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 Women Friendly Space (WFS) in Ukhiya & Teknaf Upazila of Cox's Bazar District

Funded by:

THE WORLD BANK
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Implemented by:

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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

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, these 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) 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)
- Awareness raising session to reach women and girls with disabilities.

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

- 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 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 life's and Dignity of the women and girls from Rohingya communities and host community as well 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 violence against women 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 of 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 WFS in Ukhiya and Teknaf Upazilas 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) given in Figure 1.3.1.

Table-1.3.1: Basic Geolocation Information of WFS

[Sources of data: Field survey, 2020: DDC]

SL. NO	*IDENTIFICATION OF WOMEN FRIENDLY SPACE(WFS)*	*GPS COORDINATES*	*DISTANCE FROM UPAZILA HQ*	*UNION, UPAZILA*	*WARD*	ESTIMATED LAND AREA (SQ.FT.)	PRE-EXISTING CONDITION
1.	South Leda WFS (Camp 26)	20.960289^0 N 92.250104^0 E	10.5 km	2 number Nhila, Teknaf	08	5,232	Open Space where construction needed
2.	Noyapara Host WFS	21.06841^0 N 92.22551^0 E	22 km	Whykong, Teknaf	05	4161	Open Space where construction needed
3.	West Kutupalong WFS in camp-07 (TV Tower)	21.20500^0 N 92.16912^0 E	5.5km	Rajapalong, Ukhiya	09	2880	Existing house will be under tenure
4.	West Palongkhali WFS	21.14496^0 N 92.14861^0 E	11 km	Palongkhali, Ukhiya	07	2107	Open Space where construction needed
5.	Haladiapalong Host WFS	21^{0}18’17.3” N 92^{0}07’28.0” E	6.83 km	Holdiapalong, Ukhiya	05	2200	Existing house will be under tenure
6.	Amtoli WFS (Camp 15)	21^{0}09’24.4” N 92^{0}08’26.7” E	9.7 km	Palongkhali, Ukhiya	06	2400	Open Space where construction needed

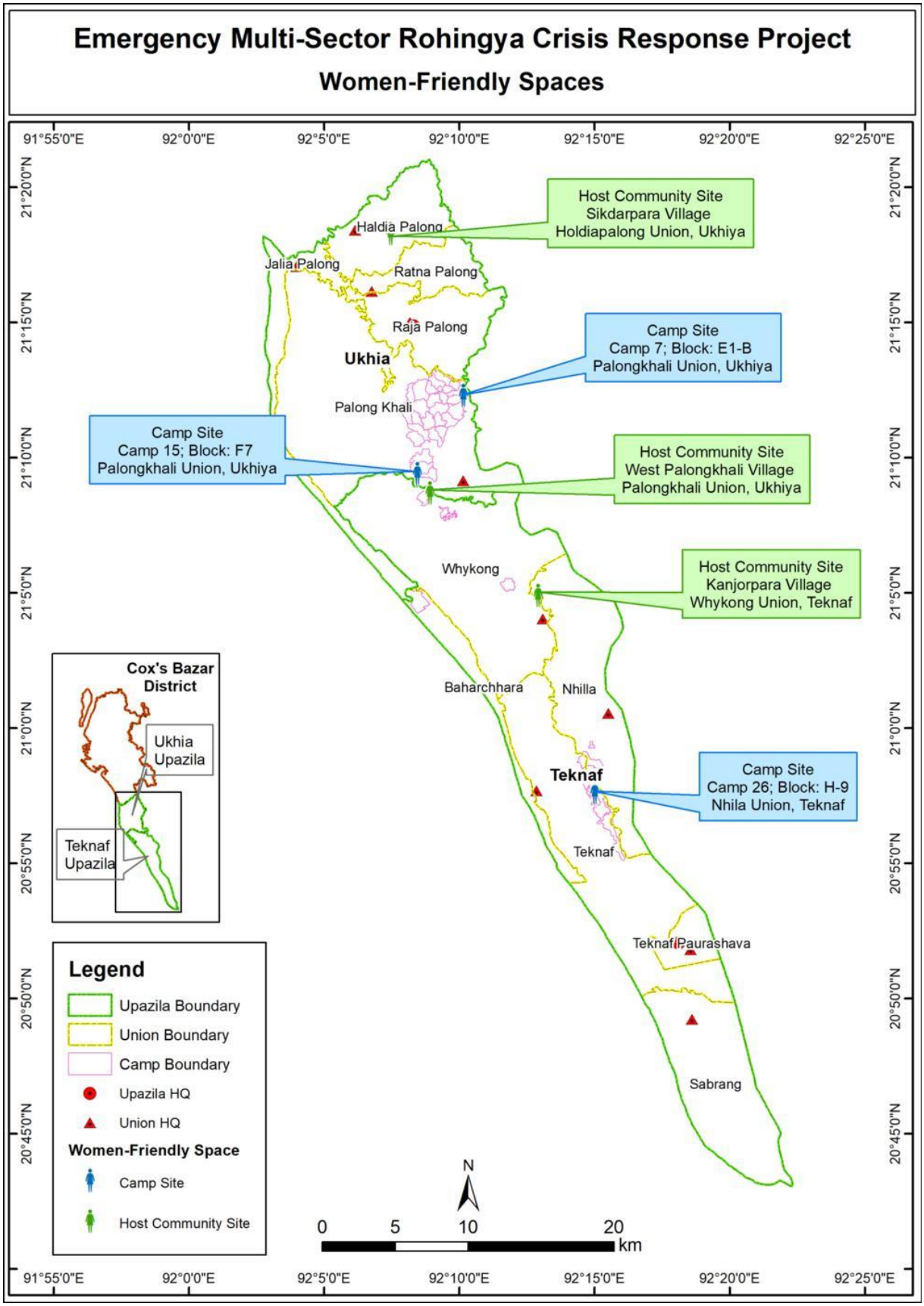


Figure 1.3.1: Map illustrating WFS locations in Ukhiya & Teknaf Upazila

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 spaces for all concerning activities in order 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. Their care and spaces for psycho-social support are also considered.

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

Sl #	Construction Activities		Number	Length	Wide	Total Area (sq.ft.)	Activity/Remarks
1	WFS (50'-0"X30'-0"=1500 sq. ft.)	(a) Meeting room	2	24'-7"	16'-0"	786.56	Adolescent Session Room This room is for children and adolescent girls where they regularly attend information and awareness sessions, PSS activities and play, dance and participate in activities, such as drawings, henna, and hanging out with friends. Women Session Room This room is used by the women and members of the Women's Support Group where they regularly attend the sessions and PSS activities, organize their meetings and participate in handicraft activities such as hand stitching, Anhla singing and weaving fishing nets. It is a relaxing and safe place for them where they come to lie down, take a rest and meet their friends and neighbors after they complete their household chores
		(b) Counseling room	1	11'-7"	9'-10"	113.83	Counselling Room This room is dedicated to provide safe and secure psycho-social support and case management services to the women.
		(c) Mid wife room	1	11'-7"	9'-7"	110.93	Midwife Room: The midwife room provides family planning and basic SRH services to the women

							and pregnant mothers without the extra hassles which they would face in the regular hospitals and health centers.
		(d) Office room	1	11'-7"	9'-10"	113.83	Office Room: A small office room within the WFS for the case manager and case workers.
		(e) Corridor	1	63'-0"	5'-0"	315	
2	Store room		1	12'-0"	7'-0"	84	To keep the emergency materials in this room. Like; Dignity Kits, Refreshment etc.
3	Guard room		1	7'-0"	5'-0"	35	To ensure the security at night for WFS. Night Guard are staying there.
4	Generator room		1	7'-0"	6'-0"	42	
5	Phyco-Social Support (PSS) activities room		1	12'-0"	10'-0"	120	PSS activities room: This room is dedicated to provide for all the beneficiaries to ensure well mental health through different level of PSS activities. Like; Storytelling, Sports etc.
6	Kitchen room		1	12'-0"	10'-0"	120	
7	Latrine		2	5'-0"	5'-0"	50	
8	Bath room		2	5'-0"	5'-0"	50	
Total Land Area						**1941.15**	All of the target location for WFS has sufficient space to accommodate all the facilities stated above (please refer to table 1.3.1 column seven). On the other hand, the locations which have pre-existing infrastructure are well suited to accommodate each facility as well because these residents have enough room with spaces. Nonetheless, Mukti Cox's Bazar has plans to add playground and hand wash station if extra space is available. During the Pandemic period, hand washing station should be an unavoidable option.

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 Development Design Consultants Ltd. The consultation meeting was attended by disparate social groups representing local habitants of different age groups & social class and most importantly women community. In all cases, Mukti Cox's Bazar representative were 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, construction and post construction phase has 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 effecting 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. Extrapolation is not under any method of judgement therefore; specific items has been dealt with and considered distinctively. Sensitive findings have been identified if any, and relevant mitigation or minimization measures were suggested to subdue such complication for over the project life span.

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 under W-25	Direction	Important features/ establishment (approx. distance from the proposed site)
1.	South Leda WFS (Camp 26)	North	South Leda Jame Mosque(400m), Hill/Forest area (300m), Connecting road to register Rohingya camp(20m), Tin shed household(10m), brick field (300m)
		South	Bamboo fence(20m), Settlement(30m), Tin fence/settlement(20m), Pond (150m)
		East	Households(20m), Bamboo fence(10m), Trees and bamboo bush(10m), Rohingya Mosque(50m)
		West	Tin fence(10m), camp settlements(30m), Camp-26 (300m)
2.	Noyapara	North	Noyapara Gov. Primary School(150m), Model Academy KG

Sl. No.	Component's name under W-25	Direction	Important features/ establishment (approx. distance from the proposed site)
	Host WFS		school(1km), Kanjorpara Central mosque(500m), West Shah Jame Mosque(500m)
		South	Graveyard(1km), Nurani Madrassa(1km)
		East	Abdul Gofur's hosue(10m), Pond(20m)
		West	Graveyard(100m), Reserve Forest(1km), Mokbul Ahmed Penjokahan(500m), johoria Mosque and Furkania Madrasasa(500m), Cox's Bazar-Teknaf Highway(100m)
3.	West Kutupalong WFS in camp-07 (TB Tower)	North	Friendship Hospital(200m), Cox's Bazar-Teknaf Highway(300m), Brac Office(10m), Pulse Bangladesh(10m), Al Haramin Mosque(50m-NW)
		South	CIC Office(1km), Mosque(50m), Camp-07(50m)
		East	Rohingya Camp 07(50m)
		West	Brac Clinic (30m), Pond(30m), Fish Hachery(50m), Baitullah Jame Mosque/Hefzokhana(50m)
4.	West Palongkhali WFS	North	Murchakhola School(1km), Forest Office(150m), Anhaz Bin Malek Mosque/ Hefzokhana(140m)
		South	Graveyard(50m), Shop(10m), Households(50m)
		East	Agriculture Field(30m), Ponjakahan/ Madrassa(50m), Settlement(60m)
		West	West Palongkhali Khal (80m), Settlements/Households(30m)
5.	Haladiapalong Host WFS	North	Sale Bulbul Chowdhury Gov. Primary School(1km), Holudbunia Mosque/ Hefzokhana/ Graveyard (800m), Brickfield(700m)
		South	Holudia Khal(200m), Middle Holudia Jame Mosque(800m), Shikdarpara Mosque(150m), South Holudia Ghatorpara Community Clinic(1km), Nasirpara Mosque and Madrassa(1km)
		East	Dawatul Haque Mosque/ Hefzokhana/ Graveyard(500m), Holudiapalong Sub-Health Complex (600m), Nalbunia Gov. Primary School(800m), Darul Quran Al Islamia Madrassa/ Mosque(900m)
		West	Shikdarpara New Mosque(200m), Moulovi Abdus Shukur Mosque/ Hefzokhana(800m)
6.	Amtoli WFS (Camp 15)	North	Fish Farm(5m), Camp-15 Block-H(30m), Camp-15 Block-E(100m), Block-D(150m), Mohaj Ibn Jabal Mosque(200m), Mosque-E-Afsa(150m), Brac School(150m)
		South	Cox's Bazar Teknaf Highway (100m), Musar khola Jame

Sl. No.	Component's name under W-25	Direction	Important features/ establishment (approx. distance from the proposed site)
			Mosque(150m), Host Community Households(100m), Paddy Land(100m)
		East	NGO Office(400m), World Learning Center(300m), jamtoli Bazar(1km), Mosque-E-Rahman(900m), CIC Office(500m), Block-A(1km), Block-F(10m), Block-G(500m), Block-C(600m), Block-B (800m)
		West	Learning Center(100m), Paddy Land(50m), Block-H(50m), STC Hospital(110m), Mosque-E-Belal, Abdullah-bin-Omar Mosque(150m), Concern International(180m), Musarkhola Graveyard(300m), Musarkhola Chora(320m)

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 rented space renovation or construction of a one-story tin-roof 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.

D&S Consultants from EMCRP-LGED part conducted consultation meeting with both the Rohingya and host community regarding the work activities. Participants in general don't have any objection regarding the interventions; rather they expressed sheer enthusiasm in sub-project beneficial outcomes 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 of four 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. It is better to note that in every consultation meeting both women and men group have had their well representative participation along with local public representatives as Ward member were present in few of the meetings. 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 selected 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 and positioning of WFS	Location of WFS along with relevant construction issues such as possible location for temporary material storage and labor shed. No child labor is acceptable.	Every location will have to adjust with labor space and material storage with whatever space is available. None has any objection regarding the construction of WFS in chosen location.
Environmental Concerns	No trees should be harmed for this improvement work. Adjacent Water body should be kept undisturbed along with preserved soil and air quality.	The selected locations are not posing any threat to any water body since no site is nearby to any such feature as such, neither the development interventions.

	No habitat loss must not be encountered for this development.	However, construction work may cause materials leftover to be spread across the surrounding areas or chemical (e.g., paints) to finds way to nearby soil or water bodies. These specific and very local mismanagement in works may induce impacts on soil and water, which can easily be avoided or minimized very effectively with a careful work practices, and 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 Women Friendly Space	Date of Meetings	Meeting Places	Number of Participants				Total
				Host		DRP		
				Male	Female	Male	Female	
1	West Kutupalong Women Friendly Space (WFS), Camp-7, Ukhiya	10/10/2020	Kutupalong Westpara Amir Hossain's House-Block-E-1-B	3	8	1	9	21
2	Amtoli Women Friendly Space (WFS), Camp-15, Ukhiya	10/10/2020	Amtoli	3	2	9	11	25
3	South Leda Women Friendly Space (WFS), Camp-26, Teknaf	12/10/2020	Shop of Mr. Akter Hossain, South Leda,	3	0	5	11	19

			Shialer Ghona.					
4	Noyapara Host Women Friendly Space (WFS), Whykong, Teknaf	11/10/2020	Mr. Abdul Gafur House, Noyapara, Bottali.	5	6	-	-	11
5	Haldiapalong Host Women Friendly Space (WFS), Ukhiya	10/10/2020	Haldiapalong Host Women Friendly Space (WFS), Nalbunia, Ukhiya.	2	14	-	-	16
6	West Palongkhali Host Women Friendly Space (WFS), Ukhiya.	10/10/2020	West Palongkhali Giasuddin's and Zafor Alam's House.	17	9	-	-	26
Total participants =				33	39	15	31	118

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 within half a kilometer of the radial distance around the selected site. Environmental Assessment (EA) based on this screening study for the Sub-project 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 sub-project has correspondence with its surrounding features and upholds interchangeable impacts. However, the degree is not an interchangeable factor since scale is not parallel to each of these components which is where, mitigation measure differentiation 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 is enlisted in following Table 3.2.1 with pertaining impacts. Moreover, impacts that are adventitious has 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:	***South Leda WFS (Camp 26)***
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 be empty and no engagement was seen.	
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?	
The nominated location is not found to be on any high ground with steep slope or vise-versa. This location is fairly plain and no landslide potential can be expected from it. On the other hand, the WFS involve a single floor construction which does not require heavy pilling work. Soil degradation chances are very low nonetheless minimum scale of top soil clearing maybe needed.	
Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?	
No. The construction will be limited to the selected site and this is not located near any waterbody which will be subject to deterioration. Groundwater will not be interfered by this development work since heavy earth removal or cutting is not involved. Low scale run-off will occur, but this is manageable.	
Chances of Waste generation?	
The construction work will definitely induce waste which are mostly construction debris such as; leftovers of brick chips, cement, wood, bamboo, plastics, wires and paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) etc. Moreover, labors who will work during the construction period may generate organic and feacal waste.	
Any damage to existing vegetation or garden plants?	
No. There are no plants or large tree cover which will need clearing. Nonetheless, small bush or grass may need uprooting.	
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?	
Chemical spills or improper disposal of construction waste materials may occur due to lack of worker's training and misconduct of contractor's labor safety initiatives. Other than this, no other items are seen to pose risk during pre-construction and construction phase.	
Availability of Labor camp and material storage Space or Ancillary facility?	
Separate location other than nominated site was not found. Labor camp and material storage will have to adjust in the selected vicinity. However, labor camp may not be required, if local labors are engaged in construction works.	

Availability of Utility Services?
Electricity is not available. Solar light or Generator will have to arrange. No pre-existing tube well is found in the proposed location. Tube well will be installed immediately after the construction, which has been confirmed by Mukti Cox's Bazar.
Availability of access road?
The connecting registered camp road is the only pathway to deliver materials but heavy transports cannot be used. Small four-wheeler should be used.
Does the component have Social Safety and Acceptance?
Selected location is accepted by both male and female representatives. There is a shop to the North which is always teeming with people. North side of the location should have extra care and security.

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

Project Name:	***Noyapara Host WFS***

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 be empty and no engagement was seen. However, this proposed location is placed in front yard of Mr. Abdul Gofur's house.
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?
The nominated location is not found to be on any high ground with steep slope or vise-versa. This location is fairly plain and no landslide potential can be expected from it. On the other hand, the WFS involve a single floor construction which does not require heavy pilling work. Soil degradation chances are very low nonetheless minimum scale of top soil clearing maybe needed.

Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?
No. The construction will be limited to the selected site and this is not located near any waterbody which will be subject to deterioration. Groundwater will not be interfered by this development since heavy earth removal or cutting is not involved. Low scale run-off will occur, but this is manageable.
Chances of Waste generation?
The construction work will definitely induce waste which are mostly construction debris such as; leftovers of brick chips, cement, wood, bamboo, plastics, wires and paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) etc. Moreover, labors who will work during the construction period may generate organic and feacal waste.
Any damage to existing vegetation or garden plants?
This location has small to medium sized plants and bush which will need clearing in order to make way for the WFS to stand. Around 40 small trees will need clearing.
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. The owner of the land is also in good terms with the endeavor and has no issue whatsoever.
Violation of Environment, Health and Safety?
Chemical spills or improper disposal of construction waste materials may occur due to lack of worker's training and misconduct of contractor's labor safety initiatives. However, a municipal electricity line is crossing over the target area which has a height of around 18 feet. This line should be replaced to a site at safer distance before construction work is incepted. Otherwise, this may pose risk during operation period as well.
Availability of Labor camp and material storage Space or Ancillary facility?
Separate location other than nominated site was not found. Labor camp and material storage can be set out side of the proposed location which is abutting with the existing boundary wall. However, labor camp may not be required, if local labors are engaged in construction works.
Availability of Utility Services?
Electricity is available and pre-existing tube wells were found in the proposed location. However, new Tube well will be installed as per the confirmation by Mukti Cox's Bazar.
Availability of access road?
The Cox's Bazar-Teknaf highway is the only pathway to deliver materials to the location.
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	Low	Low	None
Air Pollution	Low	None	None
Soils	None	None	None
Vibrations	Low	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)

Project Name:	***West Kutupalong WFS in camp-07 (TV Tower)***

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 existing house which will be rented for WFS.

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?

The nominated location has pre-existing one floor house which belongs to Mr. Amin. He has agreed to rent Mukti Cox's Bazar to use it as WFS. As a result, for this component no new construction is needed. Nonetheless, renovation work is needed. Here, no major impact is expected.

Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?

No construction is needed. Therefore, no concern arises in this respect.

Chances of Waste generation?

No construction is expected. However, renovation works may bring out plastics, wires and paint chemicals as waste materials.

Any damage to existing vegetation or garden plants?

No. There are no plants or large tree cover which will need clearing.

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?

Chemical spills or improper disposal of construction waste materials may occur due to lack of worker's training and misconduct of contractor's labor safety initiatives.

Availability of Labor camp and material storage Space or Ancillary facility?

Not required.

Availability of Utility Services?

Electricity is available. Water is available and pre-existing tube well is found in the proposed location. Tube well will be installed which is confirmed by Mukti Cox's Bazar.

Availability of access road?

Roads for camp-07 is the only available roads for use.
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	Low	None
Air Pollution	None	None	None
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)

Project Name:	***West Palongkhali WFS***

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 be empty and no engagement was seen.
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?
The nominated location is not found to be on any high ground with steep slope or vise-versa. This location is fairly plain and no landslide potential can be expected from it. On the other hand, the WFS involve a single floor construction which does not require heavy pilling work. Soil degradation chances are very low nonetheless minimum scale of top soil clearing maybe needed.
Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?
No. The construction will be limited to the selected site and this is not located near any waterbody which will be subject to deterioration. Groundwater will not be interfered by this development work since heavy earth removal or cutting is not involved. Low scale run-off will occur, but this is manageable.
Chances of Waste generation?
The construction work will definitely induce waste which are mostly construction debris such as;

leftovers of brick chips, cement, wood, bamboo, plastics, wires and paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) etc. Moreover, labors who will work during the construction period may generate organic and feacal waste.
Any damage to existing vegetation or garden plants?
This location has small to medium size trees and bamboo bush which will need clearing in order to make way for WFS to stand. Around 15 small trees will need clearing.
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. Nonetheless, only one shop is found in the vicinity which will need assistance.
Violation of Environment, Health and Safety?
Chemical spills or improper disposal of construction waste materials may occur due to lack of worker's training and misconduct of contractor's labor safety initiatives.
Availability of Labor camp and material storage Space or Ancillary facility?
Separate location other than nominated site was not found. Labor camp and material storage can be set out side of the proposed location which is abutting with the existing site boundary. However, labor camp may not be required, if local labors are engaged in construction works.
Availability of Utility Services?
Electricity is available and pre-existing tube wells were found in the proposed location. However, a new Tube well will be installed as per the confirmation of Mukti Cox's Bazar.
Availability of access road?
The Poshchim-para Palongkhali road is the only pathway to deliver materials to the location.
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	Low	Low	None
Air Pollution	Low	None	None
Soils	None	None	None
Vibrations	Low	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)

Project Name:	*Haldiapalong Host WFS*

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. Proposed site is found to have pre-existing two-story building of Abdul Haque, which is rented for preparation of WFS and it has adequate space and room to facilitate all component of WFS.

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?

This will not need new construction works. Only minor renovation is needed which does not pose any chance of land degradation.

Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?

No. There will be no activity outside of the rented building, thus no obstruction to water body or pollution is expected.

Chances of Waste generation?

Only renovation work will induce waste which are leftovers of plastics, wires and paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) etc.

Any damage to existing vegetation or garden plants?

This location has nut trees that will not be disturbed in any way.

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 or disturbed by this intervention. Therefore, no negative impact is expected in that regard.

Violation of Environment, Health and Safety?

Chemical spills or improper disposal of construction waste materials may occur due to lack of worker's training and misconduct of contractor's labor safety initiatives. However, the chances are low since no heavy work, wide space utilization or electric work is needed here.

Availability of Labor camp and material storage Space or Ancillary facility?

No temporary shed is required within the vicinity or adjacent location.

Availability of Utility Services?

Electricity is available and pre-existing tube wells were found in the proposed location. However, a new Tube well will be installed as per confirmation by Mukti Cox's Bazar.

Availability of access road?

The Holudbunia, boktatoli connecting road and Moricha Bazar road is the only pathway for access to the site.

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	Low	Low	None
Air Pollution	None	None	None
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)

Project Name:	***Amtoli WFS (Camp 15)***

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 be empty and no engagement was seen. This location is situated in camp-15.

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?

The nominated location is not found to be on any high ground with steep slope or vice-versa. This location is fairly plain and no landslide potential can be expected here. On the other hand, the WFS involve a single floor construction which does not require heavy pilling work. Soil degradation chances are very low, nonetheless minimum scale of top soil clearing and earth filling maybe needed.

Will the construction obstruct water cycle of the local area or pollute near waterbody and groundwater?

No. The construction will be limited to the selected site but it is located near a pond which will be subject to runoff leading to surface water pollution, though in a very minor scale and if there is additional flow of water running over the ground. Groundwater will not be interfered by this development since heavy earth removal or cutting is not involved.

Chances of Waste generation?

The construction work will definitely produce wastes which are mostly construction debris such as leftovers of brick chips, cement, wood, bamboo, plastics, wires and paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) etc. Moreover, labors who will work during the construction period may generate organic and feacal waste.

Any damage to existing vegetation or garden plants?

This location has no vegetation cover that may cause any matter of concern.
Will the project cause socio-economic disturbance?
The project is not located in any agriculture field or existing socio-economic structure which will be challenged by this intervention. However, agriculture fields are found in approaching distance or close by. During construction the pathway, connecting this proposed site and these crop fields, will be heavily used which may cause temporary trouble to farmers.
Violation of Environment, Health and Safety?
Chemical spills or improper disposal of construction waste materials may occur due to lack of worker's training and misconduct of contractor's labor safety initiatives. However, the chances are low since no heavy work, wide space utilization or limited electric work is needed here. Also, while construction, a boundary should be maintained along the side of the pond, so that no accidents occur.
Availability of Labor camp and material storage Space or Ancillary facility?
Separate location other than the nominated site was found. Labor camp and material storage can be set out side of the proposed location.
Availability of Utility Services?
Electricity is not available. Solar light/ Generator can be used, and pre-existing tube wells were not found in the proposed location. However, a new Tube well will be installed as per Mukti Cox's Bazar.
Availability of access road?
The Musarkhola connecting road and Jamtoli-Bagguna connecting road is available.
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 activities of WFS.

Environmental Components (Physical/ Biological)	***Impact during the project life span***		
	PC	**OM**	**DE**
Noise	Low	Low	None
Air Pollution	Low	None	None
Soils	None	None	None
Vibrations	Low	None	None
Surface Water	Low	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. A few incidents of human elephant conflict have been reported in 2018. 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, 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.

3.3.2 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 Thunder storm has been seen to have increase and is found to have highest

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

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

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.
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. 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 construction works are minimized to its least level and controlled efficiently, it will turn into a welcoming and beneficial project for the local communities.

Environmental management plan 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.

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, and/or operation procedure of the proposed Sub-project. 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, mis-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 air quality, noise, solid waste, occupational health & safety during the construction period, that need to be minimized through management plan. Management problems are common and should be taken into consideration.
- 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.

Appendix-01: List of Participants in the Consultation Meetings

South Leda WFS, Camp-26, Teknaf

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for South Leda WFS (Camp 26)

Noyapara Host WFS, Whykong, Teknaf

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for Noyapara Host WFS

West Kutupalong WFS, Camp-7, Ukhiya

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Host

Figure: Attendance of consultation meeting for West Kutupalong WFS in camp-07 (TB Tower)

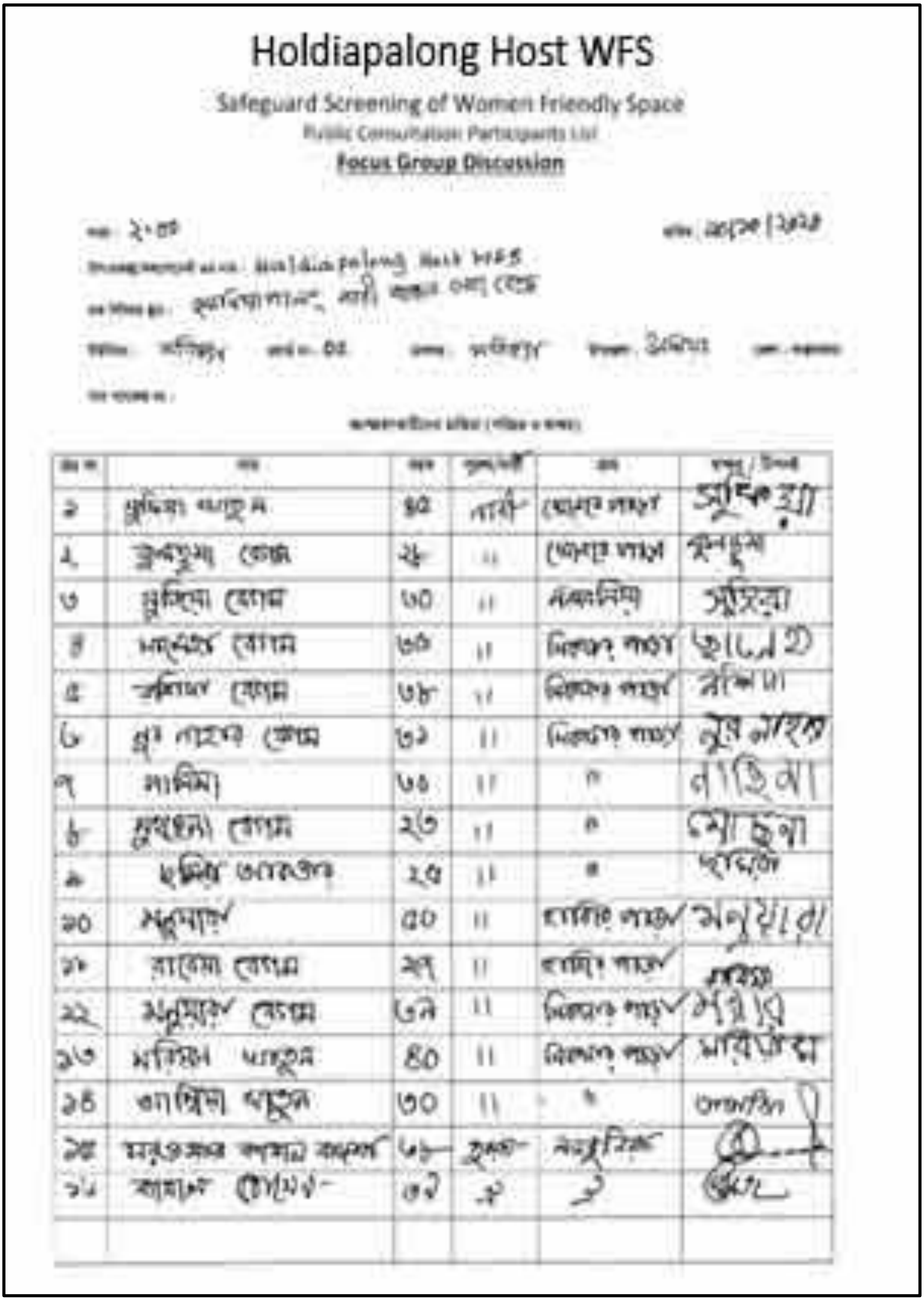
West Kutupalong WFS, Camp-7, Ukhiya

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for West Kutupalong WFS in camp-07 (TV Tower)


Holdiapalong Host WFS

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for Haladiapalong Host WFS

West Palongkhali WFS

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for West Palongkhali WFS

West Palongkhali WFS

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for West Palongkhali WFS

Amtoli WFS, Camp-15, Ukhiya

Safeguard Screening of Women Friendly Space

Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for Amtoli WFS (Camp 15)

Amtoli WFS, Camp-15, Ukhiya

Safeguard Screening of Women Friendly Space

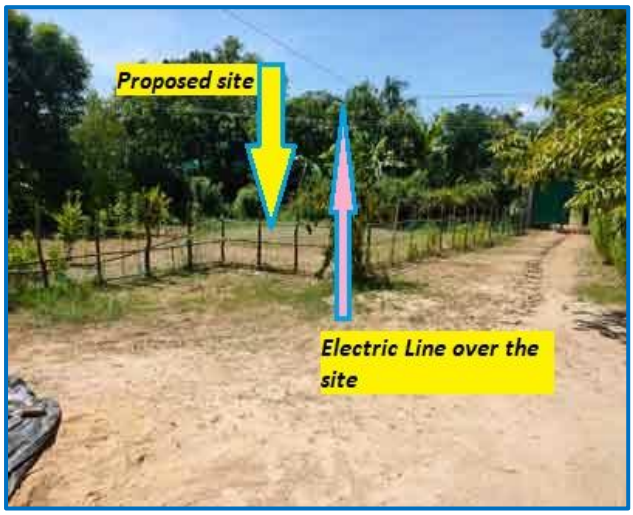
Public Consultation Participants List

Focus Group Discussion

Figure: Attendance of consultation meeting for Amtoli WFS

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

Figures: Present condition of South Leda WFS (Camp 26) & Public Consultation meeting with Host & Rohingya community



Figures: Present condition of Noyapara Host WFS & Public Consultation meeting with Host community

Figures: Present condition of West Kutupalong WFS in camp-07 (TV Tower) & Public Consultation meeting with Host & Rohingya community

Figures: Present condition of West Palongkhali WFS & Public Consultation meeting with Host & Rohingya community

Figures: Present condition of West Haladiapalong Host WFS & Public Consultation meeting with Host & Rohingya community

Figures: Present condition of Amtoli WFS (Camp 15) & Public Consultation meeting with Host & Rohingya community

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

Environmental Screening Form for South Leda WFS (Camp 26)

Name of Sub-Project: South Leda WFS (Camp 26)
Implementing Agency/Agencies: Mukti Cox's Bazar

District: Cox's Bazar **Sub-District**: Teknaf **Union**: Nhila

Name of Community/Local Area: South Leda (Close to Camp-26 area)
Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):
The Sub-Project is categorized as single storied building with tin roof. Proposed structure will have Meeting room, Counselling Room, Mid-Wife Room, Office Room, Corridor etc. The total area needed for these facilities is 1500 square feet. Apart from these, Store room, generator room, Kitchen, Latrine, Bathroom and Psycho Social Support (PSS) room are added in the plan which accounts for 441 square feet area. Moreover, the compound will be environed with boundary made of wood and bamboo.

Estimated footprint / land area for this sub-project is 1914 sq. feet
Available land area: 5,232 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 South Leda in Nhila union of Teknaf Upazila under Ward 08. The proposed location is an empty space with no significant concerning feature which may be harmed from the placement of WFS. It falls in camp-26 area having Rohingya settlements in the surrounding area. Few mosques and non-permanent establishments are also present within 500-meter area. Majority 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 socio-economic facility as agriculture fields or fish farm are present near this location.

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 construction phase and limited within 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 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:

During construction period solid waste will be generated due to construction activities. The types of wastes are brick pit, unused sand, wood, gravels, bitumen etc. The types of wastes are gravel, stones, rock, wood, copper wires, concrete, iron, plastic etc. Negligible amount of plastic will come as residue. Moreover, liquid waste will include chemicals of paint leftovers, motor oils, used oil, Degreasing solvents etc. Domestic solid wastes will be produced in kitchen of labor camps during the construction 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. South Leda Jame Mosque(400m), Hill/Forest are(300m), Connecting road to register Rohingya camp(20m), Tin shed household(10m) and brick field (300m) to the north. Bamboo fence(20m), Settlement(30m), Tin fence/settlement(20m) and pond (150m) to the south. Households(20m), Bamboo fence(10m), Trees and bamboo bush(10m), Rohingya Mosque(50m) to the east. Tin fence(10m), camp settlements(30m), Camp-26 (300 m) to the west. 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;

Item	Size (sq.ft)	Item	Size (sq.ft)
Meeting room	786.56	Guard room	35
Counseling room	113.83	Generator room	42
Mid wife room	110.93	Phyco-Social Support (PSS) activities room	120
Office room	113.83	Kitchen room	120
Corridor	315	Latrine	50
Store room	84	Bath room	50

Also, One tube well and One water filter are included for ensuring safe drinking water.

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Teknaf
Union	Nhila
WARD	08
Proposed area size	5232 Sq. ft.
Distance from Upazila HQ	10.5 km
Coordinates	20.960289^0 N 92.250104^0 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:

South Leda Jame Mosque(400m), Hill/Forest are(300m), Connecting road to register Rohingya camp(20m), Tin shed household(10m) and brick field (300m) to the north. Bamboo fence(20m), Settlement(30m), Tin fence/settlement(20m) and pond (150m) to the south. Households(20m), Bamboo fence(10m), Trees and bamboo bush(10m), Rohingya Mosque(50m) to the east. Tin fence(10m), camp settlements(30m), Camp-26 (300 m) to the west. 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).

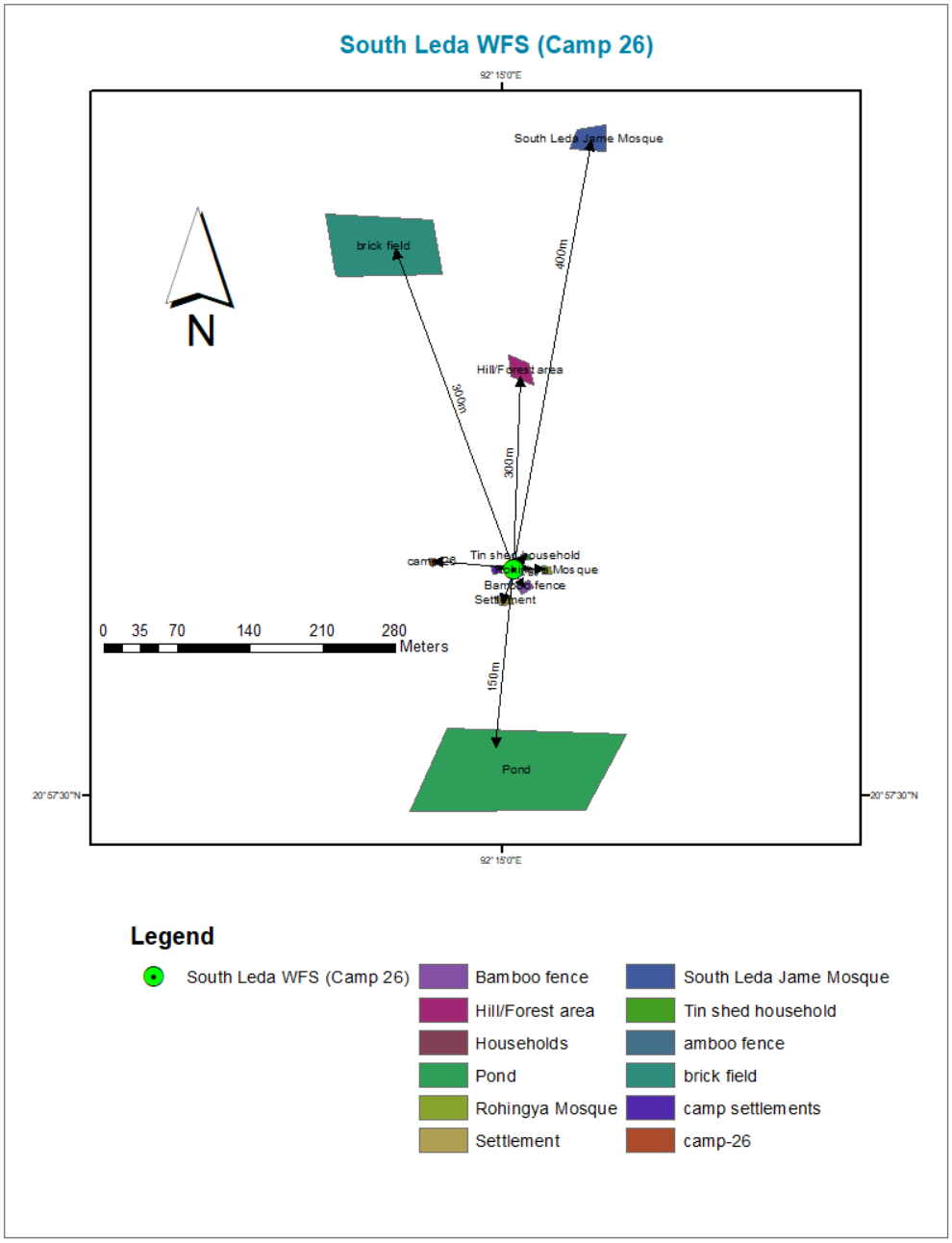
Section B: Environmental Screening

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

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

South Leda Jame Mosque(400m), Hill/Forest are(300m), Connecting road to register Rohingya camp(20m), Tin shed household(10m) and brick field (300m) to the north. Bamboo fence(20m), Settlement(30m), Tin fence/settlement(20m) and pond (150m) to the south. Households(20m), Bamboo fence(10m), Trees and bamboo bush(10m), Rohingya Mosque(50m) to the east. Tin fence(10m), camp settlements(30m), Camp-26 (300 m) to the west. 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, madrasa and local 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. 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).

(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:

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. Vehicles such as tempo, auto rickshaw, tractor, trailer, etc. move on roads adjacent to proposed location throughout the day generating noise but within tolerable limit in most cases.

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):

N/A (the sub-project will be constructed in a plain land and within proposed location boundary)

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, 2020). 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:

Patches of vegetation containing large and matured trees found in surrounding area of the proposed location which are within 200m radial distance.

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): The connecting registered camp road is the only pathway to deliver materials but heavy transports cannot be used. Small four-wheeler should be used.
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 the contractor in the vicinity of the construction area for all the components of the project, electric connection will be established with the accommodation facility for the workforce. Electricity is not available in the area. Generator or Solar lamp will need installation
Possible location of labor camps: Separate location other than nominated site was not found. Labor camp and material storage will have to adjust in the selected vicinity.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): i) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction.
Identification of access road for transportation (Yes/No): The connecting registered camp road is the only pathway to deliver materials but heavy transports cannot be used. Small four-wheeler should be used.
Location identification for raw material storage: Separate location other than nominated site was not found. Labor camp and 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 also no old latrines which needs to be accounted for.

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:** Iron, concrete, metal, drywall, wood, plastic, rubber, copper wires, excavated soils etc. **Quantity:** It is difficult to give exact figures of construction waste produced on a typical construction site. However, in order to approximate the quantity, it is estimated that nearly 2 kg of waste would be generated each working day, which are mainly construction wastes. Some plastic, paper and organic waste will be generated from the use of workers, though a very negligible amount- half a kilogram a day maximum. Wastes from food and kitchen (biodegradable organic waste) will be generated at an amount of 1 kg per day in the labor camp. **Liquid waste**: Paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) will come out as leftovers. During construction period fecal sludge will be generated from the labor

camp and the quantity would be nearly 1.5 kg per day, which would be reduced in weight in course of time. 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) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction. **Quantity**: It is difficult to give exact figures of construction 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 1914 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 construction work 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 the construction period in or around/ adjacent to the proposed area. During construction period one or two water reservoir may be constructed due to construction activities. But all those will completely be demolished and cleared out, once the construction period is over.
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 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 works. Life cycle or movement of some terrestrial living species (fauna) (i.e. Insects - ant, bees, earthworm, reptiles, birds etc.) might be disturbed for the time being, but with very less impact indeed. 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 already compacted and developed and the area is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil for the said construction works.
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 movement of vehicles carrying construction 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 and exhaust gas might be produced by the vehicles bound to pass by the facility through adjacent road; the quantity of dust is expected to be bit high only for a small period of time. 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 has to 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 will be disposed off in a designated place away from the site and any water bodies, and covered with layers of soil in a periodic manner so that 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: Construction or 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) No existing drainage channels or surface water bodies found in the project area; therefore, no such effect can be 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. An earthen road connects the site with the main road. The muddy road is mainly used for pedestrian access and light vehicles like bicycles, three wheelers etc. therefore, during operation period traffic congestion is not expected. However, if not properly maintained and supervised, low effects of noise and air pollution will be occurred, primarily because of the noise and emission from vehicular movement and loose soil being dispersed around during the dry weather, and accidents may occur due to the bad condition of the access road and unsafe driving through it.

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 Noyapara Host WFS

Name of Sub-Project: Noyapara Host WFS
Implementing Agency/Agencies: Mukti Cox's Bazar

District: Cox's Bazar **Sub-District**: Teknaf **Union**: Whykong

Name of Community/Local Area: Noyapara
Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):
The Sub-Project is categorized as single story building with tin roof. Proposed structures will have Meeting room, Counselling Room, Mid-Wife Room, Office Room, Corridor etc. The total area needed for these facilities is 1500 square feet. Other than these Store room, generator room, Kitchen, Latrine, Bathroom and Psycho Social Support (PSS) room are added in the plan which accounts for 441 square feet area. Moreover, the compound will be fenced with boundary made from wood and bamboo.

Estimated footprint / land area for this sub-project is 1914 sq. feet
Available land area: 4161 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 Noyapara in Whykong union of Teknaf Upazila under Ward 05. The proposed location is an empty space with few concerning features which may be harmed from the placement of WFS. Small trees and plants are present in proposed location which may need uprooting and clearing. Moreover, this location is placed in front of Mr. Abdul Gofur's house which can be characterized as front yard garden. It falls in host community area having households and social establishments in surrounding area. Few mosques and non-permanent establishments are also present within 500-meter area. There are no significant eco-sensitive features on the footprint area. No socio-economic facility as agriculture fields or fish farm are present near this location which might be hampered.

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 construction phase and limited within 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 to local community. The local community representatives both male and female joined 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:

During construction period solid waste will be generated due to construction activities. The types of wastes are brick pit, unused sand, wood, gravels, bitumen etc. The types of wastes are gravel, stones, rock, wood, copper wires, concrete, iron, plastic etc. Negligible amount of plastic will come as residue. Moreover, liquid waste will include chemicals of paint leftovers, motor oils, used oil, Degreasing solvents etc. Domestic solid wastes will be produced in kitchen of labor camps during the construction 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. Noyapara Gov. Primary School(150m), Model Academy KG school(1km), Kanjorpara Central mosque(500m), West Shah Jame Mosque(500m) to the north. Graveyard(1km), Nurani Madrassa(1km) to the south. Abdul Gofur's hosue(10m), Pond(20m) to the east. Graveyard(100m), Reserve Forest(1km), Mokbul Ahmed Penjokahan(500m), johoria Mosque and Furkania Madrasasa(500m), Cox's Bazar-Teknaf Highway(1000m) to the west. Apart from these structures no other sensitive environmental, cultural, archaeological, religious sites exists.

Mostly Host 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;

Item	Size (sq.ft)	Item	Size (sq.ft)
Meeting room	786.56	Guard room	35
Counseling room	113.83	Generator room	42
Mid wife room	110.93	Phyco-Social Support (PSS) activities room	120
Office room	113.83	Kitchen room	120
Corridor	315	Latrine	50
Store room	84	Bath room	50

Also, tube well and water filter are included for ensuring safe drinking water.

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Teknaf

Union	Whykong
WARD	05
Proposed area size	4161 Sq. ft.
Distance from Upazila HQ	22 km
Coordinates	21.068410 N 92.225510 E

Land ownership

Private Land

Expected construction period: 1 Year

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:

Noyapara Gov. Primary School(150m), Model Academy KG school(1km), Kanjorpara Central mosque(500m), West Shah Jame Mosque(500m) to the north. Graveyard(1km), Nurani Madrassa(1km) to the south. Abdul Gofur's hosue(10m), Pond(20m) to the east. Graveyard(100m), Reserve Forest(1km), Mokbul Ahmed Penjokahan(500m), johoria Mosque and Furkania Madrasasa(500m), Cox's Bazar-Teknaf Highway(1000m) to the west. 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).

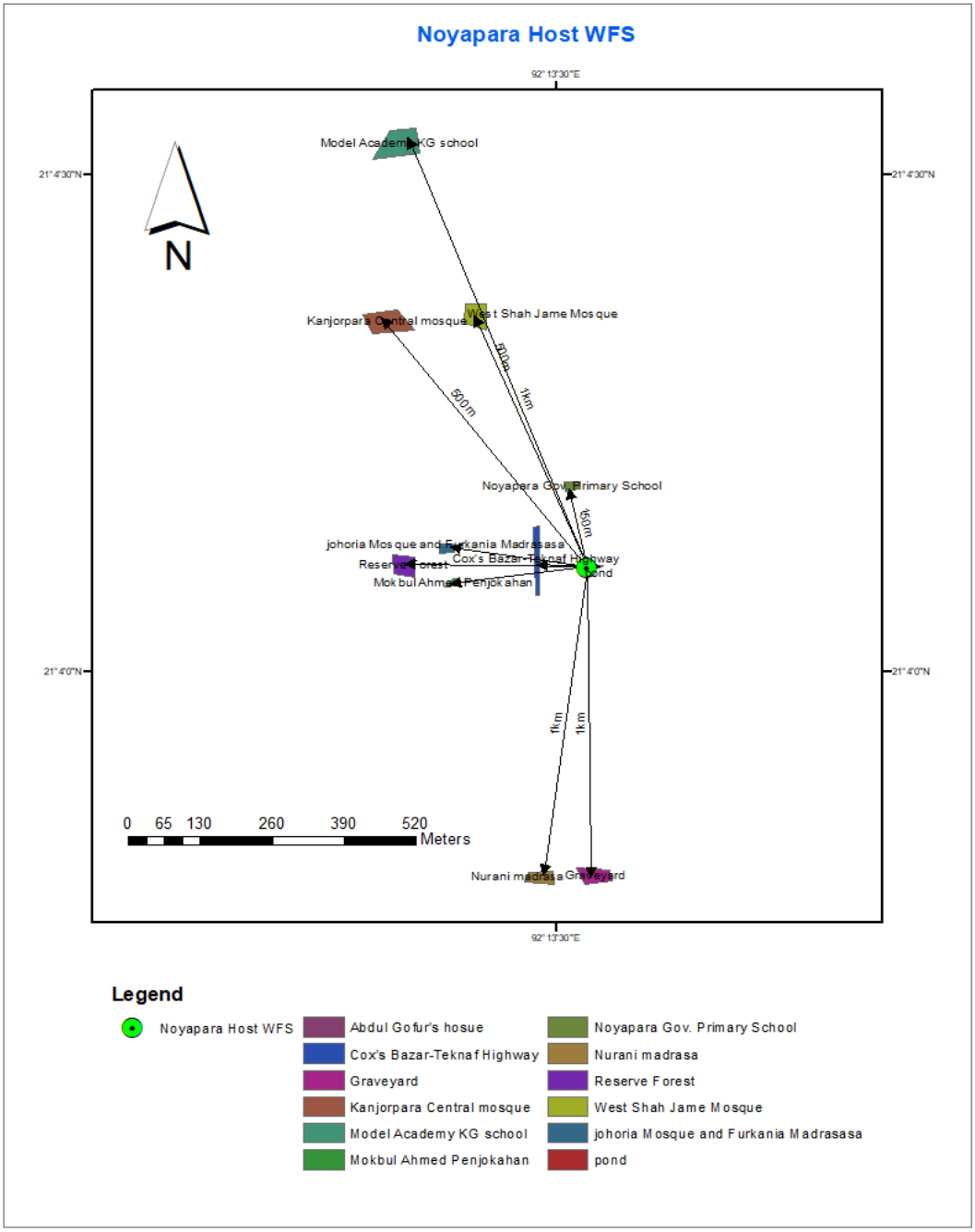
Section B: Environmental Screening

***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:

Noyapara Gov. Primary School(150m), Model Academy KG school(1km), Kanjorpara Central mosque(500m), West Shah Jame Mosque(500m) to the north. Graveyard(1km), Nurani Madrassa(1km) to the south. Abdul Gofur's hosue(10m), Pond(20m) to the east. Graveyard(100m), Reserve Forest(1km), Mokbul Ahmed Penjokahan(500m), johoria Mosque and Furkania Madrasasa(500m), Cox's Bazar-Teknaf Highway(1000m) to the west. 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, except some vegetation as homestead gardens. Several mosques, madrasa and local 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. 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).

(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:

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. Vehicles such as tempo, auto rickshaw, tractor, trailer, etc. move on roads adjacent to proposed location throughout the day generating noise but within tolerable limit in most cases.

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):

N/A (the sub-project will be constructed in a plain land and within proposed location boundary)

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, 2020). 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:

Patches of vegetation containing large and matured trees found in surrounding area of the proposed location which are within 200m radial distance.

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): The Cox's Bazar-Teknaf highway is the only pathway to deliver materials but heavy transports cannot be used. Small four-wheeler should be used.
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 the contractor in the vicinity of the construction area for all the components of the project, electric connection will be established with the accommodation facility for the workforce. Electricity is available in the area.
Possible location of labor camps: Separate location other than nominated site was not found. Labor camp and material storage will have to adjust in the selected vicinity. However, the land owner has confirmed that contractors can use separate space which belongs to him.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): i) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction.
Identification of access road for transportation (Yes/No): The Cox's Bazar-Teknaf highway is the only pathway to deliver materials but heavy transports cannot be used. Heavy four-wheeler can be used.
Location identification for raw material storage: The land owner Abdul Gofur has confirmed that contractors can use separate space which is abutting to the proposed location.
Possible composition and quantities of wastes (Solids wastes, demolition materials, sludge from old latrines, etc.): A boundary wall needs adjusting in order to place a front gate for the WFS. Here small demolition work is expected. It will bring out old bricks and brick chips as demolition materials, however these can be used in construction period.

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:** Iron, concrete, metal, drywall, wood, plastic, rubber, copper wires, excavated soils etc. **Quantity:** It is difficult to give exact figures of construction waste produced on a typical construction site. However, in order to approximate the quantity, it is estimated that nearly 2 kg of waste would be generated each working day, which are mainly construction wastes. Some plastic, paper and organic waste will be generated from the use of workers, though a very negligible amount- half a kilogram a day maximum. Wastes from food and kitchen (biodegradable organic waste) will be generated at an amount of 1 kg per day in the labor camp.

Liquid waste: Paint chemicals as paint thinners which contain Volatile Organic Compounds (VOCs) will come out as leftovers. During construction period fecal sludge will be generated from the labor camp and the quantity would be nearly 1.5 kg per day, which would be reduced in weight in course of time. 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) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction. **Quantity**: It is difficult to give exact figures of construction 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 1914 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 construction work 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 the construction period in or around/ adjacent to the proposed area. During construction period one or two water reservoir may be constructed due to construction activities. But all those will completely be demolished and cleared out, once the construction period is over.
Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description) No pre-existing waterbody or 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 works. Life cycle or movement of some terrestrial living species (fauna) (i.e. Insects - ant, bees, earthworm, reptiles, birds etc.) might be disturbed for the time being, but with very less impact indeed. 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 already compacted and developed and the area is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil for the said construction works.
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 movement of vehicles carrying construction 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 and exhaust gas might be produced by the vehicles bound to pass by the facility through adjacent road; the quantity of dust is expected to be bit high only for a small period of time. 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 has to 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 will be disposed off in a designated place away from the site and any water bodies, and covered with layers of soil in a periodic manner so that 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: Construction or 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) No existing drainage channels or surface water bodies found in the project area; therefore, no such

effect can be 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. An earthen road connects the site with the main road. The muddy road is mainly used for pedestrian access and light vehicles like bicycles, three wheelers etc. therefore, during operation period traffic congestion is not expected. However, if not properly maintained and supervised, low effects of noise and air pollution will be occurred, primarily because of the noise and emission from vehicular movement and loose soil being dispersed around during the dry weather, and accidents may occur due to the bad condition of the access road and unsafe driving through it.

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 West Kutupalong WFS in camp-07 (TV Tower)

Name of Sub-Project: West Kutupalong WFS in camp-07 (TB Tower)
Implementing Agency/Agencies: Mukti Cox's Bazar

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

Name of Community/Local Area: Kutupalong West para in camp-07

Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):
The Sub-Project is categorized as single story building with paka roof. Here, pre-existing structure will be rented for delivering WFS facilities. Owner of the house, Mr. Amin Hossain, has agreed to rent his domicile to Mukti Cox's bazar. It will have to adjust Meeting room, Counselling Room, Mid-Wife Room, Office Room, Corridor etc. The total area needed for these facilities is 1500 square feet. Other than these Store room, generator room, Kitchen, Latrine, Bathroom and Psycho Social Support (PSS) room are added in the plan which accounts for 441 square feet area. This house has 5 individual rooms with a long corridor and separate latrines for men and women. These spaces can be planned and utilized for WFS facilities. Moreover, the compound does not need separate fencing because existing boundary exists. Although, if deemed necessary extra fencing can be placed on the back side of the proposed location as the current condition was found to have weak terpal fencing.

Estimated footprint / land area for this sub-project is 1914 sq. feet
Available land area: 2880 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 kutupalong westpara in camp-07, Rajaplong union of Ukhiya Upazila under Ward 09. The proposed location is a pre-existing one story building. Small trees and plants are present around the proposed location. Moreover, this location is privately owned whose owner, Mr. Amin Hossain has no objection with the intervention's activity. It falls in both Rohingya and host community area having households and social establishments. Few mosques and non-permanent establishments are also present within 500-meter area. There are no significant eco-sensitive features on the footprint area. No socio-economic facility as agriculture fields or fish farm are present near this location which might be hampered.

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 construction phase and limited within 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 to local community. The local community representatives both male and female joined the participatory public consultation meeting. Their community representatives have no objection regarding 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:

No construction is needed for this facility though small renovation works are needed. During renovation solid waste will be generated as unused wood, copper wires, plastic pipes etc. Negligible amount of plastic will come as residue. Moreover, liquid waste will include chemicals of paint leftovers, used oil, Degreasing solvents etc. Sludge from sewage and fecal wastes will be generated during the 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. Friendship Hospital(200m), Cox's Bazar-Teknaf Highway(300m), Brac Office(10m), Pulse Bangladesh(10m), Al Haramin Mosque(50m-NW) to the north. CIC Office(1km), Mosque(50m), Camp-07(50m) to the south. Rohingya Camp 07(50m) to the east. Brac Clinic (30m), Pond(30m), Fish Hachery(50m), Baitullah Jame Mosque/Hefzokhana(50m) to the west. 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 proposed area, no elephant migration routes exist (ref. IUCN). No disturbance is anticipated due to renovation 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; (these items will be ensured on the basis of the rented house therefore; the proposed size area may differ)

Item	Size (sq.ft)	Item	Size (sq.ft)
Meeting room	786.56	Guard room	35
Counseling room	113.83	Generator room	42
Mid wife room	110.93	Phyco-Social Support (PSS) activities room	120
Office room	113.83	Kitchen room	120
Corridor	315	Latrine	50
Store room	84	Bath room	50

Also, tube well and water filter are included for ensuring safe drinking water.

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Ukhiya
Union	Rajaplong
WARD	09
Proposed area size	2880 Sq. ft.
Distance from Upazila HQ	5.5 km
Coordinates	21.20500^0 N 92.16912^0 E

Land ownership

Private Land

Expected construction period: 1 Year

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:

Friendship Hospital(200m), Cox's Bazar-Teknaf Highway(300m), Brac Office(10m), Pulse Bangladesh(10m), Al Haramin Mosque(50m-NW) to the north. CIC Office(1km), Mosque(50m), Camp-07(50m) to the south. Rohingya Camp 07(50m) to the east. Brac Clinic (30m), Pond(30m), Fish Hachery(50m), Baitullah Jame Mosque/Hefzokhana(50m) to the west.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

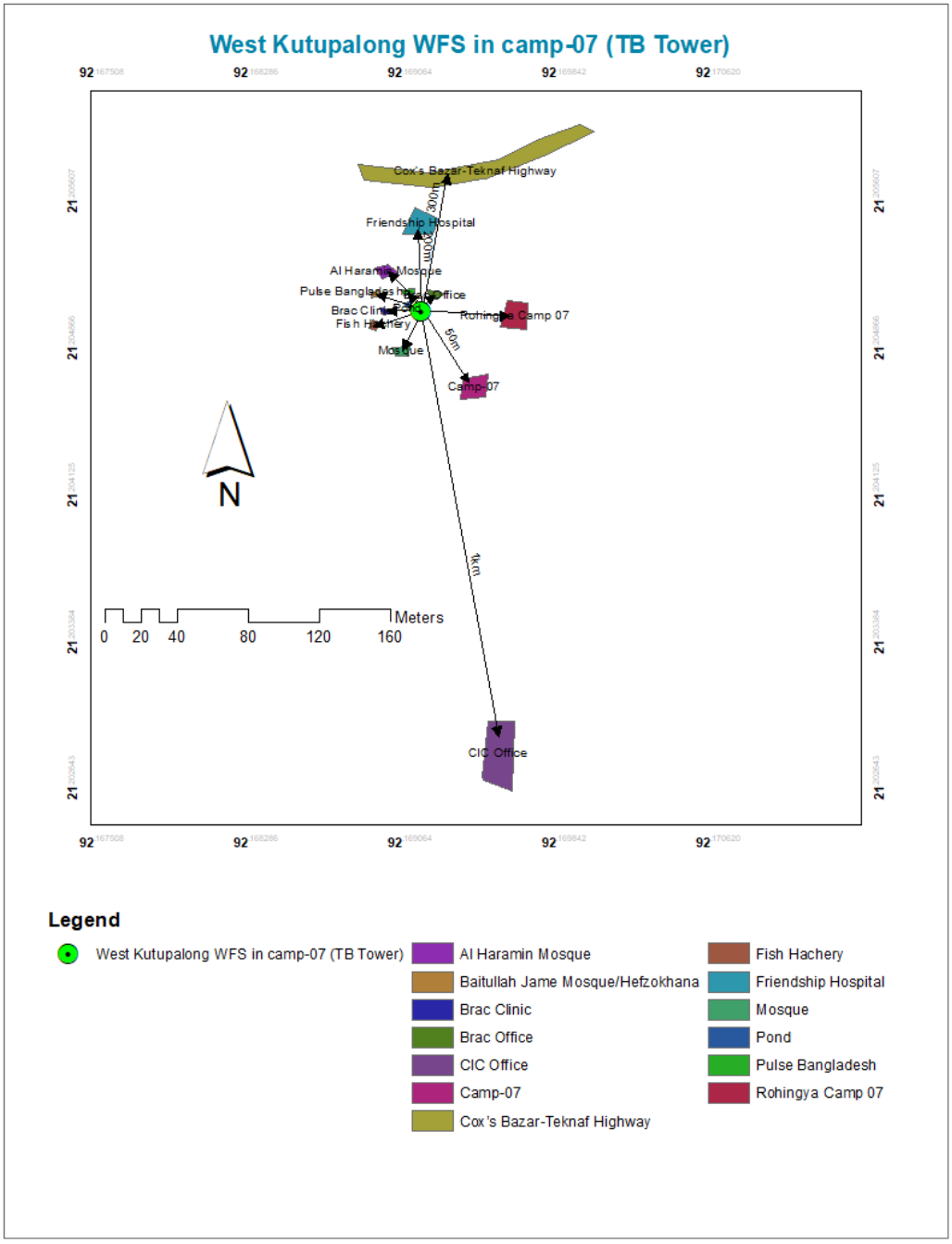
***B.1*: Environmental feature of sub-project location**

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:

Friendship Hospital(200m), Cox's Bazar-Teknaf Highway(300m), Brac Office(10m), Pulse Bangladesh(10m), Al Haramin Mosque(50m-NW) to the north. CIC Office(1km), Mosque(50m), Camp-07(50m) to the south. Rohingya Camp 07(50m) to the east. Brac Clinic (30m), Pond(30m), Fish Hachery(50m), Baitullah Jame Mosque/Hefzokhana(50m) to the west.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, except some vegetation as homestead gardens. Several local settlements were found during the survey. It will not be affected by the any activity relating to the this WFS, as the renovation activities will be carried out within the existing proposed area boundary and necessary preventive and mitigation measures will still be followed during the entire construction period.

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

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).

(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:

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. Vehicles such as tempo, auto rickshaw, tractor, trailer, etc. move on roads adjacent to proposed location throughout the day generating noise but within tolerable limit in most cases.

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):

N/A (the sub-project will be constructed in a plain land and within proposed location boundary)

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, 2020). 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:

Patches of vegetation containing large and matured trees found in surrounding area of the proposed location which are within 200m radial distance.

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): The Cox's Bazar-Teknaf highway is the only pathway.
Requirement of accommodation or service amenities (toilet, water supply, electricity) to support the workforce during construction: New construction is not needed for this component. Only renovation works. Electricity is available in the area and water supply is available in Mr. Amin Hossain's house.
Possible location of labor camps: Separate location for labor camp not needed.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): Since construction is not needed, heavy usage of construction material will not be used other than few Bamboo/ wood, plastic materials as pipes, copper wires and paint.
Identification of access road for transportation (Yes/No): The Cox's Bazar-Teknaf highway is the only pathway
Location identification for raw material storage: Separate material storage is not needed since construction is not needed.
Possible composition and quantities of wastes (Solids wastes, demolition materials, sludge from old latrines, etc.): N/A

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.): No construction will have zero waste generation
Type and quantity of raw materials used (wood, bricks, cement, water, etc.): No construction needed.
Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards: Around 1914 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 any activity.
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 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 waterbody or 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 since no major construction will take place.
Activities that can lead to landslides, slumps, slips and other mass movements in road cuts The soil in the proposed site is already compacted and developed and the area is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil is needed.
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 or even noise pollution since construction is not an option here.

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 and exhaust gas might be produced by the vehicles bound to pass by the facility through adjacent road; the quantity of dust is expected to be bit high only for a small period of time. 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 has to 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 will be disposed off in a designated place away from the site and any water bodies, and covered with layers of soil in a periodic manner so that 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: Construction or 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) No existing drainage channels or surface water bodies found in the project area; therefore, no such effect can be 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. An earthen road connects the site with the main road. The muddy road is mainly used for pedestrian access and light vehicles like bicycles, three wheelers etc. therefore, during operation period traffic congestion is not expected. However, if not properly maintained and supervised, low effects of noise and air pollution will be occurred, primarily because of the noise and emission from vehicular movement and loose soil being dispersed around during the dry weather, and accidents may occur due to the bad condition of the access road and unsafe driving through it.

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 West Palongkhali WFS

Name of Sub-Project: West Palongkhali WFS
Implementing Agency/Agencies: Mukti Cox's Bazar

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

Name of Community/Local Area: West para forest office area
Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):
The Sub-Project is categorized as single stored building with tin roof. Proposed structures will have Meeting room, Counselling Room, Mid-Wife Room, Office Room, Corridor etc. The total area needed for these facilities is 1500 square feet. Other than these Store room, generator room, Kitchen, Latrine, Bathroom and Psycho Social Support (PSS) room are added in the plan which accounts for 441 square feet area. Moreover, the compound will be fenced with boundary made from wood and bamboo.

Estimated footprint / land area for this sub-project is 1914 sq. feet
Available land area: 2107 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 West para forest office area in Palongkhali union of Ukhiya Upazila under Ward 07. The proposed location is an empty space with no significant concerning feature which may be harmed from the placement of WFS. Few mosques and household establishments are present within 500-meter area. There is a crop field on the east side of the location and a khal called west palongkhali is placed on the west 80 meters away from the proposed location. Few bamboo bush is present in the proposed location.

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 construction phase and limited within 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 local 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:
During construction period solid waste will be generated due to construction activities. The types of wastes are brick pit, unused sand, wood, gravels, bitumen etc. The types of wastes are gravel,

stones, rock, wood, copper wires, concrete, iron, plastic etc. Negligible amount of plastic will come as residue. Moreover, liquid waste will include chemicals of paint leftovers, motor oils, used oil, degreasing solvents etc. Domestic solid wastes will be produced in kitchen of labor camps during the construction 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. Murchakhola School(1km), Forest Office(150m), Anhaz Bin Malek Mosque/ Hefzokhana(140m) to the north. Graveyard(50m), Shop(10m), Households(50m) to the south. Agriculture Field(30m), Ponjakahan/ Madrassa(50m), Settlement(60m) to the east. West Palongkhali Khal (80m), Settlements/Households(30m) to the west. Apart from these structures no other sensitive environmental, cultural, archaeological, religious sites exists.

Mostly Host 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;

Item	Size (sq.ft)	Item	Size (sq.ft)
Meeting room	786.56	Guard room	35
Counseling room	113.83	Generator room	42
Mid wife room	110.93	Phyco-Social Support (PSS) activities room	120
Office room	113.83	Kitchen room	120
Corridor	315	Latrine	50
Store room	84	Bath room	50

Also, one tube well and One water filter are included for ensuring safe drinking water.

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Ukhiya
Union	Palongkhali
WARD	07
Proposed area size	2107 Sq. ft.
Distance from Upazila HQ	11 km
Coordinates	21.14496^0 N; 92.14861^0 E

Land ownership

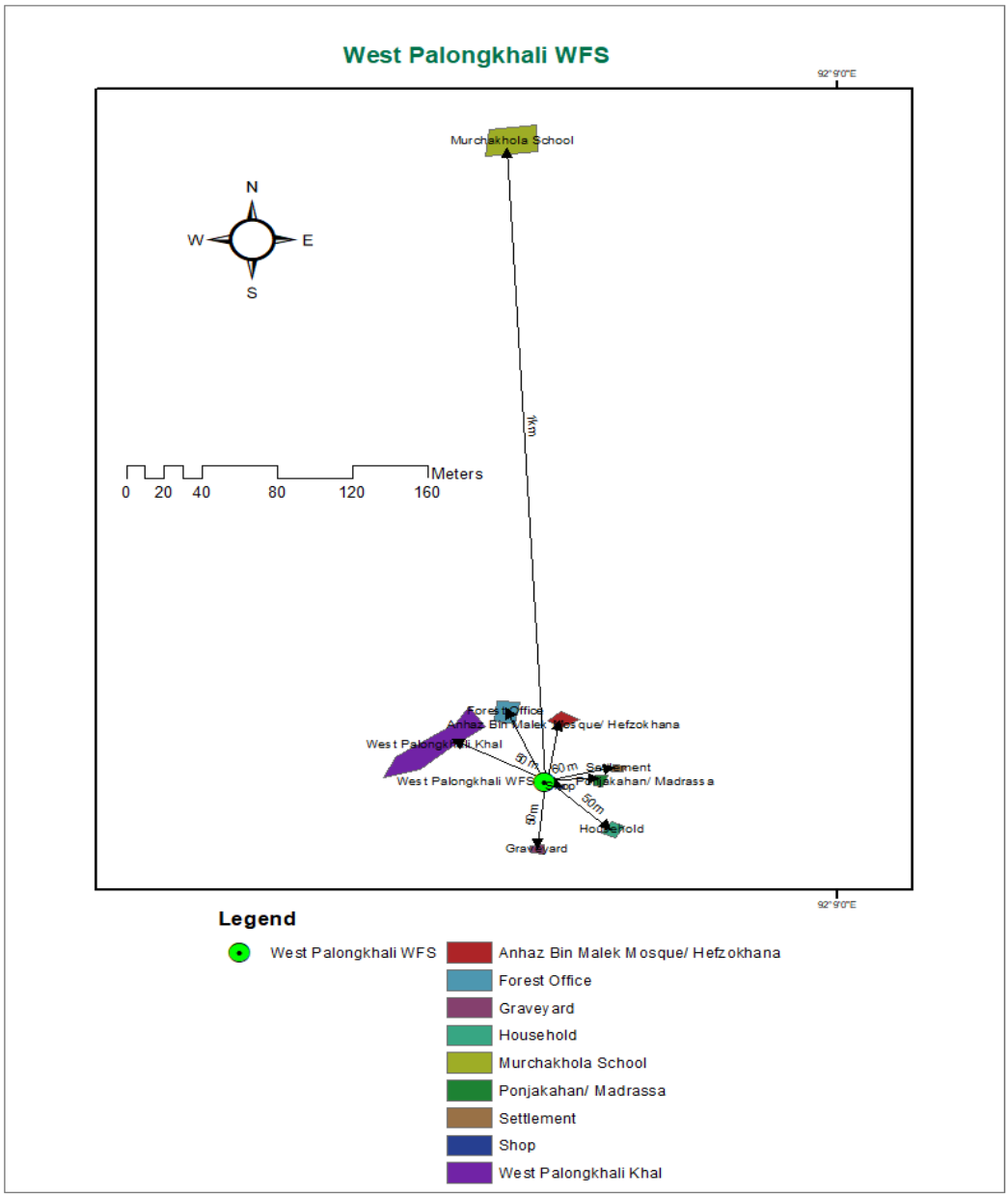
Private Land

Expected construction period: 1 Year
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: Murchakhola School(1km), Forest Office(150m), Anhaz Bin Malek Mosque/ Hefzokhana(140m) to the north. Graveyard(50m), Shop(10m), Households(50m) to the south. Agriculture Field(30m), Ponjakahan/ Madrassa(50m), Settlement(60m) to the east. West Palongkhali Khal (80m), Settlements/Households(30m) to the west. 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: Murchakhola School(1km), Forest Office(150m), Anhaz Bin Malek Mosque/ Hefzokhana(140m) to the north. Graveyard(50m), Shop(10m), Households(50m) to the south. Agriculture Field(30m), Ponjakahan/ Madrassa(50m), Settlement(60m) to the east. West Palongkhali Khal (80m), Settlements/Households(30m) to the west. 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, madrasa and local 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. 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).

(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:

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. Vehicles such as tempo, auto rickshaw, tractor, trailer, etc. move on roads adjacent to proposed location throughout the day generating noise but within tolerable limit in most cases.

Baseline soil quality:

The proposed 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):

N/A (the sub-project will be constructed in a plain land and within proposed location boundary)

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, 2020). 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:

Patches of vegetation containing large and matured trees found in surrounding area of the proposed location which are within 200m radial distance.

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):

The connecting registered camp road is the only pathway to deliver materials but heavy transports cannot be used. Small four-wheeler should be used.

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 the contractor in the vicinity of the construction area for all the components of the project, electric connection will be established with the accommodation facility for the workforce. Electricity is available in the area.
Possible location of labor camps: Separate location other than nominated site was not found. Labor camp and material storage will have to adjust in the selected vicinity.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): i) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction.
Identification of access road for transportation (Yes/No): The west para palongkhali road is the only pathway to deliver materials but heavy transports cannot be used. Small four-wheeler should be used.
Location identification for raw material storage: Separate location other than nominated site was not found. Labor camp and 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 also no old latrines which needs to be accounted for.

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:** Iron, concrete, metal, drywall, wood, plastic, rubber, copper wires, excavated soils etc. **Quantity:** It is difficult to give exact figures of construction waste produced on a typical construction site. However, in order to approximate the quantity, it is estimated that nearly 2 kg of waste would be generated each working day, which are mainly construction wastes. Some plastic, paper and organic waste will be generated from the use of workers, though a very negligible amount- half a kilogram a day maximum. Wastes from food and kitchen (biodegradable organic waste) will be generated at an amount of 1 kg per day in the labor camp. Sludge will be produced from sewage as well. **Liquid waste**: Paint chemicals as paint thinners which contain Volatile Organic Compounds (VOCs) will come out as leftovers. During construction period fecal sludge will be generated from the labor camp and the quantity would be nearly 1.5 kg per day, which would be reduced in weight in course of time. 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) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction. **Quantity**: It is difficult to give exact figures of construction 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 1914 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 construction work 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 the construction period in or around/ adjacent to the proposed area. During construction period one or two water reservoir may be constructed due to construction activities. But all those will completely be demolished and cleared out, once the construction period is over.
Disturbance or modification of existing drainage channels (rivers, canals) or surface water bodies (wetlands, marshes): (High/Medium/Low with description) No pre-existing waterbody or 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 works. Life cycle or movement of some terrestrial living species (fauna) (i.e. Insects - ant, bees, earthworm, reptiles, birds etc.) might be disturbed for the time being, but with very less impact indeed. 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 already compacted and developed and the area is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil for the said construction works.
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 movement of vehicles carrying construction 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 and exhaust gas might be produced by the vehicles bound to pass by the facility through adjacent road; the quantity of dust is expected to be bit high only for a small period of time. 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 has to 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 will be disposed off in a designated place away from the site and any water bodies, and covered with layers of soil in a periodic manner so that 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: Construction or 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) No existing drainage channels or surface water bodies found in the project area; therefore, no such effect can be 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. An earthen road connects the site with the main road. The muddy road is mainly used for pedestrian access and light vehicles like bicycles, three wheelers etc. therefore, during operation period traffic congestion is not expected. However, if not properly maintained and supervised, low effects of noise and air pollution will be occurred, primarily because of the noise and emission from vehicular movement and loose soil being dispersed around during the dry weather, and accidents may occur due to the bad condition of the access road and unsafe driving through it.

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 Haldiapalong Host WFS

Name of Sub-Project: Haldiapalong Host WFS
Implementing Agency/Agencies: Mukti Cox's Bazar

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

Name of Community/Local Area: Shikdarpara

Description of proposed sub-project activities (incl. type of activities, footprint area, natural resources required, etc.):
The Sub-Project is categorized as two story building with paka roof. Here, pre-existing structure will be rented for delivering WFS facilities. Owner of the house, Abdul Haque's, has agreed to rent his domicile to Mukti Cox's bazar. It will have to adjust Meeting room, Counselling Room, Mid-Wife Room, Office Room, Corridor etc. The total area needed for these facilities is 1500 square feet. Other than these Store room, generator room, Kitchen, Latrine, Bathroom and Psycho Social Support (PSS) room are added in the plan which accounts for 441 square feet area. This house has 5 individual rooms with a long corridor and separate latrines for men and women. These spaces can be planned and utilized for WFS facilities. Moreover, the compound does not need separate fencing because existing boundary exists. Although, if deemed necessary extra fencing can be placed on the back side of the proposed location as the current condition was found to have weak terpal fencing.

Estimated footprint / land area for this sub-project is 1914 sq. feet
Available land area: 2200 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 Shikdarpara area in Haldoapalong union of Ukhiya Upazila under ward 05. The proposed location is a pre-existing one story building. Small trees and plants are present around the proposed location. Moreover, this location is privately owned whose owner, Abdul Haque has no objection with the intervention's activity. It falls in both Rohingya and host community area having households and social establishments. Few mosques and non-permanent establishments are also present within 500-meter area. There are no significant eco-sensitive features on the footprint area. No socio-economic facility as agriculture fields or fish farm are present near this location which might be hampered.

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 construction phase and limited within 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 local 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 social security in female communities and make lives easier for these people.

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

No construction is needed for this facility though small renovation works are needed. During renovation solid waste will be generated as unused wood, copper wires, plastic pipes etc. Negligible amount of plastic will come as residue. Moreover, liquid waste will include chemicals of paint leftovers, used oil, Degreasing solvents etc. Sludge from sewage and fecal wastes will also be generated during the 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. Sale Bulbul Chowdhury Gov. Primary School(1km), Holudbunia Mosque/ Hefzokhana/ Graveyard (800m), Brickfield(700m) to the north. Holudia Khal(200m), Middle Holudia Jame Mosque(800m), Shikdarpara Mosque(150m), South Holudia Ghatorpara Community Clinic(1km), Nasirpara Mosque and Madrassa(1km) to the south. Dawatul Haque Mosque/ Hefzokhana/ Graveyard(500m), Holudiapalong Sub-Health Complex (600m), Nalbunia Gov. Primary School(800m), Darul Quran Al Islamia Madrassa/ Mosque(900m) to the east Shikdarpara New Mosque(200m), Moulovi Abdus Shukur Mosque/ Hefzokhana(800m) to the west. Apart from these structures no other sensitive environmental, cultural, archaeological, religious sites exists.

Mostly Host 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; (these items will be ensured on the basis of the rented house therefore; the proposed size area may differ)

Item	Size (sq.ft)	Item	Size (sq.ft)
Meeting room	786.56	Guard room	35
Counseling room	113.83	Generator room	42
Mid wife room	110.93	Phyco-Social Support (PSS) activities room	120
Office room	113.83	Kitchen room	120
Corridor	315	Latrine	50
Store room	84	Bath room	50

Also, one tube well and One water filter are included for ensuring safe drinking water.

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Ukhiya
Union	Haldiapalong
WARD	5
Proposed area size	2200 Sq. ft.
Distance from Upazila HQ	6.8 km
Coordinates	$21^0$18'17.3" N $92^0$07'28.0" E

Land ownership

Private Land to be rented under an agreement.

Expected construction period: 1 Year

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:

Sale Bulbul Chowdhury Gov. Primary School(1km), Holudbunia Mosque/ Hefzokhana/ Graveyard (800m), Brickfield(700m) to the north. Holudia Khal(200m), Middle Holudia Jame Mosque(800m), Shikdarpara Mosque(150m), South Holudia Ghatorpara Community Clinic(1km), Nasirpara Mosque and Madrassa(1km) to the south. Dawatul Haque Mosque/ Hefzokhana/ Graveyard(500m), Holudiapalong Sub-Health Complex (600m), Nalbunia Gov. Primary School(800m), Darul Quran Al Islamia Madrassa/ Mosque(900m) to the east Shikdarpara New Mosque(200m), Moulovi Abdus Shukur Mosque/ Hefzokhana(800m) to the west. 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

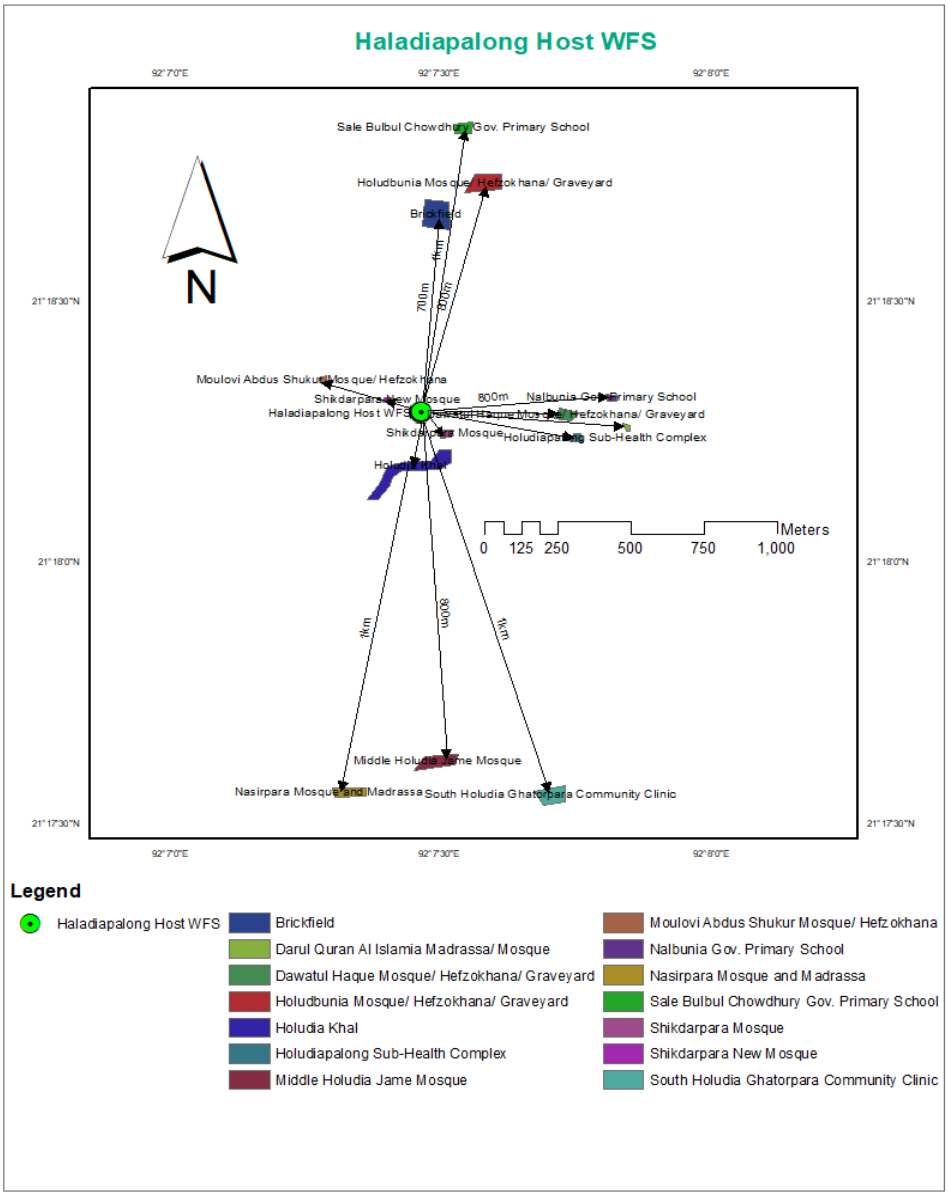
***B.1*: Environmental feature of sub-project location**

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:

Sale Bulbul Chowdhury Gov. Primary School(1km), Holudbunia Mosque/ Hefzokhana/ Graveyard (800m), Brickfield(700m) to the north. Holudia Khal(200m), Middle Holudia Jame Mosque(800m), Shikdarpara Mosque(150m), South Holudia Ghatorpara Community Clinic(1km), Nasirpara Mosque and Madrassa(1km) to the south. Dawatul Haque Mosque/ Hefzokhana/ Graveyard(500m), Holudiapalong Sub-Health Complex (600m), Nalbunia Gov. Primary School(800m), Darul Quran Al Islamia Madrassa/ Mosque(900m) to the east Shikdarpara New Mosque(200m), Moulovi Abdus Shukur Mosque/ Hefzokhana(800m) to the west. 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, except some vegetation as homestead gardens. Several local settlements were found during the survey. It will not be affected by the any activity relating to the this WFS, as the renovation activities will be carried out within the existing proposed area boundary and necessary preventive and mitigation measures will still be followed during the entire construction period.

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

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).

(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:
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. Vehicles such as tempo, auto rickshaw, tractor, trailer, etc. move on roads adjacent to proposed location throughout the day generating noise but within tolerable limit in most cases.

Baseline soil quality:
The proposed 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):
N/A (the sub-project will be constructed in a plain land and within proposed location boundary)

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, 2020). 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:
Patches of vegetation containing large and matured trees found in surrounding area of the proposed location which are within 200m radial distance.

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):
The Haludbunia, Boktatoli, patabari, ghatirpara-nasirpara connecting roads are available.

Requirement of accommodation or service amenities (toilet, water supply, electricity) to support the workforce during construction: New construction is not needed for this component. Only renovation works is needed. Electricity is available in the area and water supply is available in Mr. Abdul Haque's house.
Possible location of labor camps: Separate location for labor camp not needed.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): Since construction is not needed, heavy usage of construction material will not be used other than few Bamboo/ wood, plastic materials as pipes, copper wires and paint.
Identification of access road for transportation (Yes/No): The Haludbunia, Boktatoli, patabari, ghatirpara-nasirpara connecting roads are available.
Location identification for raw material storage: Separate material storage is not needed since construction is not needed.
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 also no old latrines which needs to be accounted for.

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.): No construction will have zero waste generation
Type and quantity of raw materials used (wood, bricks, cement, water, etc.): No construction needed.
Approx. area (in square meters) of vegetation and soil in the right-of-way, borrow pits, waste dumps, and equipment yards: Around 1914 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 any activity.
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 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 waterbody or 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 since no major

construction will take place.
Activities that can lead to landslides, slumps, slips and other mass movements in road cuts: The soil in the proposed site is already compacted and developed and the area is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil is needed.
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 movement of vehicles carrying construction 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 and exhaust gas might be produced by the vehicles bound to pass by the facility through adjacent road; the quantity of dust is expected to be bit high only for a small period of time. 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 has to 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 will be disposed off in a designated place away from the site and any water bodies, and covered with layers of soil in a periodic manner so that 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: Construction or 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) No existing drainage channels or surface water bodies found in the project area; therefore, no such effect can be 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. An earthen road connects the site with the main road. The muddy road is mainly used for pedestrian access and light vehicles like bicycles, three wheelers etc. therefore, during operation period traffic congestion is not expected. However, if not properly maintained and supervised, low effects of noise and air pollution will be occurred, primarily because of the noise and emission from vehicular movement and loose soil being dispersed around during the dry weather, and accidents may occur due to the bad condition of the access road and unsafe driving through it.

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 Amtoli WFS (Camp 15)

Name of Sub-Project: Amtoli WFS (Camp 15)

Implementing Agency/Agencies: Mukti Cox's Bazar

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

Name of Community/Local Area: Mucharkhola, Jamtoli Rohingya camp

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

The Sub-Project is categorized as single story building with tin roof. Proposed structure will have Meeting room, Counselling Room, Mid-Wife Room, Office Room, Corridor etc. The total area needed for these facilities is 1500 square feet. Other than the already mentioned facilities, Store room, generator room, Kitchen, Latrine, Bathroom and Psycho Social Support (PSS) room are added in the plan which accounts for 441 square feet area. Moreover, the compound will be fenced with boundary made from wood and bamboo.

Estimated footprint / land area for this sub-project is 1914 sq. feet
Available land area: 2400 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 Mucharkhola, Jamtoli Rohingya camp in Palongkhali union of Ukhiya Upazila under ward 06. The proposed location is an empty space with few concerning features which may be harmed from the placement of WFS. It falls in rohingya community area having households and social establishments in surrounding area. Few mosques and non-permanent establishments are also present within 500-meter area. There are no significant eco-sensitive features on the footprint area. No socio-economic facility, such as agriculture fields or fish farm is present near this location which might be hampered.

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 construction phase and limited within 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 local 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:

During construction period solid waste will be generated due to construction activities. The types of wastes are brick pit, unused sand, wood, gravels, bitumen etc. The types of wastes are gravel, stones, rock, wood, copper wires, concrete, iron, plastic etc. Negligible amount of plastic will come as residue. Moreover, liquid waste will include chemicals of paint leftovers, motor oils, used oil, Degreasing solvents etc. Domestic solid wastes will be produced in kitchen of labor camps during the construction 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. Fish Farm(5m), Camp-15 Block-H(30m), Camp-15 Block-E(100m), Block-D(150m), Mohaj Ibn Jabal Mosque(200m), Mosque-E-Afsa(150m), Brac School(150m) to the north. Cox's Bazar Teknaf Highway (100m), Musar khola Jame Mosque(150m), Host Community Households(100m), Paddy Land(100m) to the south. NGO Office(400m), World Learning Center(300m), jamtoli Bazar(1km), Mosque-E-Rahman(900m), CIC Office(500m), Block-A(1km), Block-F(10m), Block-G(500m), Block-C(600m), Block-B (800m) to the east. Learning Center(100m), Paddy Land(50m), Block-H(50m), STC Hospital(110m), Mosque-E-Belal, Abdullah-bin-Omar Mosque(150m), Concern International(180m), Musarkhola Graveyard(300m), Musarkhola Chora(320m) to the west. Apart from these structures no other sensitive environmental, cultural, archaeological, religious sites exists.

Mostly Host 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;

Item	Size (sq.ft)	Item	Size (sq.ft)
Meeting room	786.56	Guard room	35
Counseling room	113.83	Generator room	42
Mid wife room	110.93	Phyco-Social Support (PSS) activities room	120
Office room	113.83	Kitchen room	120
Corridor	315	Latrine	50
Store room	84	Bath room	50

Also, one tube well and One water filter are included for ensuring safe drinking water.

Sub-project Location:

Important Features	
District	Cox's Bazar
Upazila	Ukhiya
Union	Haldiapalong

WARD	
Proposed area size	2200 Sq. ft.
Distance from Upazila HQ	6.8 km
Coordinates	$21^0$18'17.3" N $92^0$07'28.0" 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:

Fish Farm(5m), Camp-15 Block-H(30m), Camp-15 Block-E(100m), Block-D(150m), Mohaj Ibn Jabal Mosque(200m), Mosque-E-Afsa(150m), Brac School(150m) to the north. Cox's Bazar Teknaf Highway (100m), Musar khola Jame Mosque(150m), Host Community Households(100m), Paddy Land(100m) to the south. NGO Office(400m), World Learning Center(300m), jamtoli Bazar(1km), Mosque-E-Rahman(900m), CIC Office(500m), Block-A(1km), Block-F(10m), Block-G(500m), Block-C(600m), Block-B (800m) to the east. Learning Center(100m), Paddy Land(50m), Block-H(50m), STC Hospital(110m), Mosque-E-Belal, Abdullah-bin-Omar Mosque(150m), Concern International(180m), Musarkhola Graveyard(300m), Musarkhola Chora(320m) to the west. 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).

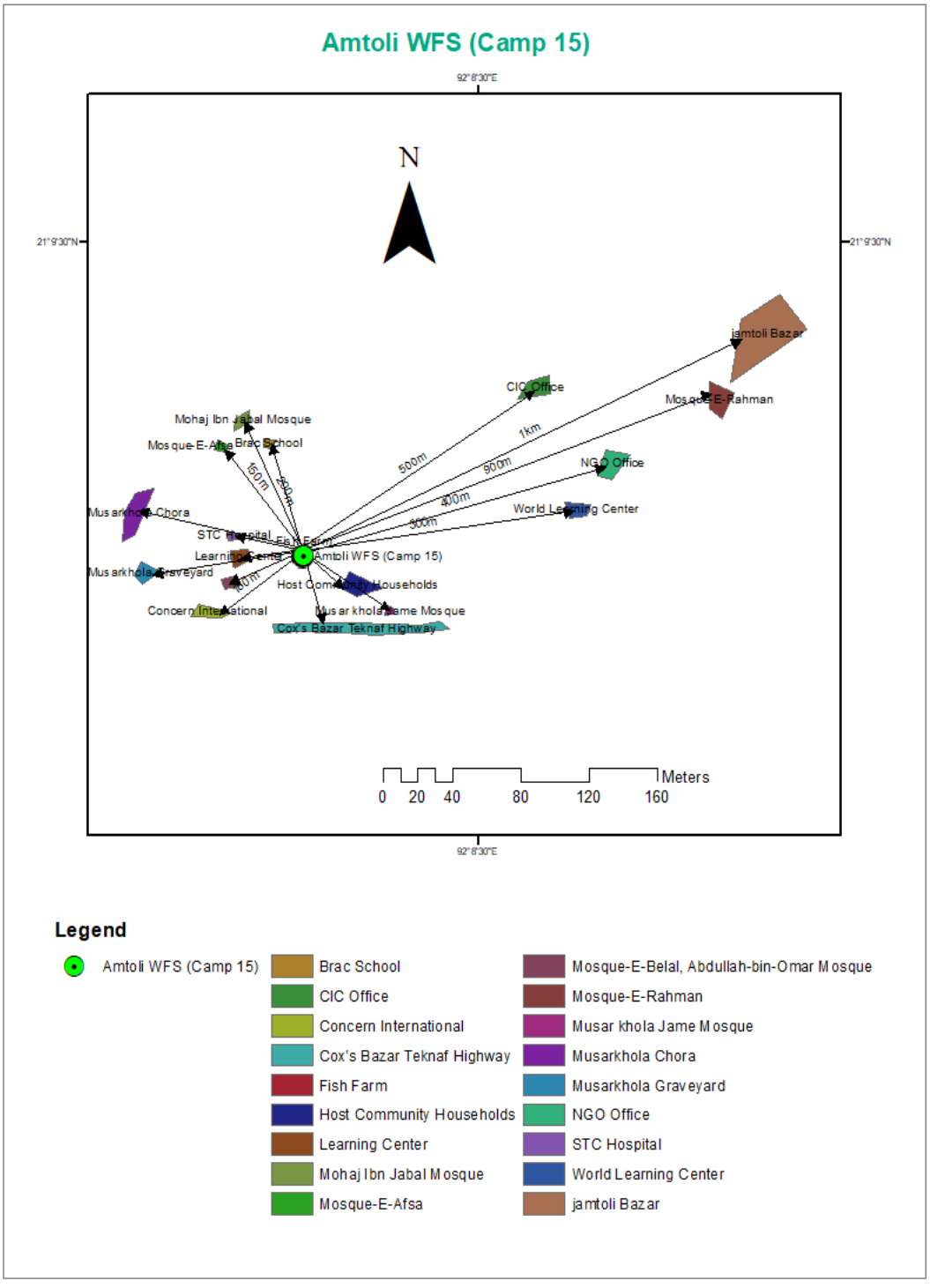
Section B: Environmental Screening

***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:

Fish Farm(5m), Camp-15 Block-H(30m), Camp-15 Block-E(100m), Block-D(150m), Mohaj Ibn Jabal Mosque(200m), Mosque-E-Afsa(150m), Brac School(150m) to the north. Cox's Bazar Teknaf Highway (100m), Musar khola Jame Mosque(150m), Host Community Households(100m), Paddy Land(100m) to the south. NGO Office(400m), World Learning Center(300m), jamtoli Bazar(1km), Mosque-E-Rahman(900m), CIC Office(500m), Block-A(1km), Block-F(10m), Block-G(500m), Block-C(600m), Block-B (800m) to the east. Learning Center(100m), Paddy Land(50m), Block-H(50m), STC Hospital(110m), Mosque-E-Belal, Abdullah-bin-Omar Mosque(150m), Concern International(180m), Musarkhola Graveyard(300m), Musarkhola Chora(320m) to the west. 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, madrasa and local 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. 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).

(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:

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 proposed project area is not a major concern because noise level is within the tolerance limit. Vehicles such as tempo, auto rickshaw, tractor, trailer, etc. move on roads adjacent to proposed location throughout the day generating noise but within tolerable limit in most cases.

Baseline soil quality:

The proposed 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):

N/A (the sub-project will be constructed in a plain land and within proposed location boundary)

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, 2020). 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: Patches of vegetation containing large and matured trees found in surrounding area of the proposed location which are within 200m radial distance.
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): The Mucharkhola connecting roads is available.
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 the contractor in the vicinity of the construction area for all the components of the project, electric connection will be established with the accommodation facility for the workforce. Electricity is not available in the area. Generator or Solar light will need installation
Possible location of labor camps: Separate location other than nominated site was not found. Labor camp and material storage will have to adjust in the selected vicinity.
Requirement and type of raw materials (e.g., sand, stone, wood, etc.): i) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction.
Identification of access road for transportation (Yes/No): The Mucharkhola connecting roads is available.
Location identification for raw material storage: Separate location other than nominated site was not found. Labor camp and 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 also no old latrines which needs to be accounted for.

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:** Iron, concrete, metal, drywall, wood, plastic, rubber, copper wires, excavated soils etc. **Quantity:** It is difficult to give exact figures of construction waste produced on a typical construction site. However, in order to approximate the quantity, it is estimated that nearly 2 kg of waste would be generated each working day, which are mainly construction wastes. Some plastic, paper and organic waste will be generated from the use of workers, though a very negligible amount- half a

kilogram a day maximum. Wastes from food and kitchen (biodegradable organic waste) will be generated at an amount of 1 kg per day in the labor camp.

Liquid waste: Paint chemicals as paint thinners which contains Volatile Organic Compounds (VOCs) will come out as leftovers. During construction period fecal sludge will be generated from the labor camp and the quantity would be nearly 1.5 kg per day, which would be reduced in weight in course of time. 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) Bricks, ii) Sand iii) cement iv) aggregates v) metals vi) water vii) concretes vii) Bamboo & wood from mobilized materials viii) clay are the most common type of building material used in construction.

Quantity: It is difficult to give exact figures of construction 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 1914 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 any activity.

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 the construction period in or around/ adjacent to the proposed area. During construction period one or two water reservoir may be constructed due to construction activities. But all those will completely be demolished and cleared out, once the construction period is over.

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

No pre-existing waterbody or 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 works. Life cycle or movement of some terrestrial living species (fauna) (i.e. Insects - ant, bees, earthworm, reptiles, birds etc.) might be disturbed for the time being, but with very less impact indeed. 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 already compacted and developed and the area is largely flat, so there is almost no chance to trigger the landslide or any type of mass movement of soil for the said construction works.

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 movement of vehicles carrying construction 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 and exhaust gas might be produced by the vehicles bound to pass by the facility through adjacent road; the quantity of dust is expected to be bit high only for a small period of time. 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 has to 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 will be disposed off in a designated place away from the site and any water bodies, and covered with layers of soil in a periodic manner so that 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: Construction or 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) No existing drainage channels or surface water bodies found in the project area; therefore, no such effect can be 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: **T**he proposed site is located inside camp area. An earthen road connects the site with the main road. The muddy road is mainly used for pedestrian access and light vehicles like bicycles, three wheelers etc. therefore, during operation period traffic congestion is not expected. However, if not properly maintained and supervised, low effects of noise and air pollution will be occurred, primarily because of the noise and emission from vehicular movement and loose soil being dispersed around during the dry weather, and accidents may occur due to the bad condition of the access road and unsafe driving through it.

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

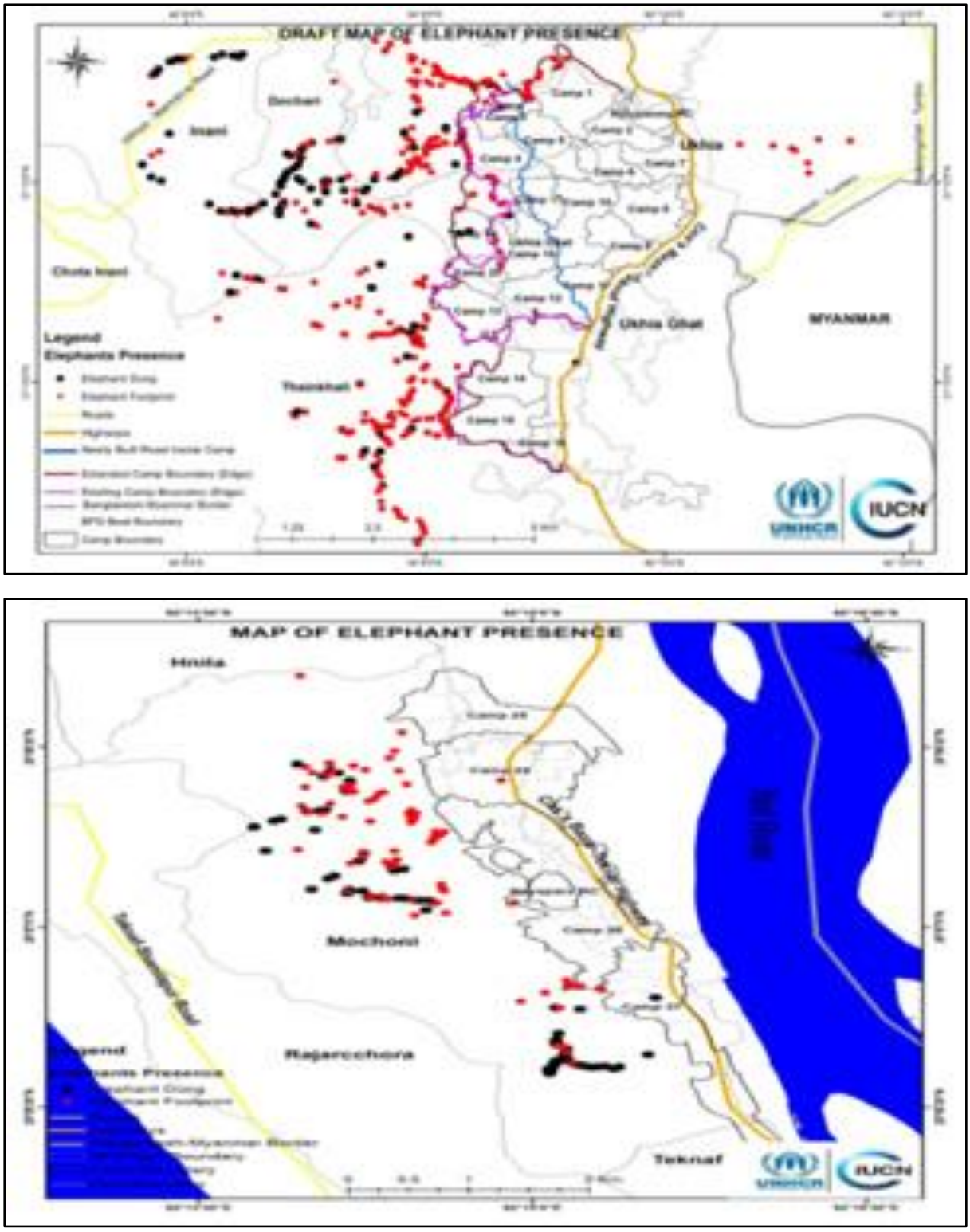


Figure: Elephant presence map (latest information published on 24 May 2018)

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**.	• Limiting earthworks; • Watering of dry exposed surfaces and stockpiles of aggregates at least twice daily, as necessary; • Requiring trucks delivering aggregates or bricks and cement to have tarpaulin cover 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; 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.

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
	Soil impacts	Under the sub-project intervention the overall score is **low.**	• Precautions might be taken when rainstorms are likely, when a rainstorm is imminent or 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. • The material stockpile sites shall be far away from surface water bodies and areas prone to surface run-off. Loose materials shall be 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.	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
	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 locations to avoid littering which in turn might negatively affect surface and ground water. Monitor water quality according to the environmental management plan.	Construction Contractor and monitored by Mukti Cox's Bazar	(i)Areas for stockpiles, storage of fuels and lubricants and waste materials; (ii) Records of water 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.	Water quality test (mainly GW) twice during the construction period in six months interval.

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
2: Pre-construction Phase	Sanitation, water supply, if labor shed is required.	Under the subproject intervention the overall score is **low**.	Provide suitable housing, adequate supplies of potable water, and toilet and bathing facilities within labor camp area for the assigned laborer. Provide means for disposing of wastewater from toilets, baths and food preparation areas either through a septic tank and soak away, or holding tank with removal by vacuum truck. Records for any type of training or awareness building sessions must be kept at site.	Construction Contractor and monitored by Mukti Cox's Bazar	Site-specific H&S Plan; Records of supply of uncontaminated water; Record of Health &Safety orientation trainings; Condition of sanitation facilities for workers.	Visual inspection by 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 and monitored by Mukti Cox's Bazar	• Record of regular inspection. • Record of accidents/incidents	Monthly monitoring.
	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 and monitored by Mukti Cox's Bazar	• List of materials and sources of materials;	During implementation phase, as necessary through discussion with UNFPA, Consultant

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
3: Construction Phase	Wastes	Under the sub-project intervention, the overall score is **low.**	• Prepare and implement on-site waste water runoff and labor camp 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 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.	Construction Contractor and 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
	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 Contractor and 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.
			• Construction materials must not interrupt land contours, natural drainage pattern, and create water 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.			

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
	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.	Mukti Cox's Bazar	Complaints from community;	Daily
	Noise pollution	Under the subproject intervention the overall score is **low.**	• Consultation with affected people; not to operate noisy equipment during working period; • No noisy work after 5.00 pm. • Sound suppression for equipment; • Ear protection for workers. • Conduct noise quality monitoring as per EMP.	Construction Contractor and monitored by Mukti Cox's Bazar.	Number of complaints from stakeholders; Use of silencers in noise-producing equipment and sound barriers.	Inspection by UNFPA and supervision 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 and 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.

Section	Main Environmental Impacts	Impact Significance*	Suggested Mitigation Measures	Person/Institution Responsible	Monitoring Suggestions	
					Indicators	Frequency
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, Mukti Cox's Bazar	Location signage and safety instruments at suitable locations and chainage	Immediately after the construction work is over.
	Tree re 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, Mukti Cox's Bazar	Number of complaints from stakeholders; Records of trees number and tree	Immediately after the construction work is over.
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.	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 WFS

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 and Mukti Cox's Bazar	UNFPA
Pre-Construction Stage	Site Preparation: Soil Erosion; Alteration of natural drainage	• Selected site will be far 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
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 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
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	Mukti Cox's Bazar & Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
		construction work starts.		
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. • Adequate facilities ensuring sanitation for labor camps will be put in place. • 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 construction.	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 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.	Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
		• 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.		
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 events during construction activities such as manual handling and musculoskeletal disorders, hand-arm vibration, temporary or permanent hearing loss, heat stress, and	• 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. • 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	Mukti Cox's Bazar and Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
	dermatitis.	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
Decommissioning during the project implementation period (including site clearance after the construction)	The impacts are similar to those listed in construction stage: • Pollution from waste materials • Health & Safety risks to workers and local	• Provision to proper measure of mitigation and monitoring to minimize or reduce the environmental and social impacts during decommissioning are anticipated to be similar to those identified for the construction phase. • Third party monitoring of air quality as well as on receiving land and water bodies, may be undertaken, if the condition of those compartments seems to be	Contractor	UNFPA

Project Stage	Potential Environmental & Social Impacts/Issues	Proposed Mitigation Measures	Institutional Responsibilities	Supervision Responsibility
	community/DRPs	significantly worse.		
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 to the storage batteries and maintenance/replacing of associated equipment is to be ensured. • Water tanks should be cleaned properly at least once in a quarter.	Mukti Cox's Bazar	UNFPA

Demolition and 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 demolition 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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