GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH
MINISTRY OF LOCAL GOVERNMENT, RURAL DEVELOPMENT AND CO-OPERATIVES
LOCAL GOVERNMENT ENGINEERING DEPARTMENT (LGED)

Emergency Multi-Sector Rohingya Crisis Response Project (EMCRP)

Environmental Screening Report
For
Establishment of 2 nos. Women Friendly Space (WFS) in Ukhiya Upazila of Cox's Bazar District

Funded by:

THE WORLD BANK
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Implemented by

UNFPA

Prepared by:

Development Design Consultants Ltd.

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Contents

ACRONYMS

DoE	Department of Environment
DRP	Displaced Rohingya people
EA	Environmental Assessment
EC	Electrical Conductivity
EMCRP	Emergency Multi-Sector Rohingya Crisis Response Project
ESMP	Environmental and Social Management Plan
ERP	Emergency Response Plan
FDMN	Forcibly Displaced Myanmar National
FGD	Focus Group Discussion
FSM	Faecal Sludge Management
GBV	Gender Based violence
GPS	Government Primary School
IEFs	Important Environmental Features
ISCG	Inter Sector Coordination Group
IUCN	International Union for Conservation of Nature
IWM	Institute of Water Modeling
PIA	Project Influence Area
PPE	Personal Protective Equipment
PSC	Project Steering Committee
SPM	Suspended Particulate Matter
SWM	Solid Waste Management
UNHCR	The United Nations High Commissioner for Refugees
UNFPA	United Nations Population Fund
WB	World Bank
WFS	Women Friendly Space
WGSS	Women and Girls Safe Space

1. INTRODUCTION

1.1 Project background

An estimated 730,000[1] people of Rohingya community has fled to neighboring Cox's Bazar district of Bangladesh since August 25, 2017 to escape extreme violence in Rakhine State of Myanmar, which caused the total number of Forcibly Displaced Myanmar National (FDMN) in the district to be about 923,033[2]. This huge number of displaced population account for about one-third of the total population of Cox's bazar, a district which was already facing many development challenges and suffering from resource-constrained social service delivery system even before the crisis evolved and the mass exodus of FDMN has worsened the situation further. Almost all of these displaced people are hosted in Ukhiya and Teknaf Upazila of Cox's Bazar, in extremely congested settlements in areas having very minimal access to basic infrastructure and services and is prone to natural disasters.

Moreover, this forced migrated population has needs in all respect of services and needs. One of the crucial factors which demands attention is well being of women population. FDMN Women living in different camps or shelters have had experience of being tortured and persecuted back in their country or while fleeing the land; and the resulting psychophysical distress and trauma are still haunting many of them. Moreover, this crisis situation is disproportionately affecting women and girls by reinforcing and exacerbating already-existing gender inequalities, gender-based violence and discrimination. So, different tiers of concerns are present while considering safety, health and rights. It is no new matter that female community needs special and separate facilities for the growth and development of health and mental well-being. From the very onset, this crisis has had a particularly gendered nature- 52% of the total refugee population are women and girls, while 85% are women and children and 16% of those households are female headed. Girls, who represent a larger proportion (57%) of the vulnerable group, are particularly at risk of child marriage, sexual exploitation, abuse and neglect. In order to supplement the activities and aid many other development organizations are providing in parallel with UNFPA, in combating the distressed situation of Rohingya Women, girls and adolescents, Women Friendly Spaces (WFS) or Women and Girls Safe Space (WGSS) are being incepted with facilities which will provide services to women based on their needs and development.

The objective of these facilities is to provide greater protection for these vulnerable and different age groups of women communities through:

- Providing psychosocial support to GBV and Non GBV survivors women and girls
- Case management of GBV survivors
- Provide Referral Services to the GBV and Non-GBV survivors women
- Awareness Information Session in WFS
- Awareness Information Session at outreach
- Recreational activities for women and adolescents' girls
- Develop and Disseminate IEC and BCC materials (Early marriage, puberty, HIV/AIDS, Hygiene etc.)
- Form and functioning Women Support Group (WSG)
- Community Watch Group formation and functioning (CWG)

[1] ISCG: Situation Report Rohingya Refugee Crisis, (September 27, 2018)
[2] IOM Needs and Population Monitoring round 12 as of October 10, 2018

- Awareness raising session to reach women and girls with disabilities.
- Distribution of Dignity Kits to the women and girls of re-productive age
- Coordination meeting with other service providers for strengthening referral pathway for ensuring SRHR (Sexual and Reproductive Health & Rights) services
- COVID-19 awareness session
- COVID-19 Kit distribution

This initiative is an undertaking of the Gender Based Violence in Emergency (GBViE) sub-Project which is being implemented by Mukti Cox's Bazar under their respective mandate and scope of works and which is also a partner organization of UNFPA for providing the services. The goal of this endeavor is to advance gender equality, women's and girls' empowerment and reproductive right, for all women and girls in the area, including the most vulnerable and marginalized women, adolescent and youth.

1.2 Aim of the Project

Gender Based Violence in Emergency (GVBiE) sub-project aims to save the lives and uphold the dignity of the women and girls from Rohingya and host communities through improving access to basic services and building separate space with facilities to provide the solutions. Cox's Bazar is facing new challenges with the increasing displaced Rohingya population among all other preconceived emergency conditions at hand. Nonetheless, they are being aided through national and international interventions where solutions to new raised impediments can be arranged. Mukti Cox's Bazar is no different in this matter. With the support of the United Nations Population Fund (UNFPA) they are targeting the suppressing matter of Gender Based Violence (GBV) and women rights. Women Friendly Space (WFS) is proposed to be a facility to address female centred services including different programs and services related to the protection/prevention or recovering from all types of violence against women/female adolescents and protect women's rights for the Displaced Rohingya women population as well as the host community. This establishment is planned to cover all camp sites and center points of local community in order to make sure accessibility. In most cases women find it challenging to find a safe location to put forth their troubles and find assistance from a reliable authority.

1.3 Elementary information of WFS Project

The catchment area of these components falls within the area where mostly Displaced Rohingya Community lives and some parts fall out of the camp location in host community areas. These facilities are selected on the basis of geographical priority and needs for newly developed camp areas or existing host community locations. Moreover, these interventions are also selected considering different social and environmental aspects.

The objective of this Environmental Screening Report is to screen out the major environmental features of the proposed components site and surrounding areas of WFS assessing the potential impacts in respect to the planned interventions on the site and also suggest intervention items specific management plan including appropriate mitigation options, if any or required.

It is imperative to recognize proposed components of these two nos. WFS in Ukhiya Upazila in order to assess and verify its interventions according to UNFPA regards. Acknowledging this matter, such details are accounted for as given below in Table 1.3.1 along with visual presentation (General

Upazila Map with WFS points) given in Figure 1.3.1 and separate map for each WFS as Figure 1.3.3.1 and Figure 1.3.1.2.

Table-1.3.1: Basic Geolocation Information and current condition of WFS proposed location

SL. NO	IDENTIFICATION OF WOMEN FRIENDLY SPACE(WFS)	GPS COORDINATES	DISTANCE FROM UPAZILA HQ	UNION, UPAZILA	WARD NO.	LAND AREA AVAILABLE (SQ.FT.)	LAND AREA ESTIMATED AS DESIGN (SQ.FT.)	PRE-EXISTING CONDITION
1.	Camp-3, Block: D-49, Women Friendly Space	21.20752^0 N 92.14845^0 E	8.5km	Rajapalong, Ukhiya	9	816	701.52	The location is found to be a comparatively empty space however there are few features which might need consideration before access of works for Mukti. The area has visible amount of minor to medium vegetation and fenced with steel wires. If there is a concern for this location to be always fenced then construction works, which is needed in this case, should incorporate such planning.
2.	Camp-14, Block-E3, Women Friendly Space	21.16759^0 N 92.14001^0 E	12.5 km	Palongkhali, Ukhiya	8	5,244	1,647	A pre-established facility is found on the selected location which has enough area and built rooms that can meet WFS activity requirements. This location is adjacent to a playground to the east which will not cause any impediments to this facility as it is strongly fenced and vice versa since all its affairs will be within its premise.

[Sources of data: Field survey, July 2022]

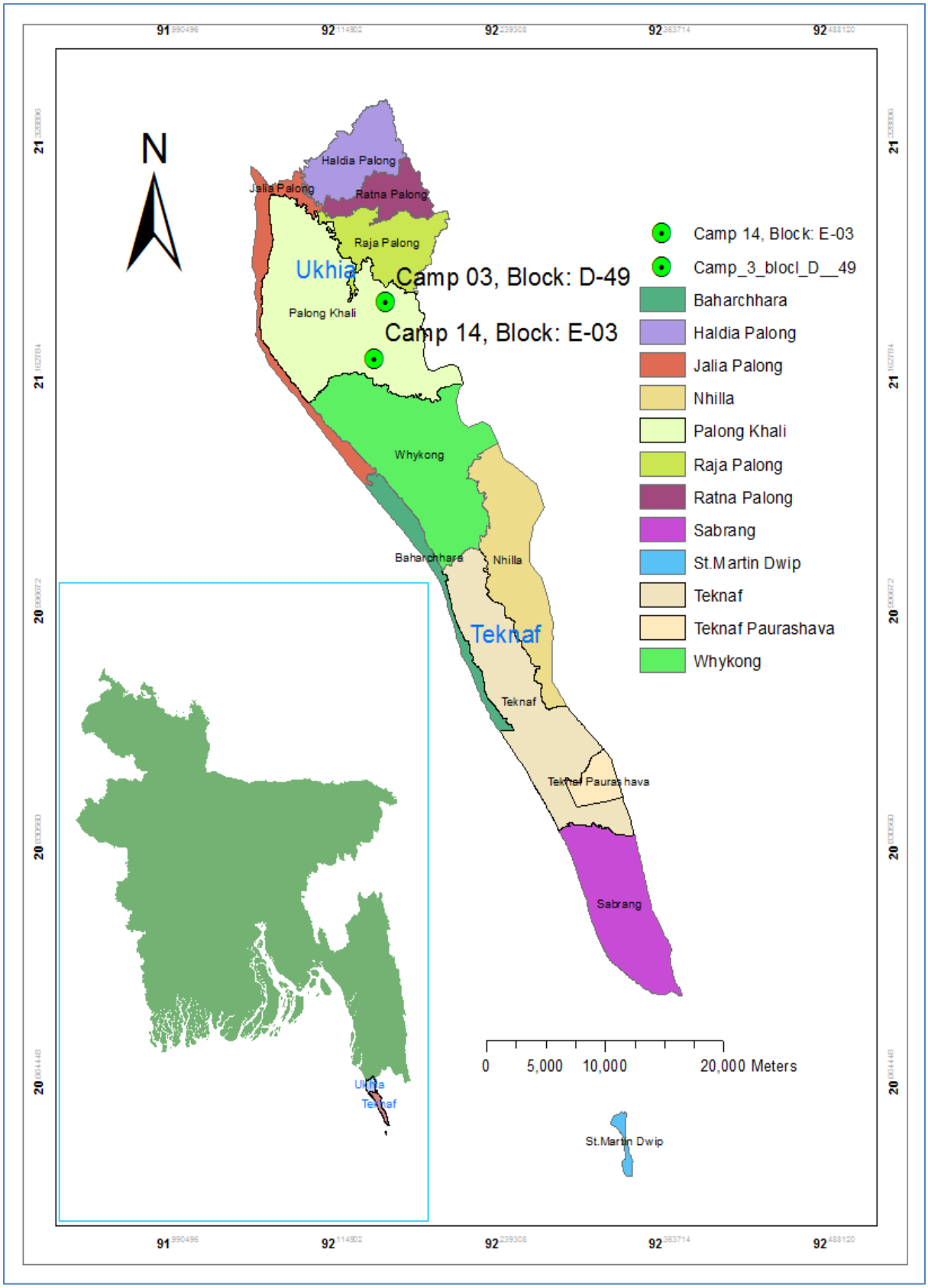


Figure 1.3.1: Map illustrating WFS locations in Ukhiya Upazila

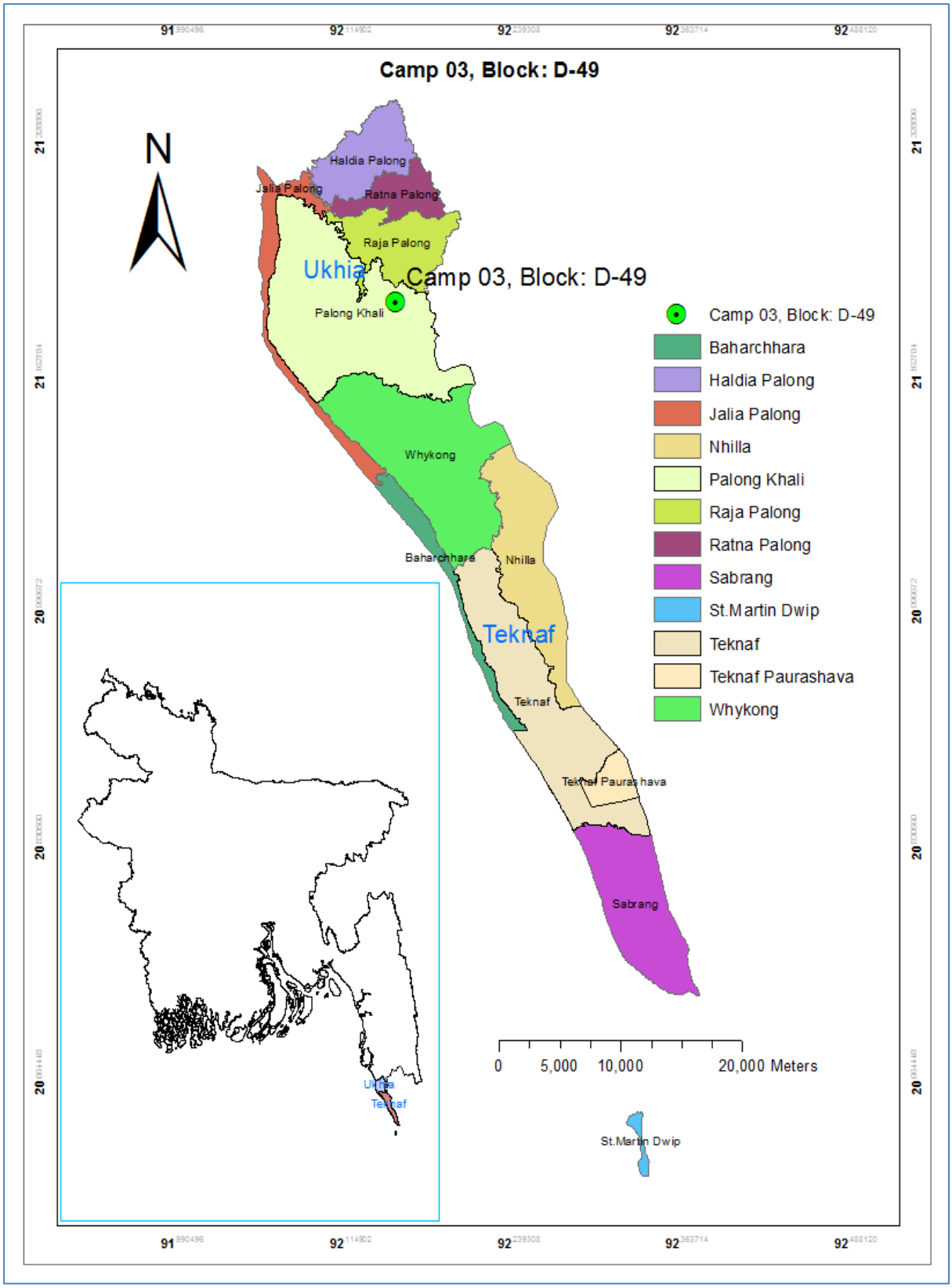


Figure 1.3.1.1: Map illustrating WFS location of Camp-3, Block-D49

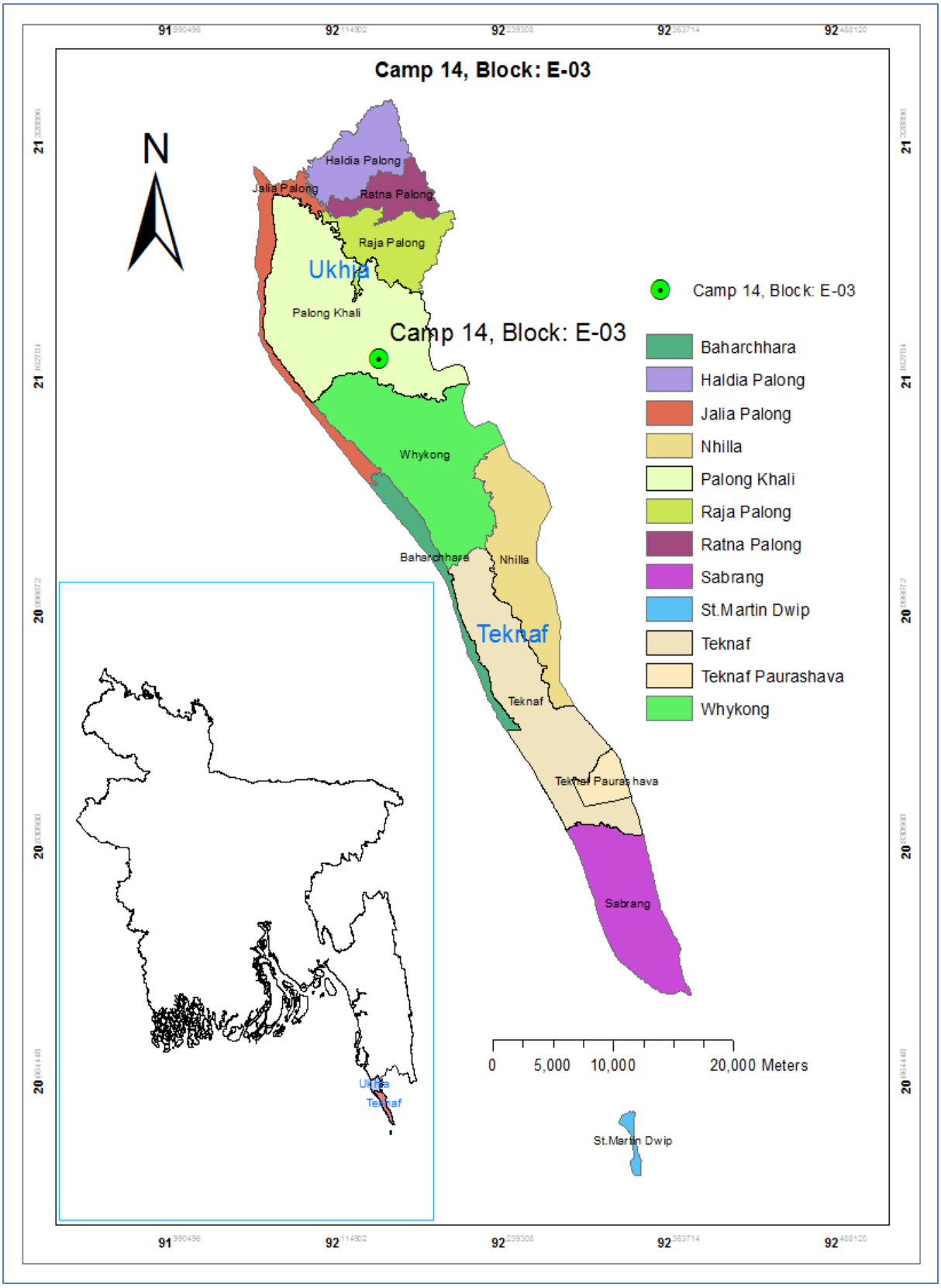


Figure 1.3.1.2: Map illustrating WFS location of Camp-14, Block-E03

1.4 Proposed Facilities in WFS

These Women Friendly Space (WFS) locations have been proposed to ensure aimed services for women and girls. Facilities that are crucial in order to deliver assistance to surrounding women and girls of Rohingya or Host community, was kept in mind while choosing the target location. Each WFS will host separate space for all concerning activities to deliver targeted services and facilities. In context, there will be spaces for consultation, women group meetings and mid-wife facilities and so on. Moreover, these sites are not only set for women welfare but also for children and adolescent groups. The proposed facilities will be equipped with Solar Powered electricity supply system with a capacity of 2 KW, which would help reducing the CO2 emission to 2.19 Tons per year (Ref. CO2 Emission Reduction : Results - Solar Mango – #1 guide for solar; considering 250 days of sunshine each year).

Table 1.4.1: Total requirements of land for each WFS constructions and proposed facilities

Facilities Required	WFS, Camp-3, Mukti Cox's Bazar		WFS, Camp-14, Mukti Cox's Bazar	
	Quantity	Dimensions (ft) Length X Width	Quantity	Dimensions (ft)
Store room, Solar system (Battery)	1	6.9'X5.7'	1	12' X 7'
Staff Office room	1	11.2'X8.8'	1	12' X10'
Session/Counseling room	1	7'X8.8'	1	12' X 7'
Corridor	1	33.6'X4.2'	1	29' X 5'
Varenda	--	--	2	19.6' X4'
Meeting Room	1	17'X12'	2	24' X 17' (In total)
Midwife Room	1	9.0'X8.8"	1	12' X 9'
Guard Room	1	7'X5'	1	7' X5'
Latrine	1	5' X4'	1	5' X5'
Bathroom	1	5' X4'	1	5' X5'

2. PUBLIC CONSULTATION, PARTICIPATION AND SURVEY FINDINGS

2.1 Methodology

Public participation and community consultation have been taken up as an integral part of environmental assessment process of the project. As part of the impact assessment, participatory public consultation was conducted in areas of concern for proposed WFS by PIU and Development Design Consultants Ltd (DDC). The consultation meeting was attended by disparate social groups representing local habitants of different age groups & social class and most importantly women communities in DRP camps. In all cases, Mukti Cox's Bazar representative was present. The meetings were organized in an informed, expressive and unbiased manner, wherefrom different views and concerns came across which will be properly taken care of during the design, construction and operational phases. In order to serve the screening processes, relevant items were communicated to the audience in discussion and troubleshoot confusing or worrying matters regarding the proposed intervention. Impacts in regards to environment, socio-economic matters during pre-construction, and construction and post construction phases have been put forth. Moreover, their comprehension as stakeholder has been up lifted.

All components under the work package have been put through review for locating impediments or possible adversity affecting future environment and socio-economic conditions. In order to comprehend surrounding features and impacts which may stipulate with it, screening has acknowledged to have a Project Influence Area (PIA) of 0.5-kilometer radius. In addition, several walk-through informal group consultations were held. A questionnaire was kept ready and responses were elicited. During these consultations, the communities were explained about the project, facilities for the specific components, its benefits, and associated social and environmental aspects and possible mitigation measures.

As such, public consultation is a living process as the types of problems/ difficulties, involved parties or stakeholders and mode of settlement or resolution processes are more likely to differ with time. Thus, consultation with different parties or stakeholders will be continued throughout the construction/implementation period and records of resolutions, whatsoever and wherever possible, will be kept in writing at the site and made available on any enquiries or requests by all parties concerned.

2.2 Important features/establishments within the PIA

Initial screening process is conducted through field survey and direct involvement of stakeholders in the influence area of the proposed component. In combination of both field walk-through and inputs of audience, a register of existing features is formed. Allow the following table to describe such elements in all the WFS.

Table 2.2.1: Important features under Project Influence Area

Sl. No.	Component's name	Direction	Important features/ establishment (approx. distance from the proposed site)
1.	Camp-3, Block: D-49, Women Friendly Space	North	IOM Clinic(120m), Codec School (50m), Mosque (150m NE), DRP settlements (10m)
		South	Codec School (50m), Mosque (120m)
		East	Mosque (80m), Rohingya Community School (250m), Mosque (150m SE), Camp/Army Road (20m)
		West	Brac Office (5m), Mosque (50m), RATMR Clinic (120m), DRP Settlements (5m)
2.	Camp-14, Block-E3, Women Friendly Space	South	DRP settlements (50m), Coast Task School (20m SE), Mosque (40m SE),
		East	Open Field (adjacent), Codec School (20m), DRP Settlements (60m)
		North	Mosque (50m), Coast Task School (100m), Mosque (600m)
		West	Coast Task School (120m), DRP settlements (50m)

2.3 Issues and Recommendations raised by the Participants in regards to component interventions

In the consultation meeting, environmental issues and their relevant impacts for WFS development work such as renovation or construction of a one-story building were thoroughly discussed. The advantages and disadvantages regarding the development activities were also revealed. A successful public consultation programme requires the following three elements to be effectively executed (i) dissemination of information to the stakeholders (ii) solicitation of views and information from affected parties and inhabitants on social and environmental issues. (iii) Consultation with interest groups and the public.

PIU & D&S Consultants from EMCRP-LGED part conducted consultation meetings with the Rohingya community regarding the work activities. Participants in general don't have any objection regarding the interventions; rather they expressed sheer enthusiasm in beneficial outcomes of the proposed spaces and interest in receiving the services or benefits. The participants were also assured that very low impact might accrue especially from masonry works for the construction/renovation of these WFS structures in open places, but the extent is very negligible.

Please follow the table 2.3.1 given below to recognize participants' inputs arranged in relevance with separate component. Consultation meeting summary and attendance sheets along with pictures of location with separate meetings for proposed location of each Women Friendly Space can be found in Table 2.3.2 and Appendix-01 and **Appendix-02** respectively. Women and adolescent girls were the target groups in every consultation meeting, whose for services will be rendered primarily. In deciding the suitable location in camp areas, representatives of CIC office were consulted as well. No consultation has been undertaken without Mukti Cox's Bazar official. Also, for Rohingya women population translator was involved to convey concerning messages to ensure proper consultation.

Table 2.3.1: Issues and Recommendations raised by the Participants

TOPIC DISCUSSED	ISSUES INTRODUCED	PARTICIPANTS' FEEDBACK /ACKNOWLEDGEMENT
Ideology of WFS	Purpose of WFS and benefits for Women community in regards to women right, women general health/reproductive health/ mental health and support in time of social aggression etc. WFS will also stand as a socio-economic development center for women.	They (especially female participants) have considered this with a strong view and find it as an access point for security and development. They wish to have services from WFS as early as possible since they deal with regular challenges and need help from closer proximity.
Construction/renovation and positioning of WFS	Location of WFS along with relevant renovation issues such as possible location for temporary material storage and labor shed. No child labor is acceptable.	Every location will have to adjust with material storage with whatever space is available. None has any objection regarding the development and renovation of WFS in chosen locations.
Environmental Concerns	No trees should be harmed for this improvement work. Adjacent	The selected locations are not posing any threat to any water body since

	Water body (if present) should be kept undisturbed along with preserved soil and air quality.	no site is nearby to any such feature as such, neither the development interventions. However, renovation works may cause materials leftover to be spread across the surrounding areas such as chemicals (e.g., paints). These specific and very local mismanagement in works may induce impacts on the vicinity, which can easily be avoided or minimized very effectively with a careful work practice. Mukti as a monitoring agent for the implementation must take care of these issues.
Safety at work site	Safety of children and adults at the sites during construction works. Fencing will have to be maintained while construction so that local habitants are not disturbed for any reason.	They have appreciated this motif and stated they will arrange fencing, if necessary, for their own safety from their part of effort.
Specific Need	Any matter that has not been included in this endeavor was requested to be presented by the participants.	They are satisfied with what this intervention is offering and informed, and they also wish to have female consultants and doctors for their health check-up and they have been informed of what Mukti Cox's Bazar is planning to deliver. Also, children's playground is included in the work plan where possible. Women would find guidance for childbirth and their upbringing as well.

Table 2.3.2: Particulars of Consultation Meetings

Sl. No.	Name of camps of proposed Women Friendly Space	Date of Meetings	Meeting Places	Number of Participants				Total
				Host		DRP		
				Male	Female	Male	Female	
1	CAMP-3, BLOCK: D-49, WOMEN FRIENDLY SPACE	31/07/2022	A shop near the periphery of the chosen area.	0	0	12	5	17
2	CAMP-14, BLOCK-E3, WOMEN FRIENDLY SPACE	31/07/2022	Existing WFS Compound	0	0	0	15	15
Total participants =				**0**	**0**	**12**	**20**	**32**

3. ENVIRONMENTAL SCREENING

3.1 General

This section identifies the potential impacts (if any) that the various elements of the proposed WFS may have on the physical, biological and socio-economic environment based on this screening study for the Sub-project that has been conducted to identify and determine which potential Project impacts may be significant and therefore require the application of reasonable and effective management and/or mitigation measures.

In order to realize the exact physical, biological, socio-economic and environmental impacts of the proposed sub-project sites and the influence area in regards to the implementation measures, an extensive field visit was carried out in each proposed area.

The screening data and information for each surveyed Women Friendly Space (WFS) under the Gender Based Violence in Emergency Project (GBViE) is illustrated in safeguard questionnaire summary form shown in tables under section 3.2 where project impacts in construction phases have been considered. Each component has been brought to questioning in order to understand the characteristics of each way impacts these developments may have with circumambient features.

3.2 Major Findings

A complete view of current environmental conditions of individual location in relation to interested queries has been congregated in order to understand the degree of impacts corresponding with marked interventions. Interestingly, most components have correspondence with its surrounding features and uphold interchangeable impacts. However, the degree is not an interchangeable factor since scale is not parallel to each of these components, where differentiation in mitigation measures is implied. There are some cases where unique circumstances have been met with while environmental screening took place which is also accounted for and should be a matter of concern. The significant issues observed in each sub-project are enlisted in following Table 3.2.1 with pertaining impacts. Moreover, impacts that are adventitious have also been embraced for promoting best practices. Detailed Environmental Screening form is given in **Appendix-03.**

Table 3.2.1: Concerning environmental issues relating to each proposed WFS

Project Name:	**Camp-3, Block: D-49, Women Friendly Space**
Environmental Screening Summary	
Is the project located in any environmentally sensitive location?	
No. The location is not occupied in any critical area of any sort. No impact is expected on any sensitive habitat or major forest cover or waterbody. However, current condition of the proposed site is found to have few minor scale vegetation that will need clearing and few uprooting.	
Is the project located in elephant migration route?	
No. This has been checked based on elephant migration route map established by UNHCR/IUCN (latest updated maps as of 22 February 2018 and later June 05, 2018).	
Will the construction of this component induce land degradation or landslide?	
No. This location is not under conditions that may cause landslides during construction, and it is rationally on plain grounds. So, soil degradation and landslide chances are very low.	
Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?	
No. The needed construction works will be limited to the selected site, and this is not located near any waterbody which will be subject to deterioration.	
Chances of Waste generation?	
The construction works will induce waste which will mostly come from a non-permanent establishment preparation and debris as such may include leftovers of wood, bamboo, plastics, wires, and paint chemicals as paint thinners etc. Workers who will work during the renovation period will not generate organic and faecal waste and kitchen waste since labor shed is not needed for erecting a temporary establishment.	
Any damage to existing vegetation or garden plants?	
Low. A small amount of vegetation or plants will be in harm's way for the development of the project since little uprooting will be necessary.	
Will the project cause socio-economic disturbance?	
The selected space is not located in any sort of area that will cause socio-economic deprivation for the development.	
Violation of Environment, Health and Safety?	
This component will be built from scratch therefore ensuring health and safety during construction/renovation phase is crucial. Chemical spills from paint jobs or improper disposal of maintenance or construction waste materials may occur due to worker's misconduct and poor labor safety initiatives. Other than this, no other items are seen to pose risk during construction or operation phase.	
Availability of Labor camp and material storage Space?	
Labor camp is not necessary and separate location other than the nominated site was not found for material storage.	
Availability of Utility Services?	
Electricity is not available. Solar light or Generator will have to be arranged. No pre-existing tube well is found in the proposed location. Tube well will need installing after the construction, which has been confirmed by Mukti Cox' Bazar.	

Availability of access road?			
18 feet wide HBB road is available connecting different blocks and camps which is called the Army Road. This can be used for transport and material supply route. However, a small wooden bridge falls on the course to reach the site where overhead carrying will be suitable for the materials to reach the site. This bridge is not more than 12 meters away from site connecting the Army Road.			
Does the component have Social Safety and Acceptance?			
Selected location is accepted by both male and female representatives.			
Environmental Components (Physical/ Biological)	***Impact during the project life span***		
	PC	**OM**	**DE**
Noise Pollution	Medium	Low	Low
Air Pollution	Medium	Low	None
Soils	Low	Low	None
Vibrations	Low	None	None
Surface Water	None	None	None
Groundwater	None	None	None
Flora	Low	None	None
Fauna	None	None	None

Note: PC = Pre-construction and construction stages; OM = Operation and Maintenance Stage; DE = decommissioning stage. High = Likely to cause long-term impacts or over large area (>0.5sqkm); Medium = Likely to cause temporary damage or over moderate area (0.25 to 0.5sqkm); Low = Likely to cause little, short-term damage and over small area (<0.25sqkm)

Project Name:	**Camp-14, Block-E3, Women Friendly Space**
Environmental Screening Summary	
Is the project located in any environmentally sensitive location?	
No. The location is not occupied in any critical area of any sort. No impact is expected on any sensitive habitat or major forest cover or waterbody. Current condition of the proposed site is found to have a pre-existing bamboo made facility.	
Is the project located in elephant migration route?	
No. There is no existence of Elephant corridor/ route now, which have been checked on the basis of elephant migration route map established by UNHCR/IUCN (latest updated maps as of 22 February 2018 and later June 05, 2018).	
Will the construction of this component induce land degradation or landslide?	
No. This location is well-built on plain land and functioning on a bamboo made structured. So, soil degradation and landslide chances are very low.	
Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?	
No. The renovation works will be limited to the selected site, and this is not located near any waterbody which will be subject to deterioration.	
Chances of Waste generation?	
The renovation works will induce waste which are mostly renovation debris such as leftovers of wood, bamboo, plastics, wires, and paint chemicals as paint thinners which contains Volatile Organic	

Compounds (VOCs) etc. Workers who will work during the renovation period will not generate organic and faecal waste and kitchen waste since labor shed is not needed.
Any damage to existing vegetation or garden plants?
This location does not offer any greenery which might be affected by the intervention.
Will the project cause socio-economic disturbance?
The project is not located in or around any agriculture field or existing socio-economic structure which will be challenged by this intervention. Hence, no impact is expected.
Violation of Environment, Health and Safety?
Though this component is purely renovation works with minor changes, it should be ensured that during renovation phase or operation phase the site do not experience damage. Chemical spills from paint jobs or improper disposal of renovation waste materials may occur due to worker's misconduct and poor labor safety initiatives. Other than this, no other items are seen to pose risk during construction and operation phase.
Availability of Labor camp and material storage Space?
Labor camp is not necessary and separate location other than nominated site was not found for material storage.
Availability of Utility Services?
Electricity is not available. Solar light or Generator will have to be arranged. No pre-existing tube well is found in the proposed location. Tube well will need installing after the construction, which has been confirmed by Mukti Cox's Bazar.
Availability of access road?
A road is found coming from union parishad connecting to camp-14; also another road camp 14 CiC to Cox's Bazar-Teknaf highway is present. This camp roads do not take to the facility directly; also walking paths of few hundred meters will lead to the proposed site after using these roads.
Does the component have Social Safety and Acceptance?
Selected location is accepted by both male and female representatives. Also, the location does not have any surrounding element that might hamper the peaceful activity of WFS.

Environmental Components (Physical/ Biological)	***Impact during the project life span***		
	PC	**OM**	**DE**
Noise	None	None	Low
Air Pollution	None	None	Low
Soils	None	None	None
Vibrations	None	None	None
Surface Water	None	None	None
Groundwater	None	None	None
Flora	None	None	None
Fauna	None	None	None

Note: PC = Pre-construction and construction stages; OM = Operation and Maintenance Stage; DE = decommissioning stage. High = Likely to cause long-term impacts or over large area (>0.5sqkm); Medium = Likely to cause temporary damage or over moderate area (0.25 to 0.5sqkm); Low = Likely to cause little, short-term damage and over small area (<0.25sqkm)

There is no evidence of presence of elephants in the subproject area. The IUCN has conducted a study on such conflict. With the support from UNHCR, IUCN has been marking elephant routs and corridors and informing local communities and stakeholders of avoiding the marked areas. As part of the mitigation options, different initiatives have been undertaken, such as formation and capacity development of Elephant Response Teams (ERTs); providing equipment to ERTs to divert in-coming elephants; and setting up elephant deterrent tools (e.g., trip alarms and watch-towers). Though the current chances of occurrence of conflicting incidence are becoming narrow since for long periods elephants have left these locations showered with displaced population and settled away from all the commotion, any recurrence would be managed by the ERTs and they will be called if there appears any minute possibility to recur. **Appendix-4** presents a map of elephant routes of Ukhiya Upazila which is prepared by the IUCN.

In order to offset the loss or attenuating the environmental degradation, a set of mitigation measures will be adopted, on top of general practice of standard construction procedure or following the relevant codes of practices.

3.3 Climate Change Impact Screening

3.3.1 General Overview of the area

Cox's Bazar is one of the coastal districts of Bangladesh and is prone to the effects of climate change due to its geomorphological siting and climate induced effects. The hilly tracts of Cox's Bazar could foster further environmental crisis brought on by indiscriminate deforestation and diminishing groundwater reservoirs, which have been taken place in recent months as the Rohingya crisis evolved. A recent study conducted by World Bank[3] has found that Cox's Bazar will be the worst-hit district in South Asia as average temperatures rise and rainfall patterns become disruptive, by 2050, if greenhouse gas emissions continue unabated.

The hilly region of the country, especially the part in Cox's Bazar is characteristically of muddy soil structure, not of any rocky formation and the stability comes from the roots of the trees. Also rainfall, proximity to the sea, elevation, and land cover are very important factors for analyzing the risk of cyclone. Denudation of trees from hilltops in order for the huge settlement of Rohingya people has already increased the vulnerability to the risk of hill collapse by destabilizing the terrain. Also, deforestation at a rapid speed uncovers the land and raise the risk of occurrence of cyclones, as forests protect land from high wind and storm surges where demolishing the trees would make the area vulnerable.

Together with the above-mentioned hazardous situation, again due to sudden extraction of huge amount of groundwater, availability of potable water from shallow tube wells that pump water up from about 150 feet has already reached to a critical level. Averting the problem requires new tube wells to be plumbing deeper into the poorly mapped aquifer but going deeper than 700 feet in some places may cause salt water to contaminate freshwater resources.

[3] https://openknowledge.worldbank.org/bitstream/handle/10986/28723/9781464811555.pdf

3.3.2 Site Specific Screening and outcome

Climate Change impact on a particular subproject is tough to deduce as the highest resolution of climate model simulation done over Bangladesh is 50km. Depending on the simulation ensemble of Cox's Bazar district, the temperature and precipitation are likely to increase with time.

The impact of cyclone and precipitation has higher impact in this area, Intensity of precipitation has increased according to the participants and number of cyclones has been seen to have increased in the past few years. Salinity has not been found in the vicinity of the target locations. Cyclonic storm surge has medium impact in the proposed areas. Temperature has increased and thus has medium impact on the area and Thunderstorm has been seen to have increased and is found to have highest impact in the area. Water stagnation has not been found. Drainage channel has not been found in the target areas.

As compared to the entire district area or a 50km resolution for model simulation, the proposed sites are trivial point for impact generation, having minor footprints in respect to climate change effects. Yet, to avoid the devastation caused by the growing thunderstorm events, conventional lightning protection system (copper rod to be used as a lightning arrester) should be employed to the proposed facilities. Solar power as energy sources is suggested to be incorporated in the design and to be implemented as part of the construction of these WFS. As there is very low impact of cyclonic storm surge in the area the mitigation measures for flooding potential are not provided here.

4. ENVIRONMENTAL AND SOCIAL PROTECTION/SAFEGUARDS

4.1 Mitigation and Management Measures

Considering the environmental settings of the sub-project area, it can be assumed that possible impacts would be largely construction-related, and could be addressed through adoption of good engineering practices; good housekeeping; better *in-situ* construction materials management; and observance of health and safety protocols during the implementation period.

Though these components will not require intensive structural development, the contractor must adhere to the best practice debris management procedure and regular adoption of dust control measures (spraying of water at least twice a day) to minimize the effect to the least level from the renovation works. Further improvement related activities which may result in adverse impacts in the surrounding environment of the sub project must be kept under close consideration and appropriate mitigation and management measures will be taken with due care and vigilance. Contractor's staffs and workers will be given training on good practice construction works, health safety, and efficient camp management, and relevant awareness building sessions will also be conducted, and records of all those training and awareness building sessions will be kept on-site as part of effective management and monitoring of safeguard works. With all the required efforts, once the overall effects for this proposed development works are minimized to its least level and controlled efficiently, it will turn into a welcoming and beneficial project for the DRP communities.

Environmental and Social Management Plan (ESMP) has been outlined for WFS in **Appendix-5** delivering specific indicators for each category of project intervention periods including sub-project specific issues. The mitigation measures as well as monitoring program of ESMP have also been incorporated in the management plan.

4.2 Health and Safety Measures under COVID situation

Apart from the established Occupational Health and Safety (OHS) measures being followed in construction/renovation sites and offices, a set of additional measures has to be taken and practiced throughout the daily cycle by each labor, staff and any involved parties, due to the ongoing pandemic coronavirus situation. Staffs and consultants at PIU and D&SC, and UNFPA, along with the pool of staffs of implementing/partner organizations and construction contractors and suppliers have to play much sensitive, pro-active and responsible roles in abiding by the rules and measures by themselves and getting the involved workers and different stakeholders adhered to the same. A detailed guideline containing a set of measures with shared responsibilities has been sketched out under this project, in order to curb the exposure and further spread of this potentially fatal situation. This plan or guideline shall constitute an integral part of ESMP measures for every sub-project, though is not included in this report to keep it concise and specific, and the contractor is required to keep the copy of that guideline at every site office.

However, among many other relevant issues, the guidelines emphasize on following line of directives:

a. Contractor must designate one of his employees as H&S/Safeguards supervisor to lead, coordinate and interface in order to fight the COVID 19 situation under the direct guidance of COVID focal at PIU of EMCRP project (here, someone from MUKTI Cox's Bazar would do the same).
b. All workers, supervising and supporting engineers and staffs, service providers and other concerned parties must adhere to the personal health and hygiene rules, social distancing, and other protective measures in full in order to protect themselves and contain the infections any further. Necessary training and awareness campaign will be aligned with the specific sub-project scenario and prevailing conditions.
c. General practice of cleaning and hygiene has to be maintained in all project/site offices and camp sites, and supply of necessary PPEs and cleaning /disinfecting materials along with proper use of those is to be ensured.
d. Necessary protocols have to be established and maintained in case of handling a sick employee or worker, and appropriate compensation to a sick disengaged labor is required to be given with due documentation.
e. Budgeting for suggested protective measures, along with necessary supervision and monitoring for the required interventions has to be ensured.

5. CONCLUSION AND RECOMMENDATIONS

The overall conclusion is that if the mitigation, compensation and enhancement measures are implemented in full, there will be no significant negative environmental impacts in regards to the selection of location, design, construction/renovation, and/or operation procedure of the proposed Sub-project. Pre-existing facilities are to be used in most cases but precautions must not be taken lightly doing any level of renovation works. There will in fact be tremendous benefits from recommended mitigation and enhancement measures and major improvements in quality of life and ensuring social safety and security for women community will be achieved once the scheme is in operation.

The conclusions of the screening study can be summarized as follows:

- The female communities will receive large benefits in terms of quality of life, particularly with reducing vulnerability to social aggression, miss-treatment, and health & education.
- None of the proposed WFS sites are located in or near to any environmentally sensitive sites/areas, nor will cause any significant detrimental impacts during the construction period. Social impacts of different forms may arise during the operational period of those WFS facilities, which need to be carefully handled.
- The short-term negative impacts that may come by the way of noise, solid waste, occupational health & safety, though very negligibale, need to be minimized through the management plan.
- The project will create employment for those who live in the vicinity of the construction site and will provide them a short-term economic gain.
- A comprehensive Environmental and social Management Plan (ESMP) has been prepared to mitigate and reduce the adverse impacts that will come out from the project activities. Costs involved with any preparatory, conservative, mitigation, or offsetting measures delineated in the ESMP or for any contingency measures will be borne by the UNFPA/Mukti Cox' Bazar.

Appendix-01: List of Participants in the Consultation Meetings

Camp-3, Block : D-49 Women Friendly Space (WFS)

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

সময়: 10:40 AM তারিখ: 31/07/2022

উপ-প্রকল্প/কমপোনেন্ট এর নাম: Camp-3, Block-D49 Women Friendly Space (WFS)

মত বিনিময় স্থান: Beside the vacant space alloted for WFS of camp-3, in front of the shop Mst. Md. Enayet Ullah

ইউনিয়ন: Rajapalong ওয়ার্ড নং: 09 ডাকঘর (পোষ্ট কোড সহ): Ukhiya 4750 উপজেলা: Ukhiya

জেলা: কক্সবাজার

সাব প্যাকেজ নং:

অংশগ্রহণকারীদের হাজিরা (পরিচয় ও স্বাক্ষর)

ক্রম নং	নাম	বয়স	পুরুষ/নারী		গ্রাম/ব্লক/সাব ব্লক	স্বাক্ষর / টিপসই
			DRP	HOST		
০১	মোঃ শরীফ	৪৪	✓	-	D-50	
০২	মোঃ রফিক	২০	✓	-	D-50	
০৩	আলী হোসেন	৬৮	✓	-	D-50/02	
০৪	মোঃ ওসমান (আলি)	৩৪	✓	-	D-50	
০৫	আফিয়া উল্লাহ	২২	✓	-	D-52	
০৬	ইব্রাহীম	২৫	✓	-	D-50	
০৭	নাসরিন উল্লাহ	২০	✓	-	D-52	
০৮	মোঃ হোসেন	২৯	✓	-	D-52	
০৯	খুরশিদ আক্তার	২৪	✓	-	D-49	
১০	মোঃ সুলতান	৩৬	✓	-	D-50	
১২	মোঃ সালাম	৪৮	✓	-	D-49	

Camp-3, Block: D-49 Women Friendly Space (WFS)

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

সময়: 10:40 AM তারিখ: 31/07/2022

উপ-প্রকল্প/কমপোনেন্ট এর নাম: Camp-3, Block-D49 Women Friendly Space(WFS)

মত বিনিময় স্থান: Beside the vacant space alloted for WFS of Camp-3, In front of the shop Mr. Md. Enayet Ullah.

ইউনিয়ন: Rajapalong ওয়ার্ড নং: 09 ডাকঘর (পোষ্ট কোড সহ): Ukhiya 4750 উপজেলা: Ukhiya

জেলা: কক্সবাজার

সাব প্যাকেজ নং:

অংশগ্রহণকারীদের হাজিরা (পরিচয় ও স্বাক্ষর)

ক্রম নং	নাম	বয়স	পুরুষ/নারী		গ্রাম/ব্লক/সাব ব্লক	স্বাক্ষর / টিপসই
			DRP	HOST		
01	সাজিদা বেগম	80	✓	-	D-50	Sajeda.
02	রাজু বেগম	67	✓	-	D-50	
03	নূর বেগম	62	✓	-	D-49	
04	মেহেরা বেগম	87	✓	-	D-50	
05	সাহিদা খাতুন	05	✓	-	D-49	

Figure: Attendance of consultation meeting for WFS at Camp-3, Block-D49

Camp-14, Block : E-3 Women Friendly Space (WFS)

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

সময়: 12:15 PM তারিখ: 31/07/2022

উপ-প্রকল্প/কম্পোনেন্ট এর নাম: Camp-14, Block: E 3 Women Friendly space (WFS)

মত বিনিময় স্থান: At existing WFS Compound

ইউনিয়ন: Palongkhali ওয়ার্ড নং: 08 ডাকঘর (পোষ্ট কোড সহ): Ukhiya 4750 উপজেলা: Ukhiya

জেলা: কক্সবাজার

সাব প্যাকেজ নং:

অংশগ্রহণকারীদের হাজিরা (পরিচয় ও স্বাক্ষর)

ক্রম নং	নাম	বয়স	পুরুষ/নারী DRP	HOST	গ্রাম/ব্লক/সাব ব্লক	স্বাক্ষর / টিপসই
০১.	সুমাইয়া বিবি	১১	✓	-	E-1 Block-16	Sumaya
০২	তসলিমা	২০	✓	-	Block-18 F-3	[thumbprint]
০৩	নুর কলিমা	২২	✓	-	Block-18 F-3	NOOR KOLEMA
০৪	নুর ছফা	২০	✓	-	Block-17 F-2	Nur Safa
০৫	ইসমত আরা	২2	✓	-	Block-18 F-3	[thumbprint]
০৬	ইয়াস সাহার	২2	✓	-	Block-17 F-2	InnBoSFA
০৭	সাদেকা	২2	✓	-	Block-16 F-1	Sadeka
০৮	আনোয়ারা কালি	২2	✓	-	Block-18 F-3	Anuwa kal

Camp-14, Block : E-3 Women Friendly Space (WFS)

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

সময়: 12:15 PM তারিখ: 31/07/2022

উপ-প্রকল্প/কমপোনেন্ট এর নাম: Camp-14, Block: E 3 Women Friendly Space (WFS)

মত বিনিময় স্থান: At Existing WFS Compound

ইউনিয়ন: Palongkhali ওয়ার্ড নং: 08 ডাকঘর (পোষ্ট কোড সহ): Ukiya 4750 উপজেলা: Ukiya

জেলা: কক্সবাজার

সাব প্যাকেজ নং:

অংশগ্রহণকারীদের হাজিরা (পরিচয় ও স্বাক্ষর)

ক্রঃ নং	নাম	বয়স	পুরুষ/নারী		গ্রাম/ব্লক/সাব ব্লক	স্বাক্ষর / টিপসই
			DRP	HOST		
০১	[illegible]	২৭	✓		Block-18 E-3	
০২	[illegible]	৫০	✓		Block-18 E-3	
০৩	[illegible]	৪০	✓		Block-18 E-3	
০৪	[illegible]	৩০	✓		Block-18 E-3	
০৫	[illegible]	২৫	✓		Block-18 E-3	
০৬	[illegible]	৫০	✓		Block-18 E-3	
০৭	[illegible]	৩৫	✓		Block-18 E-3	

Figure: Attendance of consultation meeting for WFS at Camp-14, Block-E3

Appendix-02: Pictorial View of the sites and consultation meetings

Figure: Present condition of selected site for WFS Camp-3; Block-D 49

Figure: Present condition of the selected site for WFS Camp-14; Block-E3

Appendix-03: Filled in Environmental Screening Forms for examining WFS

Environmental Screening Form for WFS (Camp-03)

Name of Sub-Project: Camp-3, Block: D-49, Women Friendly Space

Implementing Agency/Agencies: Mukti Cox's Bazar

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

Name of Community/Local Area: Rajapalong, Ward No.-09, Camp-03, Block- D49

Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):
A one story structure, made of bamboo wall with tin/tarpaulin on the roof, having brick-cement floor, involving simple masonry works, will be constructed for the facility. The construction works require bamboo, ropes, tin/tarpaulin, bricks, sand, cement, paints, electric wires & peripherals, etc. There is an abandoned tin-shed structure at site which needs smaller renovation works and could be annexed to the new facility. Supply of electricity and fresh water to the site is to be ensured by the implementing organization.

The location is found to be a comparatively empty space however there are few features which might need consideration before access of works for Mukti Cox's Bazar. The area has visible amount of minor to medium vegetation and fenced with steel wires. If there is a concern for this location always to be fenced then construction works, which is needed in this case, should incorporate such planning.

Estimated footprint / land area for this sub-project is 701.52 sq. feet

Available land area: 816 sq.feet which is an empty space and planned to be constructed upon.

Brief description of sub-project site: (e.g., present land use, Important Environmental Features (IEFs) near site, etc.:
Proposed WFS is situated within the catchment area of Camp-03 in Rajapalong union of Ukhiya Upazila under Ward 9. The proposed location has a tin shed house that was previously used by a separate organization. Mostly DRP settlements are found surrounding the selected site and being closer to the Army camp road will prove this site to be an effective WFS center for all surrounding area. The location is found to be a backyard of other abandoned facility. An adjacent room to the north is to be used by Mukti Cox's Bazar for administrative works. The space however has no environmentally significant concerning feature which may be harmed from the placement of the proposed WFS other than shrubs and small trees that will need clearing as well as restructuring of the existing fence. Other than Army Road, another pedestrian pathway is present on the south of this site that is heavily used by the DRP settled there. Few mosques and non-permanent establishments are present within 500-meter area, majority of which are DRP settlements and learning facilities of different organizations. Moreover, no economic establishments as agriculture

fields or fish farm are present near this location. This location is set on a comparatively low land.

Overall Comments

The proposed WFS is not located within any remarkable environmentally sensitive area and will not cause any severe effect to the environmental settings of the area, thus not going to create intimidation to important environmental features. No drainage congestion/water loggings have been observed in the area and drainage system is in place for easy water runoff. No agricultural productive soil will be used for this development. The major inputs will mainly include construction works within existing project boundary.

People of the project area are very much optimistic about the success of the project and are also eager to participate in the project activities. The subproject is environmentally sustainable and socially acceptable. The Rohingya community attended in the participatory public consultation meeting. Their community representatives have no objection to the construction of this infrastructure in the proposed site; the community also appreciated the initiative of Mukti Cox's Bazar to ensure safe and secure facility for women community. The public consultation meeting results confirmed that establishment of this WFS will increase social security in female communities and make lives easier for these people.

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

The construction period will see complete development works of a temporary facility and additional small-scale repairing works. As a result, types of wastes will include plastics, unused wires, wood chips, bamboos etc. Amount will be negligible and come as residue. Liquid waste will include chemicals of paint leftovers, thinners, used oil, degreasing solvents etc. Domestic solid wastes will be produced in kitchen of WFS during the operation period; besides, sludge from sewage and fecal wastes will also be generated during both the construction and operational period of the WFS.

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

Within the influence area of the subproject no historical sites were identified. Sensitive environmental, cultural, archaeological, religious sites within 1 kilometer. At north there are IOM Clinic (120m), Codec School (50m), Mosque (150m NE), DRP settlements (10m); at south there are Codec School (50m), Mosque (120m); at the east there are Mosque (80m), Rohingya Community School (250m), Mosque (150m SE), Camp/Army Road (20m); at the west there are Brac Office (5m), Mosque (50m), RATMR Clinic (120m), DRP Settlements (5m). Apart from these structures no other sensitive environmental, cultural, archaeological, religious sites exists.

Mostly Rohingya settlements are found around the proposed area. No disturbance is anticipated due to construction activities to those environmental components. In this sub-project area, no elephant migration routes exist (ref. IUCN). No disturbance is anticipated due to construction activities to those social and environmental components.

Completed environmental and social screening forms are given below

Section A: Sub-Project Overview

Description of sub-project/component interventions:

This intervention will include the following items:

Facility/ Rooms		**Qty.**	**Dimensions (ft'-inch'')**		**Area (Sq.ft)**
			Length	**Width**	
WFS (33'-6"X20'-4"=681 sft)	(a) Meeting room	1	17'-0"	12'-0"	204
	(b) Counseling room	1	7'-0"	8'-8"	60.62
	(c) Mid wife room	1	9'-0"	8'-8"	77.94
	(d) Office room	1	11'-2"	8'-8"	96.64
	(e) Corridor	1	33'-6"	4'-2"	139.36
	(f) Guard room	1	5'-0"	8'-8"	45.30
	(f) Store room	1	6'-9"	5'-7"	37.66
Latrine		1	5'-0"	4'-0"	20
Bathroom		1	5'-0"	4'-0"	20
Total area needed as per design					**701.52**
Available space the selected site offers					**816**

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Ukhiya
Union	Rajapalong
WARD	09
Proposed area size	701.52 sq.ft
Distance from Upazila HQ	8.5 km
Coordinates	21.20752^0 N 92.14845^0 E

Land ownership

Private Land

Expected construction period: 6 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): Please also explain any analysis on alternative location was conducted:

At north there are IOM Clinic (120m), Codec School (50m), Mosque (150m NE), DRP settlements (10m); at south there are Codec School (50m), Mosque (120m); at the east there are Mosque (80m), Rohingya Community School (250m), Mosque (150m SE), Camp/Army Road (20m); at the west there are Brac Office (5m), Mosque (50m), RATMR Clinic (120m), DRP Settlements (5m). Within the influence area of the proposed location no historical sites were identified. Also, there is no evidence of elephant movement close to subproject location (confirmed by the participants in the consultation meeting).

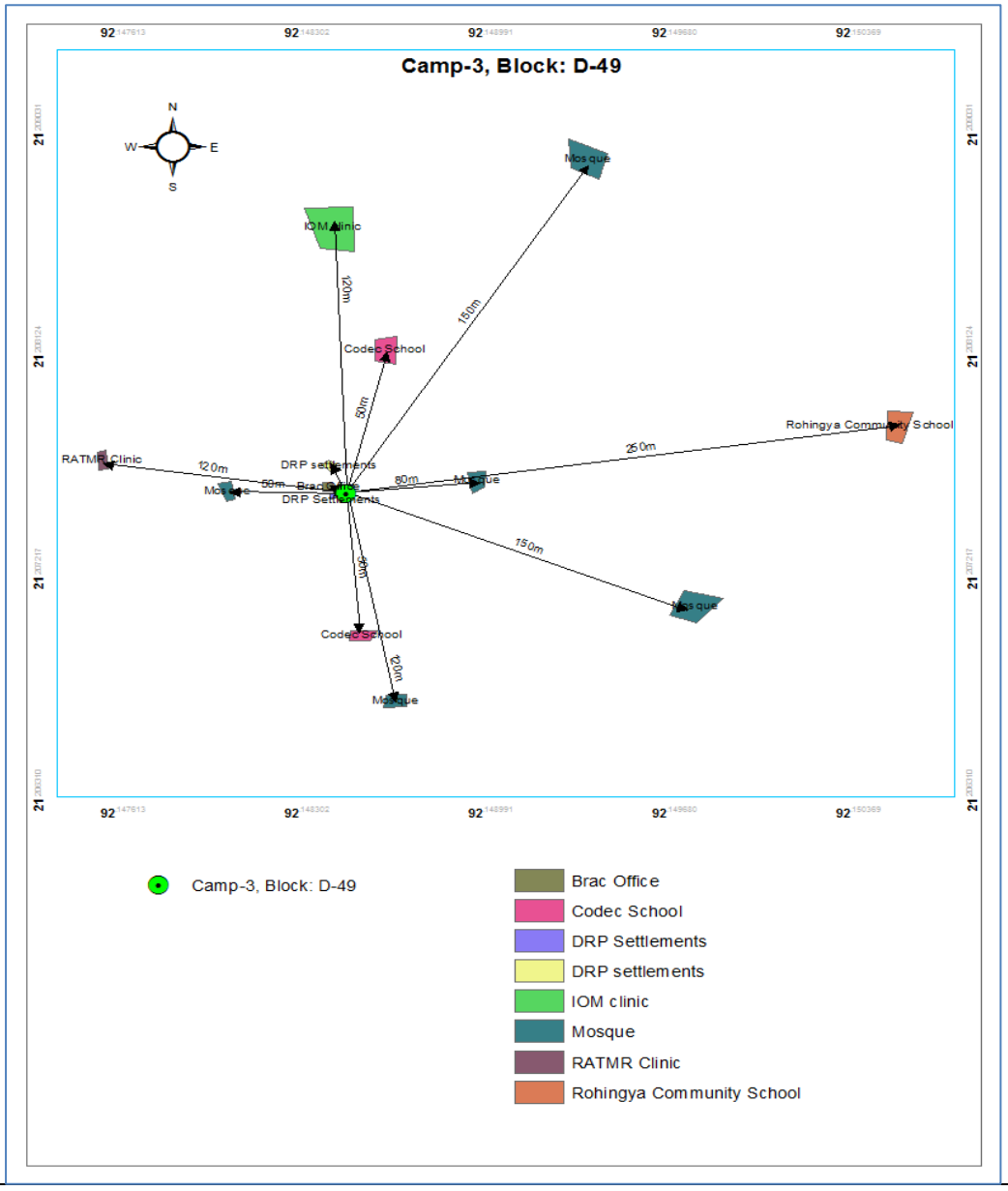
Section B: Environmental Screening

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

Description of cultural properties (if applicable, including distance from site): Sensitive environmental, cultural, archaeological, religious sites near (within the catchment area) of site including elephant migration routes and remaining forests:

At north there are IOM Clinic (120m), Codec School (50m), Mosque (150m NE), DRP settlements (10m); at south there are Codec School (50m), Mosque (120m); at the east there are Mosque (80m), Rohingya Community School (250m), Mosque (150m SE), Camp/Army Road (20m); at the west there are Brac Office (5m), Mosque (50m), RATMR Clinic (120m), DRP Settlements (5m). There are no other sensitive environmental, cultural, archaeological sites within the catchment area of this sub-project.

A sketch of the project surrounding area with several features at relatively distant places and locations of sensitive institutions in the project surrounding areas are shown below.



Location of environmentally important and sensitive areas:

There are no environmentally important or sensitive features found in the footprint area. Several mosques and DRP settlement were found during the survey. It will not be affected by the construction works, as the activities will be carried out within the existing proposed area boundary and necessary preventive and mitigation measures will be followed during the entire construction period.

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

No. This have been checked based on elephant migration route map established by UNHCR/IUCN (latest updated maps as of 22 February 2018 and later June 05, 2018).

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

N/A (This activity will be confined within the proposed location)

(3) Other issues: N/A

*This question needs to be answered by checking the elephant migration route map established by UNHCR/IUCN

Baseline air quality and noise levels:

Ascertaining distinctively the baseline air and noise quality level in respect to any sites at different parts of Cox's Bazar district is nearly impossible because of the huge burden of physical developmental works including roads, bridges, culverts, building structures, markets, jetties, etc. being carried out simultaneously across the areas. Therefore, the apparent baseline of the pre-development period can only be anticipated and results of visual observation are worth to be presented here.

Dust:

Ambient air quality data was not readily available, but quality is apparently good due to the appearance of rural vegetative settings around. Dust is slightly generated through movement of pedestrians.

Noise:

Noise in the Sub-project area is not a major concern because noise level is within the tolerance limit. No vehicles movement can be reported adjacent to proposed location throughout the day generating noise.

Baseline soil quality:

The Sub-project area is located mainly on red, alluvial, muddy, and sandy soil. The soil 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):

The nominated location is found to be on plane land. There is no condition found around the selected site which might give reasons for landslides.

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

Groundwater is the main source of potable water in the Sub-project area. The shallow depth is about 100 feet to 120 feet and deep tube well depth is 700 to 850 feet. In the sub-project area, deep groundwater is fresh and potable, and arsenic free. Water from the deep aquifers contains medium concentration of iron. Deep groundwater table (drinkable) varies from 600-800ft (Field survey, 2022). DRP people usually use community-level deep tube-well water for drinking and other domestic purposes. There should have been deep tube well which pump water from the confined aquifer.

Groundwater quality: pH-5.17 to 8.51, DO-2.26 to 8.14mg/l, TDS-23.40 to 320 mg/l, EC -25.7 to 681µs/cm, Fe-0.5 to 7.0 mg/l and As-Nil (IWM Study Report, 2019)
Status of wildlife movement: **N/A** (None of the information was found about the wildlife movement in or across the area)
State of forestation: No major vegetation containing vegetable crops however small trees found in target location.
Summary of water balance analysis (For water supply scheme only): **N/A**

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): 18 feet wide HBB road is available connecting different blocks and camps which is called the Army Road. This can be used for transport and material supply route. However, a small wooden bridge falls on the course to reach the site where overhead carrying will be suitable for the materials to reach the site. This bridge is not more than 12 meters away from site connecting the Army Road.
Requirement of accommodation or service amenities (toilet, water supply, electricity) to support the workforce during construction: Toilet and water supply facilities will be ensured by Mukti Cox's Bazar in the vicinity of the construction area for all the components of the project, electric connection will be established with the accommodation facility. Electricity is not available in the area. Generator or Solar lamp will need installation
Possible location of labor camps: Labor camp will not be necessary for this work.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): The construction of this temporary facility will need material as i) bamboo ii) wood iii) plastics iv) bricks
Identification of access road for transportation (Yes/No): 18 feet wide HBB road is available connecting different blocks and camps which is called the Army Road. This can be used for transport and material supply route.
Location identification for raw material storage: Separate location other than nominated site was not found. Material storage will have to adjust in the selected vicinity.
Possible composition and quantities of wastes (Solids wastes, demolition materials, sludge from old latrines, etc.): There is no pre-existing structure which will face demolition. Here, demolition waste will not have to be accounted for. Few leftovers from soil clearing, plastics or residual clearing, and site clearing may be generated. Also, debris from the construction works will be minimal.

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:** Metal, brick, wood, plastic, rubber, wires, bamboo etc. **Quantity:** It is difficult to give exact figures of construction waste produced on a typical construction site. To approximate the quantity, it is estimated that nearly 2 kg of waste would be generated each working day. Some plastic, paper, bamboo, wires and organic waste will be generated from the use of workers, though a very negligible amount. **Liquid waste**: Paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) will come out as leftovers. Leftover oils or spills from machinery can be a high probability generating liquid waste.
Type and quantity of raw materials used (wood, bricks, cement, water, etc.): **Type:** i) Paints ii) bricks/aggregates iii) metals vi) wood vii) Bamboo viii) clay are the most common type of building material used in construction of a temporary facility. **Quantity**: It is difficult to give exact figures of construction or renovation waste produced on a typical construction site.
Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards: Around 701.52 sq. feet area is needed for this project. Small quantity of vegetation is present in targeted footprint area. Specific soil amount is not needed for the project. The current condition explains that there is no aggregated soil on the site. The shrubs and small plants will need cutting for the construction works.
Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: (High/Medium/Low with explanation) Low. No borrow pit or quarries will be required to dig out during this period in or around/ adjacent to the proposed area.
Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description). No drainage and a small water channel are present on the surrounding area that can be subject to any disturbance from the small-scale construction works needed for the project.
Destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development: (High/Medium/Low with description) **Low.** The site is free from any aquatic ecosystems or habitats of endangered species. So, overall potential effect is very low or absent for this specific sub project.
Activities that can lead to landslides, slumps, slips and other mass movements in road cuts: The soil in the proposed site is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil moreover no major construction plan is needed that may induce such incident.
Erosion of lands below the roadbed receiving concentrated outflow carried by covered or open drains: (High/Medium/Low with description) N/A
Describe possible traffic movement impacts on (unwanted) light, noise and air pollution: No traffic movement impact on light is anticipated.

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: During the operation phase of this project, small amount of dust might be produced by the human traffic through adjacent road; the quantity of dust is expected to be bit high only for a small period. So, causing any health hazards and interference of plant growth is not very likely to happen by such activities for short duration.
Chance of long-term or semi-permanent destruction of soils: (High/Medium/Low with description) There is no chance of activities during the operation period, which can lead to any long-term or semi-permanent destruction of soils.
Possibility of odor and water, soil quality impacts from SWM and FSM disposal system: (High/Medium/Low with description) Low. The proposed WFS will be equipped with full facilities for conducting consultation with women and assisting socially challenged group. It will also be including separate toilets to use as latrine and bathroom for female group only. Moreover, water supply and filtration, storage and other facilities will be ensured. No fecal sludge will be produced for transferring to any disposal system during the operation period. However, to avoid any potential nuisance regular monitoring on sludge management (including toilet and sewage) and periodic cleaning plan must be established and followed. Further, very little amount of solid waste consisting of mainly paper, plastic, polythene, and organic stuffs is likely to be produced in a typical service day and fair number of wastes including organic kitchen wastes will be produced. All these wastes will be stored in covered plastic bins temporarily and later collected and transferred by the agency responsible for waste management services in this area. Therefore, no odor, water and soil quality impacts are generated. Plastic, polythene, and other non-biodegradable wastes must be separated from the organic/ biodegradable wastes before disposing off underneath the soil and responsible group for the facility should be made aware of this separation and disposal procedure.
Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: (High/Medium/Low with explanation) There is no possibility for creating borrow-pits, quarries, etc. during the operation phase.
Likely direct and indirect impacts on economic development in the project areas by the sub-project: Implementation of this WFS substantially contributes to the development of the women community in the project area. It will surely improve the technical skills of women to reduce the dependency which they were restricted to. Increases the chances of business and income of female community in/around the areas and ensure better living conditions with better practical knowledge for their health and offer health facilities. Thus, the direct and indirect impacts on economic development in the project areas for women would be enormous by this facility.
Extent of disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description) Low. There are no drainage or waterbody surrounding the selected site also the standard activities

of a WFS does not escalate to irritation of a waterbody of any sort.
Extent of destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development: (High/Medium/Low with description) Low. There are no protected areas in or around project sites, and no known areas of ecological interest which can be affected by the daily activity of this facility.
Activities leading to landslides, slumps, slips and other mass movements in road cuts: N/A
Erosion of lands below the roadbed receiving concentrated outflow carried by covered or open drains: (High/Medium/Low with explanation) N/A
Describe possible traffic movement impacts on (unwanted) light, noise and air pollution: The proposed site is located inside camp area. There is a camp road which connects with the location. The location in only accessed during daytime and not heavily used as regular village road so operation period traffic congestion is not 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)

Environmental Screening Form for WFS (Camp 14)

Name of Sub-Project: Camp-14, Block-E3, Women Friendly Space

Implementing Agency/Agencies: Mukti Cox's Bazar

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

Name of Community/Local Area: Palongkhali, Ward No.-08, Camp-14, Block-E3

Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):
A pre-established facility is found on the selected location which has enough area and built rooms that can meet WFS activity requirements. A well fenced single storied bamboo house which will have Meeting room, Counselling Room, Mid-Wife Room, Office Room, Corridor, latrine etc. This location is adjacent to a playground to the east which will not cause any impediments to this facility as it is strongly fenced and vice versa since all its affairs will be within its premise. Apart from the mentioned rooms there will be spaces dedicated as storeroom, generator room, and Psychosocial Support (PSS) room are added in the plan.

Estimated footprint / land area for this sub-project is 1647 sq. feet

Available land area: 5244 sq.feet

Brief description of sub-project site: (e.g., present land use, Important Environmental Features (IEFs) near site, etc.:
Proposed WFS is situated within the catchment area of Camp-14 in Palongkhali union of Ukhiya Upazila under Ward No. 08. The proposed location is a pre-built bamboo structure with no environmentally significant concerning feature which may be harmed from the placement of WFS. It falls in camp-14 area having Rohingya settlements in the surrounding area. A playground and few mosques and non-permanent establishments are also present within 500-meter area majority are DRP settlements and learning facilities of different organizations. Most of the surrounding space of this intervention used to be covered with forests. However, migration of these displaced Rohingya population has resulted in barren space and there are no significant eco-sensitive features on the footprint area. No economic establishment, such as, agriculture fields or fish farm are present near this location. The location is set on a plane land but on lower grounds surrounded by hilly areas. Often this results in water stagnation in heavy monsoon periods that makes the location hard to reach and challenging for dwellers.

Overall Comments
The proposed WFS is not located within any remarkable environmentally sensitive area and will not cause any severe affect to the environmental settings of the area, thus not going to create intimidation to important environmental features. No drainage congestion/water loggings have been observed in the area. No agricultural productive soil will be used for the purpose. The inputs will be mainly at renovation phase and limited within existing boundary.

People of the project area are very much optimistic about the success of the project and are also eager to participate in the project activities. The subproject is environmentally sustainable and socially acceptable. The local and Rohingya community attended in the participatory public consultation meeting. Their community representatives have no objection to the construction this infrastructure in the proposed site; the community also appreciated the initiative of Mukti Cox's Bazar to ensure safe and secure facility for women community. The public consultation meeting results confirmed that establishment of this WFS will increase socio security in female communities and make lives easier for these people.

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

The construction period will see minor renovations and small-scale repairing works. Other than that, no major construction is included in any phase of this project. As a result, types of wastes will be limited to plastics, unused wires, wood chips, etc. Amount will be negligible and come as residue. Liquid waste will include chemicals of paint leftovers, thinners, used oil, degreasing solvents etc. Domestic solid wastes will be produced in kitchen of WFS during the operation period; besides, sludge from sewage and fecal wastes will also be generated during both the construction and operational period of the WFS.

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

Within the influence area of the subproject no historical sites were identified. Sensitive environmental, cultural, archaeological, religious sites within 1 kilometer. At north there are Mosque (50m), Coast Task School (100m), Mosque (600m); at south there are DRP settlements (50m), Coast Task School (20m SE), Mosque (40m SE), at the east there are Open Field (adjacent), Codec School (20m), DRP Settlements (60m); at the west there are Coast Task School (120m), DRP settlements (50m). Apart from these structures no other sensitive environmental, cultural, archaeological, religious sites exists.

Mostly Rohingya settlements are found around the proposed area. No disturbance is anticipated due to renovation activities to those environmental components. In this sub-project area, no elephant migration routes exist (ref. IUCN). No disturbance is anticipated due to construction activities to those social and environmental components.

Completed environmental and social screening forms are given below

Section A: Sub-Project Overview

Description of sub-project/component interventions:

This intervention will include the following items:

Facility/ Rooms		Qty.	Dimensions (ft'-inch'')		Area (Sq.ft)
			Length	Width	
Total Land Area for WFS		1	76'-0"	69'-0"	5244
WFS (66'-0"X21'-8"=1429 sft)	(a) Meeting room	2	24'-0"	17'-0"	816
	(b) Counseling room	1	12'-0"	7'-0"	84
	(c) Mid wife room	1	12'-0"	9'-0"	108
	(d) Office room	1	12'-0"	10'-0"	120
	(e) Corridor	1	29'-0"	5'-0"	145

	(f) Varenda	2	19'-6"	4'-0"	156
Storeroom		1	12'-0"	7'-0"	84
Guard room		1	7'-0"	5'-0"	35
Generator room		1	7'-0"	7'-0"	49
Latrine		1	5'-0"	5'-0"	25
Bathroom		1	5'-0"	5'-0"	25
Total area needed as per design					1647
Available space the selected site offers					5244

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Ukhiya
Union	Palongkhali
WARD	08
Proposed area size	1647 Sq. ft.
Distance from Upazila HQ	12.5 km
Coordinates	21.16759^0 N 92.14001^0 E

Land ownership
Government Land

Expected construction period: 6 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): Please also explain any analysis on alternative location was conducted:
At north there are Mosque (50m), Coast Task School (100m), Mosque (600m); at south there are DRP settlements (50m), Coast Task School (20m SE), Mosque (40m SE), at the east there are Open Field (adjacent), Codec School (20m), DRP Settlements (60m); at the west there are Coast Task School (120m), DRP settlements (50m). Within the influence area of the proposed location no historical sites were identified. Also, there is no evidence of elephant movement close to subproject location (confirmed by the participants in the consultation meeting).

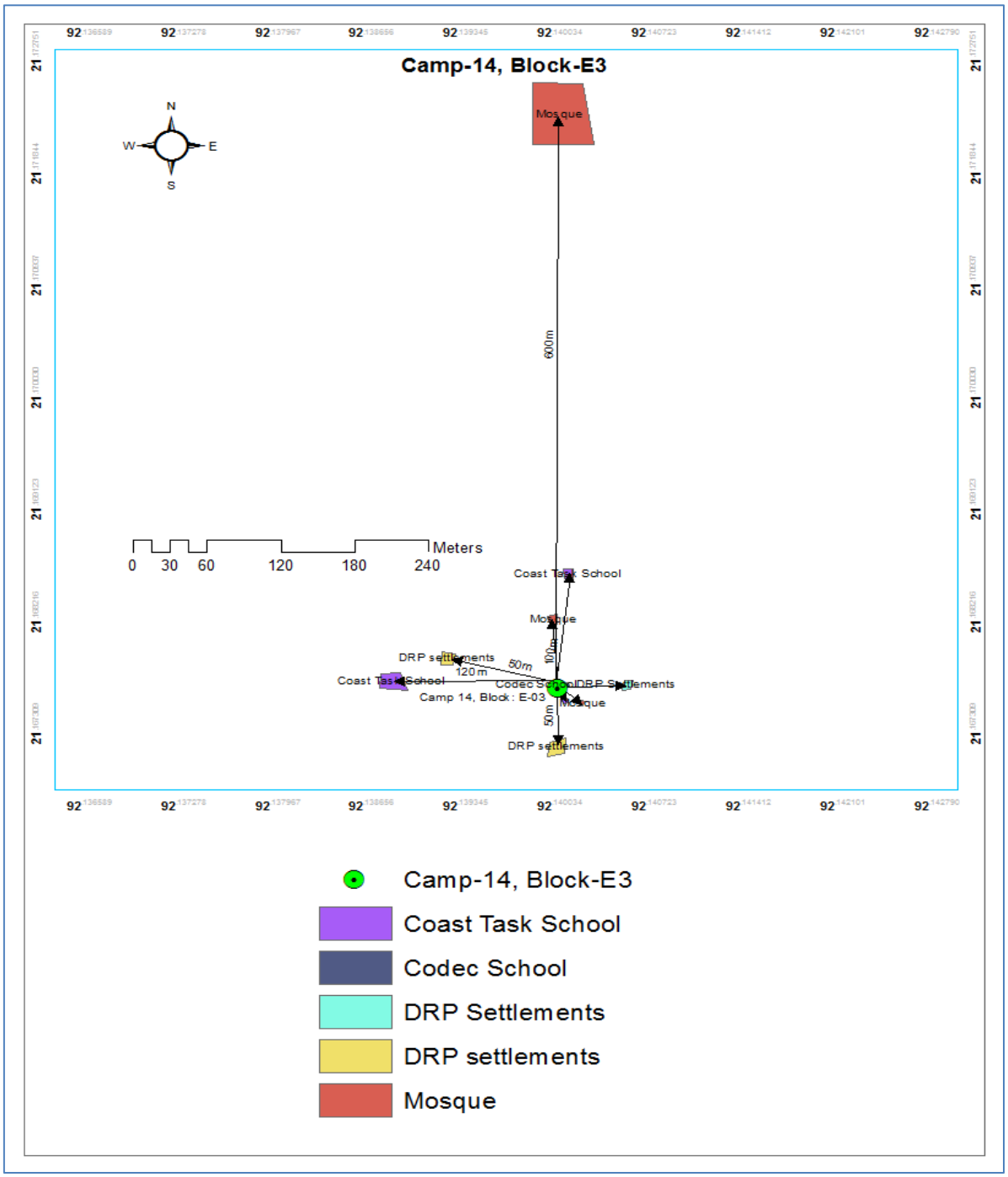
Section B: Environmental Screening

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

Description of cultural properties (if applicable, including distance from site): Sensitive environmental, cultural, archaeological, religious sites near (within the catchment area) of site including elephant migration routes and remaining forests:
At north there are Mosque (50m), Coast Task School (100m), Mosque (600m); at south there are DRP settlements (50m), Coast Task School (20m SE), Mosque (40m SE), at the east there are Open Field (adjacent), Codec School (20m), DRP Settlements (60m); at the west there are Coast Task

School (120m), DRP settlements (50m). There are no other sensitive environmental, cultural, archaeological sites within the catchment area of this sub-project.

A sketch of the project surrounding area with several features at relatively distant places and locations of sensitive institutions in the project surrounding areas are shown below.



Location of environmentally important and sensitive areas:

There are no environmentally important or sensitive features found in the footprint area. Several mosques and DRP settlement were found during the survey. It will not be affected by the renovation works, as the activities will be carried out within the existing proposed area boundary and necessary preventive and mitigation measures will be followed during the entire construction period.

(1) Within/near Elephant Migration Routes Yes/No*
No. This have been checked based on elephant migration route map established by UNHCR/IUCN (latest updated maps as of 22 February 2018 and later June 05, 2018).

(2) potential impacts on remaining forests in/around camps Yes/No
N/A (This activity will be confined within the proposed location)

(3) Other issues: N/A
*This question needs to be answered by checking the elephant migration route map established by UNHCR/IUCN

Baseline air quality and noise levels:
Ascertaining distinctively the baseline air and noise quality level in respect to any sites at different parts of Cox's Bazar district is nearly impossible because of the huge burden of physical developmental works including roads, bridges, culverts, building structures, markets, jetties, etc. being carried out simultaneously across the areas. Therefore, the apparent baseline of the pre-development period can only be anticipated and results of visual observation are worth to be presented here.

Dust:
Ambient air quality data was not readily available, but quality is apparently good due to the appearance of rural vegetative settings around. Dust is slightly generated through movement of pedestrians. Natural air action, over the road surface which causes dust circulation.

Noise:
Noise in the Sub-project area is not a major concern because noise level is within the tolerance limit. No vehicles movement can be reported adjacent to proposed location throughout the day generating noise.

Baseline soil quality:
The Sub-project area is located mainly on red, alluvial, muddy and sandy soil. The soil 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):
The nominated location is found to be on plane but low land. There is no condition found around the selected site which might give reasons for landslides.

Baseline surface water and groundwater quality (FE, TDS, fecal coliform, pH):
Groundwater is the main source of potable water in the Sub-project area. The shallow depth is about 100 feet to 120 feet and deep tube well depth is 700 to 850 feet. In the sub-project area, deep groundwater is fresh and potable, and arsenic free. Water from the shallower aquifers contains medium concentration of iron. Deep groundwater table (drinkable) varies from 600-800ft (Field survey, 2022). Local people usually use deep tube-well water for drinking and other domestic purposes. There should have been deep tube well which pump water from the confined aquifer.

Groundwater quality: pH-5.17 to 8.51, DO-2.26 to 8.14mg/l, TDS-23.40 to 320 mg/l, EC -25.7 to

681µs/cm, Fe-0.5 to 7.0 mg/l and As-Nil (IWM Study Report, 2019)
Status of wildlife movement: **N/A** (None of the information was found about the wildlife movement in or across the area)
State of forestation: No major vegetation containing vegetable crops and small trees found in target location but in surrounding area vegetation coverage was found.
Summary of water balance analysis (For water supply scheme only): **N/A**

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): A road is present coming from union parishad connecting to camp-14 also another road camp 14 CiC to Cox's Bazar-Teknaf highway is present. This camp roads do not take to the facility directly also walking paths of few hundred meters will lead to the proposed site after using these roads.
Requirement of accommodation or service amenities (toilet, water supply, electricity) to support the workforce during construction: Toilet and water supply facilities will be ensured by Mukti Cox's Bazar in the vicinity of the renovation area for all the components of the project, electric connection will be established with the accommodation facility. Electricity is not available in the area. Generator or Solar lamp will need installation
Possible location of labor camps: Labor camp will not be necessary for this work.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): No material is necessary in this period of the development.
Identification of access road for transportation (Yes/No): Yes. A road is present coming from union parishad connecting to camp-14 also another road camp 14 CiC to Cox's Bazar-Teknaf highway is present. This camp roads do not take to the facility directly also walking paths of few hundred meters will lead to the proposed site after using these roads.
Location identification for raw material storage: Separate location other than nominated site was not found. Material storage will have to adjust in the selected vicinity for any scale renovation works.
Possible composition and quantities of wastes (Solids wastes, demolition materials, sludge from old latrines, etc.): There is no pre-existing structure which will face demolition. Here, demolition waste will not have to be accounted for. Few leftovers from soil clearing, plastics or residual clearing, and site clearing may be generated.

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:** Metal, wood, plastic, rubber, copper wires, etc. **Quantity:** It is difficult to give exact figures of construction waste produced on a typical construction site. Nonetheless, this site is not subject to pure construction works rather renovation works is needed. To approximate the quantity, it is estimated that nearly 1 kg of waste would be generated each working day, which are mainly renovation wastes. Some plastic, paper and organic waste will be generated from the use of workers, though a very negligible amount. **Liquid waste**: Paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) will come out as leftovers. Leftover oils or spills from machinery can be a high probability generating liquid waste.
Type and quantity of raw materials used (wood, bricks, cement, water, etc.): **Type:** i) Plastic ii) Sand iii) cement iv) bricks/aggravates v) metals vi) water vii) Bamboo & wood viii) clay are the most common type of building material used in construction. **Quantity**: It is difficult to give exact figures of construction or renovation waste produced on a typical construction site.
Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards: Around 1647 sq. feet area is needed for this project. No vegetation is present in targeted footprint area. Specific soil amount is not needed for the project. The current condition explains that there is no aggregated soil on the right of way. On the other hand, vegetation was found around the proposed area. The vegetation will not be affected by renovation works since scope of works is confined within planned area.
Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: (High/Medium/Low with explanation) Low. No borrow pit or quarries will be required to dig out during this period in or around/ adjacent to the proposed area.
Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description). No pre-existing water body or natural drainage is present
Destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development: (High/Medium/Low with description) **Low.** The site is free from any aquatic ecosystems or habitats of endangered species. There are some terrestrial flora species around the project site, which will not be affected by the renovation works. So, overall potential effect is very low or absent for this specific sub project.
Activities that can lead to landslides, slumps, slips and other mass movements in road cuts: The soil in the proposed site is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil moreover no major construction plan is needed that may induce such incident.
Erosion of lands below the roadbed receiving concentrated outflow carried by covered or open drains: (High/Medium/Low with description)

N/A
Describe possible traffic movement impacts on (unwanted) light, noise and air pollution: No traffic movement impact on light is anticipated, but low effects of noise and air pollution may appear resulting from the pedestrian movement and workers carrying renovation materials.

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: During the operation phase of this project, small amount of dust might be produced by the increased activity; the quantity of dust is expected to be bit high only for a small period. So, causing any health hazards and interference of plant growth is not very likely to happen by such activities for short duration.
Chance of long-term or semi-permanent destruction of soils: (High/Medium/Low with description) There is no chance of activities during the operation period, which can lead to any long-term or semi-permanent destruction of soils.
Possibility of odor and water, soil quality impacts from SWM and FSM disposal system: (High/Medium/Low with description) Low. The proposed WFS will be equipped with full facilities for conducting consultation with women and assisting socially challenged group. It will also be including separate toilets to use as latrine and bathroom for female group only. Moreover, water supply and filtration, storage and other facilities will be ensured. No fecal sludge will be produced for transferring to any disposal system during the operation period. However, to avoid any potential nuisance regular monitoring on sludge management (including toilet and sewage) and periodic cleaning plan must be established and followed. Further, very little amount of solid waste consisting of mainly paper, plastic, polythene, and organic stuffs is likely to be produced in a typical service day and fair number of wastes including organic kitchen wastes will be produced. All these wastes will be stored in covered plastic bins temporarily and later collected and transferred by the agency responsible for waste management services in this area. Therefore, no odor, water and soil quality impacts are generated. Plastic, polythene, and other non-biodegradable wastes must be separated from the organic/ biodegradable wastes before disposing off underneath the soil and responsible group for the facility should be made aware of this separation and disposal procedure.
Possibility of stagnant water bodies in borrow pits, quarries, etc., encouraging for mosquito breeding and other disease vectors: (High/Medium/Low with explanation) There is no possibility for creating borrow-pits, quarries, etc. during the operation phase.
Likely direct and indirect impacts on economic development in the project areas by the sub-project: Implementation of this WFS substantially contributes to the development of the women community in the project area. It will surely improve the technical skills of women to reduce the dependency which they were restricted to. Increases the chances of business and income of female community in/around the areas and ensure better living conditions with better practical knowledge for their

health and offer health facilities. Thus, the direct and indirect impacts on economic development in the project areas for women would be enormous by this facility.
Extent of disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description) Constructed drainage channels is found on the north-east side of the project area, but no such effect is anticipated.
Extent of destruction or damage of terrestrial or aquatic ecosystems or endangered species directly or by induced development: (High/Medium/Low with description) Low. There are no protected areas in or around project sites, and no known areas of ecological interest which can be affected by the daily activity of this facility.
Activities leading to landslides, slumps, slips and other mass movements in road cuts: N/A
Erosion of lands below the roadbed receiving concentrated outflow carried by covered or open drains: (High/Medium/Low with explanation) N/A
Describe possible traffic movement impacts on (unwanted) light, noise and air pollution: The proposed site is located inside camp area. There is no camp road which connects the location directly. The location in only accessed during daytime also a small amount of the way is on foot, not having any chances of increased traffic congestion.

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)

Appendix-04: Elephant Presence Map

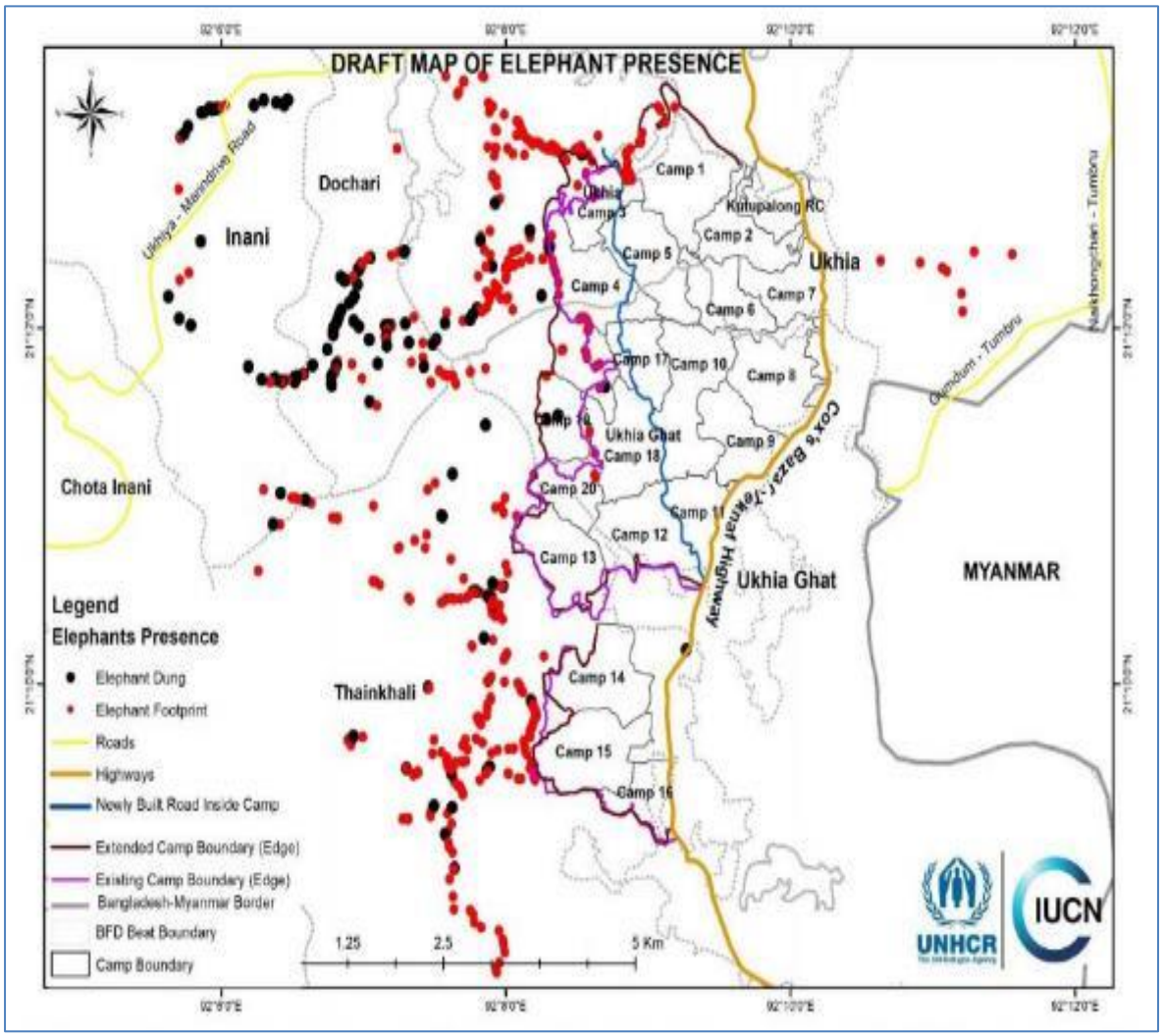


Figure: Elephant presence map (latest information published on 24 May 2018) showing the relevant camps.

Appendix-05: Environmental Screening Summary of the WFS works

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
1: Sub-Project Interventions	Air Quality	Under the project intervention the overall score is **low**.	• Handling materials in confined spaces so that unnecessary dusting does not occur. • Watering of dry exposed surfaces and stockpiles of aggregates at least twice daily, if necessary. • Requiring vehicles delivering renovation materials to have tarpaulin cover and limiting speed of these vehicles in access roads and work sites.	Construction Contractor; monitored by Mukti Cox's Bazar	Location of materials; Number of complaints from stakeholders; Covering of trucks; Records of air quality inspection;	Visual monitoring of air quality and if requires, air quality test (CO, $PM_{2.5,10}$) once in construction period in winter season.
	Soil impacts	Under the sub-project intervention, the overall score is **low.**	• Precautions might be taken when rainstorms are likely or is imminent by forecast, and actions to be taken during or after rainstorms. • The earthwork sites where exposed land surface is vulnerable to runoff shall be consolidated and/or covered as required. • The material stockpile sites shall be far away from surface water bodies and areas prone to surface run-off. Loose materials shall be	Construction Contractor monitored by Mukti Cox's Bazar	No visible degradation to nearby drainages, *khals* or water bodies due to soil erosion. Rain storms in construction phase.	Monitoring on weekly basis.

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			bagged and 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 work areas and construction yards shall be kept to a minimum to reduce the erosive potential of surface water flows elsewhere. • WFS site in Camp 18 will be constructed in a valley at the toe of surrounding hillocks. Threreore, slope protection and other potential hazards during the rainy season have to be kept in mind while constructing the structure there, and also for the operational phase.			
	Hydrology (surface and groundwater)	Under the subproject intervention the overall score is **low**.	All precautions to store chemicals/oil/fuel properly so that no chance of spill. Workers must specify waste dump	Construction Contractor monitored by Mukti Cox's Bazar	(i)Areas for stockpiles, storage of fuels and lubricants and waste materials; (ii) Records of water	Water quality test (mainly GW) twice during the construction

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			locations to avoid littering which in turn might negatively affect surface and ground water. Monitor water quality according to the environmental management plan.		quality inspection; Water Quality Test (National Drinking Water Quality Standard Parameters) if requires; (iii) No visible degradation to nearby drainages, *khals* or water bodies due to construction activities. (iv)Records should be kept and logged.	period in six months interval.
2: Pre-construction Phase	Awareness training to the workers on H&S and good engineering practices at work sites.	Under the subproject intervention the overall score is **low**.	Records for any type of training or awareness building sessions must be kept at site.	Construction Contractor monitored by Mukti Cox's Bazar	Site-specific H&S Plan; Record of Health & Safety orientation trainings.	Visual inspection by PIU and supervision consultants on monthly basis
	Transportation	Under the subproject intervention the overall score is **low.**	Contractor should verify vehicles for the suitability of carrying, loading and unloading of materials.	Construction Contractor monitored by Mukti Cox's Bazar	• Record of regular inspection. Record of accidents/incidents	Monthly monitoring.

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
	Storage of construction materials	Under the subproject intervention the overall score is **low**.	Train concerned person and team assigned for the construction work to ensure items are stored properly and away from steep slopes.	Construction Contractor monitored by Mukti Cox's Bazar	• List of materials and sources of materials.	During implementation phase, as necessary through discussion with UNFPA, Consultant
3: Construction Phase	Wastes	Under the sub-project intervention, the overall score is **low.**	• Prepare and implement on-site waste water runoff and waste management plan approved by PIU and consultants. • Sludge produced from sewage and toilet must be cleaned properly and disposed in a controlled sanitary way to a designated place with full consent from Environmental Specialist of PIU and direct supervision of EIC during or immediately after the construction period. • Wastes must be placed in the designated bins which must be regularly emptied. These shall remain within demarcated areas	Construction Contractor monitored by Mukti Cox's Bazar	Complaints from community; Regular inspection of waste management activity; Waste disposal record.	weekly as work progresses

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			and shall be designed to prevent wastes from being blown out by wind. • All waste must be removed from the site and transported to a disposal site.			
	Storage of materials	Protected and safety storage to be needed for construction materials storage. Not interrupt natural land contours, disturbance in natural drainage patterns and logging of water and the overall score is **low.**	With the assistance from site management committee in Camp or UNFPA representative to identify the storage site and other requirements, following sets of requirements shall be taken into consideration: • Storage area will be sufficiently spacious so that unloading works can be performed inside the area and materials must not be rest on road side, near the water bodies, or trees and bushes, and will not be located in any crowded place. • Storage area must be well fenced with guard posted at the entrance and at least 30 m distant from any water bodies. • Construction materials must not interrupt land contours, natural drainage pattern, and create water	Construction Contractor monitored by Mukti Cox's Bazar	-List of materials and sources of materials; -Storage areas for materials and equipment.	Monthly basis during implementation phase, as necessary with discussion with UNFPA.

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
			logging or depression. • Chemicals and hazardous materials including oil, grease, bitumen, etc. shall be kept in a Cement concrete bunded area or on wooden stage covered with polythene/tarpaulin. • Paint containing harmful substances (e.g., mercury, lead, etc.), and asbestos containing materials will not be used at site/construction or renovation works.			
	Removal of Vegetation (May cause soil erosion and their deposition on nearby crop field, affecting soil quality and productivity)	Under the sub-project intervention, the overall score is low.	• If during detailed design cutting of trees is required, compensatory plantation for trees lost at a rate of 5 trees for every tree cut. • Prevent workers or any other person from removing and damaging any flora (plant/vegetation) and fauna.	Construction Contractor monitored by Mukti Cox's Bazar	Complaints from community;	Daily
	Noise pollution	Under the subproject intervention the	• Consultation with affected people; not to operate noisy equipment during working period;	Construction Contractor monitored by	Number of complaints from stakeholders; Use of silencers in noise-	Inspection by UNFPA and supervision

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
		overall score is **low.**	• No noisy work after 5.00 pm. • Sound suppression for equipment; • Ear protection for workers. Conduct noise quality monitoring as per EMP.	Mukti Cox's Bazar	producing equipment and sound barriers.	consultants on monthly basis;
	Air pollution	Under the subproject intervention the overall score is **low.**	Water spraying 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.	Construction Contractor monitored by Mukti Cox's Bazar	Location of stockpiles; Number of complaints from stakeholders; Records of air quality inspection, if any.	Visual observation and monitoring of air quality during construction period.
4. Post Construction	Safety/Location signage	Under the issue the overall score is **low**.	• The contractor shall provide, erect and maintain informatory/safety signs written in local language, wherever required or as suggested by the Safety/safeguards personnel of UNFPA.	Construction Contractor monitored by Mukti Cox's Bazar	Location signage and safety instruments at suitable locations and chainage	Immediately after the construction work is over.
	Tree plantation, if required	Under the issue the overall score is **low**.	• Plantation of trees during monsoon period • Maintain of trees properly • Check survival of trees and replant the dead trees	Construction Contractor monitored by Mukti Cox's Bazar	Number of complaints from stakeholders; Records of trees number and tree plantation inspection;	Immediately after the construction work is over.

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
5. Operational Phase	Maintenance of facilities and assets	Under the issue the overall score is **low**.	• Regular maintenance and cleaning of assets shall be undertaken. • Sludge produced from sewage and toilet must be cleaned and disposed properly in a periodic and controlled sanitary manner and under the direct supervision of responsible official from UNFPA/Mukti/IRC.	Mukti Cox's Bazar	Number of complaints from stakeholders.	Daily throughout the operational period. Quarterly for Sludge management.

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

**Post-construction phase denotes the time period contractor use to clear and clean up the sites after the construction work is ended, perform tree plantation, grass turfing, and minor rectification till the official handing over the site to LGED, or owner of the site.

Environmental and Social Management Plan (ESMP) for 2 nos. WFS in Ukhiya Upazila of Cox's Bazar District.

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
Pre-Construction Stage	Loss of land / and other physical assets	• No land acquisition is allowed within this sub-project activity so, there is no mitigation measures according to this impact.	UNFPA	UNFPA
Pre-Construction Stage	Loss of livelihood	• Under this subproject, there is no scope of negative impact on livelihoods of the people of catchment area.	Mukti Cox's Bazar	UNFPA
Pre-Construction Stage	Stakeholders Engagement	• All the project stakeholders will be consulted • Consultation meeting with nearby residents about the project objectives and scope of works • People living in nearby community will be involved with the GRM	Mukti Cox's Bazar	UNFPA
Pre-Construction Stage	Site Selection & implementing interventions: Human-elephant conflict	• Selection of sub-project sites and all implementing interventions must take place outside of the elephant corridor/influence area.	UNFPA, Mukti Cox's Bazar	UNFPA
Pre-Construction Stage	Site Preparation: Soil Erosion; Alteration of natural drainage	• Selected site will be away from any water bodies or natural flow path to avoid the flash flood or any kind or surface runoff. • Minimize cut & fill operations, the site clearing, and grubbing operations should be limited to specific locations only. • The existing slope and natural drainage pattern on the site should not be significantly altered. • The contractor shall ensure that site preparation activities do not lead to disruption of activities of the local residents.	Mukti Cox's Bazar and Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
		• Considerations should be paid in designing and constructing the WFS structure to avoid any hazardous risks of slope destabilization or water congestion which may cause interruption in operation during and even after a rainy period.		
Construction Activity	Noise from construction works	• Construction activities will be finished at day time within 05 PM. Proper measures will be taken to avoid any disturbances. • All Personal Protective Equipment (PPE) will be available in site before starting any kind of construction works.	Contractor	UNFPA
Construction Activity	Dust	• Construction machinery shall be properly maintained to minimize exhaust emissions of CO, particulate matter (SPM, PM2.5, PM 10) and Hydrocarbons. • Provision of using water sprinklers to dust control. • Construction materials should be covered properly while carrying in vehicles to the site.	Contractor	UNFPA
Construction Activity	Safety Issues	• Unauthorized entry to the site area is completely prohibited and the site will be properly fenced with a single entry, for this purpose. • It will be ensured that proper training and guidance are provided on general and occupational along with Covid-19 related health and safety, to Contractors' personnel and labors forces, and records of training sessions are to be kept on site. • All kinds of Child labor will be completely prohibited.	Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
Construction Activity	Conflicts with existing users due to the scarcity of resource base.	• If ground water is withdrawn, adequate approvals from the appropriate department need to be undertaken before setting up bore wells. • Any type of consent letter or agreement for withdrawing water from either surface or underground sources will be kept on site. • Local community must be consulted before any construction work starts.	Mukti Cox's Bazar & Contractor	UNFPA
Construction Activity	Labour Base Camp: Conflicts with the local residents (if required)	• Awareness building session will be undertaken about prevention of child abuse, child marriage, GBV, sexual harassment, trafficking of women and children as well as illegal drug trade. Written records of this awareness building session shall be kept on site. • Work force should be prohibited from disturbing the flora, fauna including hunting of animals, wildlife hunting, poaching and tree felling. • Treated water will be made available at site for drinking purpose. • Adequate accommodation arrangements for labour forces. • Labor code of conduct is to be disclosed through consultation.	Contractor	UNFPA
Construction Activity	Waste Management: Improper management and handling of hazardous and non-hazardous waste during	Waste management issues will cover following aspects: • Ring slab septic tank will be installed before starting construction works in order to provide a better sanitation facility to the workers and staffs (under labor shed	Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
	construction.	management) • 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. • Hazardous waste viz. waste oil etc. will be collected and stored in the paved and bounded area and subsequently sold to authorized recyclers. • Paint containing harmful substances (e.g., mercury, lead, etc.), and asbestos containing materials will not be used at site/construction or renovation works.		
Construction Activity	Health & Safety Risks: • 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	• All construction equipment will be properly inspected timely. • The risk assessment will be prepared from time to time for all types of work activities on site. • Fire extinguishers should be located at identified fire points in the site. The extinguishers must be appropriate to the nature of the potential fire. • All people of construction site will be concerned about the safety and maintenance of Electrical equipment; works will be carried out on live systems. • Provision to first aid box in sub-project areas will be ensured.	Mukti Cox's Bazar and Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
	events during construction activities such as manual handling and musculoskeletal disorders, hand-arm vibration, temporary or permanent hearing loss, heat stress, and dermatitis.	• Proper Emergency evacuation response plan will exist in the site/WFS. • 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. • Awareness training will be given to all personnel involved during the construction phase in order to highlight/make aware of 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 all Sites, on different locations within the site. • 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 on how to protect themselves and there should be effective supervision to ensure that the correct methods are being used.		
Construction Activity	Pollution of water bodies	• Contractor will ensure for taking adequate protective measures to contain pollutants from reaching any water bodies, and monitoring of nearby surface and underground water bodies for signs of contamination.	Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
Construction Activity	Demobilization of structures, facilities and equipment used during the project implementation period (including site clearance and restoration after the construction). The impacts are similar to those listed in construction stage: • Pollution from waste materials • Health & Safety risks to workers and local community.	• Provision to proper measures of mitigation and monitoring to minimize or reduce the environmental and social impacts during demobilization are anticipated to be similar to those identified for the construction phase. • Contractor must prepare a waste management plan including relevant directives from "Waste Management Plan Principles" given in next section.	Contractor	UNFPA
Operation & Maintenance	Odours and pollution caused by leaking latrines and faecal sludge impacting surrounding water bodies, flora and fauna	• Preventative maintenance schedule should be followed. • Solid organic wastes should be stored in bins and/ or skips and emptied regularly at a designated waste disposal area away from the site. If no designated site is available within the reach, a dug-hole at a nearby place can be used with periodic filling with soil layer for preventing pollution and generating nutrient rich compost soil over time.	Mukti Cox's Bazar	UNFPA
Operation & Maintenance	Maintenance of assets, properties and equipment	• Periodic maintenance of building structures, plumbing, water filtering and electric equipment has to be carried out. • Periodic cleaning and maintenance of solar panel, watering	Mukti Cox's Bazar	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
		to the storage batteries and maintenance/replacing of associated equipment is to be ensured. • Fire extinguisher must be kept at each WFS where a kitchen will be operational, and necessary fire related hazard management training and periodic safety drilling should be provided to the employees. • Water tanks should be cleaned properly at least once in a quarter.		

Waste Management Plan:

The Contractor shall develop a waste management plan for various specific waste streams (e.g., reusable waste, flammable waste, construction debris, food and organic waste etc.) prior to commencing of construction and submit to Mukti Cox's Bazar for approval. The plans must include following principles or series of actions, which will be carried out/followed by the contractor and supervised by the Field level Safeguards officials from UNFPA.

For wastes and renovation debris:

- The quantity of waste materials shall be minimized by 3R (Reduce, Recycle and Reuse) approach, and wastes shall be segregated accordingly, wherever practical; and stored in designated places/facilities in the site.
- Construction site shall be maintained in a cleaner, tidy and safe condition and appropriate facilities shall be provided and maintained as temporary storage of all wastes before transportation and final disposal.
- Hazardous waste viz. waste oil etc. will be collected and stored in a paved and bounded area and subsequently sold to authorized recyclers.
- The scrap material generated from the erection of structures and related construction activities will be collected and stored separately in a separate place and sold to local recyclers. Parts of construction debris (Brick, concrete and masonry) can be recycled as filling materials on the ground or be sold for using as sub-base material or driveway bedding.
- All wastes generated during construction shall be disposed off in an environmentally acceptable manner. This will include consideration of the nature and location of disposal site, so as to cause less environmental impact.

- Other leftover non-hazardous wastes, including construction debris shall be transported to an approved disposal site by pick up tracks or back loaded vehicles with proper care.
- Organic wastes produced in the camp site during the construction period shall be collected and transported in vehicles covered with tarps or nets to prevent spilling waste along the route to the designated disposal site;
- Regular monitoring on sludge management (including toilet and sewage) procedure and periodic cleaning plan has to be established and followed.
- Burning of any type of wastes in the construction site shall be prohibited completely.

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