Environmental and Social Assessment (ESA)

for

Establishment of University Innovation Hub at Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh

August 2022

Digital Entrepreneurship and Innovation Eco-system Development Project

Bangladesh Hi-Tech Park Authority (BHTPA)

ICT Division, Ministry of Posts, Telecommunications and ICT

ICT, Tower, Agargaon, Dhaka-1207

Project Name	**Digital Entrepreneurship and Innovation Eco-System Development Project (DEIEDP) under PRIDE Bangladesh Hi-Tech Park Authority**
Report For	**Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh**

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1. Introduction

1.1 Project Background

Information and Communication Technology (ICT) is playing an important role for achieving Bangladesh's mission of becoming a middle-income country by 2021. To accelerate the economic development of the country, Bangladesh Hi-Tech Park Authority (BHTPA) was established in 2010. The Government of Bangladesh has declared "Vision 2021" with a target to make Bangladesh a middle-income country by using Information and Communication Technology (ICT) and by developing favorable business environment for Hi-Tech industries. Information Technology has been identified as the "thrust sector" for the economy of Bangladesh. Government has taken various initiatives to achieve the target.

The Bangladesh Hi-Tech Park Authority (BHTPA) was established to encourage digital entrepreneurship and to promote private investment and job creation in the IT and IT-enabled services (ITeS) industry. BHTPA is responsible for the establishment and expansion along with management, operation, and development of Hi-Tech Parks (HTPs) and Software Technology Parks (STPs) within the country.

The World Bank's Private Investment & Digital Entrepreneurship (PRIDE) project is aimed to promote private investment and job creation in economic zones and digital entrepreneurship in hi-tech parks. The project will spearhead the adoption and mainstreaming of green industrial park concepts in the implementation and development of economic zones in Bangladesh. The project has four components. The first three components will be implemented by Bangladesh Export Processing Zone (BEZA) and the fourth component (Component -4) will be implemented by Bangladesh Hi-Tech Park Authority (BHTPA).

The proposed Bangladesh Private Investment & Digital Entrepreneurship (PRIDE) Project has four components:

Component 1: Creating an Enabling Environment for Private Investment and Job Creation
- Sub-component 1.1: Promoting good governance and administrative efficiency
- Sub-component 1.2: Promoting public private participation

Component 2: Supporting phased development of the BSMSN Green Industrial City
- Sub-component 2.1: Developing environmentally sustainable and resilience infrastructure
- Sub-component 2.2: Last mile infrastructure to implement the Master Plan for BSMSN

Component 3: Creating a dynamic private market for serviced industrial land

Component 4: Strengthening the digital entrepreneurship and innovation ecosystem
- **Sub-component 4.1: Establishing Digital Entrepreneurship Hub in Dhaka**
- **Sub-component 4.2: Digital Entrepreneurship and Innovation Support Program**

Component – 4*: *Strengthening the Digital Entrepreneurship and Innovation Ecosystem
Implementing Agency: Bangladesh Hi-Tech Park Authority (BHTPA)

This component aims to strengthen the foundation of the digital entrepreneurship and innovation ecosystem in Bangladesh. It will create the country's largest agglomeration of IT and ITeS companies in Dhaka's Vision-2021 Tower STP and promote digital entrepreneurship more broadly among young professionals and women. It will design and implement a program that supports digital entrepreneurship at three levels. First, it will establish modern and professional start-up and scale-up facilities and services in Software Technology Park's (STPs). Second, it will introduce entrepreneurship and innovation hubs in different public and private technological universities. This will also offer accredited and rapid training programs to budding entrepreneurs and managers in the IT and ITeS

field. Thirdly, it will offer a media-based challenge program with grant prices to help change attitudes and attract more youth, women and young professionals to consider becoming entrepreneurs.
Sub-component 4.2: Bangladesh Hi-Teck Park Authority is longing to develop an effective ecosystem with respect to digital entrepreneurship in Bangladesh and to upgrade existing innovation culture in the country. The intension is to establish University Innovation Hubs as the key driver to promote innovation culture and nurture future leaders for innovation and hence to motivated setting up new ventures and startup among new generation. Under this sub-component, University Innovation Hubs and Incubation centers will be established in few Universities in Bangladesh. Initially Chattogram University, Khulna University, Rajshahi University of Engineering and Technology, Sahjalal University of Science and Technology, Sylhet, United International University, Dhaka has been selected for the purpose. Some more universities are also under consideration where innovation hubs will be set up in phases. The sites of four universities have been inspected. This brief report was prepared for the Rajshahi University of Engineering and Technology (RUET) innovation hub based on ES screening, site visits and information gathered from university authorities and consultation with relevant stakeholders.

1.2. Objectives of ESA

The objectives of the ESA are:

i. To identify and assess the environmental and social risks and impacts of the sub-component (University Innovation Hub) based on screening examination, site visits and information gathered from university authorities and consultation with relevant stakeholders during pre-construction, construction and operation phases;
ii. To develop a mitigation approach to the sub-components environmental and social risks and impacts;
iii. Recommend specific measures to avoid or mitigate adverse environmental and social impacts and to enhance positive impacts.
iv. Prepare Environmental and Social Management Plan (ESMP) for managing the environmental and socials impacts and risks and;
v. Recommend suitable institutional mechanisms to monitor and supervise effective implementation of ESMP

1.3 Scope of the ESA

The scope of the ESA is to:

i. A general description of the project and existing physical, biological and socio-economic conditions;
ii. Identification and assessment of the potential impacts on the natural and human environment in the sub-component area, from the construction and operation phases;
iii. Consultation with the locals/stakeholders involving concerned people in order to identify ES risk and impacts consistent with screening examination.

1.4 Approach and Methodology

The task of preparing this ESA report consisted of the following sequential steps:

- Identification of all the activities to be undertaken under the component;
- Identification and screening of the environmental issues relevant to the proposed activities through a scoping process;
- Site visits to capture environmental and social baseline;
- Identify Stakeholders and consultation with relevant parties;
- Assessment of potential risk and impacts on relevant environmental and social parameters;

- Preparation of Environmental and Social Management Plan (ESMP)

Field visit has been done to the sub-component site helped to identify the environmental parameters/components (relevant to the sub-component actions) which are likely to be affected.The field visit also included participatory approach, which involved discussions with teachers, students and officials in order to identify the perceptions and priorities of the stakeholders in and around the academic area. Information was also derived from secondary sources such as different reports, satellite imagery and Google maps etc.

2. Sub-component Description

Component 4, which will be implemented by the BHTPA, aims to strengthen the foundation of the digital entrepreneurship and innovation ecosystem in Bangladesh and take advantage of the increasing global and domestic demand for digital services further ramped up by the Covid-19 pandemic. It will create the country's largest agglomeration of ITS and ITES SMEs in Dhaka's Vision 2021 Tower Software Technology Park (STP) that will be turned into a green building; and promote digital entrepreneurship more broadly among young professionals and women. Digital entrepreneurship will be supported at three levels. First, it will establish modern and professional start-up and scale-up facilities and services in STPs. Second, it will pilot entrepreneurship and innovation hubs in some leading technological universities and business schools. This will also offer accredited and rapid training programs to budding entrepreneurs and managers in the ITS and ITES field. Third, it will offer a media-based challenge program with prices to help change attitudes and attract more youth, women, and young professionals to consider becoming entrepreneurs. The goals are to create entrepreneurship hubs, to increase market entry and growth rates of digital startups and SMEs, and to create a gender-inclusive culture. The Component 4 will be managed by BHTPA and aims to strengthen the foundation of the digital entrepreneurship and innovation ecosystem. The component 4 of the PRIDE project has two sub-components:

Under the sub-component 4.2 the University Innovation Hubs in Chattogram, Dhaka, Rajshahi, Khulna and Sylhet and other places of the country will be established to attract more students to become digital entrepreneurs within leading technological universities and business schools. Professional operators will be engaged to design, operate and then transfer the University Innovation Hubs to the universities in which they are embedded. The project will finance refurbishment/works, including retrofitting of existing buildings with architectural or building changes that enable reduction of energy consumption, energy efficiency improvements in lighting appliances and equipment of the innovation hub spaces in existing universities as well as goods and technical assistance to ensure that the new facilities can attract top talent and service providers. The UIHs will over time be expected to expand to add complementary innovation activities such as hardware prototyping spaces, joint research centers with industry, technology transfer offices, etc. This is in line with the University Grants Commission's (UGC) vision and objectives. The objective is to develop systematic programs that include investment into commercializing research and supporting innovative ideas so that UGC can demonstrate academia's role in the ecosystem. BHTPA will develop and mainstream innovation hub guidelines for university-based Innovation hubs, which will follow international standards and focus on outcomes and key principles that would allow flexibility to innovation, local customization and adjustments to develop suitable models for universities.

2.1 Planned Activities

After selection of University Innovation Hub Program Management Firm, the following activities will be done:

- Identify key approaches for university innovation hubs through analyzing local context, potentiality and the prevailing skill gap, and propose program designs and strategies that will enable delivery of the promised results, including the preparation of annual work plans.

- Design, develop and deploy a management information system (MIS) and operational processes customized to local needs as well as necessary digital systems to manage and track the incubation program to be run under this project.
- Provide mentoring of the selected startups in developing their products/ services to commercialization by developing an innovation culture in hubs throughout the project period.
- Transfer the programs to the universities in which they are embedded to ensure program sustainability.
- This will include training-of-trainers activities - and overseeing an on-the-job training through methods such as secondment and job shadowing.

2.2 Justification of Establishing Innovation Hub at SUST

SUST received government approval on 25 August in 1986 as a public university situated at Kumargaon, Sylhet in the western side of Sylhet City. The SUST started its academic journey by introducing 3 departments in the session 1990-91. Now it has expanded to 27 departments, 02 institutes and many other centers. The number of teachers has grown about 550 and the students to 10000. Besides, the University has affiliated 12 medical and 04 Nursing colleges under the School of Medical Sciences with about 4000 students. SUST is now one of the leading educational institutions in the country engaged in various innovative education and research. SUST endeavors to participate in various activities to advance the government's slogan of "Digital Bangladesh". Here are some of IT based activities implemented by SUST. That's why SUST was awarded **'Best Digital Campus Award 2019'** from the government.

- Introduced GST (General, Science and Techology) (20 University) admission process with co-leadership of SUST in Bangladesh
- Introduced 1st Mobile/Web based paperless admission process in Bangladesh.
- Innovated 1st Bangla Search Engine (Pipilika).
- Introduced 1st University Automation System including Online Result Processing System, Accounts Management System and Human Resource Management System.
- Established1st IPv6 Network infrastructure on Gigabit Network with under-ground fiber optic backbone Campus Network.
- Introduced 1st Campus based state of art technology Network Surveillance System (mostly 360° CCTV Coverage).
- Introduced 1st compulsury Computer Courses for all students from very beginning.
- Setting up Tier-2 Data Center.
- Introduced Online Payment System for Students.
- Introduced Digital Library Management System (RFID and LIS).
- Developed Largest Bangla Corpus for Bangla Computerization

Meanwhile, SUST introduced integrated semester system from the session 1996-97 first time in Bangladesh and there was a remarkable improvement in the quality of education after the introduction of this system, which was visible even in the national arena. Every student from SUST has to take two language courses, one is Bangla and the other one is English. Every student also has to take two computer courses, one for computer literacy and the other to learn a computer language.

The buildings of the campus have constructed with state-of-the-art facilities befitting a world class university. There are more than 30 buildings in this campus including academic, administrative, student's hall, many types of centers, Residential buildings, TSC and etc. Which makes SUST one of the most IT enabled modern universities in the country.

Cultural environment of SUST:
With regular academic and research activities, SUST patronize their students to involve by organizing various co-curricular activities. There are many types of student's clubs and cultural organizations in SUST. Some are mentioned bellow:

a) SUST Science Arena, Quantum Foundation of SUST Cell, Copernicus Astronomical Memorial of SUST
b) SUST Debating Club (SDC)
c) Tourist Club
d) Shahjalal University Photography Association (SUPA)
e) Theater SUST
f) KIN: Activities: Help the underprivileged people for betterment of their life.
g) SUST Science Arena: Creating awareness about science and science related knowledge
h) Sports SUST
i) SUST Writers Club
j) Shahjalal University Speakers Club (SUSC)

Apart from the mentioned cultural and social activities, SUST has many other activities that help the students to excel.

Establishment of University Innovation Hub at SUST will create opportunities for cultivating research, innovation, and incubation and commercialization culture among these university students, faculties and others as well as promoting the same at the national level all over the country. Considering the facilities and resources which includes ready space availability with future expansion, SUST is the suitable location to establish University Innovation Hub. SUST also set proven examples for research, innovation, incubation and commercialization and recognized nationally and internationally.

Considering the above points, SUST is the best option to establish the University Innovation hub in this area. Some of the facts of SUST are -

1. SUST produces industry ready employable graduates.
2. One of the top ranked state-owned universities in Bangladesh.
3. Comparable infrastructure with most of the public universities.
4. One of the largest green campuses.
5. Institutions/Centers in SUST:
    - Institute of Information & Communication Technology (IICT),
    - Institute of Modern Language (IML),
    - Center of Excellence
    - Research Center (CER),
    - Mobile Gaming and Apps Lab
    - Cisco Network Academy.

2.3. Location of the Project

Shahjalal University of Science and Technology (SUST) is situated Akalia at Kumargaon, Sylhet in the western side of Sylhet City. The innovation Hub will be established in North block of 4th floor at Dr. M A Wazed Miah IICT building, SUST. There is a lake in the eastern side and a wonderful big green area in the western side of the building. The proposed space is situated about 600 meters inside from the main gate of the university.

Building Area:

Ground floor: 25000 sft (IICT)
1st floor: 24000 sft (IICT)
2nd floor: 19000 sft (CSE)
3rd floor: 18500 sft (EEE)

5th floor: 18500 sft (Unused): At the North Block's about 5000 Sqf is proposed for the establishment of the Innovation Hub.

Picture 2.1: Proposed building where Innovation Hub will be established

2.4. Present condition of the proposed Innovation Hub site

Total area of this floor is presently vacant. This floor is constructed recently and reserved the north block for the Innovation Hub. The other spaces of this floor are going to prepare for doing usable. So, the space has sufficient ventilation facilities and suitable for establishing such a Hub (Picture 21 -2.4).

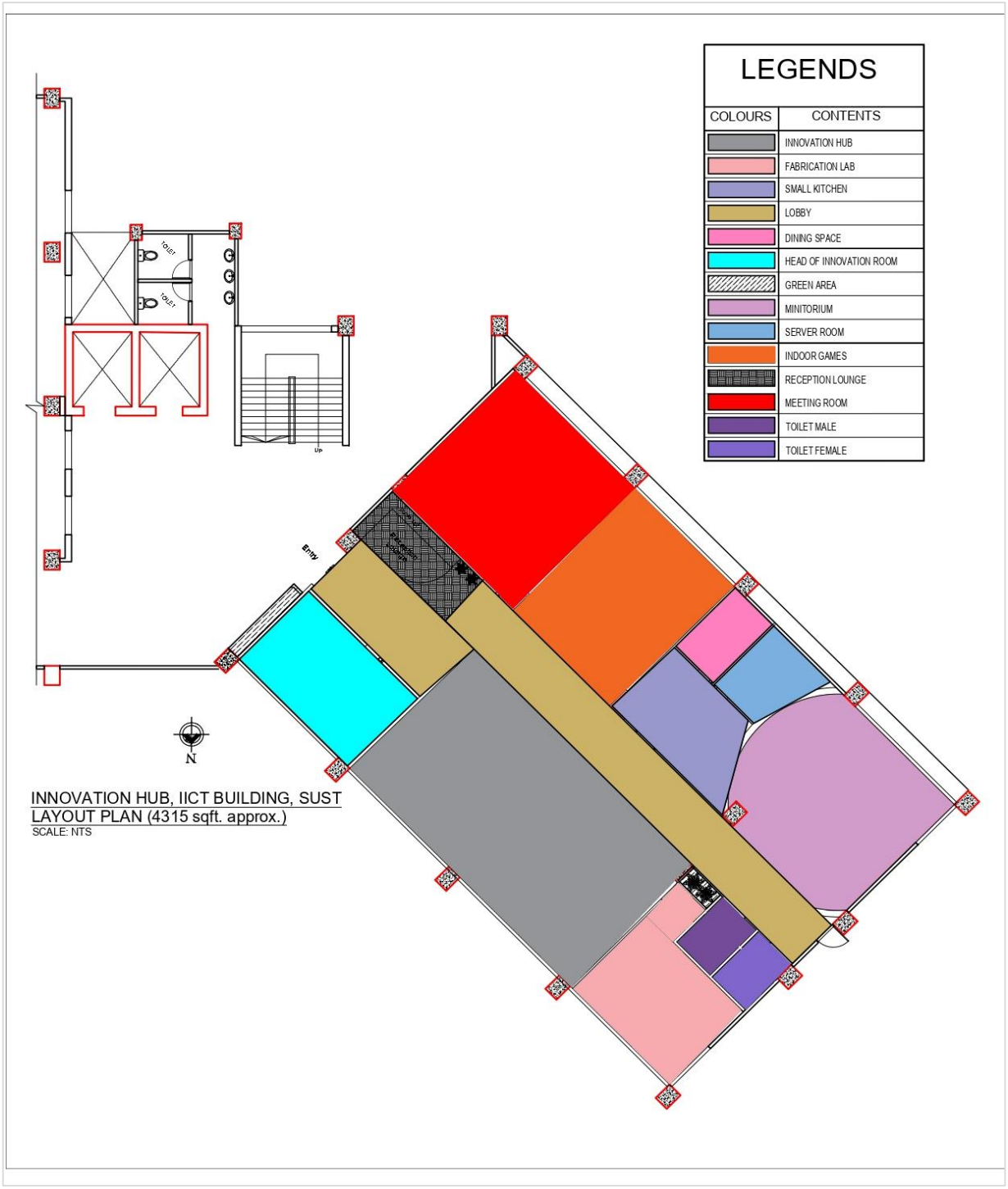
2.2: Visiting proposed site of the university innovation hub

safety on construction sites;

iii. Appraise the adequacy of the ESA with respect to the project's predicted long-term impacts on the corridor's physical, biological and socio-economic environment;
iv. Evaluate the effectiveness of the mitigation measures proposed in the ESMP and recommend improvements, if and when necessary; and
v. Compile periodic accident data to support analyzes that will help reduce future risks.

2.3: Proposed site of the university innovation hub

2.5 Proposed Interior Layout Plan with Planned Activities



2.6. Estimated Budget for Innovation Hub

Estimated cost for the Innovation Hub is BDT. 1, 69.52, 653.00 (One Crore Sixty-Nine Lac Fifty-Two Thousand Six Hundred Fifty-Three only)

2.7 Project Phases and Activities

The following are the three main project phases as planning and pre-construction, construction and operation and various activities under each phase

2.7.1 Planning and Pre-Construction Phase

The planning and pre-construction phase of the sub-component involves the following activities. Since the component is planned to be implemented in phases, some of these activities will be in parallel to earlier phases of construction.

Environmental & Social Assessment (ESA) and the submission of the report.
Preparation of the site
Environmental study based on site visit and consultation

2.7.2 Construction Phase

Mainly interior works will be done during construction phases. In addition to these main works other activities may have been undertaken as needed. Activities during construction phase of the component are as follows:

- Innovation Hub
- Fabrication Lab
- Lobby
- Snacks zone/small kitchen
- Head of Innovation Room/Innovation director
- Green Area
- Minitorium
- Sarver Room
- Indoor Games Zone
- Reception Launge
- Meeting Room
- Separate Wash Room for Male and Female

2.7.3 Operation and Maintenance Phase

During the operation phase, there may be some local activities during the maintenance of the constructed / renovated sites. Along with this, the main activities of Innovation Hub will also start. Main activities during operation of the component as follows:

a) Create a co-working space
b) Space for pitching and training
c) Research and development activities
d) Incubation activities
e) Mentorship program
f) Networking events for linkage with potential investors

SUST has its own Operations & Maintenance department fully staffed with experienced and trained engineers and operators for the smooth functioning of the activities. These personnel will be engaged during component implementation for optimal functioning of the activities.

3. Potential Environmental and Social Risks, Impact and Mitigation Measures.

The objective of the project is to establish a world class business environment for targeted high growth industrial sector and new business and to develop indigenous technological capability for the development of the local industries. Thus, the IT Business Incubators will have a positive impact in innovation and entrepreneurship, research and development among IT Professionals, Entrepreneurs, and Graduates of the Academic Institutions.

Though the component's work is expected to have some positive social impacts, there may be anticipated some low or minor concern about the environmental and social aspects related to the activities of project implementation period. For example, site preparation renovation activities, setting up small stock yards for typical pre-construction phase activities. However, it is expected that the extent and scale of the impacts will be of low and can be easily mitigated by applying the best methods and appropriate mitigation measures. Those mitigation measures should be in line with the provisions of the World Bank's ESF and in accordance with the requirements of national legislation.

There are some common impacts during pre-construction and construction/renovation phase for the establishments of the Innovation Hubs. For example, impacts during the construction/renovation phase may include:

- Operation of vehicles and equipment during site preparation and construction, hauling of equipment is likely to increase the noise level and dust emission in the buildings
- Generation of solid waste (if any) can block drainage channels and contaminate land resources if not handled properly
- Since the Innovation Hubs will be in university areas where traffic movement is minimal, additional vehicle movement can create little congestions particularly in areas where the academic building is situated
- Interactions of students and teachers with workers can spread any contagious disease in absence of proper care.
- Female students can be harassed at any time if proper care is not taken against any SH

Positive Social Impacts

The proposed Project is expected to have some positive social impacts such as:

- In the long run, the work will contribute to an overall improvement in government effectiveness
- It will improve investment climate, and potentially contributing to more investment
- Will create new jobs in the IT sector of the country
- Will promote innovation and entrepreneurship, research and development among IT professionals, entrepreneurs, and graduates of the academic institutions.

Also, in terms of the construction work to be undertaken, there are also several positive impacts associated with the civil works such as:

- Employment of local labor, creation of jobs.
- Improvement of associated existing infrastructure (improved waste management and sanitation facilities)
- Positive economic impacts on small market suppliers for raw materials needed during construction (i.e., building materials).

Negative Social Impacts

Community Health and Safety Risks

Since there are no mass level construction activities or civil work, the overall risk of the component's work is low. Though there may be a need for some construction (small construction or renovation or rearrangement) of the Innovation Hub within existing building, it is expected to have minimal

community health and safety risks. Construction sites may be a source of both liquid and solid wastes if not properly managed.

Land and Livelihoods

The Innovation Hubs will be established within the university campus, the centers are likely to be housed inside existing buildings of the university. So, this will not affect the land or livelihood of the campus. Since the location of the component will be inside the university boundaries, there will be no land acquisition or people would need to relocate or resettle.

Impacts on Cultural and Historic Heritage

As the location of the sub-component will be inside the university boundaries, where there are no cultural or historic heritages in those locations. There is also no archeological site in the proposed locations.

Labor Influx

The Project is expected to stimulate minimal labor migration. Several features of the Project could prompt in- migration. For example, construction works or establishment of the innovation centers may require construction workers, IT professionals, administrative staffs etc. This is likely to act as a magnet for people and are likely to attract some in-migrants. This may impact worker-student interaction, including harassment of students, possible clashes etc.

The construction related works for establishing the Innovation centers are minimal. Most construction workers will be most likely predominantly younger men. And if they are far away from home on the construction job, they are typically separated from their family and act outside their normal sphere of social control. This can lead to inappropriate and criminal behavior, such as sexual harassment of women and girls, exploitative sexual relations, and illicit sexual relations with minors from the local community.

COVID-19 Health and Safety of the Workforce

The project will require construction workers that may raise issues with manual labor employment, particularly regarding potential transmission risks for COVID-19 both within the worksite and for nearby communities, although a large number of workers may not be involved under this sub-component. These risks are not only from workers that are mobilized locally but also workers moving from other regions/countries. Moreover, the national COVID-19 response protocol guidelines will be adopted by the contractors for the health and safety of the labors.

HIV & AIDS Impacts

If there is any migration, that will be very minimal and it is not expected that it will have a major impact on health issues. But we cannot deny that this low labor influx can have some behavioral influences which may increase the spread of diseases such as Human Immuno- Deficiency Virus (HIV), Acquired Immune Deficiency Syndrome (AIDS) and other Sexually Transmitted Infections (STIs).

Air and Dust Pollution

Due to movement of vehicles, cutting and filling for construction/renovation works can contribute to air and dust pollution. This can lead to impacts to the surrounding environment of the buildings where the centers will be set up.

Noise and Vibration

Increased noise level (noise from the mechanical machinery and equipment, vehicles, construction and renovation work etc.) may occur during the establishment of the centers. If there is excessive noise and vibration it can cause nuisance to ongoing academic activities in the existing buildings.

Traffic

Though there will not be that much loaded transports for the project construction works but since the places are within university areas where roads are very minimal there may be some sort of congestion in the day time.

Typical Mitigation Measures

This ESMP highlighted a broad range of mitigation and enhancement measures to reduce negative impacts and enhance benefits of the establishment of the Innovation centers. Mitigation measures are identified and

designed to avoid or eliminate or offset adverse environmental impacts, or reduce them to acceptable levels during both construction and operation phases of a project intervention.

Due to the construction of a University Innovation Hub at UIU, there may occur some environmental and social aspects and consequently, there will be some impacts. The mitigation measures corresponding to individual impacts and estimated cost are outlined in chapter 5.

4. Stakeholder Consultation

4.1 Introduction

The purpose of public consultation meetings was to invite comments and detailed suggestions on any environmental and social issues considered relevant by the people living in the area of the site. The public consultation program is an essential part of the environmental assessment process and has been undertaken both formally and informally to ensure that the knowledge, experience, and views of stakeholders during the ESA work and mitigation measures and the suggestions from the stakeholders have been include in this ESA.

4.2 Approach and Methodology for Consultation

The approach **u**ndertaken for information disclosure and consultation involved the following key processes.

- Mapping and Identification of key stakeholders
- Undertaking consultation, interviews with the respective stakeholders
- Assessing the influence and impact of the sub-component based on stakeholder's comments;
- Summarizing of key findings and observations from the consultation;

4.3 Consultation

Stakeholder consultations at the beginning phase of the ESA preparation were held with the teachers, students and SUST officials during the July 2022. The key findings of the consultations are described in Table 4.1.

SL	Key issues raised	Participants/Type	Response
1	How they know about the project?	Students/ Faculty/Teachers/ officials of SUST	Most of the participants said, they have heard that an innovation hub will be established in Shahjalal University of Science and Technology (SUST) finance by the BHTPA.
2	Who lives and works near the project/sub-component site and how the project will affect their health and safety	Students, Teachers, Officials and Staff of Shahjalal University of Science and Technology (SUST)	During day time when academic /Research and other works on going the Students, Teachers, Officials and Staff of Shahjalal University of Science and Technology (SUST) will be present. So, the noise during construction/renovation of Innovation hub may create a minimal disruption of their academic session. They requested the project authority to be careful during construction/renovation period to take steps so the noise during construction work does less hamper, because a calm environment is needed while academic session is going on.

3	Time of construction work and carrying construction goods to site	DEIEDP/ BHTPA representatives, Environmental Specialist/ Social Specialist, Project Engineers and University Authority/Contractor	Participants said, carrying construction materials at night will be good. Construction work should be done during day time. Construction materials would not be carried in the location daily, rather once or twice in a week. Participants suggested to carry the construction goods during weekends such as Thursday/Friday when offices, academic seasons are off.
4	What measures should be taken regarding dust and other pollutions/ wastes during construction period?	DEIEDP/ BHTPA representatives, Environmental Specialist/ Social Specialist, Project Engineers and University Authority/Contractor	It is assured them mitigation measures are to be mentioned in the ESMP report for the contractors during renovation/construction period on minimizing environmental pollution. Brick, sand, cement etc. will be kept inside the construction boundary covering by tarpaulin. It is also assured them high priority will be taken to minimize disturbance during construction. If any generator is used, it will be covered with canopy to reduce sound and keep it in a minimal noise. Regularly spraying water on the construction materials will also be followed to minimize the level of dust in the air. Participants were ensured that an indicative waste management budget is already kept in the ESA report.
5	Labor influx	DEIEDP/ BHTPA representatives, Environmental Specialist/ Social Specialist, Project Engineers and University Authority/Contractor	This is not a big construction work. Moreover, the number of labors will not be high. There will be a labor management Plan and GRM process to mitigate the labor influx issue properly. University authority /Contractor will provide a room/camp with all facilities including water, toilet and living arrangements etc. Despite that, proper training will be arranged for laborer, contractor and his representatives. Where SEA/SH will also be included.
6	Traffic management	DEIEDP/ BHTPA representatives, Environmental Specialist/ Social Specialist, Project Engineers and University Authority/Contractor	Participants agreed on the problem on traffic management. Though it will be very minimal.
7	Occupational health safety during construction	DEIEDP/ BHTPA representatives, Environmental Specialist/ Social Specialist, Project Engineers and University Authority/Contractor	To ensure occupational health and safety during construction an OHS training will be provided for all labor, contractor and his representatives. Full set of PPEs will be provided for ensuring health and safety of labors. Provision of PPE cost will be included in ESMP of the project BoQ.

Picture: Meeting with SUST VC, Pro-VC, Registrar and Senior Teachers at SUST

5. Environmental and Social Management Plan (ESMP) including Cost

5.1 Introduction

Carrying out environmental and social screening of the sub-component, it appears that impact of the activities would not have any significant environmental and social impact, as there would not be construction of any new building under this sub-component and would include small scale civil work within the existing infrastructure. The University Innovation Hubs and incubation centers will be set up in the existing building of the university. However, this Environmental and Social Management Plan (ESMP) will ensure that all the activities of the component are screened out, and those activities are supported where the potential environmental and social risks and impacts are predictable, not significant in magnitude and site specific with low probability of serious adverse effects to human health and/or environment. However, the screening report and public consultations suggests some mitigation measures to reduce negative impacts during construction and operation phases. The mitigation measures corresponding to individual impacts and estimated cost are outlined in (**Table 5.1)**.

Table 5. 1: Identification of Potential Environmental and Social Impacts and suggested mitigation measures.

Activities	**Environmental and Social Impacts**	**Suggested Mitigation Measures**	**Time and Responsibility including approx. estimated cost in Taka**
A	**B**	**C**	**D**
Accommodation for Labor (If the university in its existing facilities can provide sufficient space for the laborers with all facilities mentioned in column C, then no separate labor shed will be required)	• Ventilation problem • Drinking water problem • Sanitation problem • Sewerage problem • Although there will be minimal labor migration, labor-student interaction can have an impact on students and staff if proper measures are not taken This can lead to inappropriate behavior such as SH of female students and women.	• Proper ventilation facilities need to be required • Need to be ensured potable water • Toilet facilities with sufficient water supply and proper sewerage network need to be completed on time • Very minimal risk of Gender based Violence (GBV), SH, social disturbance, and communicable diseases due to the low-level influx of migrant workers. • Any cases of GBV, SH and SEA will be referred to the appropriate authority to redress the issue. (If the university in its existing facilities can provide sufficient space for the laborers with all facilities mentioned above then no separate	a. If required, a labor shed should be prepared before construction activities b. The approx. estimated cost for this activity is Tk. 80,000 (Eighty thousand only) **Responsibility: Contractor**

		labor shed will be required).	
Construction activities inside the building and vehicle movement with construction materials	• Dust emission • Air pollution	• Control dust by spraying water on dust emitting materials during construction period • Uncovered aggregates and loose materials such as sand, construction wastes, etc. should be covered well. • Use tarpaulins to cover sand and other loose material when transported by vehicles • Perform the pre-construction activities at night time and minimize work done during the day-time • Regulate the speed limitation for vehicles (if there are any) inside the university areas.	a. Water spraying at least 2 times/day and as per requirement. b. The approx. estimated cost for these activities is Tk. 20,000 (Twenty thousand) only **Responsibility: Contractor**
OHS training including Personal Health and Safety and COVID-19 kits	• Without proper Personal Protective Equipment (PPE) it may cause fatal danger to the workers at any time which may endanger health and safety (OHS) of the workers • Due to the Covid-19 infections without proper health and safety measures, it can cause any human health problems	• Provision of adapted Personal Protective Equipment (PPE) i.e., Boots, Helmets, Hand gloves, Face mask, Ear plugs, aprons, eye protector etc.) ▪ Supply and ensure utilization of adapted PPEs to all labors involved in construction of proposed onsite developments. ▪ As much as possible maintain social distancing during construction works. ▪ Unnecessary movement should be avoided	a. The approx. estimated cost for these activities is Tk. 70,000 (Seventy thousand) only **Responsibility: Contractor**

		▪ Used face masks should be disposed properly. OHS training may be provided at the site for the laborers and related persons.	
Noise generation because of construction activities	• Noise and vibration inside the building may cause a nuisance for the students and teachers and disturb any academic activities	▪ There is no possibility of using generator for power supply but in any case, if generator is used it should be arranged to reduce the noise. Must be covered with a canopy and use silencer if necessary. ▪ If there is a need to cut any tiles, the noise should be kept to a minimum so that it does not go beyond the national standards. Possible measures should be taken to reduce noise from the work of tiles. ▪ Use noise barrier and absorbing materials in case of other noise sources as for example: Welding, Drilling, tiles fitting, mixture machine, wood work, etc.	a. The approx. estimated cost for these activities is Tk. 30,000 (Thirty thousand) only **Responsibility: Contractor**
First Aid Facility	• Accidents can be severe without any onsite first aid facility	▪ Provide First Aid Boxes and Emergency Medical kits including sanitizer and any other COVID-19 kits (following COVID-19 protocol).	a. The approx. estimated cost for these activities is Tk. 30,000 (Thirty thousand) only **Responsibility: Contractor**

Placing of barrier and precautionary signal/signboard/banner/ Information about GRM Focal point	• If there are no safety barriers or boundary lines or signal posts, students and teachers may have an accident while passing through the site.	▪ Provide safety signage at construction points visible to all so that everybody can identify the area to avoid any accident ▪ To aware of the workers, students, teachers, and officials,' safety barriers should be placed, and precautionary signboards/banners, etc. should be hung to avoid any accident.	a. The approx. estimated cost for these activities is Tk. 20,000 (Twenty thousand) only **Responsibility: Contractor**
Waste Management	Without proper management of different solid wastes may cause pollution hazards and GHG emission	▪ "Segregation of different waste at sources and keeping the waste in separate colorbins (Yellow for general waste, Green for organic Waste, Red for toxic, hazardous, and e-waste). ▪ Transfer the wastes to the universities or City Corporation's designated dumping site. ▪ Incorporate Waste reduction principle	a. The approx. estimated cost for these activities is Tk. 20,000 (Twenty thousand) only **Responsibility: Contractor**
Capacity building and Awareness Training	Ensure that all site personnel have a basic level of environmental and social awareness training	▪ Awareness campaign and provide training on the compliances of EHS/OHS including COVID-19 protocol to the employees and workers of the Contractor and including others. ▪ In the training program SEA, GBV and SH issues will also be included.	a. The approx. estimated cost for these activities is Tk. 30,000 (Thirty thousand) only **Responsibility: Contractor**

6. Environmental and Social Monitoring Plan

6.1 Introduction

Environmental and social monitoring plan is an essential tool about environmental management as it provides basic information for rational management decisions. The prime objectives of monitoring are:

- To check on whether mitigation and benefit enhancement measures are being adopted and are providing effective in practice
- To provide a means whereby impacts which were subject to uncertainty at the time of preparation of ESMP, or which were unforeseen, can be identified, and steps to be taken to adopt appropriate control measures.
- To provide information on the actual nature and extent of key impacts and the effectiveness of the mitigation measures which, through a feedback mechanism, can be taken into account in the planning and execution of similar projects in future.

There are two basic forms of monitoring:

- Visual observation or checking
- Physical measurement of selected parameters (if required)

As the sub-component activities are minor in nature and the possibility of environmental and social impacts are expected to be very low therefore, physical measurement of different parameters of water, air and soil and any other will not be required. But there should have regular checking and observations by the contractors and PMU consultants to identify any impacts. The importance of this monitoring program is also for ensuring that the project/component does not create adverse environmental changes in the area and providing a database of operations and maintenance, which can be utilized if unwarranted complaints are made.

An Environmental and Social Monitoring Plan has been prepared (Table 6.1) along with this ESA for the execution as a means to mitigate or minimize the adverse impacts associated with construction and operational activities of the project/component on the natural and social environments.

6.2. Objectives

The objective of environmental and social monitoring during the construction and operation phases is to compare the monitored data against the baseline condition collected during the study period to assess the effectiveness of the mitigation measures and the protection of the ambient environment based on national standards. The main objectives of the pre-construction, construction and operation phase monitoring plans will be to:

i. Monitor the actual impact of the works on physical, biological and socioeconomic receptors within the project corridor for indicating the adequacy of the ESA;
ii. Ensure compliance with legal and community obligations including

Table 6. 1: Environmental and social management Plan - Monitoring Action

No.	Environmental and social Issues	Purpose of the Monitoring	Monitoring Method			Responsibility	
			Method of Collecting and Reporting Data	Location	Duration and Frequency	Implementation	Supervision
Purpose of the Monitoring							
1.1	**Preparing ESMP**	Ensuring the compliance with design and construction method and schedule	Preparation of report	PMU and work site	During the pre-construction period	PMU	BHTPA
1.2	**Existing Utilities**	Implementation of ESMP	Obtain record of implantation	In the work site	Prior to contractor mobilization	Contractor	PMU
1.3	**ESMP Implementation Training**	Implementation of ESMP	Obtain record of training	PMU	Prior to contractor mobilization	CSC/Contractor	PMU
2.0 Construction Phase							
2.1	**Air quality**	Evaluation of effect of the mitigation measure towards air pollution	Visual observation or checking & consultation with local people	In the work site	Visual monitoring on a daily basis	Contractor	CSC/PMU
2.2	**Noise & Vibration**	Evaluation of effect of the mitigation measure towards noise pollution	Visual observation or checking & consultation with local people	In the work site	Visual monitoring on daily basis	Contractor	CSC/PMU
2.3	**Waste Pollution**	Evaluation of effect of the mitigation measure for waste	Record of kinds and quantity of waste, and the disposal method	In the work site Worker's camp	Continuous, during construction period	Contractor	CSC/PMU
2.4	**Traffic Congestion**	Evaluation of effect of construction schedule	Visual observation or checking & consultation with local people Record of accidents, Record of numbers construction	In the work site	Continuous, during construction period	Contractor	CSC/PMU
2.5	**Community health and safety**	Evaluation of effect of the work safety plan	Visual observation or checking & consultation with	In the project area	Continuous, during	Contractor	CSC/PMU

			local people		construction period		
2.6	**Worker's health and safety**	Evaluation of effect of the work safety plan	Visual observation or checking & consultation with worker	In the work site	Continuous, during construction period	Contractor	CSC/PMU
2.7	**Post-construction clean-up**	Evaluation the implementation of ESMP	Visual observation or checking & consultation with local people Reporting	In the work site	At the end of construction period along with the ESMP implementation	Contractor	CSC/PMU
2.8	**Submission of ESMP implementation report**	Evaluation the implementation of ESMP	Record of report submission	PMU and WB	At the end of construction period	Contractor	CSC/PMU
3.0 Operation Phase							
3.1	**Air Quality**		Visual observation or checking, and consultation with stakeholders, University O&M budget (if necessary) for periodic	SUST	During operation period	SUST	DEIEDP/BH TPA
3.2	**Noise Level**		Visual observation or checking, and consultation with stakeholders. University O&M budget (if necessary) for periodic monitoring	SUST	During operation period	SUST	DEIEDP/BH TPA
3.3	**Awareness**	To resolve the GBV, Equal opportunity issues	Ensuring training, information campaign and monitor: ▪ Number of trainings ▪ Number of awareness program ▪ Number of beneficiaries ▪ Monitor distribution of code of conduct & G B V related cases	SUST	During operation period	SUST	DEIEDP/BH TPA

3.4	**Health & Safety**		Visual observation or checking and consultation with local stakeholders. University O&M budget (if necessary) for periodic monitoring	SUST	During operation period	BHTPA	BHTPA

Grievance Mechanism

7.1 Grievance Mechanism Structure

The purpose of the GRM is to record and address any complaint that may arise during the project period effectively and efficiently. The GRM is designed to address concerns and complaints promptly and transparently with no impacts (cost, discrimination) for any reports made by project affected people (PAPs) and the complainants. Necessary signboard/bill board would be placed at the central places where people gather for sharing detailed information of the project.

7.1.1 DEIEDP/BHTPA Level Grievance Redress Mechanism

The BHTPA level GRC shall be comprised of the following members:

Sl. No	Name/Designation	Organization	Position in GRC
1	Director (Admin & Finance)	BHTPA	Convener
2	Project Director, DEIEDP	BHTPA	Member
3	Environmental Specialist	DEIEDP, BHTPA	Member
4	Social Specialist	DEIEDP, BHTPA	Member
5	Representative of University Innovation Hub	University	Member
6	Deputy Director Planning & DPD/AD, DEIEDP	BHTPA	Member
7	Assistant Director, DEIEDP	DEIEDP, BHTPA	Member Secretary

The BHTPA level Grievance redress committee shall do everything possible to hear and determine the issues within 15 (fifteen) days from the date the case has been transferred to it from the PIU and University level. 7(Seven) days' time may be extended if within 15(fifteen) days the case will not be settled. To ensure impartiality and transparency, hearings on complaints will remain open to the public. The GRCs will record the details of the complaints, the reasons that led to acceptance or rejection of the particular cases, and the decision agreed with the complainants. The GRC shall communicate the outcome to the aggrieved PAP(s)/staffs in writing. The GRC shall maintain a record of all outcomes related to each case.

7.2 GRM Monitoring and Reporting

Day-to-day implementation of the GRM and reporting to the World Bank will be the responsibility of the Project Director. To ensure management oversight of grievance handling, the Internal Safeguard team will be responsible for monitoring the overall process, including verification that agreed resolutions are actually implemented.

7.3 GRM contact information -DEIEDP/ BHTPA

Information on the project will be available on the project's website and will be posted on information boards in a suitable visible place in the project site. Details information of GRC contact person will also be available in information boards at project site. The point of contact regarding any grievances at DEIEDP/BHTPA is given below:

Description	Contact details
Company:	DEIEDP, Bangladesh High-Tech Park Authority
To:	Project Director
Address:	DEIEDP, Bangladesh Hi-Tech Park Authority, ICT Tower (9th Floor), E-14/X, Agargaon, Dhaka-1207
E-mail:	pd.deiedp@bhtpa.gov.bd
Website:	www.bhtpa.gov.bd
Telephone:	Phone: +88-02- 55006889 Mobile: 01849462230

Annexes

1 Environmental Screening Form (Prepared by Shahjalal University of Science and Technology (SUST) and verified by Environmental Specialist of DEIEDP)

Sub-component Name: **University Innovation Hub**

Sub-component Details in Brief: Over the last decade or two, open innovation hubs have exploded in popularity, with many of them founded by firms and institutions. The main reason is that they are required to remain competitive and effective in a rapidly changing technical and economic environment. Traditional paradigms of innovation and skill development have mostly fallen out of favor as a result of greater internet availability and non-traditional educational opportunities. Simultaneously, university and corporate research initiatives are growing increasingly difficult and costly.

Sub-component location/s: 3rd floor (north block) of Dr. M A Wazed Miah IICT building, Shahjalal University of Science and Technology, Kumar gaon, Sylhet-3114, Bangladesh.

Project Details		
Sl.no	**Components**	**Details**
1	Project components	University Innovation Hub
2	Details of Alignment/Components (Main components including construction activities)	The building where the Innovation Hub is going established has been built in visually-pleasing design with modern high quality construction materials.
3	Location of the Project Sites & Current Land use (Provide information for all sites involved in the project), any historic land use (related to heritage, or contamination) Site Survey No:/s (with ownership), Geographical co-ordinates of the site	Dr. M A Wazed Miah IICT building, Shahjalal University of Science and Technology, Kumar gaon, Sylhet-3114, Bangladesh. Shahjalal University of Science and Technology is a public university in Bangladesh. It is situated at the western side of Sylhet City, Bangladesh. Total area of SUST is 320 Acres and from here, the area of the proposed Innovation Hub is about 5000 sqf.

Proposed Resource Use

Resource Use				
Sl.no	**Proposed Resources**	**Area/ Quantity**	**Unit**	**Details**
(i).	Land Area/Building Area proposed to be used			The innovation Hub will be established in North block of 4th floor at Dr. M A Wazed Miah IICT building, SUST. There is a lake in the eastern side and a wonderful big green area in the western side of the building. The proposed space is situated about 600 meters inside from the main gate of the university. Building Area: Ground floor: 25000 sft (IICT) 1st floor: 24000 sft (IICT) 2nd floor: 19000 sft (CSE) 3rd floor: 18500 sft (EEE) 5th floor: 18500 sft (Unused): At the North Block's about 5000 Sqf is proposed for the establishment of the Innovation Hub. This floor is constructed recently and reserved the north block for the Innovation Hub. The other spaces of this floor are going to prepare for doing usable. So the space has sufficient ventilation facilities and suitable for establishing such a Hub.

(ii).	Estimated energy consumption for the Project activities–Source wise			➢ **Ready Space:** Required about 5000 sq. ft. ready space will be available for establishing the Innovation Hub. ➢ **Electricity:** Source 500 KVA/ 400 KW Transformer ➢ **Internet Capacity:** SUST secured two internet connectivity with two line (including backup line) from BdREN. BdREN provides 2000Mbps. In SUST campus, all the internet users like teachers, students, officers, staffs and other relevant people uses internet services distributed and managed by Computer & Information Center and ICT Cell. In Dr. M A Wazed Miah IICT building, both wired and wireless internet connections are present. In the building all the computers are connected to internet through wired connection of Ethernet cable. Also, Wi-Fi Zone exists there through Access Point. Wired Connection of the building is designed with network switches in such a way that we can expend the network according to demand of users. ➢ **Information of Computer Labs:** Number of Computer Labs: 15 Total number of PC: 450 Number of Digital/Circuit/Machine Labs: 02

(iii).	Estimated usage of water quantity for the project: Ground Water and Surface water?			Source: SUST Main Water supply line. Capacity of underground reserver of the proposed building: 150,000 Litre Capacity of overhead reserver of the proposed building: 20,000 Litre

Baseline Environmental Conditions

Sl.no	Environmental Aspects	Yes	No	Details
1	Is the project site located on or adjacent to any of the following (Provide information for all sites and alignment of the project components/subcomponents, associated activities; mention distance to these features in meters/kilo meters)			East: Lake and green Field West: Green Field North: Open space and then Central Mosque of SUST South: Open space and then Administrative Building
i)	Critically Vulnerable Coastal Areas, Eco-sensitive Areas		✓	
ii)	Cultural Heritage site, Protected monuments		✓	
iii)	Natural Forests/ Protected Areas Is the project in an eco-sensitive or adjoining an eco-sensitive area? If yes, provide details.		✓	
iv)	Any other Wetlands/ Mangrove/ Estuarine Region?		✓	
v)	Any Natural Habitat areas, areas with natural features?		✓	
vi)	Any other Sensitive Environmental Components?		✓	
vii)	Any Residences, schools, hospitals, Sensitive receptors?		✓	
viii)	Any culturally–socially important paths, areas/religious occupancies, burial grounds, tourist or pilgrim congregation areas, borders, etc.?		✓	
ix)	Any Drinking water source, upstream And downs stream uses of rivers, etc.?		✓	

x)	Any Low-lying areas prone to flooding/ areas of Tidal Influence?		✓	
xi)	Any areas affected by other disasters?		✓	
2	Is the site in Critical/Over exploited condition?		✓	
3	Is the area disaster- prone? If yes; list all		✓	

Sl.no	Environmental Aspects	Yes	No	Details
	Disaster zone categories applicable		✓	
4	Describe the soil and vegetation on site			N/A
5	Is the site area and condition suitable for Proposed development?	✓		
6	Describe existing pollution or degradation In the site (s)			N/A
7	Any other remark on baseline condition?			N/A

Anticipated Environmental Impacts: Impacts on Land, Geology and Soils

Sl.no	Impacts	Yes/ May create	No	Details
8.	Will the proposed project cause the following on Land/Soil?			
i)	Impact on Surrounding Environmental cconditions including Occupation on Low lying lands/flood plains		✓	
ii)	Substantial removal of Top Soil (mention area in sqm)		✓	N/A
iii)	Any degradation of land/eco-systems Expected due to the project?		✓	
iv)	Loss or impacts on Cultural/heritage Properties		✓	
v)	Does the project activity involve cutting and filling/blasting etc.?		✓	

vi)	Will the project cause physical changes? in the project area (e.g., changes to the topography) due to earth filling, excavation, earthwork or any other activity?		✓	
vii)	Will the project involve any quarrying Mining etc.?		✓	
viii	Will the project/any of its component Contaminate or pollute the Land?		✓	

Impacts on Water Environment

Sl.no	Impacts	Yes/May Create	No	Details
9	Will the sub project or its components cause any of the following impact on Water sources (Quantity or Quality):			
i)	Will the activities have Proposed at the site(s) Impact water quality (surface or Underground) and water resource availability and use? Will this sub- project involve the dredging of water bodies, sea, canals, etc.		✓	
ii)	Impacts on Water Resources		✓	
iii)	Pollution of Water bodies/ground water nearby or down stream		✓	
iv)	Will the project affect the river /cannel flow pattern, stream pattern or any other irrigation canal?		✓	
v)	Will the project result in stagnation of water flow or pondage or weed growth		✓	

Impacts on Biodiversity and Host Communities

Sl.no	Environmental Impacts	Yes/May Create	No	Details
10	Will the sub project or its components cause any of the following impacts on Bio diversity or the neighbor hood			

i)	Will the project necessitates cutting of? Trees/Loss of Vegetation		✓	
ii)	Will the project result in Health & Safety Risks in the neighborhood including the release of toxic gases, accident risks		✓	
iii)	Potential risk of habitat fragmentation due to the clearing activities? (e.g., Hindrance to the local biodiversity like disturbing the migratory path of animals /birds etc.)		✓	
iv)	Potential Noise and Light Pollution or disturbance to surrounding habitats/ communities		✓	
v)	Potential disruption to common property, accessibility, traffic disruptions, conflicts or disruption to the local community within the subproject area?		✓	

Impacts due to Storage and Wastes: Pollution and Hazards

	Type	**Yes**	**No**	**Details**
11	Will the sub project or its components cause any impact due to storage of materials, wastes or pollution due to releases during various project activities			
i)	Will the project use or store dangerous substances (e.g., large quantities of hazardous chemicals/ materials like Chlorine, Diesel, Petroleum products; any other?		✓	
ii)	Will the project produce solid or liquid wastes; including construction/demolition wastes (including dredging, de-weeding wastes, muck/silt, dust); polluted liquids?		✓	
iii)	Will the project cause or increase air pollution or odor nuisance?		✓	
iv)	Will the project generate or increase noise levels which will impact surrounding biodiversity or communities?		✓	

v)	Will the project generate or increase visual blight or light pollution?		✓	
vi)	Will the project cause water pollution? (of water bodies/ground water)?		✓	
vii)	Will the project involve dangerous construction activities which may be a safety concern to workers/host communities		✓	
viii	Is there a potential for release of toxic gases or accident risks (e.g., potential fire outbreaks)		✓	
12	Describe any other features of the project That could influence the ambient environment			N/A

Suggested Environmental Enhancement Measures

	Enhancement Measures	Yes	No	Details
13	Has the subproject design considered the following enhancement measures?			
i)	Energy conservation measures/energy recovery options incorporated in sub project design	✓		
ii)	Considered waste minimization or waste reuse/ recycle options	✓		
iii)	Rain water harvesting, water Recycling and other water resource enhancement measures			N/A
iv)	Considerations for extreme events, drought, flood, other natural disasters	✓		N/A
vi)	NOC for water withdrawal from surface water source	✓		N/A
vii)	Mining Permit (for dredging)			N/A
viii)	NOC for transportation and storage of diesel, oil and lubricants, etc.	✓		

ix)	Others (Mention)			Waste management by university authority. Recently a storage shed is being built for garbage collection and will be disposed by City corporation.

Annex B: Social Screening Form ((Prepared by SUST and verified by Social Specialist of DEIEDP)

Project Name: **University Innovation Hub**

Project location: Dr. M A Wazed Miah IICT building, Shahjalal University of Science and Technology, Kumar gaon, Sylhet-3114, Bangladesh.

Land Use, Resettlement, and/or Land Acquisition				
Sl.no	**Components**	**Yes**	**No**	**Details**
1	Does the project involve acquisition of Private land?		✓	
2	Alienation of any type of Government land including that owned by Urban Local Body?		✓	
3	Clearance of encroachment from Government/Local body Land?			N/A
4	Clearance of squatters/hawkers from Government/Local Body Land?			N/A
5	Number of structures, both authorized and/or unauthorized to be acquired/ cleared/			N/A
6	Number of households to be displaced?		✓	
7	Village common properties to be Alienated Pasture Land(acres)Acquisition /Burial ground and others specify?		✓	
8	Existing land uses on and around the project area (e.g., community facilities, agriculture, tourism, private property) will be affected?		✓	
9	Will the project result in construction? Workers or other people moving in to or having access to the area (for along-time period and in large numbers compared to permanent residents)?		✓	
10	Are financial compensation measures Expected to be needed?		✓	

Land Use, Resettlement, and/or Land Acquisition				
Sl.no	**Components**	**Yes**	**No**	**Details**
Loss of Crops, Fruit Trees, House hold Infrastructure and livelihood				
11	Will the project result in the permanent or temporary loss of the following?		✓	
11.1	Crops?		✓	
11.2	Fruit trees? Specify with numbers		✓	
11.3	Petty Shops		✓	
11.4	Vegetable/Fish/Meat vending		✓	
11.5	Cycle repair shop		✓	
11.6	Garage		✓	
11.7	Tea stalls		✓	
11.8	Grazing		✓	
11.9	Loss of access to forest produce		✓	
11.10	Any others-specify		✓	
Welfare, Employment, and Gender				
12	Is the project likely to provide local employment opportunities, including employment opportunities for women?	✓		
13	Is the project being planned with sufficient attention to local poverty alleviation objectives?	✓		
14	Is the project being designed with Sufficient local participation (Including the participation of women) in the planning, design			N/A
Historical, Archaeological, or Cultural Heritage Sites				
15	Historical heritage site(s) require excavation near the same?		✓	
16	Archaeological heritage site(s) require excavation near the same?		✓	

17	Cultural heritage site(s) require Excavation near the same?		✓	
18	Graves or sacred locations require Excavations near the same?		✓	
Tribal Population/Indigenous People				
Land Use, Resettlement, and/or Land Acquisition				
Sl.no	**Components**	**Yes**	**No**	**Details**
19	Does this project involve acquisition of any land belonging to Tribal people?		✓	
Beneficiaries				
20	Population proposed to be benefitted by the proposed project	Approx.no.: 13000		More than 10000 members from Khulna University and More than 3000 members from other institutes.
21	No. of Females proposed to be benefitted by the proposed project	Approx.no.:4000		More than 3000 from SUST and More than 1000 from other institutes.
22	Vulnerable households/population to be benefitted	Approx.no.:		N/A
23	No. of Families to be benefitted	Approx.no.:		N/A