connected with different natural canal. Drain connected water bodies can be contaminated if generated waste of scheme sites get contact with road side drain water by runoff of precipitation or disposal of waste into drain (by discharging solid & liquid wastes from construction site & labor camp into nearby drain & through the drain those wastes can fall into canal water). However, it would be minimal because contractor will dispose the generated waste into designated waste dump site regularly.

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

Construction of the sub-project components can lead to low scale effects of land slide/slips. The impacts are expected to be negative, short-term, site-specific within a relatively small area and can be minimized by mitigation measures.

Erosion of lands below the road bed receiving concentrated outflow carried by covered or open drains: (High/Medium/Low with description):

Low. Potential erosion may occur when moderately to highly sloping terrains are disturbed for the construction of Deep Tara Tube wells. The impacts are expected to be negative, small scale, site-specific within a relatively small area and minimized by mitigation measures.

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

No traffic movement impacts on light as all vehicular movement will be during day time. Some temporary, localized effects of noise and air pollution can occur due to truck movements.



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

B.4: Operation Phase

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

N/A.

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

No chance of long-term or semi-permanent destruction of soils for Deep Tara Tubewell project area.

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

N/A

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

Low. Less possibilities of stagnant water deposition in operation period, due to pipe drain provides tube well platform to drain gray water passing.

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

Safe drinking water supply will be helpful reduce water scarcity crisis of the DRP and improve their health condition.

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

No impact. Because only grey water will be produced from tubewells platform.

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

None

Activities leading to landslides, slumps, slips and other mass movements in road cuts:



N/A

Erosion of lands below the road bed receiving concentrated outflow carried by covered or open drains: (*High/Medium/Low with explanation*):

Low: Low possibility to erosion of land because pipe drains will be provided from tube well platform to nearest drain.

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 |
|--|---|
| <p>Will the project potentially involve an influx of workers to the project location, and will the influx be considered significant for the local community?</p> | <p>The required number of total skilled and unskilled Labor for installation of each Deep Tara Tubewell are respectively 1-2 and 3-5. All the unskilled labor will be engaged from the DRP community. No additional foreign labor will be engaged. All the skilled labor will be staying at labor shed within the camp. The size of the labor shed will be 120 square feet.</p> |
| <p>Is the project located in a rural or remote area?</p> | <p>The project area is in a camp area demarcated by the Government and belongs to camp_04 in a remote specialized area. The population size is 32,389. The frequency and extent of the contract, communication between the local community and outsiders are limited, and controlled by the respective authority. After installation of the proposed Deep Tara Tubewell scheme in the area about 100 people (20 HH) will be benefitted from every Tubewell through meeting their water requirements.</p> |
| <p>Based on the socioeconomic, cultural, religious and demographic qualities of the local community, Rohingya population and the incoming workers, is there a possibility that their presence or interaction with the local community could create adverse impacts?</p> | <p>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 PMU on a regular basis.</p> |
| <p>Consultation with DRP Community People and relevant stakeholders (SH)</p> | <p>During screening and site identification DPHE conducted different consultation with primary and secondary stakeholders (RRRC, WASH Sector, Site Management Committee representatives, Contractor team and DRP Community). The local DPHE has undertaken two consultations with male and female of the DRP.</p> <p>Over the coordination and connection activities of the project, the authorities accomplished some formal exchange meetings, individual household visits, FGD and Tea stall dialogue etc.</p> |



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? | | √ | | No, land acquisition is not for this subproject Deep Tara Tubewells at the DRP camp site. |
| 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 manage the land? | √ | | | The ownership of the land is government and lands are currently empty. |
| 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 Camp-04 area 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? If yes, approximately how many? | | | | |
| | | | | [√] No [] Yes |
| 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.

In order to preparing the Environmental and Social Screening as well as identification of sites several numbers of participatory community consultations was conducted at subproject sites (**Appendix-2**). Several numbers one to one consultation have been also done with relevant stakeholders to have clear understating of their interest, concern and recommendation on proposed subproject. The approach involved a mix of conventional participatory, community consultation and one-to one interview. The DPHE Engineer, IWM Environmental & Social safeguard team, ES and SS, GIS Specialist of PMU, local individuals (DRP) as well as representative of Union Parishad participated. For better understanding the socio-economic and environmental condition community consultation have been conducted in the subproject study area where male and female both the participants were presented. Gender Specialist interview with vulnerable group like pregnant women, elderly, persons with disabilities, etc. The community consultation was 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 public, (iii) to assess cultural patterns and behavior of DRP 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 representative who are concern about the subproject. All of the proceedings and interaction of consultation and community consultations have been recorded and are to be considered in the design of ESMF.

Feedback, Suggestions, and Recommendations of the Participants Community Consultation

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

- During consultation DRP community expressed their pleasure to get DTTWs at the nearest places of their houses. They opined that it will reduce their time to collect water and bring pleasure for them. Now they are using less water as per their need and this is a mental pain for them. Old and pregnant women cannot collect water from the tops of the hills and they fail to get assistance from others very often. The DRP is very much happy with EMCRP project
- Participants expressed that the number of Tara Tube well that have been selected for at camp- 4 is not adequate in term of population density and inadequacy of water supply over the year for the DRPs.
- They emphasized for the construction of the Tara Tubewell with provision of CC platform so that at tube well location and its surrounding area remain dry and safe for women and child;



- Participants showed highly anxious about its operation and maintenance. In this regard, they suggested confirming who will take responsibilities operation and maintenance.
- They also expressed their concern about employment opportunities. They said that, non skilled worker should engage from DRP community so that they can manage their livelihood. As well as they mentioned some skill workers are in DRP community; if possible, they should also be engaged.
- Vulnerable group like pregnant women, elderly, persons with disabilities, etc. requested to install tube well within household areas. Maximum tara deep tube well sites are selected near DRPs household areas.

Individual level consultation with project interest and influence parties (CiC, Site Management Committee (SMC)/Camp Wash focal team, RRRC, UNHCR) representative were conducted in consistence with consultation objective during subproject selection stage to have their idea, concern, segregation about the proposed subproject. Because of Covid-19, virtual meeting was conducted with UNHCR. Consultation outcome with them are consolidated here in below:

- Site Management and WASH focal representatives agreed on selection of proposed sites. By the persuasion of local DPHE the CiC approved the sites. All meeting participants opined that DRP will have access to safe water from the DTWs at door step. The CiC welcomed and committed to support EMCPR implementation at DRP camps.
- Development work of the subproject in camp area, project proponent needs to be taken approval of RRRC with the recommendation of camp administration;
- Intervention sites should not locate in the elephant migration corridor. Hence, elephant migration road map set by the IUCN/UNCHR should follow during site selection.
- Provision of temporary bin for waste collection during scheme implementation should arrange and regular disposal also need to be assured stated by wash focal;
- Finalizing of schemes with the assistance of CiC and other respected organization, site should be confined to avoid the neighboring disturbance
- Engaging DRP/Local community to implement the sub-project properly

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 consistent 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?

Stakeholders are in favor of the projects and believe that overall project impacts will be positive. The influx is straining existing infrastructure and degrading an already resource-constrained social service delivery system and the environment at DRP camps. Access to improved water quality and quantity is a priority. In environmental aspects, the settlement of DRP in Cox's Bazar's South Forest Division, including the Teknaf and Ukhiya Ranges, the Teknaf Wildlife Sanctuary, and other Reserved Forest areas has added unprecedented pressure on the area's natural resources. Regarding Social Protection, it has been revealed that, at least 80 percent of the DRP are dependent on life-saving external assistance. The remaining 20 percent only partially meet their needs through coping strategies, which will quickly deteriorate as coping capacities such as savings are exhausted. The high influx of DRP has placed formidable pressures on an already inadequately resourced social service delivery system.

Positive Impact:

After construction of Deep Tara Tube well, camp area people will get sufficient water provision near by the houses for drinking & other domestic uses, which will reduce their suffering of collecting water to meet up the basic needs. These tube wells will ensure pollution free potable water for DRPs.

Negative Impact:

Due to operation of Tara Tubewell, expected adverse impact would be minimal. Except chance of muddy surface nearby the tube well location during carrying of water and limited interference for ablutions where tube well is adjacent to the site, there will have no significant impact. Beside there will have medium level of negative impact, from waste (mud, liquid waste) that to be generated by constructing the tube well. However, anticipated impact will be short term and negative and localized. Further, if construction site is not fenced properly and is located nearby the learning center then learning center going children may face accident.



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

As per the visit findings 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 engaged 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 appear risk of some social conflict. A complete Gender action plan 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, eve teasing, 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 | Mr. Shah Rezwan Hayat, RRRC Commissioner, CXB, Email rrccox@yahoo.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. |
| | DPHE | Engr. Ritthick Chowdhury, DPHE, Executive Engineer, CXB, Email. chowritthick@gmail.com | | |
| | DC | Md. Mamunur Rashid dccoxsbazar@mopa.gov.bd | | |
| | DRP CIC | Mr. Arup Ratan Singh Asst. Camp-in-Charge, Camp-4 (Asst. Commissioner) arupratan.sust@gmail.com 01847351607 | | |
| UN Agencies /INGOs | WSC, IOM, UNICEF, WFP, FAO, UNHCR, UNFPA | Murray Wilson WASH Sector Coordinator/ Area Focal Agency UNHCR 01708367828 wilsonmu@unhcr.org Mr. Salahuddin Ahmmed | Management of DRP Crisis in BD. Refugee Relief and Repatriation, Site management, Ensuring DRP HH shelter, F/NFIs, WASH facilities, Education, Health, Livelihoods, | DRP Camps, Blocks, synchronizing with Host, E&S aspects, Elephant corridors, conserve NR. Establish proper |



| 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 |
|---|---------------------|--|---|--|
| | | OXFAM Focal Person 01745137585 sahmmed@oxfam.org.uk | Social security, power sources, renewable solar energy. | road communication. |
| 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

Based on the above environmental and social screening, potential impact for implementing the proposed intervention on different parameters of environment and social with consequence mitigation measures and suggestive monitoring plan with mentioning the responsibilities parties of implementation and supervise the subproject 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 . | <ul style="list-style-type: none"> Limiting earthworks; watering of dry exposed surfaces and stockpiles of aggregates at least twice daily, as necessary; (spreading of crushed gravel over backfilled surfaces; Work place isolated by fencing active work sites in populated areas. 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 | <ul style="list-style-type: none"> Location of stockpiles; Number of complaints from stakeholders; Covering of trucks; | Regular monitoring during construction |



| Section | Main Environmental and Social Impacts | Impact Significance* | Suggested Mitigation Measures | Person/Institution Responsible | Monitoring Suggestions | |
|---------|--|--|---|---|---|--|
| | | | | | Indicators | Frequency |
| | Soil | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> • Precautions might 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 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 | Construction Contractor monitored by Environmental Consultant and PMU | <ul style="list-style-type: none"> • No visible degradation to nearby drainages, • Khals or water bodies due to soil erosion. | Weekly, especially after rain events |
| | Hydrology (surface and groundwater) | Under the sub-project intervention, the overall score is Medium | <ul style="list-style-type: none"> • 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 | Construction Contractor and monitored by Environmental Consultant and PMU | <ul style="list-style-type: none"> • Areas for stockpiles, storage of fuels and lubricants and waste materials; • Records of water quality inspection; Water Quality Test | Water quality test (SW & GW) once in construction period and Operation period. Training records reviewed |



| Section | Main Environmental and Social Impacts | Impact Significance* | Suggested Mitigation Measures | Person/Institution Responsible | Monitoring Suggestions | |
|---------|---------------------------------------|----------------------|--|--------------------------------|--|-----------|
| | | | | | Indicators | Frequency |
| | | | <p>environmental management plan.</p> <ul style="list-style-type: none"> • 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 | | <p>(National Drinking Water Quality Standard Parameters);</p> <ul style="list-style-type: none"> • No visible degradation to nearby drainages, khals or water bodies due to construction activities. • For surface water quality parameters: pH, DO, BOD, COD, TC, FC • For groundwater quality parameters: pH, Chloride, As, Fe, TC, FC • Training records. | quarterly |



| Section | Main Environmental and Social Impacts | Impact Significance* | Suggested Mitigation Measures | Person/Institution Responsible | Monitoring Suggestions | |
|---------------------------|---|---|--|---|---|---|
| | | | | | Indicators | Frequency |
| 2: Pre-construction Phase | Sanitation, water supply | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> 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 Environmental Consultant monitored by PMU | <ul style="list-style-type: none"> 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 by PMU and supervision consultants on monthly basis |
| | Storage of construction materials | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> Obviously orient to the concerned person, team assigned for the construction work. More details provided in ESMP | Contractor and Environmental Consultant monitored by PMU | <ul style="list-style-type: none"> List of materials and sources of materials; | Weekly |
| | Impact on Existing drainage: drain may block, due to storage of construction materials on or next to the drain. | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> The Contractor will not be allowed to store construction materials beside drains Regular monitoring is essential If any materials fall within the drain, contractor will clean the drain immediately. | Contractor and Environmental Consultant monitored by PMU | <ul style="list-style-type: none"> List of materials and sources of materials; Storage site away from the drain | Weekly |



| Section | Main Environmental and Social Impacts | Impact Significance* | Suggested Mitigation Measures | Person/Institution Responsible | Monitoring Suggestions | |
|------------------------------|---------------------------------------|--|---|---|--|---------------------------|
| | | | | | Indicators | Frequency |
| | Transportation | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> 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. More details provided in ESMP | Construction Contractor and monitored by Environmental Consultant and PMU | <ul style="list-style-type: none"> Check the vehicle pool. Record of regular inspection. Record of accidents/incidents | Monthly monitoring. |
| 3: Construction Phase | Wastes (earth, mud) | Under the sub-project intervention, the overall score is medium . | <ul style="list-style-type: none"> 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 | Contractor and monitored by Environmental Consultant and PMU | <ul style="list-style-type: none"> Complaints from community; Regular inspection of waste management activity; Waste disposal record. | As work weekly progresses |
| | Water Stagnant Impact | Under the sub-project intervention, the overall score is medium . | <ul style="list-style-type: none"> Water stagnant area should fence with marking tape The top soils in the sub-project are sandy and the water should drain away quickly After construction of tube well, backfilling & compaction of water storage (which is used during drilling) pit is essential Contractor should arrange proper | Construction Contractor foreman and monitored by Consultant and PMU | <ul style="list-style-type: none"> Water stagnant beside tube well area | Daily during construction |



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



| Section | Main Environmental and Social Impacts | Impact Significance* | Suggested Mitigation Measures | Person/Institution Responsible | Monitoring Suggestions | |
|-----------------------------|---------------------------------------|---|--|---|---|---|
| | | | | | Indicators | Frequency |
| | | | <ul style="list-style-type: none"> • Proper PPEs are essential during construction work. | | | |
| | Noise pollution | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> • Consultation with affected people; not to operate noisy equipment during working and operations time (22:00 – 06:00); • Sound suppression for equipment; • Ear protection for workers. • Conduct noise quality monitoring as per EMP. | Construction Contractor and Environmental Consultant monitored by PMU | <ul style="list-style-type: none"> • 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 sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> • Water spraying from other source 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 Environmental Consultant monitored by PMU | <ul style="list-style-type: none"> • Location of stockpiles; • Number of complaints from stakeholders; | Regular monitoring during construction |
| 4: Operational Phase | Water Stagnant Impact | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> • Pipe drain should provide from tube well platform to nearest drain. | <ul style="list-style-type: none"> • Camp WASH NGO staff • DPHE XEN | Accidents register | Monthly |



| Section | Main Environmental and Social Impacts | Impact Significance* | Suggested Mitigation Measures | Person/Institution Responsible | Monitoring Suggestions | |
|---------|--|---|--|--|-----------------------------|--------------------------|
| | | | | | Indicators | Frequency |
| | Erosion of land | Under the sub-project intervention, the overall score is low . | Pipe drain should provide from tube well platform to nearest drain. | <ul style="list-style-type: none"> • Camp WASH NGO staff • DPHE XEN | Accidents register | Monthly |
| | Injuries to operation and maintenance workers | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> • Ensure proper training given to all staff • Ensure PPE used by all staff | <ul style="list-style-type: none"> • Camp WASH NGO staff • DPHE XEN | • Accidents register | Monthly |
| | Air Pollution and Noise from Traffic Movement | Under the sub-project intervention, the overall score is low . | <ul style="list-style-type: none"> • Properly maintained vehicles to be used. • Limit speed to 20kmph at/near work sites | <ul style="list-style-type: none"> • Maintenance Contractor • DPHE XEN | • Complaints by nearby DRPs | During maintenance works |

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



Social Screening Summary:

Under the Construction of Non-Piped Deep Tara Tube well including O&M (WD-7B) for DRP at Camp_04 and Block: B-18, B-19, B-20, B-21, B-22, C-18, C-22, C-25, C-26, C-28, C-29, D-6, D-7, D-8, D-15, D-19, D-20 herein has been illustrating the overall 'Social screening summary:

To furnish the details of social screening, have followed the ESMF, focusing the sub-projects major social impacts its significance (Equity, labor influx, population coverage, easy access, GBV, impact mitigation measures, referral, and monitoring suggestions). For this purpose, no land acquisition is required for this sub-project. Provision is available be utilized within an existing Right of Way within this Camp-4 of Deep Tara Tubewell scheme sites. The sub-project location was found by the support of RRRC, CiC, SMC and local DPHE. Consultation meeting also conduct with local representatives who will be direct or indirectly related in the sub-project. The assigned consultants and local DPHE, CiC representatives, SMC and WASH focal team have visited the proposed site location and prepared the screening report. 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 not close to the site.

Construction induced impact issues:

Since the Non piped Deep Tara Tubewell Schemes is being implemented in an empty government-owned land, no land acquisition will be required which will prevent 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 arrange consultation meeting with the site management along with contractors and camp focal points to take mitigation measures according to ESMF and RPF.

Labor issues:

Every Deep Tara Tubewell Scheme executing contractor will engage skill & unskilled labors. The number of unskilled labor will be 3-5 who will be engaged from the camp while only 1-2 skilled laborers will be engaged from the local/host community/other places of Bangladesh. No foreign labors will be needed to install deep Tara Tube Well. Since the number of external workers will be very few and working for short periods of time (more than 3 months), usually there should be no competition in using resources amongst the host and DRP communities. Thus, the sub-project will not create any influx of workers. The unskilled labors will be hired from the DRP community of Camp-04, 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 labor shed for both male (15ftX15ft) and females (15ftX12ft) for females if necessary. All laborers (skilled and unskilled) shall be provided appropriate training and capacity development to entail a multitude of codes of conduct pertaining to conflict, GBV and other issues.

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.



Gender Based Violence (GBV) issues:

Gender Based Violence (GBV) is one of human rights violations that are exacerbated during emergencies. GBV is generally defined as an umbrella term for any harmful act that is perpetrated against a person's will and that is based on socially ascribed (i.e., gender) differences between males and females. It includes acts that inflict physical, sexual or mental harm or suffering, threats of such acts, coercion, and other deprivations of liberty. The GBV relevance of risk of the project is assumed neither less factor.

Major construction of ongoing project activities engaged skilled labor of host community meanwhile unskilled from DRP community labor. Strict labor code of conduct might be followed as laws. Major concerns are potential exposure to sexual exploitation and abuse (SEA), sexual harassment (SHA) and GBV for females in the area is adherence. Women and vulnerable groups in the proposed location might expose by male laborers while the installation works will do. It seems to hidden lead to sexual harassment of varying degrees.

A GRM establish to deal with related right base issues and working team may conduct consultation meetings with the DRP & host communities, contractors and labor to aware the issues of GBV. Some other topics would discuss in the meeting like code & conducts, working instructions (do's and don'ts) in implementing phase. It helps to mitigate cross-cutting issues of the project matrix.

The predictable outcome of the sub-project with various stakeholders, women and vulnerable groups expected to positive and create responsive socioeconomic heaven. The climate adoption is integrated with project interventions. The Camp WASH Focal, DRP communities and community leader have no complaint to installation Non-Piped Deep Tara Tube Well in Camp-04. The GRC will mitigate any uncomfortable issues if arise worst-situation, according to the ESMF GRM guideline.

UNFPA is being hired as a specialized organization to deal with the GBV activities. This project is a part of the Gender Component of the UNFPA 9th Country Programme contribute to achieve the CP outcome 3 "advanced gender equality, women's and girls' empowerment, and reproductive rights, including for the most vulnerable and marginalized women, adolescents and youth." Any issues on GBV may arise; they will communicate with UNFPA through appropriate channels and resolve the issue as follows.

16 new WFS will establish and 2 existing WFS are fully functioning. Here is providing comprehensive GBV and case management services. It engaged to provide common information, community and outreach initiatives, community-based psycho-social support (PSS) and protection of GBV through community engagement. The other works inclusion and safety audit, strengthening of community-based support mechanism for women and girls by engaging women support groups and adolescence support groups.

The adequate capacity development of staff on GBV, handle GBV case management, coaching, mentoring, supervision, GBVIMS and GBVIMS+ to ensure comprehensive case management services with monitoring and supervision by project personnel. Capacity development also focuses on inclusion of people with disability (PWD) to prevent GBV. Different tools may develop to measure and facilitate GBV, MHPSS services.



A part the GBV case management services, GBV and labor awareness programs will be implemented including all stakeholders. The project site management team, the WB and project clients such as DPHE and LGD encompass all sorts of supporting. MUKTI will support procure WFS strengthening materials and awareness raising materials. And also implement preparedness/ contingency plans for any disasters. Finally, strict monitoring and supervision initiatives will be incorporate to ensure arising issues and averted. Facilitate smooth project processes in terms of gender friendly initiatives.

Consultations and Future Consultations:

Under the EMCRP, the DPHE has initiated elaborate consultations with various stakeholders of this project for the Non-Piped Deep Tara Tubewell Schemes 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, sludge management. Most importantly, the benefits of safe drinking water options through installing the Non piped Deep Tara Tubewell schemes 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, and compensation mechanisms in the event of 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 and improved sanitation (Latrine installation) is one of their priority needs for secured and better livelihoods aspects.

Thus, future consultations during the lifetime of the project are expected to ensure that negative social and environmental impacts are being mitigated with due consideration of community needs and opinions. 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 have a complaint book for stakeholders to register their complaint and the GRM will be institutionalized with qualified personnel having adequate training in dealing with relevant complaints. The GRM will be available for a wide array of issues such as malpractice, labor issues and GBV.



Labour and Contractors management during COVID-19:

Recommendations

For projects involving construction/civil works,

Contractors will develop specific procedures or plans so that adequate precautions are in place to prevent or minimize an outbreak of COVID-19, and what should be done if a worker gets sick.:

- Assessing the characteristics of the workforce, including those with underlying health issues or who may be otherwise at risk
- Confirming workers are fit for work, to 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.

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

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

- 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 arises, following steps will be followed:

- i. Identify vulnerable PAPs and Non-title holders who may have increased vulnerability due to COVID outbreak and (lockdown or loss of livelihood); particularly NTH
- ii. 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;
- iii. Employ local population on wage labor, make advance payments;
- iv. Manage migrant labor for COVID related risks
- v. Invest in living conditions in relocation settlements

D. Community Health and Safety:

PMU and contractors are responsible to implement the following

- i. Stop any Project Activities that may increase community exposure to COVID risks
- ii. Communicate to communities about protective COVID risks and measures
- iii. Monitor incidence and outbreak of communicable diseases
- iv. Identify hotspots based on health data available
- v. Screen Security personnel for COVID



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

E. Stakeholders and Citizen and Grievance Mechanism:

- i. Disseminate COVID advisories over phones, texts, what's app groups, radio, TV, frontline workers Communication;
- ii. Monitor existing grievance and public information mechanisms for any COVID related grievance, queries etc.;
- iii. Widely disseminate material on those who have recovered from COVID to remove stigma
- iv. Include Doctor or medical staff in the GRM
- v. 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, any negative impacts can be mitigated and monitored. ESMP is attached (**Appendix-01**).



Appendix -01 Environmental and Social Management Plan (ESMP)

Considering the intervention wise construction activities of proposed sites potential impact with consequence mitigation measures have been designed (as a ESMP) in the following table for seventeen Non Piped Deep Tara Tube well Camp_4 and Block: B-18, B-19, B-20, B-21, B-22, C-18, C-22, C-25, C-26, C-28, C-29, D-6, D-7, D- 8, D-15, D-19, D-20.

| 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: <ul style="list-style-type: none"> • 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 and Hygiene Promotion Consultant of PMU, Supervision and monitoring firms. |
| Pre-Construction Stage | Loss of land/and other physical assets | <ul style="list-style-type: none"> • No land acquisition will be allowed inside the DRP camp. As, there were no any mitigation measures according to this impact. | PMU, IWM | Social Development and Hygiene Promotion Consultant of PMU |
| Pre-Construction Stage | Loss of livelihoods | <ul style="list-style-type: none"> • Under this sub-project, there is no scope of negative impact of DRP livelihoods. | PMU, IWM & Contractor | Social Development and Hygiene Promotion Consultant of PMU |
| Pre-Construction Stage | Stakeholders Engagement | <ul style="list-style-type: none"> • All the project stakeholders will be engaged in 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 | PMU, IWM & Contractor | Social Development and Hygiene Promotion Consultant of PMU |



| Project Stage | Potential Environmental & Social Impacts/Issues | Proposed Mitigation Measures/indicators | Institutional Responsibilities | Supervision Responsibility |
|-------------------------------|--|--|--------------------------------|--|
| | | <p>project safeguard documents will be disclosed to the stakeholders</p> <ul style="list-style-type: none"> • DRP camp people will be involved with the GRM, formed GRC • Consultation meeting with will be held contractors and labors about safe guard issues. | | |
| Pre-Construction Stage | Loss of Access rights | <ul style="list-style-type: none"> • 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, IWM | Social Development and Hygiene Promotion Consultant of PMU |
| Pre-Construction Stage | Site Selection & implementing interventions: Human-elephant conflict | <ul style="list-style-type: none"> • Selection of sub-project sites will be outside of the elephant route/corridor/influenced area. • Before finalized the location of sub-project must be contact with camp wash focal • Department of Forest (DoF) and Border Guard Bangladesh (BGB) already fixed up the camp area and boundary. Sub-project Interventions will be also included in this area. So, no need to take any further consent for those purpose, if any circumstance arisen. | PMU, IWM | Environmental Consultant of PMU |
| Pre-Construction Stage | Site Preparation: Soil Erosion; Alteration of natural drainage | <ul style="list-style-type: none"> • 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. • For deep tubewell sinking a minimum 10 meters' distance from latrines' soak well to be maintained. If the different number of thick clay layer is found on the upper part of the borelog, there is no problem even if it is near the latrine. • Minimize cut & fill operations, the site clearing and grubbing operations should be limited to specific locations only. • Always try to avoid any disruption of socially sensitive areas with regard to human and biodiversity. • The existing slope and natural drainage pattern on the site should not be significantly altered. | PMU, IWM & Contractor | Environmental Consultant of PMU |



| Project Stage | Potential Environmental & Social Impacts/Issues | Proposed Mitigation Measures/indicators | Institutional Responsibilities | Supervision Responsibility |
|------------------------------|---|--|--------------------------------|--|
| | | <ul style="list-style-type: none"> If trees on private lands are damaged during construction operations, compensation shall be paid to the owner as determined by the DoF or appropriate authority. The contractors shall ensure that site preparation activities not lead to disruption of activities for the local residents and biodiversity. | | |
| Construction Activity | Construction Induced Impacts | <ul style="list-style-type: none"> Any construction induced impacts must be mitigated following the guidelines of RPF and ESMF | Contractors | PMU, IWM and DPHE |
| Construction Activity | Noise from construction works | <ul style="list-style-type: none"> Construction activity will be finished at daytime with in 4.00 pm. Proper measures will be taken to avoid any disturbances. But some works will be continuing for 24 hours' schedule like deep tubewell drilling, development & testing. Contractor will confirm proper measures for avoiding any disturbance of residents as well as biodiversity. Personal Protective Equipment (PPE) will be ensured in sub-project site before starting any kind of construction activities. | Contractor | Environmental Consultant of PMU, IWM, and DPHE |
| Construction Activity | Dust | <ul style="list-style-type: none"> Construction machinery shall be properly maintained to minimize exhaust emissions of CO₂, particulate matter (SPM, PM_{2.5} and PM₁₀) 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. | Contractor | Environmental Consultant of PMU, IWM, and DPHE |
| Construction Activity | Safety Issues | <ul style="list-style-type: none"> 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 Health and safety training will be arranged for the Rohingya or other community's labours before project intervention started. Labour will bring their proper IDs and wear when they will entry in the camp area. | Contractor | Environmental Consultant of PMU, IWM, and DPHE |



| Project Stage | Potential Environmental & Social Impacts/Issues | Proposed Mitigation Measures/indicators | Institutional Responsibilities | Supervision Responsibility |
|------------------------------|---|---|--------------------------------|--|
| | | <ul style="list-style-type: none"> Child labours will not be allowed for any kind of activities Site shall be secured by fencing and maintained at entry points. | | |
| Construction Activity | Traffic Management | <ul style="list-style-type: none"> Contractors to provide traffic management plans to be approved by relevant authorities. If need adequate alternative arrangements will be made to minimize impact on motorist and pedestrians. Adequate road signs to be planted on access roads to limit vehicular speeds For access roads, speed ramps will be constructed by proper design. Traffic signs will be made both in Bangla and Rohingya language. | Contractor | Environmental Consultant of PMU, IWM, and DPHE |
| Construction Activity | Conflicts with existing users due to the scarcity of resource base. | <ul style="list-style-type: none"> A detailed assessment of the available resources and consent of the local representative for withdrawal of water from existing surface water sources shall be taken. If ground water is withdrawn, adequate approvals essential from the appropriate department/authorities before setting up bore wells. Local community must be consulted before any construction works started | Contractor | Environmental Consultant and Social Development and Hygiene Promotion Consultant of PMU, IWM, and DPHE |
| Construction Activity | Increase in road accidents | <ul style="list-style-type: none"> The movement of heavy machinery and equipment will be restricted to defined routes. Proper signage to be displayed at major junctions. Road diversions and closures to be informed well in advance to the local community. The vehicular movement will be controlled near sensitive locations viz. schools, colleges, hospitals, mosques, learning center & DRP camps identified along designated vehicular transportation routes. Local community will be trained up about traffic management and awareness. | Contractor | Environmental Consultant of PMU, IWM, and DPHE |



| Project Stage | Potential Environmental & Social Impacts/Issues | Proposed Mitigation Measures/indicators | Institutional Responsibilities | Supervision Responsibility |
|------------------------------|--|---|--------------------------------|--|
| Construction Activity | Labor Base Camp: Conflicts with the local residents | <ul style="list-style-type: none"> • 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 • Awareness building 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. • Adequate facilities ensuring sanitation for labor camps. • Safe drinking water will be made available at site for labour drinking purpose. • Adequate accommodation arrangements for labour. • Labor code of conduct to be disclosed through consultation and FGD. | Contractor | Social Development and Gender Specialist of PMU, IWM, and DPHE |
| Construction Activity | Waste Management: Improper management and handling of hazardous and non-hazardous waste during construction. | <p>Preparation of a waste management plan covering the following aspects:</p> <ul style="list-style-type: none"> • Residual waste from the temporary accommodation facilities for labor. • 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. • Bins and/ or skips should be emptied regularly and waste/ debris should be disposed off at waste disposal areas and/ or at the site. • Waste from equipment maintenance/vehicles on-site • The scrap material generated from the erection of structures and related construction activities will be collected and stored separately in a stack yard and sold to local recyclers. • Hazardous waste viz. waste, oil, Mobil etc. will be collected and stored in the paved and bounded area and subsequently sold to | Contractor | Environmental Consultant, Social Development and Gender Specialist of PMU, IWM, and DPHE |



| Project Stage | Potential Environmental & Social Impacts/Issues | Proposed Mitigation Measures/indicators | Institutional Responsibilities | Supervision Responsibility |
|-------------------------------------|--|--|--------------------------------|---|
| | | <p>authorized recyclers.</p> <ul style="list-style-type: none"> Waste from civil works will be properly collected Hazardous Waste Management Rules should be applied. | | |
| <p>Construction Activity</p> | <p>Health & Safety Risks:</p> <ul style="list-style-type: none"> 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 events during construction activities such as manual handling and musculoskeletal disorders, hand-arm vibration, temporary or permanent hearing loss, heat stress, and dermatitis. | <ul style="list-style-type: none"> All construction equipment will be properly inspected timely. The risk assessment will be prepared time to time for all types of work activities on site. Proper walkways that are clearly designated as a walkway; all walkways shall be provided with good conditions underfoot; signposted and with adequate lighting. Proper signpost any slippery areas will be ensured in construction site. Carry out fire risk assessment for the construction areas, identify sources of fuel and ignition and establish general fire precautions including, means of escape, warning and fighting fire. A system to alert for workers will be setup on site. This may be temporary or permanent mains operated fire alarm. Fire extinguishers will be located at identified fire points around the site. The extinguishers will be appropriated to the nature of the potential fire. 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. Electrical equipment must be safe and properly maintained; 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. | <p>Contractor</p> | <p>Environmental Consultant, Social Development and Hygiene Promotion Consultant of PMU, IWM and DPHE</p> |



| Project Stage | Potential Environmental & Social Impacts/Issues | Proposed Mitigation Measures/indicators | Institutional Responsibilities | Supervision Responsibility |
|---------------|---|--|--------------------------------|----------------------------|
| | | <ul style="list-style-type: none"> • 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 acceptability etc.), provide the lowest vibration tools that are suitable and can do the works. • All safety equipment will be available in sub-project site (safety, size, power, efficiency, ergonomics, cost, user acceptability etc.), the lowest vibration tools will be provided that are suitable and can do the works. • Regulated noise exposure assessments and noise level surveys of noisy areas, processes and equipment shall be carried out in order to form the basis for remedial actions when necessary. • 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 PPE 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 | | |

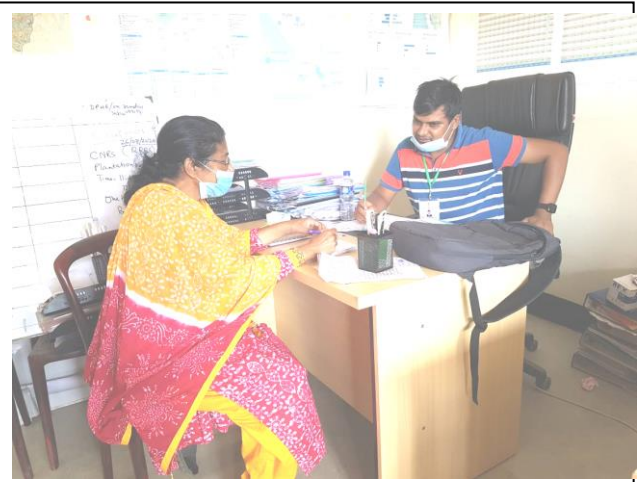


| Project Stage | Potential Environmental & Social Impacts/Issues | Proposed Mitigation Measures/indicators | Institutional Responsibilities | Supervision Responsibility |
|------------------------------------|--|---|--|---|
| | | protect themselves and there should be effective supervision to ensure that the correct methods are being used. | | |
| Operation & Maintenance | Noise disturbances to fauna | <ul style="list-style-type: none"> • Provision to maintain noise from the operation & maintenance of machinery and equipment by noise dampeners • Provision to take necessary lighting, caution for the works and most of the time contractor will avoid the night time construction works. • Contractors will be ensuring the device to determine the of noise level in this sub-project area. • Regularly third-party will be monitored the noise level in this sub-project area. | Contractor: up to contractor's liability period Long-term responsibility to be determined by CiC/DPHE | Environmental Consultant of PMU, Long-term responsibility to be determined by CiC/DPHE |
| Operation & Maintenance | Draw down of deep tubewell groundwater due to excessive withdrawals | <ul style="list-style-type: none"> • Coordination with other development agencies for groundwater extraction rates will be monitoring. • Regular third-party will be monitoring of groundwater levels | Contractor: up to contractor's liability period Long-term responsibility to be determined by CiC/DPHE | Environmental Consultant of PMU, Long-term responsibility to be determined by CiC/DPHE |
| Decommissioning | The impacts are similar to those listed in construction stage: <ul style="list-style-type: none"> • Pollution from waste materials • Health & Safety risks to workers and local community/DRPs | <ul style="list-style-type: none"> • Provision to proper measure of mitigation and monitoring to minimize or reduce the environmental and social impacts during decommissioning are anticipated to be similar to those identified for the construction phase. • Third-party monitoring of air quality as well as on receiving land and water bodies, may be undertaken, if the condition of those compartments seems to be significantly worse. | Contractor: up to contractor's liability period Long-term responsibility to be determined by CiC/DPHE | Environmental Consultant of PMU Long-term responsibility to be determined by CiC/DPHE |

Appendix-02: Community Consultation Meeting with DRP and Meeting with Representative of CiC, Site Management and WASH focal.



Representative of CiC at Camp-04



Representative of Site Manager at Camp-04



Camp WASH focal at Camp-4



Community Consultation Meeting with DRP

Figure-01: Community consultation meeting



Appendix 03: List of the Participants

Consultancy Services for "Monitoring and Supervision of Water Supply and Sanitation Schemes including review, update of existing drawing and design, EIA and SIA" under Emergency Multi-Sector Rohingya Crisis Response Project (EMCRP), DPHE.

Community Consultation Meeting Attendance Sheet **Non pipe**

Camp No 4 Block No C-26 Sub-Project No WD-7B Name of Site Majhee Shopa Date: 08/09/20

| Sl. No. | Name | Sex | | Designation | Mobile number | Signature | Remarks |
|---------|-----------------|-----|---|-------------|---------------|-----------|---------|
| | | M | F | | | | |
| 1 | Rafiq-I | ✓ | | Majhee | 01864636602 | | |
| 2 | Md Ari-fu-llah | ✓ | | DRP | - | | |
| 3 | Md Ennuj | ✓ | | " | - | | |
| 4 | Foyaz | ✓ | | " | - | | |
| 5 | Son-Ali | ✓ | | " | - | | |
| 6 | Elias | ✓ | | " | - | | |
| 7 | Abdullah | ✓ | | " | - | | |
| 8 | Md Ayas | ✓ | | " | - | | |
| 9 | Shafi Atom | ✓ | | " | - | | |
| 10 | Johur Atom | ✓ | | " | - | | |
| 11 | Amanullah | ✓ | | " | - | | |
| 21 | Amin Ali | ✓ | | " | - | | |
| 13 | Ali | ✓ | | " | - | | |
| 14 | Md Saker | ✓ | | " | - | | |
| 15 | Md Jabar | ✓ | | " | - | | |
| 16 | Md Jonaid | ✓ | | " | - | | |
| 17 | Abdul-Latif | ✓ | | " | - | | |
| 18 | Mohammed Hossan | ✓ | | " | - | | |
| 19 | Jaynal | ✓ | | " | - | | |
| 20 | | | | | | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | | | |

Prepared by:
FAZILATUN NESAF
Gender Specialist
EMCRP, SD-14, W/M



Consultancy Services for "Monitoring and Supervision of Water Supply and Sanitation Schemes including review, update of existing drawing and design, EIA and SIA" under Emergency Multi-Sector Rohingya Crisis Response Project (EMCRP), DPHE.

Community Consultation Meeting Attendance Sheet Non pipe

Camp No. 4 Block No. B-19 Sub-Project No. WD-7B Name of Site Majhee house Date: 08/09/2020

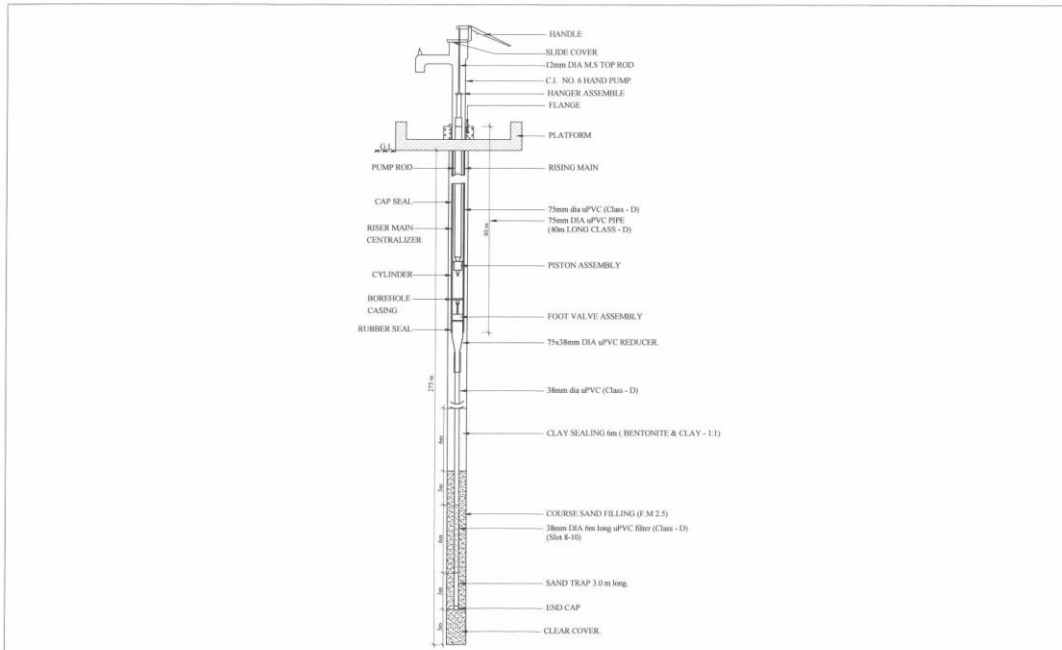
| Sl. No. | Name | Sex | | Designation | Mobile number | Signature | Remarks |
|---------|----------------|-----|---|-------------|---------------|-----------|---------|
| | | M | F | | | | |
| 1 | Md. Shafe | ✓ | | Majhee | 01876409528 | | |
| 2 | Bingjia | | ✓ | DRP | - | | |
| 3 | Ambia Khatun | | ✓ | DRP | - | | |
| 4 | Mabia Khatun | | ✓ | " | - | | |
| 5 | Md Hasan | ✓ | | " | - | | |
| 6 | Kulsuma Khatun | | ✓ | " | - | | |
| 7 | Rehana | | ✓ | " | - | | |
| 8 | Nur Begom | | ✓ | " | - | | |
| 9 | Begom barc | | ✓ | " | - | | |
| 10 | Hamida | | ✓ | " | - | | |
| 11 | Kulsuma | | ✓ | " | - | | |
| 21 | Rahima | | ✓ | " | - | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |
| 21 | | | | | | | |
| 22 | | | | | | | |
| 23 | | | | | | | |
| 24 | | | | | | | |
| 25 | | | | | | | |

Prepared by :

FAZILATUN NESSA
Gender Specialist
EMCRP SD III WAP
Dhaka



Appendix 4: Typical design of Deep Tara Tube well.



| DEPARTMENT: | NAME OF PROJECT: | DESIGNED BY: | VALIDATED BY: | CHECKED BY: | PROJECT DIRECTOR: | DRAWING TITLE : | CONSULTANTS: | DRG. NO: |
|---|---|--------------------|--|--|--|---------------------------------------|--|-----------------|
| DEPARTMENT OF PUBLIC HEALTH ENGINEERING | EMERGENCY MULTI-SECTOR ROHINGYA CRISIS RESPONSE PROJECT (EMCRP) | <i>[Signature]</i> | Mostafiz Ali Joint Lecturer, P&S, IUT-14 IUT, Mirsharai, Dhaka | Md. Farhad Hossain Senior Consultant Engineer in Charge Dhaka, Bangladesh | (Mohammad Abdul Kalam) Project Director Emergency Multi-Sector Rohingya Crisis Response Project, DPHE, Dhaka | TYPICAL DESIGN OF DEEP TARA TUBE-WELL | Institute of Water Modeling B-10, Sector-10, Mirsharai-14, Dhaka-1207, Bangladesh | EMCRP-01 |
| | | | | | | | | SCALE: As shown |



Prepared by:

Environmental and Social Safeguard Team, Contract Package No. SD-14, IWM, EMCRP

Reviewed by :

(Md. Ahsanul Kabir)
SD & HP Consultant, EMCRP (DPHE Part),
Email: makabirbd68@gmail.com

(Mahbubul Alam)
Environmental & Hydrogeologist Consultant, EMCRP (DPHE Part),
Email: alam.mahbubgeo@gmail.com

(Rebeka Ahsan))
Deputy Project Director, EMCRP (DPHE Part),
Email: dpherebeka@gmail.com

(Md. Muktadir Harun)
Social Development Officer, EMCRP, DPHE, Dhaka.
Email: mh.dphe@gmail.com

Approved by:

(Mohammad Abdul Kaium)
Project Director, EMCRP (DPHE Part),
Email: pddphe.emcrp@gmail.com