Initial Environmental Examination

June 2022

Cambodia: Science and Technology Project in Upper Secondary Education

Prepared by the Ministry of Education, Youth and Sport of the Kingdom of Cambodia for the Asian Development Bank.

ABBREVIATIONS

ADB	–	Asian Development Bank
ASEAN	–	Association of Southeast Asian Nations
CCCA	–	Cambodia Climate Change Alliance
CMAC	–	Cambodian Mine Action Centre
CMDG	–	Cambodia Millennuum Development Goals
DOE	–	District Office of Education
EHS	–	Environmental and Health and Safety
EHSO	–	Environmental and Health and Safety Officer
EIA	–	Environmental Impact Assessment
EMIS	–	Education Management Information System
EMP	–	Environmental Management Plan
ERC	–	Education Research Council
ESP	–	Education Strategic Plan
GRC	–	grievance redress committee
GRM	–	grievance redress mechanism
ICT	–	Information and communication technology
IEE	–	Initial Environmental Examination
IESIA	–	Initial Environmental and Social Impact Assessment
LSS	–	Lower Secondary School
MLVT	–	Ministry of Labor and Vocational Training
MOE	–	Ministry of Environment
MoEYS	–	Ministry of Education, Youth and Sport
MOH	–	Ministry of Health
MRC	–	Mekong River Commission
NSDP	–	National Strategic Development Plan
PAM	–	Project Administration Manual
PCP	–	Public Communications Policy
PMU	–	project management unit
POE	–	Provincial Office of Education
QPR	–	Quarterly Progress Report
REA	–	Rapid Environmental Assessment
RGC	–	Royal Government of Cambodia
SIF	–	School Improvement Funds
SPS	–	ADB Safeguard Policy Statement (2009)
SRC	–	secondary resource centers
SRS	–	secondary resource schools
TGL	–	Technical Group Leader
USE	–	upper secondary education
USESDP	–	Upper Secondary Education Sector Development Project
USS	–	upper secondary school
UXO	–	unexploded ordinance
WASH	–	water, sanitation and hygiene
WHO	–	World Health Organization

NOTES

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TABLE OF CONTENTS

LISTS OF TABLES

LISTS OF FIGURES

EXECUTIVE SUMMARY

A. Project Summary

1. The proposed Science and Technology Project in Upper Secondary Education (STEP UP) is part of the phased support of the Asian Development Bank (ADB) to develop high-quality human resources by improving the effectiveness of upper secondary education (USE). It builds on and complements ADB's ongoing first Upper Secondary Education Sector Development Program (USESDP 1) and second Upper Secondary Education Sector Development Program (USESDP 2).[1]

B. Project Rationale

2. The project will be aligned with the following impact: high quality human resources for a knowledge-based society developed.[2] The outcome will be effectiveness of upper secondary education improved.[3] The outcome will be measured by the following indicators: (i) at least 1.5 percentage point increase in the proportion of female and male USE science stream students from secondary resource schools (SRSs) passing the Grade 12 national exam; (ii) proportion of upper secondary schools (USSs) meeting minimum service standards for outputs increased; and (iii) at least three new SRSs accredited as new generation schools (NGSs).

3. The outputs of the project will be:

(i) equitable access to standards-based upper secondary education expanded;
(ii) quality of science, technology, engineering, and mathematics (STEM) teaching and learning strengthened; and
(iii) institutional and school leadership and management capacity strengthened for effective quality improvement.

4. As part of Output 2, the Cambodia Science and Technology Center (CSTC) will be established. The CSTC will promote STEM in an interactive and innovative way to the public through a physical presence in Phnom Penh at the Institute for Technology of Cambodia (ITC) and a digital outreach program for access in schools and communities nationwide. It will also provide a STEM eco-system hub for teacher education institutions (TEIs) and higher education institutions (HEIs) for research and teaching purposes; conncect industry and secondary schools; and connect with regional and global STEM communities.

C. Purpose and Methodology of Environment Assessment

5. **Environment classification and assessments.** The project is classified as environment Category B in accordance with ADB Safeguard Policy Statement (SPS, 2009), requiring an Initial Environmental Examination (IEE) and Environmental Management Plan (EMP).

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[1] ADB. 2016. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grants to the Kingdom of Cambodia for the Upper Secondary Education Sector Development Program.* Manila.

[2] Government of Cambodia, MoEYS. *Education Strategic Plan, 2019–2023*. Phnom Penh.

[3] The preliminary design and monitoring framework is in Appendix 2 of the Report and Recommendation of the President to the Board.

6. The exact size of the proposed CSTC is not yet defined. The feasibility study (FS) and detailed engineer design (DED) will be studied during project implementation. Therefore, domestic safeguards requirements, i.e., initial environmental and social impacts assessment (IESIA) as per Ministry of Environment (MOE) Prakas No. 21: Classification of Environmental Impact Assessment for Development Project (2020), will need to be confirmed once the FS is available. However, it is anticipated that the CSTC will not be subject to IESIA since the entire ITC campus was subject to ESIA in 2021.

7. This IEE and EMP focus on the investment components under **Output 1** which involve (i) renovation and equipping of 3 classrooms to 2 science classrooms and one librtay, multi-purpose project-based classrooms, WASH facilities, voltage stabilisers (new) and battery back-up systems (new); (ii) provision of science equipment for technical workshops for General Technical Hight Schools (GTHS), science classrooms safety equipment; and (iii) provision of target USS with innovative digital technology. **Output 2** involves, among others, the establishment of the Cambodia Science and Technology Center (CSTC).

8. The adverse impacts during construction are localized, short term and reversible which are principally related to health and safety of students, staff, and adjoining communities, as well as noise, dust, pollution, and disturbance that could arise from poor site management and inadequate sanitation infrastructure.

D. Environmental Conditions at Project Sites

9. Besides the Secondary Resource Centers (SRCs) where the schools are located in the urban/town centres,[4] the other schools are located in rural areas, and some located in remote areas. The proposed construction site of the CSTC is located in the new ITC site, located in Preak Taroth village, Sangkat Preak Tasek, Khan Chroy Changva, Phnom Penh, appropriately 13 Km North of Phnom Penh center (Wat Phnom).

10. In terms of location and topography, all the schools and CSTC sites are located on upland areas, so historically they have never met a flooding problem. In addition, some schools have been used as a safe place for people to temporarily stay during big floods. None of these schools are located in any restricted zone of protected area or biodiversity conservation area.

11. There are no major industrial or mobile sources of air pollution in the vicinity of these schools, except for occasional movement of vehicles along unpaved roads which generates dust. Burning of garbage by households is practiced by communities to manage solid wastes which affects air quality. In general, the schools do not experience significant problems with regard to water supply, sanitation, and waste management. Sources of water come from ground water, springs, and small streams.

12. None of the schools is located in areas identified as historical or culturally significant area.

E. Environmental Impacts and Mitigation Measures

13. **Environmental and climate change benefits.** STEP UP will enhance climate resilience of the education sector through carefully designed interventions incorporating a range of climate

[4] Criteria for selecting the 5 SRSs will upgrade to NGS (the selection criteria/process refer to NGS policy guideline and additional discussion concerned by experiences thus far), 10 USS will upgrade to SRSs (the criteria refer to SRSs policy).

change adaptation features. Construction of the CSTC under output 2 will utilize climate smart design principles, including energy efficiency and water conservation measures, rooftop greening, smart façade shading and natural ventilation. These green design features will be highlighted for educational purposes in interactive exhibits and digital outreach programs to increase environmental awareness. Renovation of school classrooms and libraries under output 1 will adhere to low-carbon, climate resilient design principles, with close attention to managing electrical power loads and the associated climatic issues that may come with an increase in education technologies (EdTech). STEP UP interventions have integrated a range of EdTech solutions to meet the need for modernization and facilitate 21st century skills development. Learning management systems, and electronic record keeping will provide improved efficiency system wide, while access to purposefully selected digital devices, possessing climate-smart characteristics (e.g., low heat emittance, low wattage, low maintenance, local repairability) will vastly increase.

14. The project will strengthen environmental education through integration of climate change themes in the STEM curriculum through booklets, projects, clubs, and fairs. Providing support and equipment for the establishment of STEM Clubs, including environmentally themed clubs, will increase awareness and deepen understanding. Students will be challenged to use their STEM skills to develop innovative solutions for climate issues through projects. STEM Fairs will serve as a platform for students to showcase climate-focused projects and promote a sense of environmental responsibility beyond the school community. Social media will be leveraged to improve public perceptions of STEM and related topics, such as climate change. An engaging, targeted campaign will showcase climate action projects and organizations in Cambodia, while explainer videos will deepen understanding, empowering schools, and communities nationwide to embrace climate smart practices.

15. **Pre-Construction Impacts.** Potential environmental impacts and risks due to location and design are associated with presence of geological hazards, UXO, cultural/heritage sites, proximity to protected areas, availability and requirements for water supply, sanitation, and drainage. The construction and improvement of schools will be performed exclusively at existing school sites. The schools and the CSTC are not in proximity to any restricted protected area; hence, they are not expected to induce degradation of biodiversity conservation areas. The schools and the CSTC will also not impact upon any archaeological or historical sites and there will be no requirement for land use change. None of the schools is in areas prone to landslides and earthquakes but the CSTC should be designed to withstand earthquakes and proper ground analysis should be done to ensure design of stable foundation.

16. The school authorities and villagers consulted during preparation of the IEE said that they have not encountered UXO or land mines in the project areas. As there is only one organization dealing with UXO in Cambodia - the Cambodia Mine Action Centre (CMAC), there are few ways to seek support from the CMAC. First, for schools located near the CMAC headquarter in Phnom Penh, the school authorities can directly call or write a letter to the CMAC requesting for the UXO clearance. For schools located far from the headquarter, the request should be first written by the school director, endorsed by the local authority (commune Chief), District Office of Education (DOE) or Provincial Office of Education (POE) to the CMAC. Although construction will occur in existing school compounds that have been subject to disturbance, the screening for presence of UXO needs to be confirmed to ensure safety and security of the students, teachers, and the community people. CMAC will be consulted for records of historical UXO contamination in the construction area. If a risk is identified, a certified UXO company to conduct a detailed survey will be contracted. If any UXO is identified during the survey, the certified company will clear and dispose of UXO and obtain a certificate from CMAC that the area has been cleared prior to

commencing construction excavations. The site conditions, components, design configuration and sizes of facilities and other infrastructures needed by the schools will be evaluated further during the detailed design.

17. **Construction Impacts.** The construction works will have some minor temporary negative impacts. Risks to health and safety and environmental impacts such as noise, dust and pollutant emissions that will arise from civil works will be minimal and localized since these are confined within a small footprint area in existing school compounds. Impacts include risks to occupational and school user's health and safety from construction activities, e.g., school students playing near open excavation or risk of getting hit by a construction vehicle or equipment. Additional potential impacts include an increased level of noise and dust due to the vehicle movement and building construction activities. There will also be a need to properly dispose of construction debris generated during the construction works. Based on the condition of existing schools visited, hazardous materials such as asbestos or asbestos containing materials or toxic paints were not present. All of the existing schools have tin roofs and no asbestos containing materials were found.

18. In general, the short-term construction impacts can be prevented or mitigated with good construction management practices in line with the Environmental and Health and Safety (EHS) Guidelines (2007). An EMP, included in **Appendix 1**, outlines mitigation measures to prevent or minimize construction impacts such as those related to elevated dust, noise, erosion and sedimentation, and public and worker safety. A monitoring plan is included in **Appendix 2**, which also defined reporting requirements.

19. **Environmental Impacts during School Operation.** No significant impacts are anticipated during project operation. The schools require sufficient and safe potable water supply, clean and sex-segregated toilets with septic tanks, proper solid waste management systems, ventilation and drainage. The project supports installation of WASH facilities in target 18 SRS, 100 NWS and 15 new upper secondary network schools where gaps in sanitation services have been identified. The CSTC will be connected to the Phnom Penh Municipality public sewer system.

F. Institutional Responsibilities for EMP implementation

20. **Institutional arrangements.** The executing agency (EA) of the project will be the Ministry of Education, Youth and Sport (MoEYS), while the implementing agencies (IA) will be the Institute of Technology of Cambodia (ITC), National Institute of Education (NIE) and the Directorate General of Education (DGE). A Project Management Unit (PMU) and three Project Implementation Units (PIU) will be established.

21. The EA will establish a steering committee (SC) to provide strategic guidance and monitor toward successful implementation of the project within the available budget as well as facilitate inter-ministry coordination.

22. The PMU will lead and be responsible for day-to-day management, coordination, and monitoring and evaluation (M&E) of the project implementation. The PMU will be led by the Project Director and the Project Manager. ITC as one of the IAs will implement activities toward full operations of the CSTC under output 2.

23. MoEYS will recruit a project implementation support consultant (PISC) to support the PMU in project implementation, and a CSTC Design and Supervision Firm (CSTC-DSF) in charge of

detailed engineering design and construction supervision of the CSTC. The PISC will include a national environment consultant (PISC-EC) that will act on PMU's behalf as the EMP implementation coordinator. The CSTC-DSF will include a national environment, health and safety (EHS) specialist in charge of all EHS supervision during CSTC construction.

24. **Monitoring and reporting.** The PMU, on behalf of MoEYS, will be responsible for monitoring the implementation and performance of the project, and for reporting and documenting the results achieved at various stages of the project. MoEYS will be responsible for disseminating the findings to key stakeholders. The PMU (through the PISC) will prepare quarterly progress reports describing: (i) project implementation progress; (ii) issues, challenges, and constraints; and (iii) proposed actions and solutions, for submission to the Government and ADB. The progress reports will also report on EMP implementation. In addition, the PMU will submit annual environment monitoring reports to ADB. These will be disclosed in accordance with the ADB Access to Information Policy (2018). The monitoring and reporting plan is defined in **Appendix 2**.

25. A **Grievance Redress Mechanism** will be established for the project. MoEYS and the PMU shall ensure; (i) an efficient project-specific grievance redress mechanism (GRM) is in place and functional to assist affected persons resolve queries and complaints related to safeguard concerns, if any, in a timely manner; (ii) all complaints are registered, investigated and resolved in a manner consistent with the provisions of Grievance Redress Mechanism; (iii) the Complainants/aggrieved persons are kept informed about status of their grievances and remedies available to them; (iv) adequate staff and resources are available for supervising and monitoring the mechanism; and (v) complaints and their resolution should be recorded and included in periodic monitoring reports submitted to ADB. The details of the GRM and key contact persons will be displayed at active work sites and on MoEYs project website.

I. POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

A. ADB's Environment Safeguards Policies

1. The environment safeguards requirements of ADB are defined in the following policies and guidelines:

- Safeguard Policy Statement (SPS) (2009);
- Operational Manual Section F1/BP; and
- Access to Information Policy (2018).

2. ADB's Strategy 2030 emphasizes the pursuit of environmentally sustainable and inclusive economic growth for developing member countries (DMCs) and requires mitigation to address environmental and social impacts of projects. The ADB's Safeguards Policy Statement (SPS, 2009) governs the environmental and social safeguards of ADB's operations. When a project has been identified for ADB financing, it is screened and categorized to determine the following:

- Significance of potential impacts or risks of the project to the environment;
- Level of assessment and institutional resources required to address the safeguard issues; and
- Information disclosure and consultation requirements.

3. The Environmental Safeguard Requirements 1 (SR1) of the SPS outlines the requirements that borrowers/clients have to meet. These requirements include assessing impacts, planning and managing impact mitigations, preparing environmental assessment reports, disclosing information and undertaking stakeholder consultations, establishing a grievance redress mechanism, and monitoring and reporting. It also includes specific environmental safeguard requirements pertaining to biodiversity conservation and sustainable management of natural resources, pollution prevention and abatement, occupational and community health and safety, and conservation of physical cultural resources.

4. Every project is categorized for potential environmental impacts and risks:

- **Category A** – if a proposed project is likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented; impacts may affect an area larger than the sites or facilities subject to physical works. A full-scale environmental impact assesses (EIA) including an environmental management plan (EMP) is required.
- **Category B** – if a proposed project's potential environmental impacts are less adverse and fewer in number than those of category A projects; impacts are site-specific, few if any of them are irreversible, and impacts can be readily addressed through mitigation measures. An initial environmental examination (IEE), including an EMP is required.
- **Category C** – if a proposed project is likely to have minimal or no adverse environmental impacts. No EIA or IEE is required although environmental implications need to be reviewed.
- **Category FI** – is assigned to projects that involve investment of ADB funds to or through a financial intermediary.

5. There are eleven basic principles of the ADB safeguards policy on environment which are summarized in Table 1.

Table 1. Environmental Safeguard Policy Principles of ADB's SPS (2009)

Environment Policy Principle	Requirement
1. Screening and categorization	Use of a screening process for each proposed project to determine the extent and type of environmental assessment commensurate with the significance or potential impacts and risks.
2. Environmental assessment	Conduct of an environmental assessment for each proposed project to identify potential impacts and risks to environment and people.
3. Alternatives examination	Examine alternatives to project's location, design, technology, and components and their potential environmental and social impacts. Also consider the "no project" alternative.
4. Environmental mitigation and monitoring plans	Prepare an EMP that includes the proposed mitigation measures, environmental monitoring and reporting requirements, related institutional or organizational arrangements, capacity development and training measures, implementation schedule, cost estimates, and performance indicators.
5. Consultation and grievance redress mechanism	Carry out meaningful consultation with affected people and facilitate their informed participation early in the project preparation process and ensure that their views and concerns are taken into account. Establish a grievance redress mechanism to receive and facilitate resolution of the affected people's concerns regarding the project's environmental performance.
6. Public disclosure	Disclose the environmental assessment including the EMP in a form and language understandable to affected people and other stakeholders.
7. EMP implementation and monitoring	Implement the EMP and monitor its effectiveness. Document the monitoring results, including corrective actions and disclose the monitoring reports.
8. Protection of critical habitats	Do not implement project activities in areas of critical habitats unless (i) there are no measureable adverse impacts on the critical habitat, (ii) there is no reduction in the population of any recognized endangered or critically endangered species and (iii) any lesser impacts are mitigated. If a project is located within a legally protected area, additional programs to promote and enhance the conservation aims of the protected area will be implemented.
9. Pollution prevention and control technologies	Apply pollution prevention and control technologies and practices consistent with international good practices as reflected in internationally recognized standards such as the World Bank's Environmental, Health, and Safety (EHS) Guidelines.
10. Occupational health and safety	Provide workers with safe and healthy working conditions and prevent accidents, injuries and diseases in the workplace. Minimize adverse impacts and risks to the health and safety of local communities.
11. Preservation of physical cultural resources	Conserve physical cultural resources and provide a "chance find" procedure and conservation approach for materials that may be discovered during project implementation.

EHS = Environmental, Health, and Safety, EMP = environmental management plan.

6. Aside from ADB SPS (2009), the ADB also prescribes the Access to Information Policy (2018) which requires consultations, participation, and disclosure of information to enhance stakeholders' trust in and ability to engage with ADB. The policy promotes transparency, accountability, and participatory development. It establishes the disclosure requirements for documents produced or to be produced through ADB assistance. The IEE, EMP and the environmental monitoring reports of the project are to be disclosed at the ADB website in accordance with the Public Communications Policy (2011).

7. For a Category B project, the draft IEE report should be available to interested stakeholders before project approval and posted on the ADB's website upon Board approval of the project.

B. Cambodia Environmental Laws and Guidelines

8. Implementation of the project will be governed by the environmental acts, rules, policies and regulations of the Royal Government of Cambodia. These regulations impose restrictions and guidelines on the activities to minimize and/or mitigate likely impacts to the environment. The project will involve construction and rehabilitation activities in existing locations.

1. Laws and Subdecrees related to Environment, Impact Assessment

9. The Law on Environmental Protection and Natural Resources Management (No: NS/RKM/1296/36) was enacted in 1996 and is the main law for protection of the environment in Cambodia. Article 6 of the law requires that environmental impact assessment (EIA) be undertaken for proposed projects with the Ministry of Environment designated as the authority to review EIAs prior to submission to the Government for approval.

10. Environmental assessment in Cambodia is governed by the following decrees and guidelines:

- Sub-decree on EIA Process No. 72 (1999). This sub-decree provides the detailed guidelines for implementation of the EIA Process. The Sub-Decree supports the Law of Environmental Protection and Natural Resources and sets out institutional responsibilities, impact assessment requirements and the procedures for undertaking the environmental assessment process.
- Declaration on Guideline for Conducting IESIA and EIA Reports No. 376 (2009). This declaration specifies the basic contents of IESIA/EIA Reports, which should include: (i) introduction; (ii) legal framework; (iii) project description; (iv) description of the existing environment; (v) public participation; (vi) assessment of, and mitigation measures for, significant environmental impacts; (vii) environmental management plan; (viii) cost-benefit analysis; and (ix) conclusion and recommendations.
- Prakas No. 21 on EIA Classification for Development Projects (2020). The Prakas provides clarity on development projects which require a Contracts on Environmental Protection and/or Initial or Full Environmental and Social Impact Assessment (IESIA or ESIA) reports.

11. The Ministry of Environment (MOE) through its EIA Department regulates and monitors the EIA Process. The MOE is responsible for: (i) review and approval of IESIA/ESIA reports in collaboration with other relevant ministries; and (ii) monitoring the EMP implementation of Project Proponents/Owners throughout the different project phases. MOE operates at the municipal and provincial levels through its Provincial Department of Environment (PDE).

12. The project owner (public or private) is required to submit the necessary project document (IESIA/ESIA report) to MOE for review and approval. After submission of IESIA/ESIA report, it should take a maximum of 30 working days for a decision. A registered company is required to complete IESIAs.

13. Further, the project is not required to have a construction permit to be issued by the Ministry of Land Management and Urban Planning. However, a construction permit must be secured from the provincial governors through the provincial office of Education (POE). The construction activities are on existing sites of the USSs which are government-owned land. Chapter 1, Article 2 of the Sub-Decree ANK/BK No. 86 (December 1997) indicates that reconstruction, renovation, expansions and floor additions of existing building shall be subjected to construction permit, which applies to public and private facilities of more than 3,000m^2 of floor space and extension of existing buildings of a surface of more of 3,000m^2 (cultural, sports, education, administration, tourist, health, energy, water).

2. Other relevant environmental laws, subdecrees and standards

14. A summary of legislative and policy instruments relevant to the project is presented in the table below. The key environmental quality standards applied to the EMP for this IEE are listed in the table below. The most stringent limit (national or international) shall apply. Protocols of the General Environment, Health and Safety Guidelines of the World Bank (2007) also apply and are reflected in the EMP mitigation measures where appropriate.

15. Cambodia is signatory to many international environmental treaties and conventions which provide a comprehensive legal framework related to environmental issues. These include: Biodiversity convention (1994), Convention on International Trade in Endangered Species of Wild Fauna and Flora (known as CITES) (1997), Ramsar Convention on Wetlands of International Importance (1999) and Climate Change Convention (MOE 2006).

Table 2. Laws, Sub-decrees and Guidance for Environment and Health Protection

Law/Regulation/ Guideline	Year	Summary
General environment related documents		
Law on the Protection of Cultural Heritage (NS/RKM/0196/26)	1996	Regulates the protection of national cultural heritage and cultural property in general against illegal destruction, modification, alteration, excavation, alienation, exportation or importation. Its Article 37 stipulates that in case of chance find of a cultural property during construction, work should be stopped and the person who found the property should immediately make a declaration to the local police, who shall, in turn, transmit the property to the Provincial Governor without delay.
Law on Forest enacted by National Assembly, 2002 promulgated by Preah Reach Kram/NS/RKM/0802/ 016	2002	Defines the framework for management, harvesting, use, development and conservation of the forests. Objective: To ensure the sustainable management of forests for their social, economic and environmental benefits, including conservation of biological diversity and cultural heritage. Under this law the state ensures customary user rights of forest products and by-products for local communities. The Forestry Law states the roles and responsibilities for the management of all forests. It states that the management of forests is under the jurisdiction of the Ministry of Agriculture Forestry and Fisheries (MAFF) (except for management of flooded forests which is covered by a different law). Furthermore, it delegates the authority to manage Protected Areas to the Ministry of Environment. Article 4 under the Forestry Law states that prior to major forest ecosystem related activity that may significantly impact on the environment and social conditions, and environmental and social impact assessment should be conducted.
Law on Land (NS/RKM/0801/14)	2001	Provides that: (i) unless it is in the public interest, no person may be deprived of ownership of his immovable property; and (ii) ownership deprivation shall be carried out according to legal forms and procedures and after an advanced payment of fair and just compensation. (Article 5)

Law/Regulation/ Guideline	Year	Summary
Labor Law (1997) Decree No. CS/RKM/0397/01	1997	This law governs relations between employers and workers resulting from employment contracts to be performed within Cambodia. The key sections relevant to this project include: Chapter VIII Health and Safety of Worker. The key provisions relate to the quality of the premises; cleaning and hygiene; lodging of personnel, if applicable (such as workers camp); ventilation and sanitation; individual protective instruments and work clothes; lighting and noise levels in the workplace. Article 230: Work places must guarantee the safety of workers. However, the only specific occupational health and safety Prakas relates to the garment industry and brick manufacture. Chapter IX Work-Related Accidents Article 248: All occupational illness, as defined by law, shall be considered a work-related accident. The law sets out how accidents should be managed in terms of compensation.
Law on Water Resources Management (NS/RKM/0607/016)	2007	Requires license/permit/written authorization for the: (i) abstraction & use of water resources other than for domestic purposes, watering for animal husbandry, fishing & irrigation of domestic gardens and orchards; (ii) extraction of sand, soil & gravel from the beds & banks of water courses, lakes, canals & reservoirs; (iii) filling of river, tributary, stream, natural lakes, canal & reservoir; and (iv) discharge, disposal or deposit of polluting substances that are likely to deteriorate water quality and to endanger human, animal and plant health. (Articles 12 & 22) Its Article 24 stipulates that Ministry of Water Resources and Meteorology (MOWRAM), in collaboration with other concerned agencies, may designate a floodplain area as flood retention area.
Expropriation Law	2010	Defines the principles, mechanisms, and procedures of expropriation, and defining fair and just compensation for any construction, rehabilitation, and public physical infrastructure expansion project for the public and national interests and development of Cambodia.
Sub-decree on Solid Waste Management (Sub-decree No. 36 ANK/BK)	1999	Article 1: Regulates solid waste management to ensure the protection of human health and the conservation of biodiversity through using appropriate technical approaches. Article 2: This sub-decree applies to all activities related to disposal, storage, collection, transport, recycling, dumping of garbage and hazardous waste. Article 4: The Ministry of Environment shall establish guidelines on disposal, collection, transport, storage, recycling, minimizing, and dumping of household waste in provinces and cities in order to ensure the safe management of household waste. The authorities of the provinces and cities shall establish the waste management plan in their province and city for short, medium and long-term. Article 15 The storage, transportation and disposal of hazardous waste shall be performed separately from the household waste which will be stipulated by the Prakas of the Ministry of Environment. The disposal of hazardous waste into public site, public drainage systems, public water area, rural area and forest area shall be strictly prohibited.
Sub-decree on Water Pollution Control (Sub-decree No. 27 ANRK/BK), (as amended by sub-decree 103 in 2021)	1999 / 2021	Regulates activities that cause pollution in public water areas in order to sustain good water quality so that the protection of human health and the conservation of biodiversity are ensured. Its Annexes 2, 4 and 5 provide the industrial effluent standards, including effluent from wastewater stabilization ponds, water quality standards for public waters for the purpose of biodiversity conservation, and water quality standards for public waters and health, respectively. In 2021, the standard was amended by Sub-decree 103 which updated effluent standard parameter values and introduced a number of clear prohibitions such as: • Discharge untreated sewage into the drainage system

Law/Regulation/ Guideline	Year	Summary
		• Operate a WWTP without meeting the technical specifications in the permit issued by the Ministry (or institution) Article 11: thresholds apply for activities require a wastewater discharge permit from MOE before discharging wastewater: • Category I - effluent exceeding 40 m3 day • Category II – effluent exceeding 20 m^3 day
Sub-decree No. 235 Management of Drainage and Wastewater Treatment System (2017)	2017	Sub-decree No. 235 ANKR.BK on Management of Drainage and Wastewater Treatment System (2017) aims to improve the management of drainage and wastewater treatment system in terms of efficiency, transparency and accountability to ensure safety, public health and biodiversity conservation. The sub-decree does not apply to the management of industrial liquid waste but does apply to effluent from construction sanitation.
Sub-decree on Control of Air Pollution and Noise Disturbance (Sub-decree No. 42 ANK/BK	2000	Regulates air and noise pollution from mobile and fixed sources through monitoring, curb and mitigation activities to protect the environmental quality and public health. It contains the following relevant standards: (i) ambient air quality standard (Annex 1); and (ii) maximum allowable noise level in public and residential areas (Annex 6). Article 3 A. “Source of pollution” is defined and separates mobile sources (including transport) and fixed sources such as factories and construction sites. Article 3 B. “Pollutant” is defined as smoke, dust, ash particle substance, gas, vapor, fog, odor, radio-active substance
Sub-decree on Management of Urban Garbage and Solid Waste (sub-decree 113)	2015	Clarifies the roles on solid waste management in urban areas by transferring the function of solid waste management under the mandate of MOE to the municipal and district administrations. Article 36: For city and district administration, the determination and selection of the places of field for urban garbage and solid waste shall be approved by provincial administration. Every proposal for establishing a landfill must obtain approval from the MOE regarding the preparation of the landfill to protect environment during the operations and decommissioning.
Environmental Guidelines on Solid Waste Management[5]	2006	Contains a Landfill Ordinance that regulates landfill requirements to: (i) reduce as far as possible the adverse effects of waste disposal on the environment; (ii) preserve groundwater, surface water & air quality & to reduce emissions of greenhouse gases (iii) ensure waste is not harmful to human, natural & animal health during operation & decommissioning; and (iv) provide information and technical recommendation on the construction, operation and closing/follow-up management of landfills to ensure public health and safety and environmental protection.
Education sector specific related documents		
MOEYS Quality Control Guidelines for School Building Construction	2012	The guidelines are available in both English and Khmer. The Guidelines focus on environment, safety and security including the protection of environment, labor standards, protection of water resources, asbestos management, noise and dust, disturbance, unexploded ordnances (UXO), protection of historical and cultural resources, clean water and sanitation facilities, monitoring, supervision and reporting.
MOEYS School Operational Manual	2020	Available in Khmer, the Manual outlines Standard Operating Procedures (SOP) for school reopening during COVID-19 pandemic aims to introduce various rules, including health measures to educational institutions so that they can prepare and implement the learning and teaching process.

[5] http://comped-cam.org/Documents/developmentguideline/06_03_25_Environmental%20gl%20on%20swm_END.pdf.

16. Key national and international standards relevant to environmental issues are shown in the table below.

Table 3. Key National Environmental Standards

Environmental Media	National Standard	International Standard
Ambient air quality	Standard Annex 1, Ambient Air Quality Standard, of Sub-decree on Control of Air Pollution and Noise Disturbance, 2000	World Health Organization (WHO) Air Quality Guidelines, global update 2005
Noise	Standard Annex 6, Max. Standard of Noise Level Allowable in the Public and Residential Areas, of Sub-decree on Control of Air Pollution and Noise Disturbance, 2000	WHO Guidelines for Community Noise, 1999
Groundwater quality (for drinking)	Drinking water Quality Standards, 2004	WHO Guidelines for Drinking-water Quality, Fourth Edition, 2011
Groundwater (ambient)	Ministry of Handicrafts and Industry Groundwater Quality Standards	EU Groundwater Directive 2006/118/EC
Surface water quality	Standard Annex 4, Water Quality Standards for Public Waters for the Purpose of Biodiversity Conservation, and Annex 5, Water Quality Standards for Public Waters and Health, of Sub-decree on Water Pollution Control, 1999	US EPA National Recommended Water Quality Criteria Mekong River Commission: Technical Guidelines for the Protection of Aquatic Life Mekong River Commission Technical Guidelines for the Protection of Human Health
Effluent quality	Standard Annex 2, Effluent standard (Discharged wastewater to public water areas or sewers), of Sub-decree on Water Pollution Control, 1999 (as amended, 2021)	IFC/World Bank EHS General Guidelines and Guidelines for Water and Sanitation

III. DESCRIPTION OF THE PROJECT

A. Project Impact, Outcome and Outputs

17. **Impact, Outcome.** The project will be aligned with the following impact: high quality human resources for a knowledge-based society developed.[6] The outcome will be effectiveness of upper secondary education improved.[7] The outcome will be measured by the following indicators: (i) at least 1.5 percentage point increase in the proportion of female and male USE science stream students from secondary resource schools (SRSs) passing the Grade 12 national exam; (ii) proportion of upper secondary schools (USSs) meeting minimum service standards for outputs increased; and (iii) at least three new SRSs accredited as new generation schools (NGSs).

18. **Outputs.** The outputs of the project will be: (i) equitable access to standards-based upper secondary education expanded; (ii) quality of science, technology, engineering, and mathematics teaching and learning strengthened; and (iii) institutional and school leadership and management capacity strengthened for effective quality improvement. The outputs are described below.

[6] Government of Cambodia, MoEYS. *Education Strategic Plan, 2019–2023*. Phnom Penh.
[7] The preliminary design and monitoring framework is in Appendix 2.

19. **Output 1: Equitable access to standards-based upper secondary education expanded.** This output will expand access to standardized-based upper secondary education for boys and girls through upgrading of facilities, putting in place standards for quality education for all USSs and providing essential EdTech and science, technology, engineering, and mathematics (STEM equipment). Output 1 will specifically:

1.1 Develop minimum service standards (MSS) for secondary education inputs and outputs to ensure equitable resource allocation across all secondary schools and to inform planning and quality assurance for learners. Priority in setting standards will be given to inputs that are most strongly associated with student learning outcomes, such as teachers and teacher quality and learning equipment.

1.2 Develop and implement a five-year secondary education medium-term expenditure framework, including multi-year budget estimates, aligned with the Cambodia Secondary Education Blueprint 2030. Integrating the agreed-upon MSS targets, the MTEF will be developed early in the project to guide secondary planning and budgeting for the next 5 years.

1.3 Develop and implement an action plan to harmonize access of upper secondary students to labor market-driven technical and vocational training courses or modules and certifications based on the Cambodia Qualification Framework (CQF).[8] The action plan will be implemented through coordination between the EA and relevant ministries, especially Ministry of Labor and Vocational Training, and other training providers, through partnership arrangements and joint delivery programs.

1.4 Upgrade facilities of 14 upper secondary network schools and 103 general secondary schools, with gender responsive, socially inclusive, and climate adaptive design considerations by converting three classrooms in each of these schools into two science classrooms and one library with equipment, teaching materials, books, furnishing and requisite EdTech resources. The upgrades will utilize proven effective designs from previous projects and facilitate use of modern teaching methods (e.g., small group work, STEM activities).

1.5 Install multi-purpose life skills and project-based classrooms in 25 SRSs.

1.6 Upgrade water and sanitation facilities in 18 SRSs and 101 SRS network schools, including the 14 new upper secondary network schools, including providing separate toilets for girls and boys.

1.7 Install voltage stabilizers in 36 SRSs with unstable electricity supply in 18 SRSs, 25 SRS network schools, including the new ones, and 10 general secondary schools to sensitive electronics which are otherwise often damaged from frequent voltage spikes.

1.8 Provide 50 SRSs, 101 SRS network schools and four general technical high schools (GTHS) with enhanced STEM equipment for improved safe teaching and learning in STEM subjects. The equipment is purposefully selected to encourage and facilitate project-based learning with a strong focus on tools for STEM project creation. Basic lab safety equipment is also included to facilitate safe laboratory practices, and development of a safety culture. The technical workshops in the 4

[8] National Training Board (February 2012). The CQF is designed to enable young people to pursue a practical education at an early age, to equip them with the right skills and competencies for the workplace.

GTHS will also be provided STEM equipment to improve teaching and learning of the technical subjects taught therein.

1.9 Provide innovative digital technology to support effective STEM teaching and learning to 50 SRSs, 101 SRS network schools, four general technical high schools, in addition to 103 general upper secondary schools (e-libraries only). Driving towards minimal school standards on access to computers for students, staff and teachers, the primary component will be the 'single board computer (SCB). Targeted USS will be supplied smart classrooms which feature an LCD projector, projection screen, sound system and SCB based computer. The smart classrooms will allow whole class use of multimedia to modernize teaching and learning using digital materials. The project will also provide two e-Libraries in targeted USS for classroom/library use and student/teacher research. Selected USS will be provided maker kits and 3D printing which will help advance integrated STEM. STEP UP will deploy IT tech teams to train a select number of staff from each target USS on a range of EdTech to be used. At the deployment stage, there will be basic training on set-up, maintenance, and usage of equipment and features of the LMS and e-Library. In addition to initial training, there will be follow up CPD (PLC, discussions, locally organized needs-based workshops, etc.) and coaching and mentoring to ensure the systems are in place, maintained, and that all target schools are able to integrate and use the tools effectively.

1.10 Provide support to SRS in the accreditation process to enable at least 3 to become NGS. In the case that a proportion of SRS that begin the 3-year NGS accreditation do not continue through the full process, a total of eight schools will be considered for this support. A yearly assessment will be developed and administered by the consulting firm for the candidate schools to proceed in receiving higher levels of investment. Support to these SRS will include: (i) upgrading and/or provision of classrooms, science rooms, computer labs, libraries, faculty offices, student affairs facilities, auditoriums; (ii) provision of laptops for teachers; and (iii) consultant support for the school management reforms.

Table 4. Upgrading civil works, and STEM and innovative EdTech equipment

Activity description	Type of school									
	NGS - existing	SRS to NGS	SRS	SRS - Chinese	SRS NWS - supported by USE2	SRS NWS - additional	SRS NWS of Chinese SRS	GTHS	USS (without THS)	Total
Total population	6		50	15	87	14	17	12	353	554
Upgrade SRS, NWS & USS										
- Renovate & equip 3 classrooms to 2 science classrooms and 1 library						14			103	117
- Multi-purpose project based classrooms			25							25
- WASH facilities			18		87	14				119
- Voltage stabilisers			36							36
- Electrical load upgrades (assume 50% of target NWS + USS)					44	7			52	103
Expand the New Generation Schools										
- Renovations, furniture & equipment, training..		8								8
Enhanced STEM equipment for SRS, NGS and GTSH										
- Enhanced science equipment for SRS and NWS		8	42		87	14		4	103	258
- Science equipment for technical workshops for GTHS								4		4
- Science classroom safety equipment		8	42		87	14		4	103	258
Provide target USS with innovative digital technology										
- computer labs		8	42		87	14		4		155
- smart classrooms		8	42		87	14		4		155
- digital library		8	42		87	14		4	103	258
- Maker kit		8	42					4		54
- 3D printing		8						4		12
Develop and implement a STEM school-level framework										
- Provide guidelines and mentoring/support			15		10				5	30
CPD for USS STEM teachers										
- NGPRC mentors			50							50
- STEM equipment training (school-based training, in clusters)									103	103
- CPD for USS STEM teachers			50		87	14		4		155
- English language training			50		87	14		4		155
Local, national, and regional STEM activities.										
- Little Scientist booklets			50		87	14		4	353	508
Strengthen utilization of EdTech in the target THS										
- Equipment for IT technician course								4		4
CPD for USS school directors										
- CPD workshops			50		87	14		4		155
Partnerships to enhance student learning and career preparation										
- School Grants for USS-Industry school-based partnerships			50		87	14				151
- STEM-Skills extra-curricular program for SRS			30							30
Strengthen system-wide analysis and planning functions										
- Access to OpenEMIS + training	6		50	15	87	14	17	12	353	554

SRS =Secondary Resource Schools; NGS = New Generational Schools; NWS = Network Schools; GTHS = General Technical High Schools; USS = Upper Secondary Schools; THS = Technical High Schools
Source: TRTA, May 2022

20. **Output 2: Quality of science, technology, engineering, and mathematics teaching and learning strengthened.** This output aims to promote quality STEM education by upskilling teachers and strengthening STEM education delivery through a wholistic approach. Output 2 will (i) develop and facilitate continuous professional development (CPD) for in-service STEM teachers and NIE STEM lecturers on effective and innovative teaching strategies, integration of digital education in USS STEM teaching, and improving pedagogical content knowledge; (ii) develop and pilot a STEM school-level framework to guide all types of schools in systematically improving STEM teaching and learning; and (iii) establish and operationalize the Cambodia Science and Technology Centre (CSTC). Output 2 will specifically:

2.1 Conduct a feasibility study, design, set up, and operationalize the CSTC that creates a bridge between science and society. The CSTC will promote STEM in an interactive and innovative way to the public through a physical presence in Phnom Penh at the Institute for Technology of Cambodia (ITC) and a digital outreach program for access in schools and communities nationwide. It will also provide a STEM eco-system hub for teacher education institutions (TEIs) and higher education institutions (HEIs) for research and teaching purposes; connect industry and secondary schools; and connect with regional and global STEM communities.

2.2 Develop and implement a school-based STEM Framework appropriate for effective, gender equality and socially inclusive (GESI)-responsive teaching and learning in 30 target USSs. The Framework will provide a guide for schools to adopt a holistic approach to develop and improve STEM programs over time through change in key areas including school governance, curriculum, instruction, teacher capacity, infrastructure, extracurricular activities, and community outreach. Customized to the local context, the framework will provide a range of action plans defining expected behaviors and achievable targets suitable for schools of varying capacities and facilities. The framework will be piloted in 30 USS, including 15 SRS, during the project for review and scale-up among USSs.

2.3 Develop and facilitate CPD for at least 25 NIE STEM lecturers on the school-based STEM Framework, effective and innovative teaching strategies, integration of digital education in USS STEM teaching, action research methods, and improving pedagogical content knowledge.[9]

2.4 Develop and facilitate CPD for 775 USS STEM teachers (including THS technical teachers) on the school-based STEM Framework (for the 30 pilot schools),[10] effective and innovative teaching strategies, integration of technology in USS STEM teaching, action research methods, and improving pedagogical content knowledge.

2.5 Apply Learning and Knowledge Management Systems for teacher PRESET and CPD (digital delivery).[11] The teacher trainings will leverage and increase use of the existing online MoEYS learning and knowledge management system

2.6 Develop and implement competency-based STEM assessment for USS.[12] Aligning with modern teaching methods, competency-based assessments will shift focus from theory to application and creation, encouraging change from the current textbook focused, rote learning behaviors resulting from the existing 2-day Grade 12 national summative assessment. Delivered at school level, the competency-based assessment will comprise a combination of student portfolio-based (including projects), oral, written, and presentation activities encouraging 21st century skills development. STEP UP proposes incorporation of these modern assessment techniques into PRESET and CPD activities to build capacity of teachers to use assessment as a planning tool. EdTech solutions such as computerized testing may play a role in the design of suitable competency-based assessment techniques.

2.7 Strengthen utilization of EdTech in technical education programs in four target general technical high schools (GTHS). STEP UP will develop and implement IT related modules (Years 1-3) in the targeted GTHS technical education programs. To address workforce development needs, the targeted GTHS have

[9] This activity will build upon and enhance the work of USESDP 2 at NIE, rather than replicate or overlap with what has been done since 2019.

[10] The 30 pilot schools consist of 5 SRS in smart provinces, 10 SRSs in disadvantaged provinces, 10 Upper secondary network schools, and 5 general upper secondary schools.

[11] LMS will store resources for teachers and students (i.e., STEM lesson plans/modules for use in PRESET and all USS. Inquiry-, problem-, and project-based teaching and learning strategies will be applied in USS classrooms using blended learning). NGS teachers are currently preparing lesson plans and resources for use by other schools. *Kolibri* is an example of an offline/online LMS (https://learningequality.org/kolibri/).

[12] Performance-based assessment is developmental focused on improving student learning outcomes as THS technical subjects, Years 1-3, currently do, rather than punitive.

requested to develop modules covering: (i) IT office equipment maintenance, (ii) digital graphics/videography (graphic/multimedia), (iii) application and ICT systems, and (iv) networking and/or telecommunications. These modules will be integrated into existing technical courses. STEP UP will support VOD and the target THS through technical assistance to design and develop course material (print and digital) to integrate with their existing curriculum. The project will procure appropriate additional equipment (above the current EdTech equipment allotted to target schools) needed to support the additional modules.

21. **Output 3: Institutional and school leadership and management capacity strengthened for effective quality improvement.** This output addresses the important role school leaders and education staff on STEM education delivery and learning outcomes. Output 3 specifically includes the following:

3.1 Support SRSs to meet the SBM effectiveness criteria. STEP UP will align with the MOEYS' aim to enable and empower all schools, their communities and stakeholders to take more active responsibility for improving the learning of students through the rollout and institutionalization of school-based management (SBM) in public schools. The project will support measures to ensure that the SBM effectiveness standards/criteria as defined by the MOEYS, are in place, and performance of the SRSs vis-à-vis meeting these standards are assessed.

3.1 Develop and facilitate CPD each year for 155 target USS school directors including school leadership and management, the teacher career pathways, instructional supervision, partnership building, resource mobilization, and stakeholder engagement.[13]

3.2 Establish at least 3 USS partnerships on STEM CPD and curriculum enhancement established and implemented with tertiary and polytechnic education and training institutions, private/NGO/international schools, and industry and business. Multi-school partnerships should be explored at the provincial level. ITC will provide guidance on how to promote active participation from STEM teachers (especially female teachers) in the use of these partnerships. STEP UP will support operating costs of meetings to facilitate the partnerships.

3.3 Establish post-secondary/private sector partnerships to enhance student learning and career preparation including guest speakers, site visits, work experience programs, etc in at least 50% of schools. STEP UP will provide school grants to SRS and to NWS to support these activities. Joint delivery programs, such as immersion programs and internships that provide a more in-depth and hands-on learning experience in a workplace environment will be prioritized. Schools will need to prepare and submit action plans to trigger disbursement of these funds.

3.4 Upskill at least 50 technical and education specialists, teacher educators, education staff of provincial and district offices, and school managers in project implementation, gender-based analysis, policy analysis, and results-based monitoring and evaluation. These selected specialists will develop skills to

[13] Integrate the school-based STEM Framework, where appropriate (i.e., 25 SRS as per Activity 2.2)

contribute to the STEP Up and future education project management and implementation through a series of hands-on workshops and facilitated local and international field visits and trainings.

3.5 Strengthen system-wide analysis and planning functions through integration of OpenEMIS census and school information systems. OpenEMIS software will upgrade the existing EMIS and be customized to the Cambodia context by EMISD with the support of a consulting firm. The firm will support trainings and the rollout of OpenEMIS from the national to school levels. School performance outcomes for each target school will be compared year by year to demonstrate areas of improvement and address issues. OpenEMIS, once operationalized, will enable a more effective and efficient process for acquiring this data.

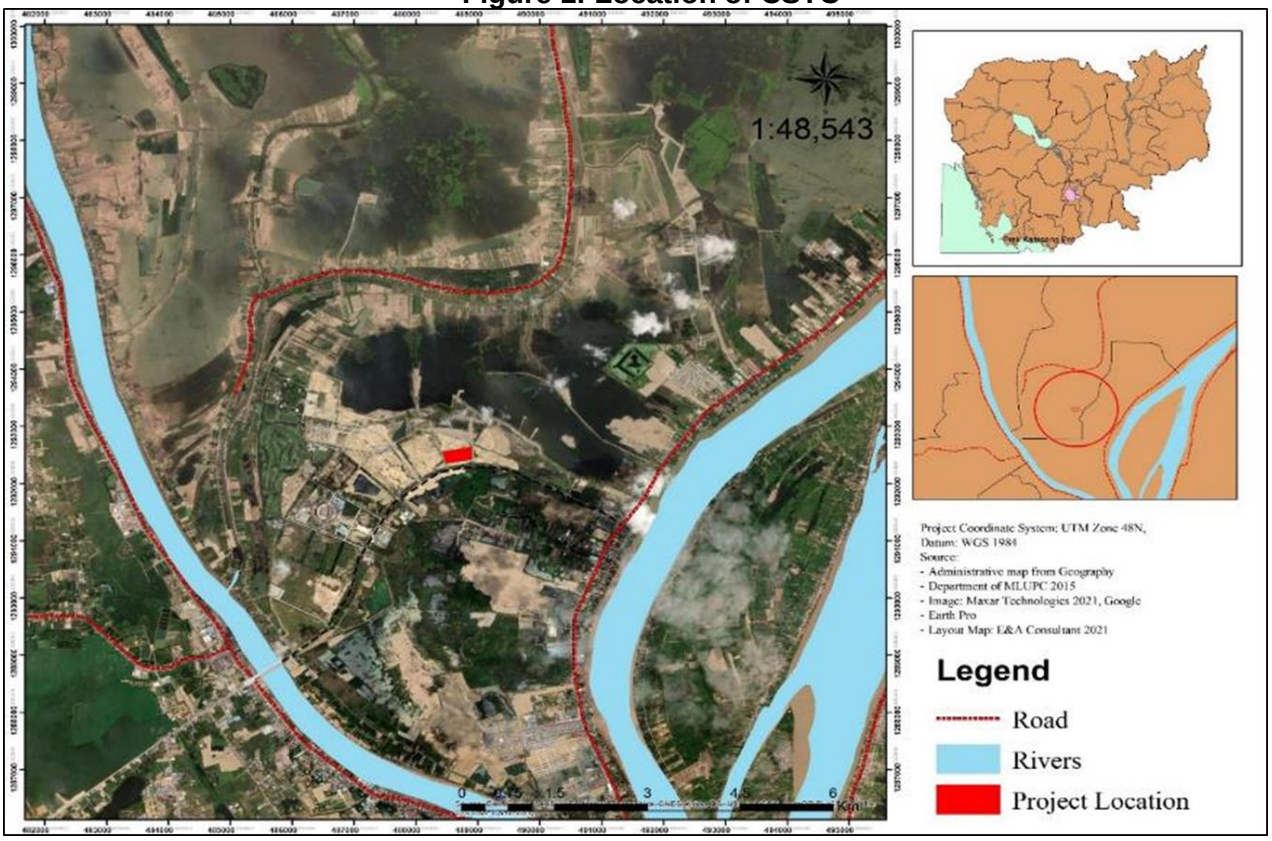
3.6 Support the publishing and dissemination of five research papers on STEM education teaching and learning. STEP UP will support writing and research proposal development workshops. The five best proposals will be awarded a grant for funding of the research activities including, but not limited to data collection and analysis, printing, and dissemination workshops.

22. Outputs involving works and with potential for adverse environmental impacts and risks to occupational or community health and safety are limited to some sub-outputs under output 1 (i.e., minor rehabilitation works required for conversion of classrooms), and sub-output 2.1 (i.e., the establishment of the Cambodia Science and Technology Center). The proposed activities under output 2.1 are described in more detail below.

B. Cambodia Science and Technology Centre (CSTC)

23. The CSTC will be established in the new Institute of Technology Center (ITC) located in Prek Taroth village, Sangkat Prek Tasek, Khan Chrouy Chang Var, Phnom Penh. The campus has a total land area of 5 hectares. The government bought the land from Ly Yong Phat Company in June 2019 and handed it over to the MoEYS/Institute of Technology of Cambodia (ITC). The land title is parcel-number recognized by the Department of Land Management, Urban Planning, Construction and Cadaster Land Surveyor of Phnom Penh. There are currently no existing structures on the compound.

Figure 1: Location of CSTC



Source: MoEYS, 2021

24. **Master Plan of ITC.** Based on master plan, ITC will establish key components such as four entrances, a research and training center, dormitories, water treatment, street 20m, street 10m, electrical room, open and green spaces, sidewalk and sport area. Figure below shows the master plan of ITC. Among the components, a research and training center and dormitory will be constructed under the Worldbank-financed Higher Education Improvement Project (HEIP)[14], while the other components will be constructed using government funds. The CSTC will be funded through the STEP UP project. The feasibility study and detailed engineering design for the CSTC will be carried out during project implementation. The proposed ITC development plan was subject to ESIA which was approved in November 2021.

25. **Design Concept, CSTC.** The concept design for the proposed CSTC hosts a series of key features, including (i) permanent indoor science and technology exhibitions; (ii) outdoor space for environmental/climate science explorations and playgrounds; (iii) space for temporary exhibitions and events and creative media production; (iv) offices for management and partners; (v) additional storage space; (vi) facilities for digital infrastructure and energy production/storage; (vii) dome/observatory; and (viii) cafeteria, canteen and gift shop. The CSTC will include two floors plus an accessible rooftop.

[14] The Higher Education Improvement Project (HEIP) is a project implemented by the Ministry of Education, Youth and Sport (MoEYS). Expected to be implemented over a 6-year period (2018 – 2024), this project is aimed at strengthening the system of higher education through the improvement of quality assurance mechanisms; the expansion of information systems; and the support or the development of legislation for autonomous HEIs. The project's main beneficiaries include: five targeted public Higher Education Institutions (HEIs), relevant departments in the Ministry of Education, Youth and Sport (MoEYS), and the selected private HEIs.

Figure 2: Front and Side Elevation Concept, CSTC

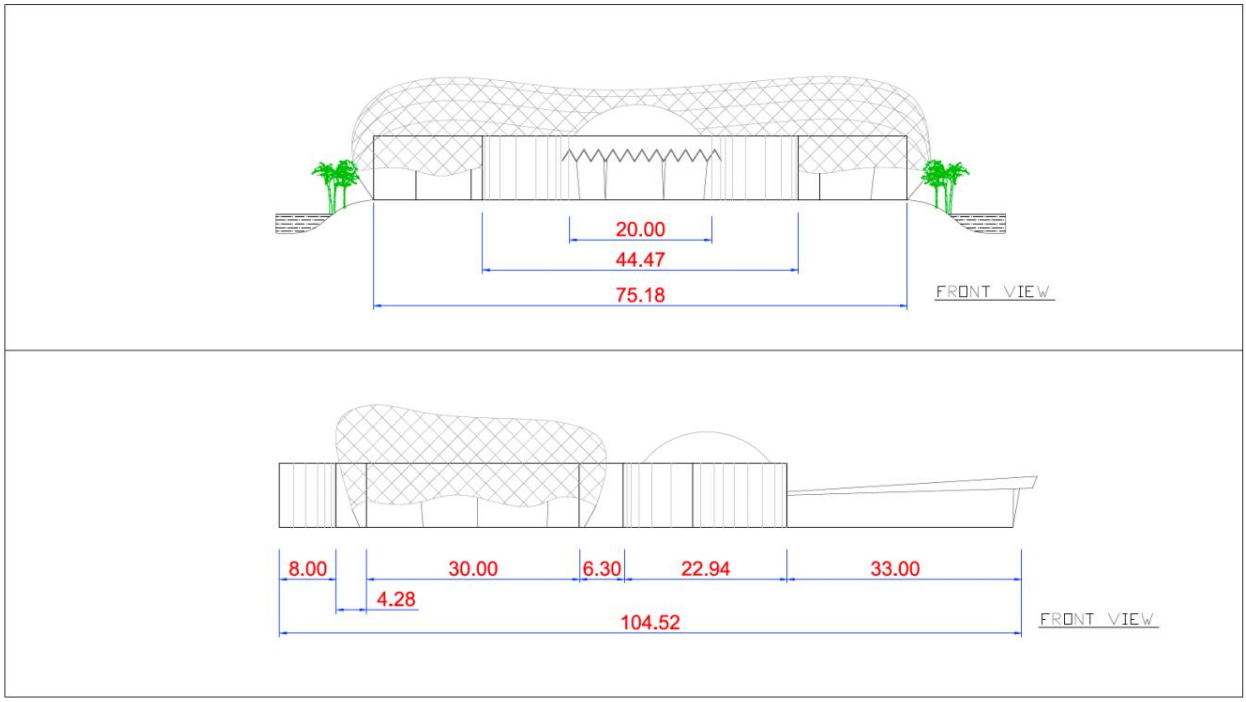


Figure 3: Ground Floor Concept, CSTC

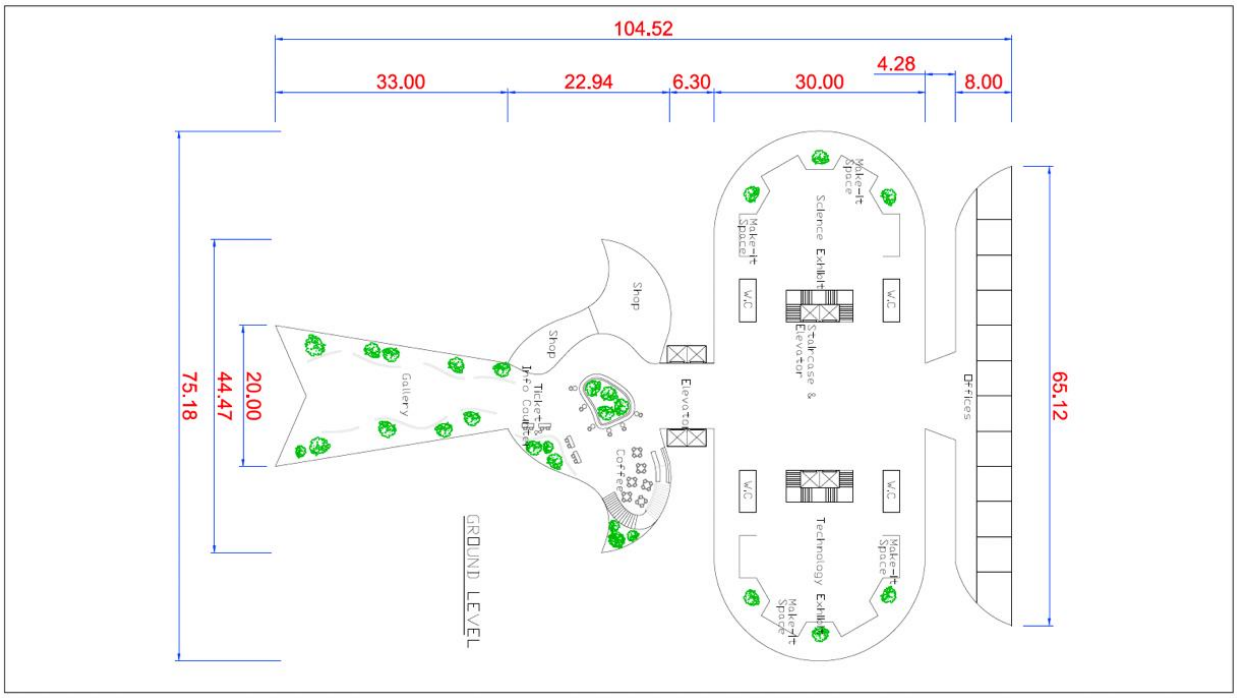
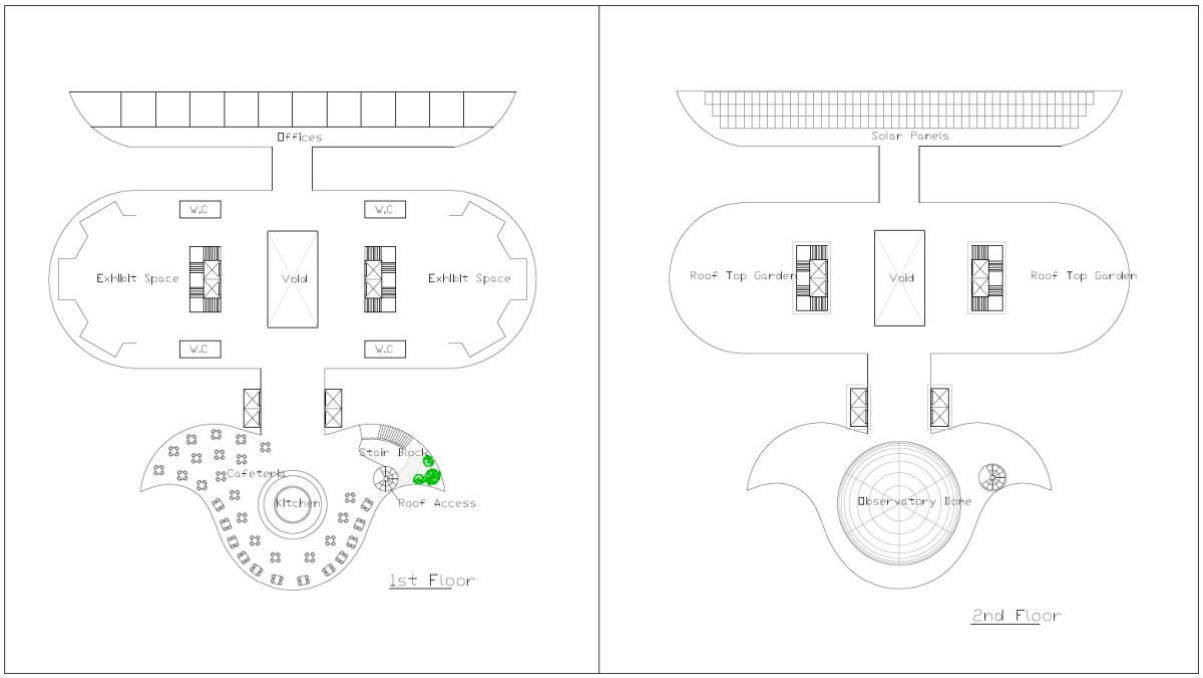


Figure 4: First and Second Floor Concept, CSTC



26. The building design will integrate a range of green building and climate change adaptation features, including energy efficiency and water conservation measures, rooftop greening, smart façade shading and natural ventilation. These green design features will be highlighted for educational purposes in interactive exhibits and digital outreach programs to increase environmental awareness.

27. The design concept will be further developed during the feasibility and detailed design study, to be initiated during project implementation.

C. Project implementation arrangements, Implementation Schedule

28. The executing agency (EA) of the project will be the Ministry of Education, Youth and Sport (MoEYS), while the implementing agencies (IA) will be the Institute of Technology of Cambodia (ITC), National Institute of Education (NIE) and the Directorate General of Education (DGE). A project management unit (PMU) and three project implementation units (PIU) will be established.

29. The EA will establish a steering committee (SC) to provide strategic guidance and monitor toward successful implementation of the project within the available budget as well as facilitate inter-ministry coordination.

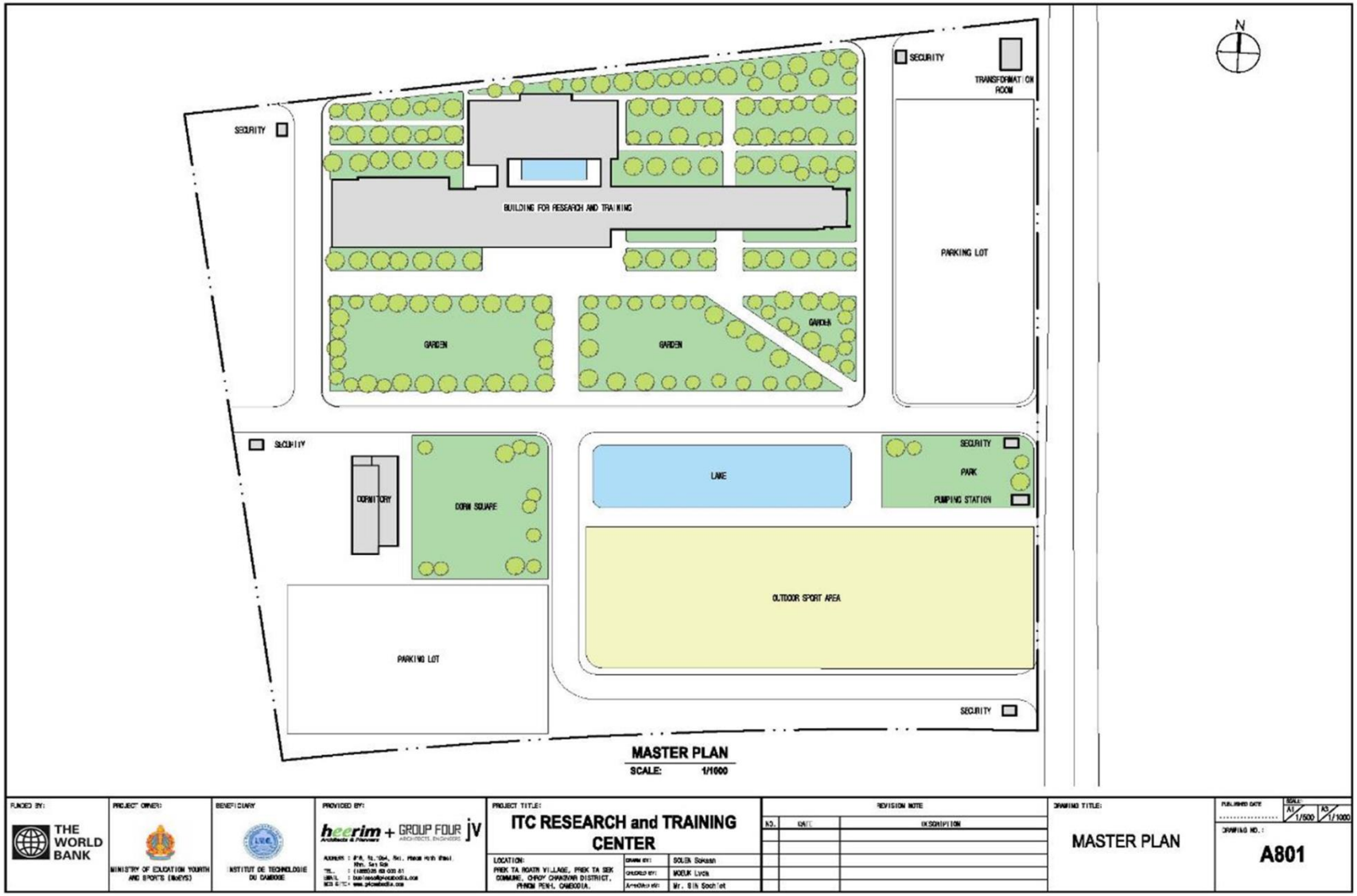
30. The PMU will lead and be responsible for day-to-day management, coordination, and monitoring and evaluation (M&E) of the project implementation. The PMU will be led by the Project Director and the Project Manager. ITC as one of the IAs will implement activities toward full operations of the STC under output 2.

31. MoEYS will recruit a project implementation consultant (PIC) to support the PMU in project implementation, and a CSTC Design and Supervision Firm (CSTC-DSF) in charge of detailed engineering design and construction supervision of the CSTC. The PIC will include a national environment consultant (PIC-EC) that will act on PMU's behalf as the EMP implementation

coordinator. The CSTC-DSF will include a national environment, health and safety (EHS) specialist in charge of all EHS supervision during CSTC construction.

32. The project will be implemented from November 2022 to 31 December 2028.

Figure 5: Master Plan of ITC



Source: MoEYS, 2021

IV. DESCRIPTION OF THE ENVIRONMENT

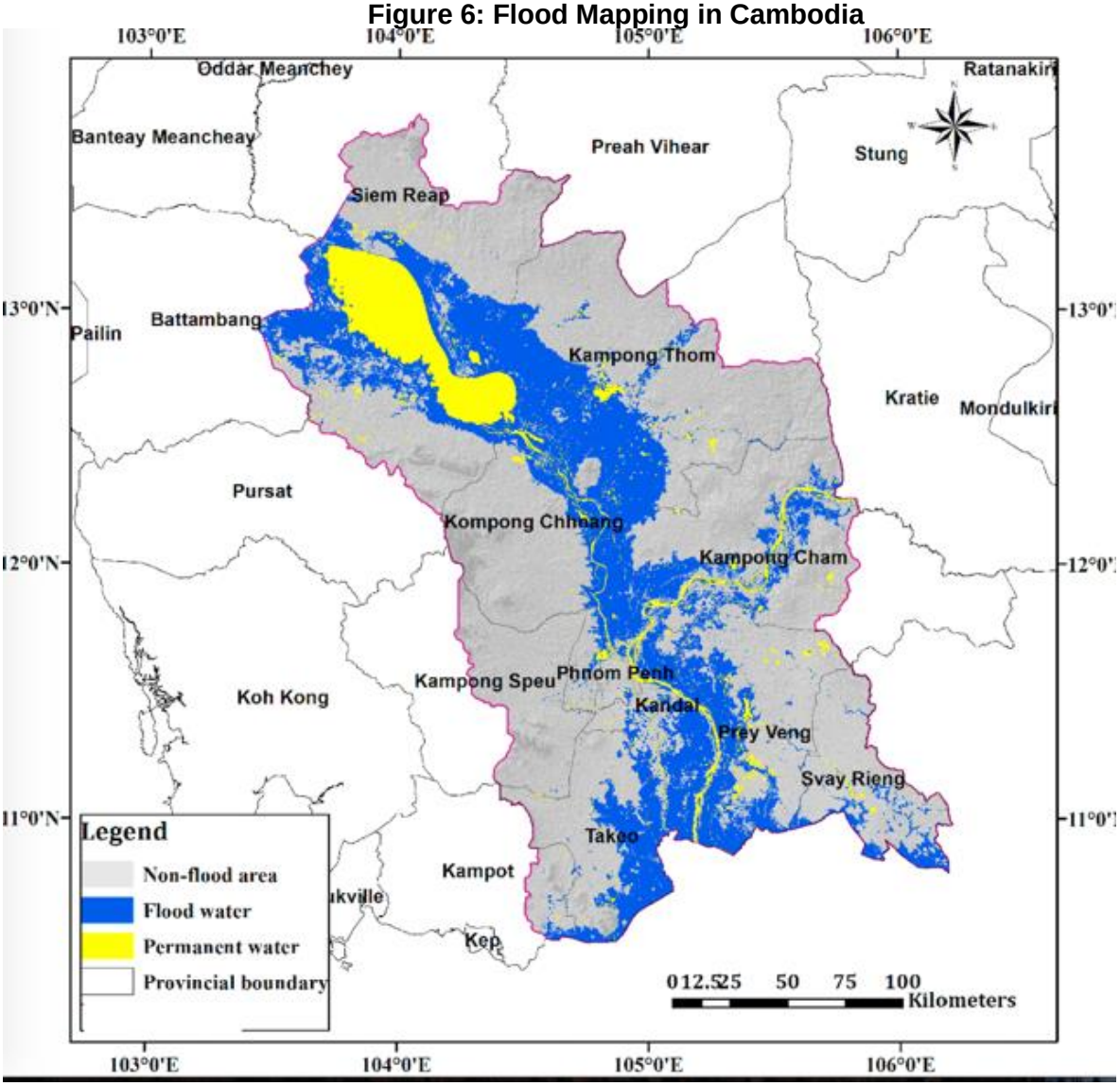
33. This chapter describes the environment conditions at the participating schools and the CSTC. The data and information presented in the description of the environment are collected through comprehensive literature survey, discussions and interviews with stakeholders, and field visits and public consultation. The improvement in the existing schools will occur in some 250 schools in 25 provinces.

A. General environment conditions in Cambodia

34. **Geography.** Cambodia is divided into two distinct parts: (i) the central low-lying or central plains and the flat coastal areas; and (ii) the mountainous ranges and high plateaus surrounding the low-lying land (**Figure 6**). The provinces of Kampong Speu, Kratie, Preah Vihear, Oddor Meanchey, Pailin, Stung Treng, Ratanakiri and Mondulkiri belong to the plateau and mountainous areas. The provinces of Preah Sihanouk, Koh Kong and Kampot belong to the flat coastal areas. For Kampong Cham, Kampong Thom, Battambang, Banteay Meanchey, Kandal, Prey Veng, Tbong Khmum, Pursat, Kampong Chhnang, and Takeo province, they belong to the central low-lying or central plains.

35. The Dangrek mountain range, which forms a part of Cambodia-Thai border in the northwest, is a continuation of the Korat plateau and northeast plateau. Dangrek Mountain, at the northern rim of the Tonle Sap Basin consisting of a steep escarpment, marks the boundary between Thailand and Cambodia with an average elevation of about 500 m and the highest points reaching more than 700 m. Between Dangrek mountain range down to the Great Lake, the landscape is composed of numerous hills with altitude decreasing from 200 m near the chain to 40 m around the plain. The Lake with the flood plain around 18,000 km^2 is surrounded by the national road 5 and 6, which are located at 11 m above the sea level. The central plains are extremely flat with an elevation difference of only 5-10 m between the southern portion of the country and the upper reaches of the Lake in the northeast, and a distance of more than 300 km.

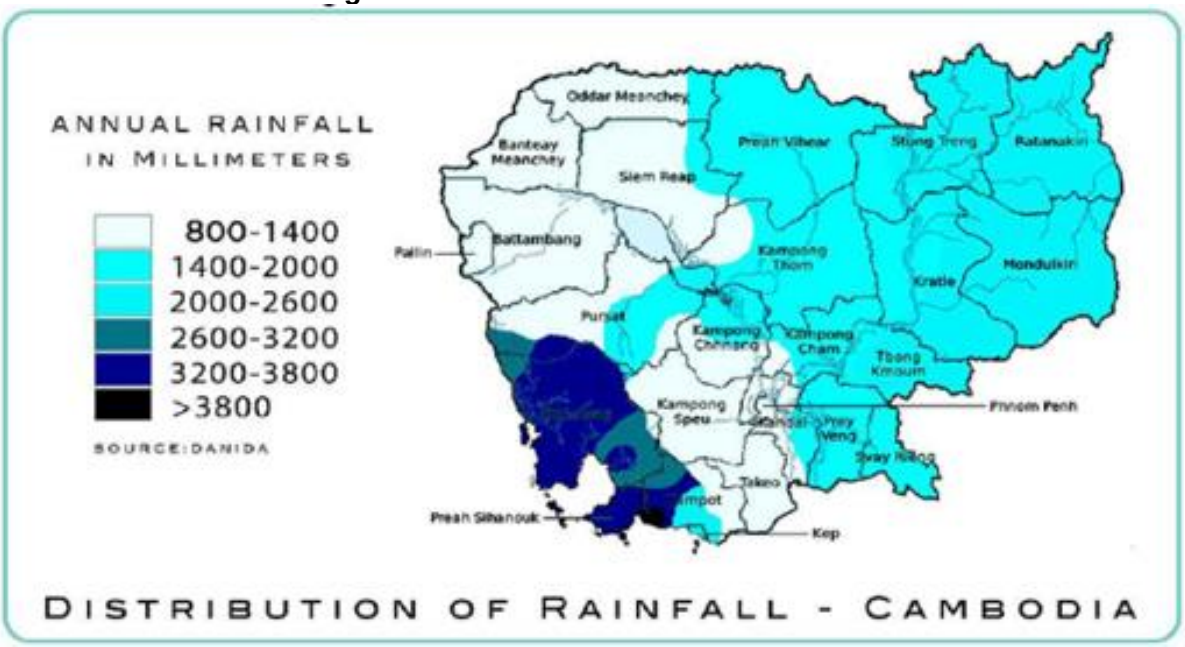
Figure 6: Flood Mapping in Cambodia



Source: mdpi.com

36. **Climate.** There are two distinct seasons in Cambodia: dry from November to April and rainy from May to November. The northwest monsoon (wet) brings 90% of the rainfall, which varies generally between 1,200 and 2,000 mm per year across the country. Rainfall in the central area covering the Tonle Sap Basin-Lower Mekong Valley averages between 1,200 and 1,900 mm annually. The heaviest rainfall, over 3,000 mm per year, occurs along the coastal lowlands in the west. The northeast monsoon results in dry weather in the period, December to April. In any particular location, rainfall varies significantly from year to year; even in June and July, periods of up to 15 days without rain are not uncommon. Relative humidity ranges from 65-70% in January/February to 85-90% in August and September. At heights ranging from 500m to more than 1000m, the temperatures there are notably cooler than the lowlands. All areas of the east experience rainfall from April or May through to October and stretches of the Mekong River.

Figure 7: Rainfall Distribution in Cambodia



37. **Air quality, noise.** There are no major industrial or mobile sources of air pollution in the vicinity of the project schools, except for occasional movement of vehicles along unpaved roads which generates dust. Burning of garbage by households is practiced by the communities to manage solid wastes which affects air quality. The others are mainly accessible through unpaved road to the schools. Similarly, there are no major sources of noise in the vicinity of the schools.

38. **Biological resources.** A complex interdependence of Cambodia's geography and hydrology makes it rich in natural resources and biological diversity, among the bio-richest countries in Southeast Asia. The areas with significant biological diversity are southwest of Cardamom and Elephant mountains, eastern section of Dangrek Range, northern and northeastern of Cambodia-Lao and Cambodia-Vietnam border, central plain of Cambodia and Tonle Sap Lake. Based on information from the overlaying of Projected Area (MoE, 2018) and school location, none of the schools are located in any restricted zones of heritage areas or biodiversity conservation areas.

39. **Socio-economic conditions.** Cambodia is an agrarian nation that largely depends upon productive natural resources for food and income. Agriculture remains an important sector for economic development, employing many rural populations. In the past ten years, more than 40% of the national GDP is derived from the primary sector consisting of agriculture, fishery and forestry. The industrial and services sectors, especially tourism, have been growing significantly over the last few years, contributing a significant proportion to economic growth.

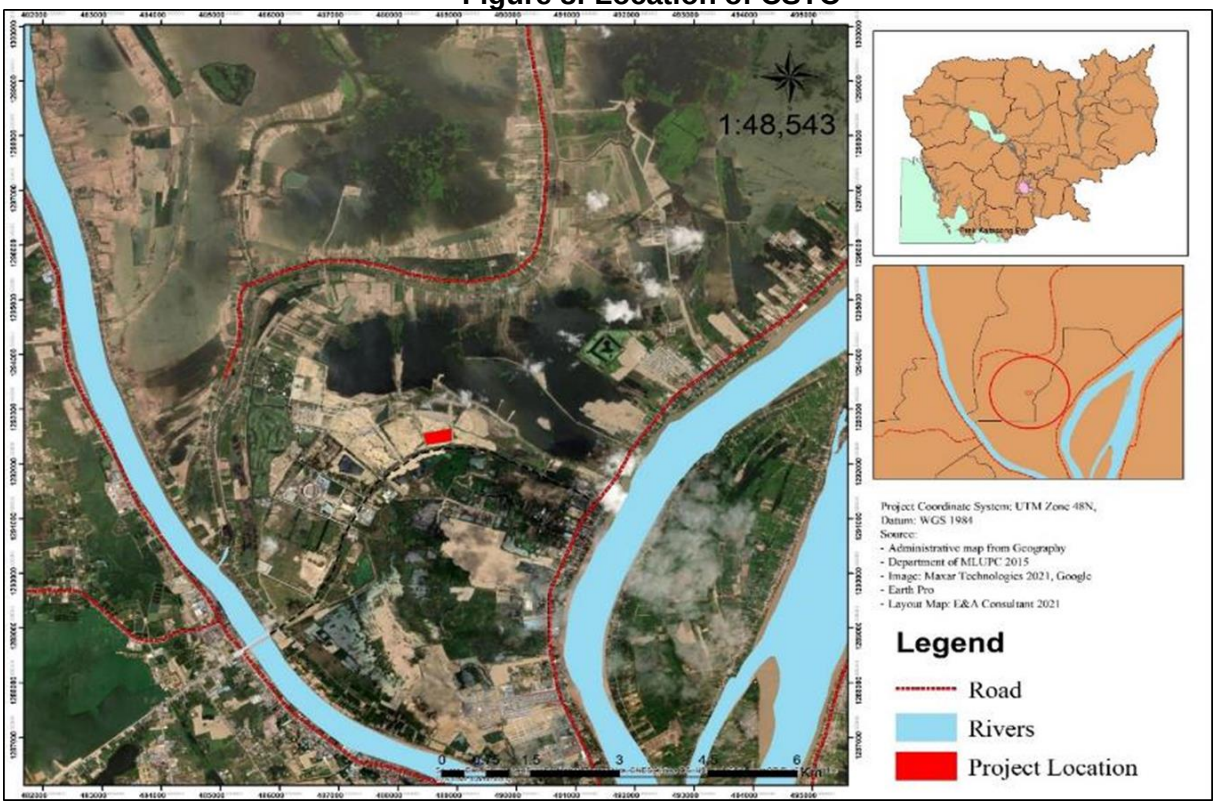
40. **Population.** Geographically, the population distribution is unequal and the density among the regions differs greatly across the country. 52% of the total population lives in the plain region covering an area of about 14% of the total land area with a population density of 235 persons per km2. Meanwhile, about 11% lives in the plateau and mountainous region covering about 38% of total land area with 17 persons per km^2. A further 30% of population lives on and around the Tonle Sap Great Lake with a 37% of the total land area and the population density of 52 persons per km^2.

41. **Basic services at schools.** In general, there are four sources of water used in the schools: (i) water well, (ii) water pond/stream, (iii) running water, (iv) mix of the three above. Many schools experience problems with regards to water supply in the dry season due to school use the water for toilets and watering the garden including bio-gardens and plants. Sanitation and waste management are considered not a problem because these schools are upper secondary where students are mature. The better schools with good water supply and toilets are mostly in schools which are close to the town.

B. Environment conditions at proposed site for CSTC

42. **Location.**The proposed CSTC site is located in Preak Ta Roth Village, Sangak Preak Ta Sek, Khan Chroy Chanva, the northeast of Phnom Penh capital city, along the Win-Win Street and about 14 km from Wat Phnom. Phnom Penh is located in the south-central region of Cambodia, and is fully surrounded by the Kandal Province. The municipality is situated on the banks of the Tonle Sap, Mekong and Bassac rivers. These rivers provide freshwater and other natural resources to the city. Phnom Penh and surrounding areas consist of a typical flood plain area for Cambodia. Although Phnom Penh is situated at 11.9 meters above sea level, monsoon season flooding is a problem and the river sometimes overtimes overflows its banks.

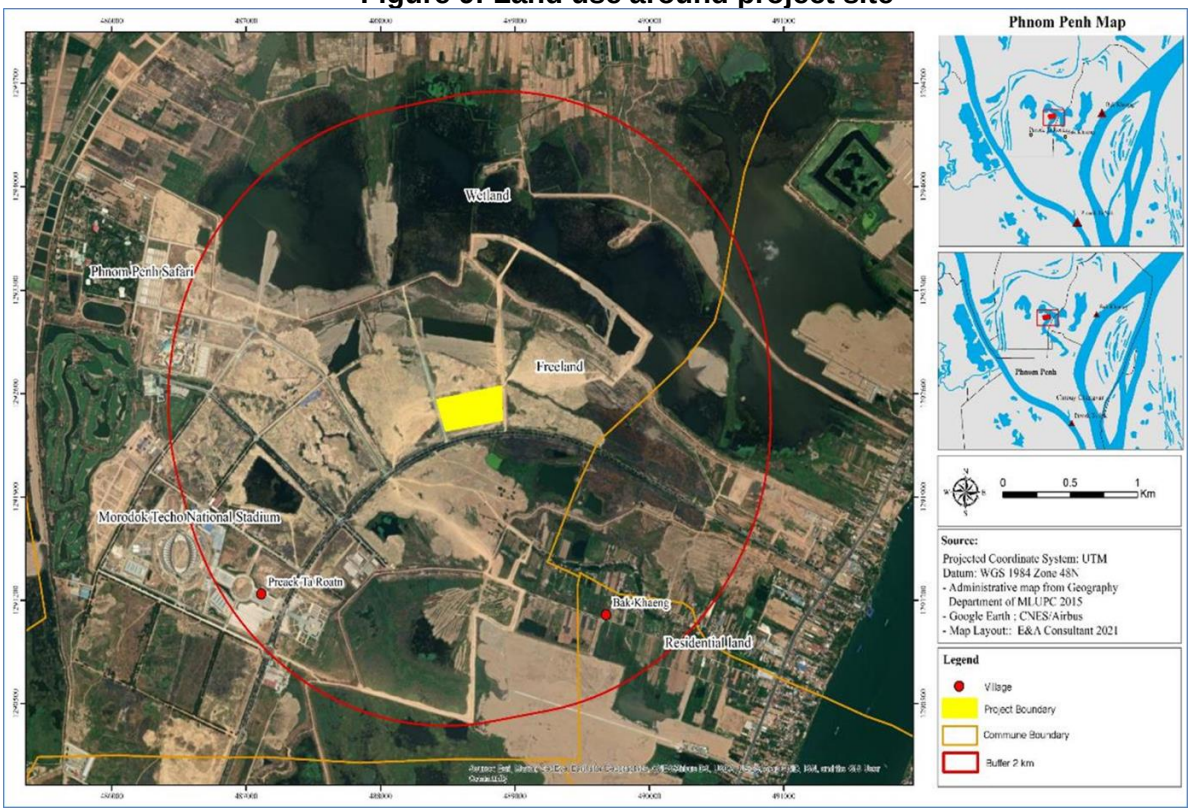
Figure 8: Location of CSTC



Source: MoEYS, 2021

43. **Land Use around Project Site.** Land use around the project site includes: Morodok Techo National Stadium, Phnom Penh Safari, residential land and freeland (see Figure 9 below).

Figure 9: Land use around project site



Source: MoEYS, 2021

Photo 1: Proposed Project Site (CSTC)

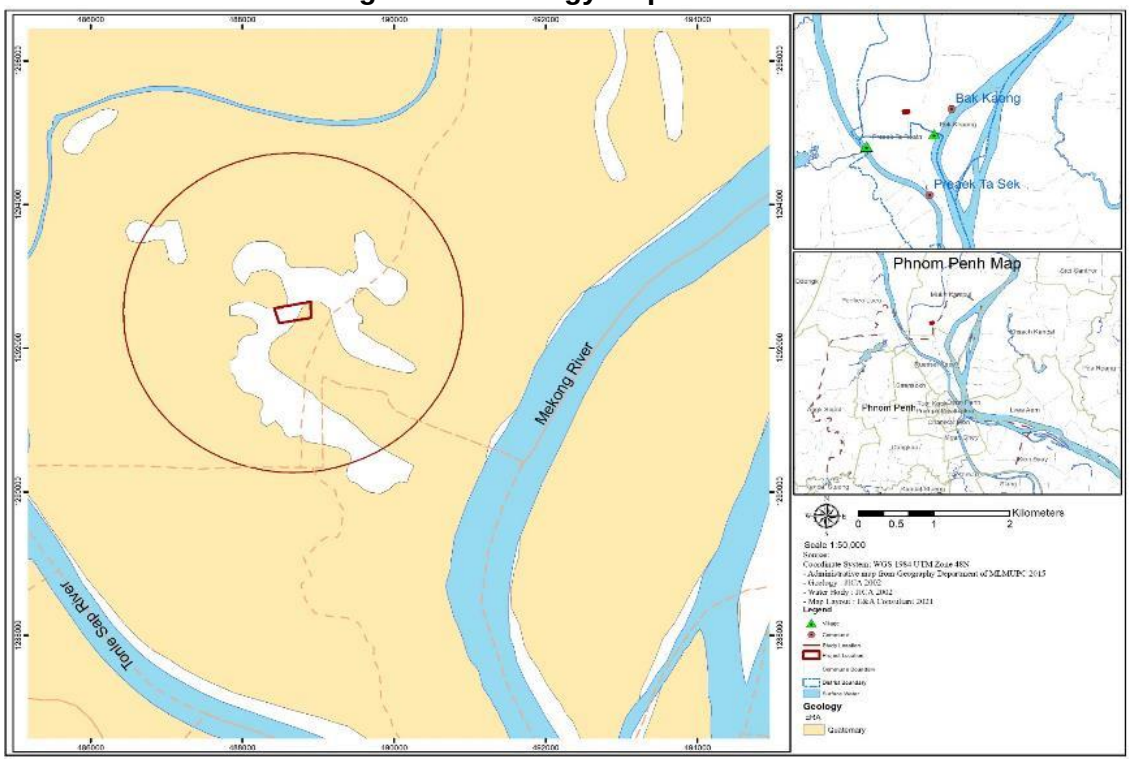
The existing condition of project site

Neighbor Project activity is under construction (Public Building)

Proposed new access road that link from Win Win Road to STC/ITC	Public drainage that has been built along the access road

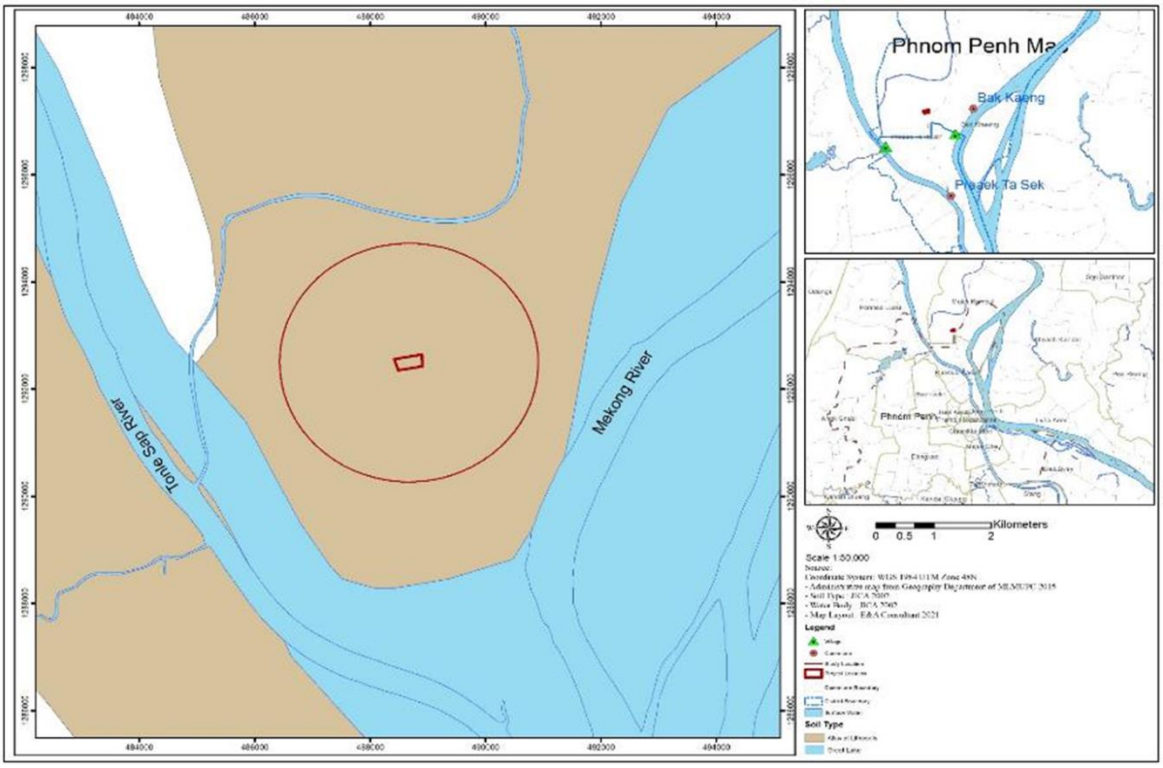
44. **Geology, soil type.** The geology in the study area (2km radium of CSTC) is classified into 1 categories-quaternary. Data of JICA (2002) shows that soil type in project site is Alluvial soil as shown in Figure 10 & 11 below.

Figure 10: Geology Map in CSTC Site



Source: MoEYS, 2021

Figure 11: Soil type map in Proposed CSTC



Source: MoEYS, 2021

45. **Air Quality.** Air quality was monitored in one location[15] within the project site with UTM X=488680, Y=1292501. The purpose of air quality monitoring is to determine the baseline information of air quality in the project site before project implementation. Air quality testing analysis was conducted on July 3, 2021 for 24 hours, and cover such parameters as carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), ozone (O_3), lead (Pb), total suspended particulate (TSP), PM10 and PM2.5. In this study, air quality was measured by using air quality measurement equipment of the Laboratory of the Ministry of Environment (MoE). The results show that all parameters are within the standard set by MoE. Table 5 below shows the result of air quality test in the project site.

Table 5. Air Quality test result in the CSTC

No.	Parameters	Unit	Standard	Result
1	Carbon monoxide (CO)	mg/m^3	< 20 (8h)	1.717
2	Nitrogen dioxide (NO_2)	mg/m^3	< 0.1 (24h)	0.047
3	Sulfur dioxide (SO_2)	mg/m^3	< 0.3 (24h)	0.049
4	Total Suspended Particulate (TSP)	mg/m^3	<0.33 (24)	0.026
5	Ozone (O_3)	mg/m^3	<0.2 (1h)	0.096
6	Lead (Pb)	mg/m^3	< 0.005 (24h)	ND
7	PM10	mg/m^3	<0.05 (24)	0.018
8	PM2.5	mg/m^3	<0.025 (24)	0.012

Source: Ministry of Environment, 2021

[15] Environmental and Social Impact Assessment for Higher Education Improvement Project (HEIP), MoEYS, 2021.

46. **Noise.** Noise monitoring was sampled at the same location as air quality monitoring site. The purpose of noise level monitoring is to determine the existing noise levels data within the project area before project implementation. The noise level monitoring was conducted on July 3, 2021. The noise results were compared with the maximum noise permitted standards allowed in residential area (hotel, administration area, house/flat), Ministry of Environment, 2018. Table 6 shows the noise level test results for 24 hours at the in-project site.

47. The results indicate that noise levels at the sample point are within the national guideline for the relevant standard of LAeg and Lmin for all three-survey period (Day, Evening and Night), but partly exceed the noise guideline of WHO (i.e., 55/45 dB(A) day and night-time). Lmax was found to be higher than the standard for three survey periods. Field observation indicated that the higher of noise level was associated with traffic like truck, car, motorbike.

Table 6. Noise level test result in CSTC

Survey Period		Noise Level dB(A)			
		LAeq	Standard (LAeq)	Lmax	Lmin
Day	6:00 - 7:00	57.2	60	86.7	42.5
	7:00 - 8:00	55.8		72.0	43.7
	8:00 - 9:00	60.0		74.3	43.6
	9:00 - 10:00	61.1		75.0	46.1
	10:00 - 11:00	61.6		75.9	47.2
	11:00 - 12:00	57.8		74.0	40.6
	12:00 - 13:00	61.9		85.4	43.3
	13:00 - 14:00	60.5		76.5	46.1
	14:00 - 15:00	58.2		70.0	47.7
	15:00 - 16:00	58.1		73.1	47.4
	16:00 - 17:00	59.1		87.0	46.7
	17:00 - 18:00	60.7		92.1	41.3
Evening	18:00 - 19:00	51.4	50	69.9	39.3
	19:00 - 20:00	52.5		75.7	39.0
	20:00 - 21:00	50.3		71.7	39.1
	21:00 - 22:00	52.6		75.1	41.2
Night	22:00 - 23:00	46.3	45	73.2	35.6
	23:00 - 00:00	43.3		73.6	36.0
	00:00 - 1:00	46.6		60.7	35.7
	1:00 - 2:00	41.1		58.4	37.4
	2:00 - 3:00	41.2		52.4	35.3
	3:00 - 4:00	42.7		58.8	34.1
	4:00 - 5:00	39.5		57.3	29.7
	5:00 - 6:00	54.0		67.7	31.5
24 hours average		53.1		72.3	40.4

Source: Ministry of Environment, 2021

48. **Biological Resources of CSTC.** The proposed site is located in the newly reclaimed and development area, there is no sign of critical habitat and even the presence of significant trees in the area. No primary data collection on mammals, reptiles and amphibians was conducted.

49. A bird survey within the study area was conducted for through consultation with local people, using the checklist and direct observation. The found bird species were classified by using the IUCN's Red List. A total of sixteen species of birds were found in the study area, where they were in the IUCN's Red List of Least Concern. Table 7 below shows the presence of bird species in the study area.

Table 7. The presence of bird species in the study area

No.	English Name	Scientific Name	Source	IUCN's Red List
1	Yellow-browed Warbler	*Phylloscopus inornatus*	CC	LC
2	Pied Bushchat	*Saxicola caprata*	CC	LC
3	Blue rock thrush	*Monticola solitarius*	CC	LC
4	Dusky warbler	*Phylloscopus fuscatus*	CC	LC
5	Yellow-browed Warbler	*Phylloscopus inornatus*	CC	LC
6	Common Tailorbird	*Orthotomus sutorius*	CC+PS	LC
7	*Ducula bicolor*	Pied Imperial Pigeon	CC+PS	LC
8	Manchurian Reed Warbler	*Acrocephalu tangorum*	CC	LC
9	Black-browed Reed Warbler	*Acrocephalus bistrigiceps*	CC	LC
10	Oriental Reed Warbler	*Acroscephalus Orientalis*	CC+PS	LC
11	Striated Grassbird	*Megalurus palustris*	CC	LC
12	Plain Prinia	*Prinia inornata*	CC	LC
13	Burmese Shrike	*Lanius collurioides*	CC	LC
14	Sooty-headed Bulbul	*Pycnonotus aurigaster*	CC	LC
15	Black Bulbul	*Hypsipetes leucocephalus*	CC	LC
16	Stripe-throated Bulbul	*Pycnonotus finlaysoni*	CC	LC

CC = Community Consultation, LC = Least Concern, PS = Primary Survey, IUCN = International Unions for Conservation of Nature.

50. **Fish Study.** Wastewater discharge point into Tonle Sap River was selected for the study of fish presence, where appropriately 4.5 km from the project site. Consultation with fishermen using checklist and fish posters in order to study the presence of fish, in which fishermen use fishing gear such as drag net, drifting net, cast net, common single hook line, trap etc. The results from consultation with fishermen found 35 species of fish (Table 8). CWS[16] indicated that at least 149 species of fish have been recorded in the Tonle Sap River. The Tonle Sap Great Lake is a unique ecosystem of great ecological value. It is a key breeding ground for fish, and is home to globally import colonies of endangered water birds, as well as reptiles, mammals and water snakes. Recently, Tonle Sap River is faced with a serious threat in fish catch due to loss of forest, climate change, upstream dams and illegal fishing activities.

Table 8. The presence of fish species in the study area (Tonle Sap River)

No.	English Name	Scientific Name	Source	IUCN's Red List
1	Duskyfin glassy perchlet	*Parambassis wolffii*	CC	LC
2	Small-scale tonguesole	*Cynoglossus microlepis*	CC	LC
3	River tonguesole	*Cynoglossus feldmanni*	CC	LC
4	Yellow Eyed Silver Barb	*Hypsibarbus pierrei*	CC+PS	DD
5	Sailfin shark carp	*Morulius chrysophekadion*	CC+PS	LC
6	Giant bony-lipcarb	*Osteochilus melanopleura*	CC	LC
7	Lesser bighead carp	*Paralaubuca typus*	CC=PS	LC

[16] https://cambodia.wcs.org/Wild-Places/Tonle-Sap-Lake-Floodplain/Species-Habitats.aspx

No.	English Name	Scientific Name	Source	IUCN's Red List
8	Snail eating barb	*Puntioplites proctozysron*	CC	DD
9	Red cheek barb	*Rasbora hobelmani*	CC+PS	DD
10	Siamese long fin carp	*Rasbora paviana*	CC	LC
11	Sumatran river sprat	*Thynnichthys thynnoides*	CC	LC
12	Barred tigerperch	*Datnioides polota*	CC	LC
13	Marble goby	*Oxyeleotris marmorata*	CC	LC
14	Halfbeak	*Zanarchopterus ectuntio*	CC	DD
15	Peascock eel	*Macrognathus Siamensis*	CC	LC
16	Eyespot spiny eel	*Macrognathus semiocellatus*	CC	LC
17	Tiretrack spiny eel	*Mastacembelus armatus*	CC	LC
18	Snakeskin gourami	*Trichohodus pestoralis*	CC	DD
19	Moonlight gourami	*Trichohodus microlepis*	CC	DD
20	Asian redtail catfish	*Hemibagrus sp (cf. nemarus)*	CC+PS	DD
21	Striped catfish	*Mystus multiradiatus*	CC	LC
22	Striped catfish	*Mystus mysticetus*	CC	LC
23	Bumblebee catfish	*Pseudomystus siamensis*	CC	LC
24	Walking catfish	*Clasias batracchus*	CC	DD
25	Bighead walking catfish	*Clasias macrocephalus*	CC	DD
26	Striped catfish	*Panasianodon hyponphthalmus*	CC	DD
27	Spotted-ear catfish	*Panasianodon larnaudii*	CC+PS	DD
28	Mekong catfish	*Pangasius mekongensis*	CC	LC
29	Twisted-jaw sheatfish	*Belodontichthys truncatus*	CC=PS	LC
30	Kompes	*Macrobrachium nipponese*	CC	DD
31	Reddish sheatfish	*Kryptopterus bleekeri*	CC+PS	LC
32	Redeye puffer	*Carinotetraodon lorteti*	CC	LC
33	Cambodian Puffer	*Monotrete cambodgiensis*	CC	LC
34	Lesser silver mud carp	*Cirrhiuns lobatus*	CC+PS	DD
35	Siamese mud carp	*Cirrhiuns siamensis*	CC+PS	DD

CC = Community Consultation, LC = Least Concern, PS = Primary Survey, IUCN = International Unions for Conservation of Nature.

51. **Socio-economic conditions.** According to 2019 commune/Sangkat data, the study area has total of 901 families, equal to 3,803 persons including 1,940 females. Among two villages, Bak Kaengs village has the largest population of 2,591 persons, and Preak Ta Roth has a population of 1,212 persons.

Table 9. Demographic profile of two villages

City	District/ Khan	Commune/ Sangkat	Villages	Number of family	Total population	Female
Phnom Penh	Chroy Changva	Preak Ta Sek	Preak Ta Roth	248	1,212	638
		Bak Kaeng	Bak Kaeng	653	2,591	1302
Total				**901**	**3,803**	**1,940**

Source: Commune/Sangkat data 2019

52. **Physical cultural resources.** Based on site visit and ESIA report for the ITC campus, the proposed CSTC is not located near historical and cultural resources.

V. ANTICIPATED ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

53. The identification of environmental impacts and risks was based on information about the project design, location, proposed activities during construction and operation, field visits, results of stakeholder consultations, and information gathered from provincial and district school authorities.

A. Anticipated Environmental Benefits from the Project

54. STEP UP will enhance climate resilience of the education sector through carefully designed interventions incorporating a range of climate change adaptation features. Construction of the CSTC under output 2 will utilize climate smart design principles, including energy efficiency and water conservation measures, rooftop greening, smart façade shading and natural ventilation. These green design features will be highlighted for educational purposes in interactive exhibits and digital outreach programs to increase environmental awareness. Renovation of school classrooms and libraries under output 1 will adhere to low-carbon, climate resilient design principles, with close attention to managing electrical power loads and the associated climatic issues that may come with an increase in education technologies (EdTech). STEP UP interventions have integrated a range of EdTech solutions to meet the need for modernization and facilitate 21st century skills development. Learning management systems, and electronic record keeping will provide improved efficiency system wide, while access to purposefully selected digital devices, possessing climate-smart characteristics (e.g., low heat emittance, low wattage, low maintenance, local repairability) will vastly increase.

55. The project will strengthen environmental education through integration of climate change themes in the STEM curriculum through booklets, projects, clubs and fairs. Providing support and equipment for the establishment of STEM Clubs, including environmentally themed clubs, will increase awareness and deepen understanding. Students will be challenged to use their STEM skills to develop innovative solutions for climate issues through projects. STEM Fairs will serve as a platform for students to showcase climate-focused projects and promote a sense of environmental responsibility beyond the school community. Social media will be leveraged to improve public perceptions of STEM and related topics, such as climate change. An engaging, targeted campaign will showcase climate action projects and organizations in Cambodia, while explainer videos will deepen understanding, empowering schools and communities nationwide to embrace climate smart practices.

56. The project is expected to improve the current condition of participating schools' WASH facilities because of better water supply systems, sex-segregated toilets, installation of septic tanks, proper drainage, solid waste management system, and well-ventilated/air conditioner in the rooms and teachers's quarters. The provision of available water and adequate toilets in schools will promote school and students' hygiene and reduce water-borne diseases.

B. Pre-Construction Impacts and Mitiagation

57. Potential pre-construction phase impacts are primarily related to project siting, and potential for land acquisition and resettlement and encroachment on historical, cultural, and archaeological sites and protected areas and the planning and details of the technical design.

1. Land Acquisition and Resettlement

58. The project is classified as category C for involuntary resettlement as it will not require land acquisition and involuntary resettlement. The proposed construction of the CSTC will be done within the Institute of Technology of Cambodia (ITC) compound while the renovation and upgrading of classrooms in the school campuses will be done within existing schools, which are all state-owned properties.

2. Encroachment on Ecologically and Culturally Protected Areas

59. No project activity will encroach on ecologically and culturally protected areas because the civil works will be located on existing school campuses and as discussed in the baseline environment conditions, there are no culturally protected areas in the location of the project. None of the schools targeted by the project are in areas identified as culturally or historically significant or legally protected. In case of chance find of a cultural property during construction, work should be stopped and the person who found the property should immediately make a declaration to the local police, who shall, in turn, transmit the property to the Provincial Governor without delay.

3. Technical Design Standards, Climate Change Considerations

60. The design of the CSTC shall apply climate smart design principles, including energy efficiency and water conservation measures, rooftop greening, smart façade shading and natural ventilation. As part of good engineering practice, the final detailed engineering design (DED) will need to consider flood risk in terms of its engineering solutions for building construction.

61. The design of CSTC and the conversion of classrooms in participating schools will adhere to the MOEYS Quality Control Guidelines for School Building Construction (2012). The Guidelines focus on environment, safety and security including the protection of environment, labor standards, protection of water resources, asbestos management, noise and dust, disturbance, unexploded ordnances (UXO), protection of historical and cultural resources, clean water and sanitation facilities, monitoring, supervision, and reporting.

62. During the detailed design, structural integrity, compliance with fire safety requirements on provision of adequate fire exits, ensuring safe and potable drinking water, and adequate treatment and disposal of wastewater shall be ensured to prevent undue risks to staff and students.

C. Environmental Impacts and Mitigation Measures during Construction

63. Adverse health and safety or other environmental impacts that will arise from civil works will be minimal and localized since these are confined within the existing school compounds. As all the construction are for the students at USS level, so the risks of students playing near open

site or risk of getting hit by a construction vehicle or equipment is relatively small. Based on the consultant site visits to CSTC and several USS, the anticipated impacts of proposed civil works and proposed mitigation measures include the following:

64. **Impacts and risks related to staging area.** A staging area will be required for storing machinery, stockpiles and equipment required for construction. This may be at the construction camp area (if a camp is required) or it may be separate to any other construction related areas. The main potential impact from a staging area is on soil quality from machinery and fuel storage, and the noise and traffic associated with vehicle movements. The site(s) will not be located close to surface water body and will not be located in an area with vegetation of high biodiversity value. The contractor will be required to (i) ensure the staging area will not be within 50m of a water course; and (ii) follow other relevant mitigation measures in the EMP for the construction staging area e.g., fuel storage and vehicle maintenance.

65. **Impacts and risks related to worker influx, worker camp**. The construction company may require labor from outside the locality. In relation to safety and security, the presence of a construction workforce particularly if selected from outside the area, may lead to local discomfort and nuisance. Particularly in the context of the current COVID-19 pandemic, the presence of non-local workers may be resented or feared. An influx of temporary workers and the interaction between the construction workforce and local communities may also increase occurrence of communicable diseases. At this stage it is not known how many workers will be required and where they will be sourced from. Poor conditions in the camp can also impact on the health and safety of the workers, particularly if COVID-19 prevention measures are not implemented and adhered to. Good camp housekeeping shall be maintained which includes sound waste management; relevant training on local laws and health protection measures provided including on COVID-19; first aid kits are required; communal areas will be provided; strict food hygiene standards will be maintained.

66. **Air pollution** from dust emissions from on-site excavation and emission from heavy equipment and construction vehicles used for construction. Contractor specifications will include restrictions in time of construction. Workers will also be provided with appropriate personal protective equipment (PPE) to minimize impact of air pollution.

67. **Water pollution** from run-off or soil erosion from stockpiled construction materials and wastewater from domestic sewage of construction workers and accidental spillage of oil and other lubricants from washing of construction equipment. Specifications in the contract will also require installation of appropriate sanitation facilities for workers.

68. **Noise pollution** from construction activities that may disturb classes and nearby communities. Contractor specifications will include traffic management measures, such as restrictions on timing, to minimize impacts.

69. Generation of **solid wastes** from construction workers and construction and demolition (C&D) wastes. There should be proper disposal of C&D wastes, hazardous wastes such as empty paint / solvent containers, busted lamps, oil contaminated materials / wastes, and electronic wastes from discarded electronic and computer equipment. Contractor specifications will require disposal at approved facilities.

70. The potential **risk of presence of asbestos** is considered low as all the schools proposed for renovation were built post 2000. MoEYs confirmed that building specifications have excluded the use of asbestos containing materials since early 2000s. Plumbing is reportedly HDPE plastic.

Contractors will be required to assess potential risk of asbestos and adopt safe working methods for asbestos management as specified in the MoEYS Quality Control Guidelines for School Building Construction (2012). The guidelines are consistent with international good practice on removal and handling of asbestos materials from buildings.

71. **Occupational health and safety risks to construction workers.** Occupational health and safety risks are particularly a concern in construction sites where heavy machinery and noisy equipment is used and where excavations e.g., for foundations are required or where working at height e.g. on new building roof is needed. Emergency situations may also occur where accidents and incidents take place. Project staff are also at risk from occupational accidents when entering construction sites for inspections and EMP verification. Contractors will be required to (i) ensure that an Environment Health and Safety (EHS) qualified engineer or staff member will be engaged for the contract and adequate first aid equipment provided on site; (ii) ensure the quality specifications of the Personal Protective Equipment (PPE) to be used on site; (iii) ensure that all workers are equipped with, and use PPE and the approach taken to enforce its use; (iv) ensure sufficient signage giving occupational health and safety warnings and information disclosure within all construction sites; (v) provide training on construction hazards, including daily toolbox meetings (safety briefings); (vi) provide a site accident record book which will be maintained where all major or minor accidents and incidents are recorded with actions taken; (vii) provide drinking water and hand washing facilities free of charge at all construction sites.

72. **Community health and safety risks**, specifically to students who need protection as a result of their exposure to noise, smell of paints and solvents and dangerous excavated work areas. Students could be more at risk from accidents during construction as a result of increased traffic and heavy vehicles delivering equipment and materials. For the avoidance of community health and safety risks, the following mitigation measures are required by the contractors: (i) mud on public roads and internal school roads will be removed at the end of each day and signs warning of mud/skid risk will be placed on the road; (ii) for all construction areas the contractor will provide signage giving community dangers / warnings inside and outside the construction areas; (iii) for all construction areas the contractor will use barriers or tape and appropriate lighting to restrict unauthorized access by school visitors.

73. In addition, major works/renovation/repair shall be undertaken during weekends, holidays, or school break to avoid disruption of classes and avoid exposure of students to hazards of construction activities. Consultations will be undertaken with school management, parents, students, and school community regarding the construction works/ renovation/repair activities.

74. **COVID-19.** The COVID-19 risks at the time of implementation cannot be anticipated therefore the EMP expects the contractor to comply with all national guidance as well as ADB COVID-19 guidance at all times and develop a Health and Safety plan which includes management of COVID-19 risks throughout construction. This will be verified by the PMU during field visits.

75. **Site rehabilitation.** At the end of construction, construction workers camp, staging areas, and any other ancillary construction areas may contain waste, spoil, and other debris. Also, the use of public roads may cause unforeseen damage from heavy vehicles and equipment, e.g. damage to road surfaces close to existing schools. Contractors will be required to ensure that (i) all areas affected by construction including the school compounds, worker camp, preparation/staging areas will be restored to original condition or better, after construction; (ii) waste, spoil and any contaminated land e.g., oil spills, will be removed and disposed of in approved sites prior to site handover; and (iii) accidental damage will be repaired.

76. In general, the short-term construction impacts can be prevented or mitigated with good construction management practices. The EMP (see **Appendix 1**) includes mitigation measures to prevent or minimize construction impacts in line with the relevant provisions of the MOEYS Quality Control Guidelines for School Building Construction (2012).

77. The EMP has three components: (1) an environmental management plan, which sets out mitigation measures that will guide all the relevant stakeholders on how to manage impacts during construction phase of proposed civil works under STEP UP; (2) environmental monitoring performance indicators; and (3) Environmental Code of Conduct for contractors. This code of conduct, including specific prohibitions and construction management measures should be incorporated into all relevant bidding documents, contracts and work orders.

D. Environmental Impacts and Mitigation Measures during School Operation

78. No significant risks and impacts are anticipated during project operation. MoEYS will promote good hygiene practice in schools through regular water, sanitation and hygiene (WASH) campaigns that encourage students to practice hand washing and how to use toilets, latrine and hand washing facilities. In addition, chemical substances from the science laboratory in the schools must be well managed. Students and teachers will also be oriented on proper solid waste segregation. Budget for infrastructure maintenance of the school facilities will be allocated by MoYES to ensure the long-term sustainability of the facilities.

VI. INFORMATION DISCLOSURE, CONSULTATION AND PARTICIPATION

A. Consultation activities

79. Consultating meetings were conducted serval times with key stakeholders, particularly with school directors and student since December 2021 for proposed activity of Output 1 of the project.

Photo 2: Consultation with School Directors and Committees

	
Consulted students at Chumporvan School, Phnom Penh November 2021	Consulted Preah Soramarith GTH school, Kampong Chhang province, January 2022

	
Consulted Ta Som Upper Secondary School, Ratanakiri Province, January 2022	Consulted Upper Secondary School, Kratie Province, January 2022

Source: TRTA, 2022.

80. The proposed CSTC (under output 2) is located within the ITC campus which was subject to ESIA. As part of the ESIA (conducted in 2021), consultations were conducted as follows:

- Consultation with key stakeholders and local authorities – From July – August 2021:
  i. Key Information Interview (KII) – The consultation was conducted with Phnom Penh Municipal Department;
  ii. Focus Group Discussion with local people who are in 2 km radius of proposed project site;
- Public Consultation Workshop at Municipal Level – on 23 September 2021.

B. Result of Public Consultation

81. Results of the consultation activities are presented in the Table below.

- The project can cause side-effects to people who live around this area such as:
  - Traffic accident.
  - Dust emission from the material transportation
  - Noise disturbance might happen while construction and transport construction materials
- Recommendation
  - Minimize noise disturbance to the minimum level especially in construction phase.
  - Follow the 2015 traffic law of Cambodia and any regulation of Department of Public Works and Transport on Win Win Street for construction material transportation.
  - For all construction material transportations especially sand, gravel, stones, etc., need to be covered properly
  - The project should reduce the disturbance of noise during construction phase with fencing, trees plantation around.
  - Please abide by the traffic law during transporting materials to construction site; drivers should be covered properly the truck or road watering to avoid the dust.
  - Cleaning wheel's vehicles every time when in or out the construction site.

- Project should consider the quality of the construction firm.
- The project should be granted the permission before construction.
- There should be a study of the entire project area, especially drainage and waste disposal.
- The project should build wastewater treatment plant in compliance with technical standards.
- The project must be properly covered all transportation, such as sand, stone, etc.
- The project should consider and study the issue of the ground properly to avoid any harmful effects on people's houses
- The project shall be fenced surround properly to minimize hassle and dusty.
- Educate all staffs / workers on proper solid waste disposal, to avoid littering with provide adequate bins
- Please abide by the traffic law during transporting materials to construction site; drivers should be covered properly the truck or road watering to avoid the dust.
- Before and after the construction, the project should have the strategy which contain the least effects, just in case will be affected on people living that area.
- To ensure that the project will be responsible for social security (staffs/workers), accommodation, and to avoid any occur such as robbery and burglary.
- Shall have good library with connection to international research publication link such as www.sciencedirect.com or www.scopus.com for students to do research.
- Campus shall have tree plantation, gardens, and sport field and clinic room in the campus.
- Health and safety of staffs/workers must be taken care of with provision of adequate personal protective equipment, regular safety instructions before starting work to avoid any accidents.
- The construction of new building shall follow the technical standards through a legally valid process and cooperates with the local authorities.
- Request the authorities as well as the project to clean dust along the street to reduce dust emission into the atmosphere when vehicles pass by as well as reduce health effects. If no dusty, their selling also easy.
- Please not drive fast to avoid the accident.
- Educate and guide to all staffs, workers, students the storage of garbage and provide adequate garbage bins in each building to avoid littering

C. Follow-up Information Disclosure and Stakeholder Consultations

82. The IEE and EMP containing the results of the stakeholder consultations will be disclosed at ADB website and translated in Khmer language and will be made available in the Department of Construction (DoC). DoC is the department under MoEYS in charge of construction. During detailed engineering design, follow-up stakeholder consultations through the provincial and

district education and sports offices will be conducted to orient the communities about the planned school improvement and to discuss any issues and suggestions that may be raised by the communities. Women's groups, parents, teachers, students, village heads, Village Education Development Committee, ethnic groups to be served by the schools, district environment offices, and other interest groups will be invited during these consultation meetings.

83. Prior to implementation, consultations, focus group discussions or interviews, as appropriate, will be undertaken with communities within the impact area of the schools to inform them about the proposed construction activities and schedules, details of the grievance redress mechanism (GRM), discuss the proposed features of the school and proposed environmental mitigation measures, and to introduce the focal or contact persons and construction managers. Billboards or information boards indicating the names of the focal persons, construction managers and schedules will also be prominently displayed at the construction areas for reference of communities.

VII. GRIEVANCE REDRESS MECHANISM

84. To address community concerns or issues that may arise during project implementation, an effective and transparent mechanism for lodging complaints and grievances has been defined and will be established. The grievance redress mechanism (GRM) is to mitigate the risks and unforeseen impacts of the project on the affected person (AP). It addresses AP's concerns and complaints (promptly or according to the period set), using an understandable and transparent process.

85. A GRM and procedures is designed to offer the APs' the opportunity to settle their complaints and grievances amicably. The GRM procedures ensure that APs are provided with the appropriate compensations, as relevant, in accordance with SPS and Cambodian law. The process also allows APs not to go through lengthy administrative and legal procedures. The priority is the settlement of issues between parties.

86. There are 3 levels for GRM:

- Step 1: School Level has 7 working days to solve the complaint and if the complaints cannot be solved at this level the school will bring the complaint to the next level.
- Step 2: ITC/NIE/GDE Level who has 15 working days to resolve this issue. If the complaints still cannot be solved, the ITC/NIE/GDE will bring this case to MoEYS
- Step 3: MoEYS Level who has 30 days to resove the complaint and also to implement the decision on the issue which has been involved by MoEYS.

87. The project will establish a Grievance Redress Committee (GRC) to manage and coordinate the GRM.

88. If there is a concern or grievance from APs concerning environment or other matters that negatively affect their livelihood or well-being, the APs can (i) lodge the complaint into the suggestion box which is made available to the public, or (ii) make a direct call to member(s) of GRM Committee. Members of the RGM commitee comprises of school authorities, local authorities, project site engineers, and contractor's representatives (site engineer, supervisor/foremen). The name and contact of these members are displayed for public access as needed. The complainant will fill-up the Grievance Form (**Figure 12**) and apply method (i) or (ii).

Figure 12. Grievance Redress Mechanism Form

Grievance redress mechanism form	
Contact Details	Name:
	Address:
	Contact Number:
	Email:
How can we contact you?	Phone:
	Email:
	Personal:
What is the nature of your grievance (State the problem, when it happened, who are involved, and other details)?	
What is your suggestion to resolve the grievance	
Signature	
Date	

89. In many cases, the camplaints can be solved through the informal mode such as talking or discussion. In case that, the complainants do not satify with the corrective action, then further steps would be preceded to the GRM school level or GRM project level. If the complainant is satisfied with the proposal, the case will be recorded in the logbook with the complainant's signature. The proposed long-term corrective action plan will be implemented by the responsible party. During construction phase, most of the responsibility lies on the contractor. The school administration is responsible for implementing the EMP during operation phase.

90. An effective monitoring system will inform project management about the frequency and nature of grievances. The GRM Committee will arrange regular meetings where the activities and the outcomes/measures taken according to the GRM logbook are to be monitored. In addition to the above, if there are any grievances related to environmental management issues in the project area, the GRM Committee will record these grievances and suggestions and pass it on to the National Environment Specialist or other relevant consultants for the corresponding action and follow-up.

91. The redress mechanism will be accessible to diverse members of the community, including the vulnerable sector of society such as women, youth and the elderly. All meetings with the affected person shall be recorded and copy of minutes, including resolution of issues, shall be provided to the affected person. Copy of the minutes shall also be provided to relevant institutions, including ADB.

92. Should project affected people not be satisfied with the project proponent's response to a grievance, complaintants may choose to contact the ADB country office and/or approach the ADB Accountability Mechanism.[17]

VIII. ENVIRONMENTAL MANAGEMENT PLAN

A. Objectives

93. An environmental management plan (EMP) has been prepared to provide mitigation and monitoring measures for identified impacts. The EMP outlines the mitigation and monitoring programs to be taken to avoid, reduce, and minimize adverse environmental impacts to acceptable levels.

[17] https://www.adb.org/who-we-are/accountability-mechanism/main

94. The EMP has two components: (1) an environmental mitigation plan, which sets out mitigation measures that will guide all the relevant stakeholders on how to manage impacts during construction phase of proposed civil works under STEP UP (**Appendix 1**). The mitigation plan may require updating to address unanticipated impacts not included in the table; (2) environmental monitoring plan including performance indicators (**Appendix 2**). The environmental monitoring plan forms the basis for verifying the extent of compliance during the implementation stages of the project. The objectives of an environmental monitoring program are to: (i) evaluate the performance of mitigation measures; (ii) provide information which could be used to verify predicted impacts and, thus, validate impact prediction techniques; (iii) suggest improvement in environmental mitigation measures, if required; and (iv) provide information on unanticipated adverse impacts or sudden change in impact trends.

B. Institutional arrangements for EMP implementation

95. The **executing agency (EA)** of the project will be the Ministry of Education, Youth and Sport (MoEYS), while the **implementing agencies** (IA) will be the Institute of Technology of Cambodia (ITC), National Institute of Education (NIE) and the Directorate General of Education (DGE).

96. The EA will establish a steering committee (SC) to provide strategic guidance and monitor toward successful implementation of the project within the available budget as well as facilitate inter-ministry coordination.

97. A **Project Management Unit (PMU)** and three Project Implementation Units (PIU) will be established. The PMU will lead and be responsible for day-to-day management, coordination, and monitoring and evaluation (M&E) of the project implementation. The PMU will be led by the Project Director and the Project Manager. The PMU of MoEYS will have overall responsibility for the management, monitoring, and reporting of the implementation of the project EMP.

98. MoEYS will recruit a **project implementation consultant (PIC)** to support the PMU in project implementation, and a **CSTC Design and Supervision Firm (CSTC-DSF)** in charge of detailed engineering design and construction supervision of the CSTC. The PISC will include a national environment consultant (PIC-EC) that will act on PMU's behalf as the EMP implementation coordinator. The CSTC-DSF will include a national environment, health and safety (EHS) specialist in charge of all EHS supervision during CSTC construction.

99. The PIC-EC will be based in Phnom Penh and will travel to project sites as required, but mainly focus on construction activities at the CSTC. The PIC-EC will provide technical assistance and support to the PMU and IAs in carrying out their responsibilities for EMP implementation, monitoring and reporting and safeguard documentation. The role will include but not be limited to:

- Procurement: Ensure EMP is part of bidding documents.
- Document Reviews: Review and clear any contractor response to bidding document environmental requirements on behalf of the PMU, ensuring the contractors' response to the bidding documents is fully responsive to the project environmental safeguard requirements.
- Prepare the Annual Safeguards Monitoring Report for submission to ADB.
- Update the IEE and EMP, as required, to reflect unanticipated impacts.

- Grievance Redress Mechanism and disclosure: Ensure GRM is established and it functions during implementation. Record all GRM complaints and resolutions. Ensure the EMP is translated into Khmer and disclosed locally.
- Permits: Ensure that the contractors and/or project owner has requisite permits and permissions are in place for all works prior to commencement of works.
- Training: Raise awareness of ADB environmental safeguards requirements for the project within PMU, the IAs, PIUs and contractors. Conduct training for the GRM focal points to ensure their roles and responsibilities are understood.

100. The **contractors** have the main responsibility to implement environmental, health and safety risk mitigation measures, conduct internal monitoring, and submit monthly monitoring reports to the PMU (**Appendix 3**). The reports shall cover the progress of EMP implementation, issues, corrective actions and compliance (including general good practice) and in the case of the CSTC, shall be verified by the EHS specialist of the CSTC-DSCF.

101. MoEYS will submit annual safeguards monitoring reports to ADB for review and disclosure. The PMU-EC will provide the necessary support for this activity. The reports will be disclosed on the project website in accordance with ADB's Access to Information Policy (2018).

102. The cost of EMP implementation will be incorporated in the bill of quantities (BOQ) for the facilities for construction. As part of construction, the contractor will be responsible for the provision of a number of mitigation measures, as shown in the EMP, the purchase of the requisite environmental monitoring equipment, and the laboratory analysis of the samples, where required.

IX. CONCLUSION AND RECOMMENDATIONS

103. The results of the IEE show that the proposed project will not result in significant adverse environmental impacts. Anticipated impacts are minor and localized during construction stage and environmental mitigation measures have been designed as outlined in the EMP to address identified impacts. Overall, the project is expected to be beneficial providing improved school and better hygiene and sanitation facilities. The EMP also presents the institutional responsibilities for implementing the mitigation measures; government will assign staff to implementation safeguard requirements and will be supported by a national environment consultant.

Appendix 1: Enviromental Management and Mitigation Plan

1. The anticipated impacts of proposed civil works include:

(i) air pollution from dust emissions from on-site excavation and emission from equipment and construction vehicles used for construction;
(ii) water pollution from run-off or soil erosion from stockpiled construction materials, wastewater from domestic sewage of construction workers, and accidental spillage of oil and other lubricants from washing of construction equipment;
(iii) noise pollution from construction activities that may disturb school operation and nearby communities;
(iv) generation of solid wastes from construction workers and construction wastes;
(v) occupational health and safety risks to construction workers;
(vi) community health and safety impacts, primarily as a result of exposure to noise, smell of paints and solvents and dangerous excavated work areas; and
(vii) Health risks from transmissible diseases, including but not limited to COVID-19.

2. To address potential impacts and risks to environment, health and safety of workers and communities, each contractor must:

(i) develop and submit to the PMU a Site Specific Environment, Health and Safety Management Plans (EHSMPs) to manage the EHS risks and impacts of ongoing works (e.g. excavation, earth works, structure works);
(ii) apssign a qualified environment, health, and safety (EHS) specialist to supervise construction works in compliance with the EMP and the Cambodia regulatory and policy framework for environment, health and safety;
(iii) execute works and all associated operations on the work sites or off-site in conformity with statutory and regulatory environmental requirements of the Government of Cambodia and the ADB SPS 2009;
(iv) take all measures and precautions to avoid any nuisance or disturbance arising from the execution of construction works and their related activities. This will, wherever possible, be achieved by suppression of the nuisance (or unwanted effects to the physical environment and people) at source rather than abatement of the nuisance once generated;
(v) compensate for any damage, loss, spoilage, or disturbance of the properties and health of affected people during execution of the construction works as specified in the bidding documents;
(vi) keep the construction site clear of stagnant water, food residuals, or any other waste or material that can attract pests and disease-carrying vectors like mosquitoes and rodents;
(vii) recruit local skilled and unskilled labor to increase the direct benefits in the subproject area(s) and to minimize potential environmental issues related to construction camps, disease transmission and socio-cultural disputes;
(viii) ensure that the International Labor Organization (ILO) Core Labor Standards (CLS) and the applicable laws and regulations of Cambodia are applied to the contractor's workers (including workers employed by sub-contractors), including laws related to their employment, health, safety, and welfare during the construction of the facilities. More specifically, each contractor shall: (a) comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; (b) do not use child labor; (c) do not discriminate workers in respect of employment and occupation; (d) do not use

forced labor; and (e) allow freedom of association and effectively recognize the right to collective bargaining;

(ix) establish a simple system to receive, register, and address community concerns and complaints. Contact number of the contractor including name, position and telephone number will be shared with local authorities, the PMU and MoEYS; and

(x) demonstrate how the impacts associated with the construction works as defined in Table 1 below are complied with. For that purpose, conduct weekly monitoring of compliance with the EMP, and include section in the monthly report to PMU. The report format defined in **Appendix 3** shall be used for monthly reporting to the PMU.

3. The following activities are strictly prohibited on or near the project site:

(i) cutting of trees for any reason outside the approved construction area;
(ii) hunting, fishing, wildlife capture, or plant collection;
(iii) use of unapproved toxic materials, including lead-based paints and asbestos-containing materials;
(iv) discharge of chemicals, sanitary wastewater, spoil, waste oil, and concrete agitator washings or any liquid requiring treatment in water courses, drainage/runoff systems, or municipal wastewater collection facilities;
(v) disturbance to anything with architectural or historical value;
(vi) employment of workers under the age of 16; persons between age 16-18 can only work in non-hazardous environment; and
(vii) discrimination regarding recruitment, wages and compensation.

Table 1: Contractors' Mitigation/Management Measures for Pre-Construction and Construction

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
Design and pre-construction phase		
Permits	Failure to secure necessary permits and clearances prior to construction	• Secure environment license, as applicable. • Secure permit to construct, as applicable, on behalf of the EA or IA.
Construction phase		
Community relations, communication, complaint resolution	Complaints, concerns of students and nearby communities	• Establish and disseminate effective GRM. • Share contractor contact details with school management, local authorities, MoYES, PMU. • Inform school management about construction and work schedules, interruption of services and traffic detour routes. • Provide list of construction workers on site to the Principal prior to construction. • Require workers to wear proper identification (ID) inside school compound.
EHS capacity	Inadequate EHS management capacity	• Assign qualified EHS staff at each construction site to supervise and monitor EMP implementation and report to PMU.
Monitoring and Reporting	Failure to comply with EMP requirements	• Submit monthly progress reports/status of construction and EMP implementation to the PMU.

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
Water and soil pollution	Leakage of spills of fuel and lubricants that may contaminate soil, surface water and groundwater	• Prevent pollution of soil, surface water/ groundwater by ensuring the following: ○ location of staging areas and storage facilities for fuel/oil/cement/ chemicals 50m away from rivers, streams and waterways; ○ soil surfaces where chemicals are stored shall be made impermeable and provided with bunds. Bunds should be sized to hold 110% of the maximum capacity of the largest tank or drum; ○ vehicles/heavy equipment maintenance and re-fuelling area will prevent spillage of fuel, oil and hazardous materials to seep into soil; ○ oil traps shall be provided in the maintenance and service areas; and ○ fuel refilling areas must be located > 50 m from water sources and protected by temporary bunds to contain spills. A spill clean-up kit must be present on site.
Air quality	Concentration of machinery working in one area plus haulage vehicle traffic may result in local areas of poor air quality.	• Maintain equipment to a high standard to ensure efficient running and fuel-burning. • Provide high-horsepower equipment with tail gas purifiers; • Ensure that all vehicle emissions comply with relevant emission standard.
Dust	Caused by earthmoving and construction haulage traffic which can cause poor air quality and nuisance to nearby sensitive receptors.	• Equip material stockpiles and concrete mixing equipment with dust shrouds. • Conduct regular water spraying on construction sites, construction roads, and stockpiled material. • Maintain driving surfaces clean as a standard site management practice. • Cover vehicles carrying soil, sand, or other fine materials to and from the construction sites with tarpaulin sheets.
Noise impacts on sensitive receptors	Noise caused by the concentration of machinery working in one area, plus haulage vehicles, can cause a range of impacts from nuisance to health problems.	• During construction, ensure installation of temporary anti-noise barriers to shield sensitive receptors; • Undertake consultations with school management, parents, students, and school community regarding the construction works/ renovation/repair activities.
Water Quality	Pollution of local water courses through sediment	• Construct site drainage to ensure that any rainfall will be diverted to a holding pond, or suitable land to prevent localized flooding and sedimentation of surface water.
Construction and demolition waste, spoil	Unauthorized or careless storage and disposal of waste can damage property, vegetation, and	• Ensure that temporary storage of spoil is located away from rivers, streams, and waterways. • Store construction and demolition waste securely in containers to prevent uncontrolled disposal. • Ensure that final disposal site of waste and spoil will be in a site approved by the relevant authorities.

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
	block natural drainage.	
Waste from workers	The construction workforce will generate domestic wastewater & garbage (food wastes, paper, and other solid waste including food-laden wash water) which causes impacts if poorly disposed	Provide sufficient waste bins at strategic locations and ensure that they are: • protected from birds and vermin; • emptied regularly to prevent overflow; and • disposed of in local disposal site as approved by local authorities.
Erosion impacts	Facility construction may require earthworks which will leave surfaces liable to erosion, especially in heavy rain periods.	Ensure that erosion control includes: • limiting construction and material handling during periods of rains and high winds. • stabilizing all cut slopes, embankments and other erosion-prone working areas while works are going on. • stabilizing all earthwork disturbance areas within 30 days after completion of earthworks.
Community health and safety	Construction work poses safety hazards and threats to students, nearby residents and passers-by. Excavations, loss of access and movements of large machinery and vehicles all potentially impact on existing utilities, community safety and day-to-day operation of existing/adjacent buildings and businesses.	Ensure that community health and safety will be safeguarded by: • planning construction activities to minimize disturbances to students, residents, passers-by, and utilities. • planning temporary land occupation well ahead of construction to minimize its impact and after consultation with the affected community. • implementing safety measures around the construction sites to protect students, the public, including warning signs to alert the public to potential safety hazards, barriers to prevent public access to construction sites, and a watch person, where necessary. • Undertake major works/renovation/repair during weekends, holidays, or school break to avoid disruption of classes and avoid exposure of students to hazards of construction activities. • Undertake consultations with school management, parents, students, and school community regarding the construction works/ renovation/repair activities.
Road safety (through movement of vehicle and equipment for construction)	Increased motorized vehicle movement including heavy goods vehicles to and from the site during construction may increase road safety risks for	• Ensure that drivers of all vehicles strictly follow road rules and maintain good road safety standards; • Properly supervise deliveries of construction materials to the site by heavy good vehicles using banksmen/traffic marshals.

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
	residents and passers-by.	
Occupational health and Safety	Workers are subject to safety hazards while operating and/or moving around machinery, as well as dust and noise impacts from extended exposures at the work site.	Ensure that: • An Environment Health and Safety (EHS) qualified engineer or staff member will be engaged for the contract and adequate first aid equipment provided on site. • All workers are equipped with, and use PPE and the approach taken to enforce its use • Only certified and tested machineries and equipment is used. • Adequate training or instruction for occupational health and safety is provided including daily toolbox meetings (safety briefings). • sufficient signage giving occupational health and safety warnings and information disclosure within all construction sites. • Adequate supervision of safe work systems is implemented. • Means of access to and exit from the site are without risk to health and safety. • A first aid kit will be available on each construction site. • All staff members are responsible for first aid and aware of local health care facilities. • Provide a site accident record book where all major or minor accidents and incidents are recorded with actions taken.
Unexploded ordnances (UXO)	Accidental discovery of land mine/UXO at the construction site may compromise the safety of workers and students	• Instruct workers to report a chance discovery of land mine/UXO to authorities. • Send a request to CMAC for the clearing of the land mine/UXO. • Provide barricade and warning signs around the area where the land mine/UXO has been found • Allow the relevant authorities to remove the land mine/UXO and to clear the area before any construction works resumes.
Exposure to asbestos or asbestos containing materials (ACM)	While unlikely, rehabilitation works may uncover ACM.	• Assess potential risk of asbestos and adopt safe working methods for asbestos management as specified in the MoEYS Quality Control Guidelines for School Building Construction (2012).
COVID-19 risk management	Inadequate protection measures may result in local outbreak	• Develop and implement a COVID-19 risk management protocol to protect workers and nearby communities from the risk of COVID-19 infection. The protocol shall be aligned with Cambodia regulatory requirements and international good practice.
Chance Find	Excavations may unearth artifacts or cultural resources	• In case of chance find, stop work immediately following the discovery of any materials with possible archeological, historical, paleontological, or other cultural value, announce findings to project manager and notify relevant authorities.

Potential impacts and issues	Nature of impacts/Issues	Environmental Action /Prevention by Contractor
		• Protect artifacts as well as possible using plastic covers, and implement measures to stabilize the area, if necessary, to properly protect artifacts. • Prevent and penalize any unauthorized access to the artifacts. • Restart construction works only upon the authorization of the relevant authorities.
Social protection, core labor standards	Workers must be protected against discrimination, unfair treatment.	• Ensure that the International Labor Organization (ILO) Core Labor Standards (CLS) and the applicable laws and regulations of Cambodia are applied to the contractor's workers (including workers employed by sub-contractors), including laws related to their employment, health, safety, and welfare during the construction of the facilities. • Comply with the Borrower's applicable labor law and regulations and incorporate applicable workplace occupational safety norms; • Do not use child labor; • Do not discriminate workers in respect of employment and occupation; • Do not use forced labor; • Allow freedom of association and effectively recognize the right to collective bargaining;
Human health and environmental pollution – Site Hand Over	Hazardous waste materials, unprotected latrines and organic waste remaining after construction will pose a risk to human health and safety.	• Remove all unused or discarded construction materials from the site before hand-over. • Landscape surroundings to reinstate original site conditions. • Remove all temporary dwellings, cook houses, and latrines upon completion of the construction; clean the site. • Restore all areas affected by construction including the school compounds, worker camp, preparation/staging areas will be restored to original condition or better. • Remove and dispose waste, spoil and any contaminated land e.g. oil spills, will be in approved sites prior to site handover. • Repair accidental damages.
Construction completion	Facility does not conform to approved plans and specifications	• Submit a completion report together with as-built drawings to the EA during turn-over.

EHS = environment, health and sanitation, GRM = grievance redress mechanism.

Appendix 2: Environment Monitoring and Reporting Plan

1. **EMP compliance monitoring.** In order for the EMP to be effective, all mitigation measures in the EMP must be monitored to ensure they are implemented. The contractor will provide a monthly monitoring report focusing on Health and Safety and EMP implementation, identifying any potential issues with future EMP compliance, based on the report outline presented in **Appendix 3**.

2. For the construction of the CSTC, the EHS specialist of the CSTC-DSF will be the key person who will verify the contractor's report through conducting independent site visits to verify that the contractor is implementing the EMP as required, and to identify any adjustments in the EMP if unacceptable or unpredicted impacts are seen. The proposed EMP verification for the CSTC construction is based on visual inspection and site visits shown in Table 1 below. The transport budget to / from site, will be part of the relevant budget of the CSTC-DSF.

3. The PISC-EC shall also conduct periodic site visits to the CSTC during construction, and to USS during minor renovation works, as required.

Table 1. EMP compliance monitoring

No.	Construction activity	Environmental risks	Proposed Monitoring
1	Construction staging area	Soil quality, noise, traffic	Visual inspection: • Location map • Distance to water course
2	Construction workers and camp	Social conflict, soil/water pollution, waste generation, H&S risk	Visual inspection: • Location / Layout maps • Housekeeping • Sanitation • Drainage • Fire fighting • Waste management
3	General civil works and demolition		Visual inspection: Services identified (pipes/cables) • Stockpile managed and topsoil retained • Drainage
4	Solid and liquid waste management	Resource use, environmental pollution, litter	Visual inspection: Waste prevention and recycling • Waste under control, stored, disposed of • No burning • Contaminated spoil segregated • Disposal sites approved
5	Machinery and equipment use and maintenance	Noise, soil pollution, water pollution	Check maintenance schedule Visual inspection: • Noise barriers • No idling • Pollution prevention method e.g. drip tray • Consultation with management
6	Construction materials transport, storage and use	Dust emissions, air quality	Visual inspection: • Trucks and stockpiles covered • Concrete batching location

No.	Construction activity	Environmental risks	Proposed Monitoring
			• Visible dust
7	Chemicals and fuels storage and use	Soil and water pollution, Occupational health and safety	Visual inspection: • Visible spills on ground • Storage and bunding • Labeling • Inspect Material Safety Data Sheets
8	Occupational health and safety	Human health	Check OHS Plan Visual inspection: • H&S engineer on site • Safety measures • PPE quality and use • Signage • Accident book • Water and sanitation
9	Emergency response	Human health – emergency operations	Check emergency response plan Ask workers on awareness
10	Training plan	Environmental risks, Occupational and Community Health and Safety	Check training plan Ask workers on awareness Evidence of training provision (e.g. photo)
11	COVID-19 prevention and response	Occupational and Community Health and Safety	Check COVID-19 plan Measures for prevention Measures for managing cases
12	Asbestos management	Occupational and Community Health and Safety	Check asbestos plan Inspect Asbestos survey before demolition
13	Community health and safety	Community Health and Safety	Visual Inspection: • Mud on roads • Warning signs • Use of barriers/lights • Accessibility for hospital vehicles • Traffic marshals • Speed limits
14	Rehabilitation and repair	Environmental pollution, health and safety	Visual Inspection: • Site condition • No waste, spoil • No contamination visible • Accidental damage repaired

4. **Monitoring of Key Performance Indicators (KPIs).** KPIs designed to check the environmental safeguards performance of the project are set out in Table 2. The indicators are primarily for the construction phase. They are not onerous and are commensurate with the environmental and social risks of the project. The PISC-EC will use these indicators to assess the project's environmental performance. The results of the indicators will be integrated into the annual safeguards reporting.

Table 2. Environmental key performance indicators

Area	Indicator	Monitoring/Reporting Frequency
Pre-Construction		

Area	Indicator	Monitoring/Reporting Frequency
Contractor approvals	1. Contractor obtained and maintains all necessary approvals, licenses, certificates.	Once before construction
Construction		
Environmental Performance	2. Number of EMP breaches identified during monitoring	Annual
Contractor Performance	3. Number of environmental and Health and Safety incidents or accidents reported by contractor	Annual
Training	4. Training and capacity building plan is followed	Annual
GRM	5. GRM is established and functioning	Annual
Environmental and social impact	6. Number of issues raised through GRM	Annual

5. **Reporting.** Table 3 gives reporting requirements. The report content will reflect the monitoring requirements set out in this EMP.

Table 3. Environmental reporting requirements

No.	Report	Frequency	Purpose	From	To
1	Contractors' Environment Health and Safety and EMP Progress Report	Monthly	EHS and EMP Progress	Contractor	PISC-EC CSTC-DSC
2	Site Visit Report on EMP Implementation and Consultation	Quarterly	Verify EMP implementation Confirm EMP and GRM are working (consultation and observation)	PISC-EC	PMU
4	Environmental Safeguards Monitoring Report	Annual	Full EMP Implementation and Adherence to Environmental Covenants/Conditions	PISC-EC, PMU	MOEYS/ADB

Appendix 3: Contractor's Environment, Health and Safety Progress Monitoring Report

Contract (*Insert Contract ref/number*)
Completed by *(Insert name of Contractor's Environmental Health and Safety Officer*)
Company name *(Insert name of Company)*

Reporting Frequency: Quarterly

Date of this report	DD-MM-YY	**Reporting Period**	MM/YY – MM/YY
Permits and licenses secured (e.g. construction permits, environmental licenses)	• Xxx • Xxx • Xxx • xxx		
Key construction activities since last report			
Planned construction activities in next reporting period			

Progress with EHS Activities this month	
Recruitment of construction workers Compliance with labor laws and regulations	• Total number of construction workers as of DD-MM-YY: Xxx women, xxx men; xxx% unskilled labor • Number of new recruitments in reporting period: xxx women, xxx men • We confirm the following: ☐ Adherence to the International Labor Organization (ILO) Core Labor Standards ☐ Compliance with Labor Code of Cambodia ☐ Compliance with xxx (replace with relevant law/code)
Trainings Undertaken *– all training related to EHS*	EHS Training Provided: (type, date) Nos. Participants: xxx women, xxx men Who provided the training:
Personal Protective Equipment	New construction PPEs issued this month: Number of incidents of workers not wearing adequate construction PPE:
COVID-19	Nos. positive cases this month:
Emergency Response	
Use of site accident Book	Accidents reported: Description and Actions taken: Outcome:
Spillages	Number of spills: Description and Actions taken: Impact of spill:
Other incidents	Number of incidents: Description and Actions taken: Impact of incident:

Concerns and Complaints	
	Number of complaints: Action taken for each complaint: Outstanding complaints:
Describe EMP Compliance Issues, Problems or Other issues PMU should be aware of	

Prepared by: **(Contractor)**

Verified by: (**CSTC-DSC)**

Appendix 4: List of Infrastructure projects that require an IESIA or ESIA

No.	Type and activities of the projects (Infrastructure)	Size / Capacity
1	Urbanization development	All sizes
2	Industrial zones	All sizes
3	Construction of bridge-roads	≥ 30 Tones weight
4	**Buildings Height**	**≥ 12 m or floor ≥ 8,000 m^2**
5	Restaurants	≥ 500 Seats
6	Hotels	≥ 60 Rooms
7	Hotel adjacent to coastal area	≥ 40 Rooms
8	National road construction	≥ 100 Kilometers
9	Railway construction	All sizes
10	Port construction	All sizes
11	Airport construction	All sizes
12	Dredging	≥ 50,000 m3
13	Dumping site	≥ 200,000 people

Source: Prakas No.21 on Classification of Development Project, February 2020.

Appendix 5A: Attendance Sheets for CSTC

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

ក្រសួងបរិស្ថាន
មន្ទីរបរិស្ថានរាជធានីភ្នំពេញ

បញ្ជីវត្តមាន

ស្តីពីកិច្ចប្រជុំពិភាក្សាជាសាធារណៈជាមួយ អង្គភាព ស្ថាប័ន និងមន្ទីរជំនាញពាក់ព័ន្ធ នៅរាជធានីភ្នំពេញ
លើគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) តាមរយៈប្រព័ន្ធតេឡេក្រាមពីចម្ងាយ
នៅថ្ងៃព្រហស្បតិ៍ទី ២៣ ខែ កញ្ញា ឆ្នាំ២០២១ វេលាម៉ោង ១៤:០០ រសៀល

ល.រ	នាមនិងគោត្តនាម	ភេទ	ឋានៈនិងតួនាទី	លេខទូរស័ព្ទ	ហត្ថលេខា
១	គាត រង្សី	ប	ប្រធានមន្ទីរបរិស្ថាន	០៩៣ ៦៦៦ ១៦៦	
២	កាន់ រតនៈឧឃ្ឈល	ស	ប្រធានមន្ទីរកិច្ចការនារី	០១២ ៨២៨ ៣៦៨	
៣	អ៊ិន អាស្នា	ប	នាយករងទីចាត់ការសំណង់ និងបរិស្ថាន	០៩២ ៨៨៤ ៧៧៤	
៤	ម៉ី ចិរ្ត្រា	ប	អនុប្រធានមន្ទីរ រៀបចំដែនដី នគរូបនីយកម្ម សំណង់ និងសុរិយោដី	០១២ ៨១៨ ៦១០	
៥	ជូ គីមច្រឺ	ប	អនុប្រធានមន្ទីរ សាធារណការ និងដឹកជញ្ជូន	០១២ ៨៩១ ០៥៦	
៦	ពិន ផាន់នី	ប	អនុប្រធានមន្ទីរ កសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ	០១២ ៦៦៣ ៦០១	
៧	អ៊ុំ សៅលី	ស	អនុប្រធានមន្ទីរ ការងារបណ្តុះបណ្តាលនិងវិជ្ជាជីវៈ	០១២ ៦៨៦ ១៦៦	
៨	ជា អនុជិត	ប	អនុប្រធានមន្ទីរ ធនធានទឹក និងឧតុនិយម	០៩៥ ៧៧០ ១១១	
៩	អាន សិហា	ប	អនុប្រធានមន្ទីរ ទេសចរណ៍	០១៥ ៩៤៨ ៨៤៤	
១០	គង់ ថូ	ប	នាយរងការិ. បង្ការពន្លត់អគ្គីភ័យ និងសង្គ្រោះ	០១៧ ៧៩៩ ០៩០	
១១	រ៉ុង រិណា	ស	តំណាងវេជ្ជបាលខណ្ឌជ្រោយចង្វារ	០១២ ៦៥៥ ៦៣៨	
១២	សាំង សុផល	ប	តំណាងមន្ទីរ អប់រំ យុវជន និងកីឡា	០១៧ ៩៦៦ ២៨៨	
១៣	សាត ម៉ែងស្រ៊ុន	ប	មន្ត្រីរ ផែនការ	០១២ ៩៩០ ៧៣៣	
១៤	ទេស ទារិទ្ធ	ប	ប្រធានការិ.EIA	០១៦ ៩៨៧ ៨៦៥	
១៥	ខឹម ណារ៉ា	ប	ប្រធានការិ.គ្រប់គ្រងសំណល់រឹង	០១២ ២៥៩ ៩០៧	

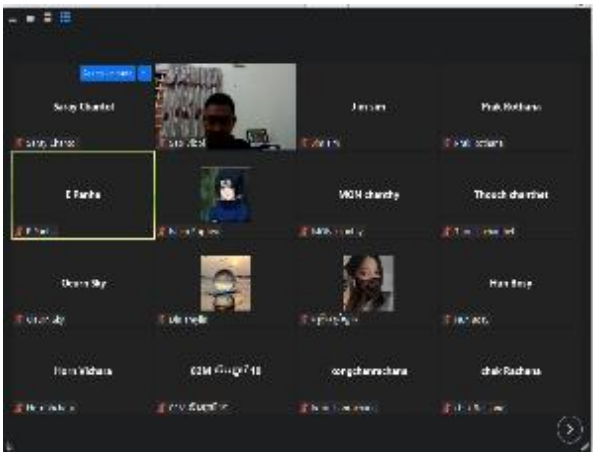
១៦	ឃុយ គុយនី	ប	ប្រធានការិ.ត្រួតពិនិត្យការបំពុល	០១៧ ៦៩៩ ០០៧	
១៧	ឌី ពុទ្ធារ័ត្ន	ប	ប្រធានការិ.គ្រប់គ្រងគុណភាពទឹក	០១៧ ៥៥៩ ៥១៥	
១៨	ជា សេង	ប	ប្រធានការិ.ការពារនិងអភិក្បៃធម្មជាតិ	០៨៩ ៩៨១ ៩៩៨	
១៩	ធីយ សំណាង	ប	អនុប្រធានការិ. EIA	០៩៩ ៩១១ ០០៦	
២០	គង់ ឌីណា	ប	ក្រសួងអប់រំ យុវជន និងកីឡា		
២១	អោ ប៊ុនស្រ៊ុន	ប	ក្រសួងអប់រំ យុវជន និងកីឡា		
២២	ស៊ូ បុទុម	ស	ក្រសួងអប់រំ យុវជន និងកីឡា	០១២ ៥៣៥ ៧៣១	
២៣	ជា សុភាព	ប	ក្រសួងអប់រំ យុវជន និងកីឡា	០១៧ ៦៤៩ ៩៦៧	
២៤	ម៉េង ថុនា	ប	ក្រសួងអប់រំ យុវជន និងកីឡា		
២៥	ឆេង ចាន់ណារី	ស	ក្រសួងអប់រំ យុវជន និងកីឡា		
២៦	ងួនផន កក្តី	ប	សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ		
២៧	ប្រ៊ុក ណាវិទ្ធ	ប	វិទ្យាស្ថានបច្ចកវិទ្យាកម្ពុជា		
២៨	ហាន រិះ	ប	វិទ្យាស្ថានបច្ចកវិទ្យាកម្ពុជា	០១៧ ៧៤៤ ៤២៧	
២៩	ប៉ូ គីមថូ	ប	វិទ្យាស្ថានបច្ចកវិទ្យាកម្ពុជា		
៣០	ហម គីមគង់	ប	ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន	០១២ ៤០៦ ៧១៦	
៣១	សៅ ឈុល	ប	ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន	០១២ ៦២៦ ០០៦	
៣២	ជី ស៊ីមលីន	ស	ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន	០៩៣ ៤៤៨ ៧៩៧	

Appendix 5B: Photo documentation of the consultation meetings (CSTC)

Consultation with Sangkat Preak Ta Sek

Consultation with Preak Ta Roth village

Consultation with Bak Khaeng village



Online consultation with students

Consultation with vendors along Win-Win street

Appendix 5C: Minutes of the Public Conultation Meeting (CSTC)

ព្រះរាជាណាចក្រកម្ពុជា

ជាតិ សាសនា ព្រះមហាក្សត្រ

កំណត់ហេតុ អង្គប្រជុំ ស្តីពី កិច្ចពិគ្រោះយោបល់ជាសាធារណៈ ជាមួយ មន្ទីរបរិស្ថានរាជធានីភ្នំពេញ លើគម្រោង កែលម្អការអប់រំឧត្តមសិក្សា របស់ក្រសួង អប់រំ យុវជន និងកីឡា

កាលបរិច្ឆេទ ៖ ថ្ងៃ ព្រហស្បតិ៍ ទី ២៣ ខែ កញ្ញា ឆ្នាំ ២០២១ វេលាម៉ោង ១៤:០០ រសៀល
ទីកន្លែង ៖ មន្ទីរបរិស្ថានរាជធានីភ្នំពេញ
សមាសភាពចូលរួម ៖ មន្ទីរ អង្គភាព ជំនាញ អាជ្ញាធរមូលដ្ឋាន និងការិយាល័យជំនាញ នៃមន្ទីរបរិស្ថាន រាជធានីភ្នំពេញ និងតំណាង ក្រុមហ៊ុន ទីប្រឹក្សា អ៊ី & អេ ខនសាល់ធេន ។

នៅវេលារសៀល ថ្ងៃព្រហស្បតិ៍ ២រោច ខែ កទ្របទ ឆ្នាំ ឆ្លូវ ត្រីស័ក ពុទ្ធសករាជ ២៥៦៥ ត្រូវនឹងថ្ងៃទី ២៣ ខែ កញ្ញា ឆ្នាំ២០២១ នៅមន្ទីរបរិស្ថាន រាជធានីភ្នំពេញ មានរៀបចំកិច្ចប្រជុំពិគ្រោះយោបល់ជាសាធារណៈជាមួយ មន្ទីរ អង្គភាព ជំនាញ អាជ្ញាធរមូលដ្ឋាន និងតំណាង ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន ព្រមទាំង ការិយាល័យជំនាញ នៃមន្ទីរបរិស្ថាន រាជធានីភ្នំពេញ ដើម្បីបំពេញបន្ថែមនូវខ្លឹមសារ ការចូលរួមយោបល់ ពីតំណាង ការិយាល័យជំនាញពាក់ព័ន្ធ របស់តំណាង មន្ទីរ អង្គភាព ជំនាញ អាជ្ញាធរមូលដ្ឋាន និងមន្ទីរបរិស្ថាន រាជធានីភ្នំពេញ ទៅលើការរៀបចំរបាយការណ៍ វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន និងសង្គម សម្រាប់គម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) របស់ ក្រសួងអប់រំ យុវជន និងកីឡា ដែលមានទីតាំងស្ថិតនៅក្នុងតំបន់អភិវឌ្ឍន៍ លី យ៉ុងផាត់ ភូមិ ព្រែកតាវ័ត្ត សង្កាត់ ព្រែកតាសេក ខណ្ឌ ជ្រោយចង្វារ រាជធានីភ្នំពេញ លើផ្ទៃដីចំហំ ១០ ហិចតា ចែកចេញជា ០២ គឺ សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ និងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា ។
សមាសភាពអ្នកចូលរួមនៅក្នុងអង្គប្រជុំរួមមាន៖

ក) មន្ទីរ ស្ថាប័ន អង្គភាព និងអាជ្ញាធរ ពាក់ព័ន្ធ នៅរាជធានីភ្នំពេញ

១.លោក	គាត រង្សី	ប្រធានមន្ទីរបរិស្ថាន និងជាអង្គប្រជុំ
២.លោកស្រី	កាន់ រតនៈឧប្បល	ប្រធានមន្ទីរ កិច្ចការនារី រាជធានីភ្នំពេញ
៣.លោក	អ៊ិន អាស្នា	នាយករងទីចាត់ការគ្រប់គ្រងសំណល់ និងបរិស្ថាន
៤.លោក	ម៉ី ចិត្ត្រា	អនុប្រធានមន្ទីរ រៀបចំដែនដី នគរូបនីយកម្ម សំណង់ និង សុរិយោដី រាជធានីភ្នំពេញ
៥.លោក	ជូ គីមទ្រី	អនុប្រធានមន្ទីរ សាធារណការ និង ដឹកជញ្ជូន រាជធានី
៦.លោកស្រី	អ៊ុំ សៅលី	អនុប្រធានមន្ទីរ ការងារនិងបណ្តុះបណ្តាលវិជ្ជាជីវៈ រាជធានី
៧.លោក	អាន សីហា	អនុប្រធានមន្ទីរ ទេសចរណ៍ រាជធានីភ្នំពេញ
៨.លោក	ពិន ផាន់នី	អនុប្រធានមន្ទីរកសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ រាជធានី
៩.លោក	ជា អនុជិត	អនុប្រធានមន្ទីរ ធនធានទឹក និង ឧតុនិយម រាជធានីភ្នំពេញ
១០.លោក	គង់ ថុ	នាយរង ការិយាល័យ នគរបាល បង្ការ ពន្លត់ អគ្គីភ័យ និង សង្គ្រោះ ស្នងការនគរបាល រាជធានីភ្នំពេញ

១១.លោក	សាំងសុផល	តំណាង មន្ទីរអប់រំ យុវជន និងកីឡា រាជធានីភ្នំពេញ
១២.លោកស្រី	រ៉ុង រីណា	តំណាង រដ្ឋបាលខណ្ឌ ជ្រោយចង្វារ
១៣.លោក	សាត ម៉េងស្រ៊ុន	ប្រធានការិយាល័យ មន្ទីរ ផែនការ រាជធានីភ្នំពេញ
១៤.លោក	ទេស នរារិទ្ធ	ប្រធានការិយាល័យ វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន
១៥.លោក	ខឹម ណារ៉ា	ប្រធានការិយាល័យ គ្រប់គ្រងសំណល់រឹង មន្ទីរបរិស្ថាន
១៦.លោក	ឌី ពុទ្ធារ័ត្ន	ប្រធានការិយាល័យ គ្រប់គ្រងគុណភាពទឹក មន្ទីរបរិស្ថាន
១៧.លោក	ឃុយ គុយនី	ប្រធានការិយាល័យ ត្រួតពិនិត្យការបំពុលបរិស្ថាន
១៨.លោក	ជា សេង	ប្រធានការិយាល័យ ការពារ និងអភិរក្សធម្មជាតិ
១៩.លោក	ឆឺយ សំណាង	អនុប្រធានការិយាល័យ វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន

ខ) ក្រុមហ៊ុនសិក្សាគម្រោង (ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន)

១.លោក	ហម គីមគង់	នាយក ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន
២.លោក	សៅ វិបុល	ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន
៣.លោកស្រី	ធី ស៊ីមលីន	ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន

គ) តំណាងម្ចាស់គម្រោង ក្រសួង អប់រំ យុវជន និងកីឡា

១.លោក	គង់ ឌីណា	ក្រសួង អប់រំ យុវជន និងកីឡា
២.លោក	អោ ប៊ុនស្រ៊ុន	ក្រសួង អប់រំ យុវជន និងកីឡា
៣.លោកស្រី	ស៊ូ បុទុម	ក្រសួង អប់រំ យុវជន និងកីឡា
៤.លោកស្រី	ឆេង ចាន់ណារី	ក្រសួង អប់រំ យុវជន និងកីឡា
៥.លោក	ជា សុភាព	ក្រសួង អប់រំ យុវជន និងកីឡា
៦.លោក	ម៉េង ថុនា	ក្រសួង អប់រំ យុវជន និងកីឡា
៧.លោក	ងួនផន ភក្តី	សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ
៨.លោក	ប្រ៊ុក ណារិទ្ធ	វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា
៩.លោក	ហាន រ៉ៃ:	វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា
១០.លោក	ប៉ូ គីមថូ	វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា

របៀបវារៈនៃកិច្ចប្រជុំ រួមមាន៖

- ចំណាប់អារម្មណ៍ នៃកិច្ចប្រជុំពិគ្រោះយោបល់ ជាសាធារណៈ ដោយ **លោក គាត រង្សី** ប្រធានមន្ទីរបរិស្ថានរាជធានីភ្នំពេញ មានមតិយោបល់ស្នើសុំឱ្យ លោក លោកស្រី តំណាង មន្ទីរជំនាញ ស្ថាប័ន អង្គភាព អាជ្ញាធរ និងការិយាល័យជំនាញពាក់ព័ន្ធស្តាប់នូវខ្លឹមសារនៃការធ្វើបទបង្ហាញរបស់តំណាងក្រុមហ៊ុន ទីប្រឹក្សាសិក្សាគម្រោង និងការបញ្ចេញមតិយោបល់ ព្រមទាំងសំណូមពរ នានា ដែលមានការពាក់ព័ន្ធ ទៅនឹងគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) របស់ ក្រសួង អប់រំ យុវជន និង កីឡា នេះ។
- ការធ្វើបទបង្ហាញពីលទ្ធផលសិក្សាបឋម និងការរៀបចំរបាយការណ៍វាយតម្លៃ ហេតុប៉ះពាល់បរិស្ថាន និងសង្គមសម្រាប់គម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) របស់ ក្រសួងអប់រំ យុវជន និងកីឡា ដែលសិក្សាគម្រោងដោយ ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន តាមរយៈប្រព័ន្ធផ្សព្វផ្សាយសង្គម ក្រុមតេឡេក្រាម (Telegram Group) របស់មន្ទីរបរិស្ថានរាជធានីភ្នំពេញ។

ក.<u>សេចក្តីផ្តើម</u>

កិច្ចប្រជុំបានប្រារព្ធធ្វើឡើង នារសៀលថ្ងៃ ព្រហស្បតិ៍ ទី ២៣ ខែ កញ្ញា ឆ្នាំ២០២១ នៅមន្ទីរបរិស្ថាន រាជធានីភ្នំពេញ ដែលមានវត្តមាន **លោក គាត រង្សី** ប្រធានមន្ទីរបរិស្ថាន រាជធានីភ្នំពេញ ជាប្រធានដឹកនាំនៃកិច្ចប្រជុំ ព្រមទាំងលោក លោកស្រី តំណាង មន្ទីរ ស្ថាប័ន ជំនាញ អង្គភាព អាជ្ញាធរ និង ការិយាល័យជំនាញ នៃមន្ទីរបរិស្ថានរាជធានីភ្នំពេញ ពាក់ព័ន្ធ ព្រមទាំង **លោកស្រី ស៊ូ បុទុម** តំណាងក្រសួង អប់រំ យុវជន និងកីឡា លោក ងួនផន កក្តី តំណាងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ លោក ប្រ៊ុក ណាវិទ្ធ តំណាង វិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា(តំណាងម្ចាស់គម្រោង ចំនួន ១០នាក់) និង ក្រុមការងារនៃ ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន ចំនួន ០៣ នាក់ សរុបចំនួន ៣២នាក់ (ស្រី០៥ នាក់) ស្តីពីរបាយការណ៍វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន និងសង្គម លើគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) របស់ ក្រសួងអប់រំ យុវជន និងកីឡា ដែលមានទីតាំងស្ថិតនៅ តំបន់អភិវឌ្ឍន៍ លី យ៉ុងផាត់ ភូមិ ព្រែកតាវ័ត្ន សង្កាត់ ព្រែកតាសេក ខណ្ឌ ជ្រោយចង្វារ រាជធានីភ្នំពេញ លើផ្ទៃដីទំហំ១០ ហិចតា ចែកចេញជា០២ គឺ សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ និងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា

ខ.គោលបំណងនៃកិច្ចប្រជុំ

- បង្ហាញពីវិធីសាស្ត្រ និងលទ្ធផលសិក្សាបឋម សម្រាប់រៀបចំរបាយការណ៍វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន និងសង្គម លើគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) របស់ ក្រសួងអប់រំ យុវជន និងកីឡា។
- ប្រមូលផ្តុំនូវមតិយោបល់ ក្តីបារម្ភឬបញ្ហាប្រឈមនិងអនុសាសន៍នានាទាក់ទងទៅនឹងគម្រោងលើគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) របស់ ក្រសួងអប់រំ យុវជន និងកីឡា ។
- ប្រជុំពិភាក្សា រកដំណោះស្រាយនានា ដើម្បីឆ្លើយតបទៅនឹងស្ថានភាពជាក់ស្តែង ក្នុងតំបន់គម្រោង និងសំណូមពរផ្សេងៗទាក់ទង នឹងសកម្មភាពរបស់គម្រោង។

គ.<u>លទ្ធផលនៃកិច្ចប្រជុំ</u>

ក្រុមហ៊ុនទីប្រឹក្សាសិក្សាគម្រោង (តំណាង ក្រុមហ៊ុន អ៊ី & អេ ខនសាល់ធេន) បានធ្វើបទបង្ហាញពីវិធីសាស្ត្រនិងលទ្ធផលនៃការសិក្សា វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន និងសង្គម លើគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) នេះរួចមកអង្គប្រជុំបានចាប់ផ្តើមពិភាក្សា និងតម្រូវឱ្យលោក លោកស្រី តំណាងមន្ទីរ ស្ថាប័ន អង្គភាពជំនាញ អាជ្ញាធរពាក់ព័ន្ធ និងការិយាល័យជំនាញ របស់មន្ទីរបរិស្ថាន ផ្តល់ជាមតិយោបល់ ក្តីបារម្ភ សំណូមពរ និងអនុសាសន៍នានាទាក់ទងទៅនឹងគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) នេះ។
ជាលទ្ធផលនៃកិច្ចប្រជុំពិភាក្សានេះត្រូវបានបង្ហាញជាសង្ខេបដូចខាងក្រោម៖

១.មតិ លោកស្រី អ៊ុំ សៅលី អនុប្រធានមន្ទីរ ការងារ និងបណ្តុះបណ្តាលវិជ្ជាជីវៈ រាជធានីភ្នំពេញ

- សូម គាំទ្រចំពោះគម្រោង ១០០% ដោយគម្រោងមួយនេះ បានបង្កើតឱកាសការងារ ជូនបងប្អូនកម្មករ និយោជិត និងបង្កើតឱ្យមានប្រាក់ចំណូលជូនគ្រួសារនៅក្នុងបរិបទនៃជម្ងឺកូវីដ១៩ នេះ។
- សំណូមពរ
- ចំណុចក្របខណ្ឌច្បាប់សូមដាក់បន្ថែមច្បាប់ស្តីពីរបបសន្តិសុខសង្គម។

២.មតិ លោក អាន សីហា អនុប្រធានមន្ទីរ ទេសចរណ៍ រាជធានីភ្នំពេញ

- សូមគាំទ្រ និងអបអរសាទរ វត្តមានគម្រោងស្ថិតក្នុងតំបន់អភិវឌ្ឍន៍ថ្មី មានសក្តានុពល ពិសេសហេដ្ឋារចនាសម្ព័ន្ធសំខាន់ៗ ដែលនឹងជួយផ្តល់នូវសោភ័ណភាព ភាពទាក់ទាញ និង ជម្រុញសកម្មភាពសេដ្ឋកិច្ច ពាណិជ្ជកម្ម និងទេសចរណ៍ អោយបានកាន់តែរីកចម្រើន លូតលាស់ប្រកបដោយនិរន្តរភាព ។

- សូមឱ្យម្ចាស់គម្រោងបន្តកិច្ចសហការល្អជាមួយអាជ្ញាធរជំនាញពាក់ព័ន្ធជាពិសេសអាជ្ញាធរមូលដ្ឋាន ដើម្បីធានាការកាត់បន្ថយនូវផលប៉ះពាល់អវិជ្ជមាននានាដល់សាធារណជន និងអ្នកទេសចរក្នុងអំឡុងពេលសាងសង់ ។
- ដំណាក់កាលអនុវត្តគម្រោង សូមម្ចាស់គម្រោងចូលរួមក្នុងការអនុវត្តតាមស្មារតីទីក្រុងស្អាត តាមរយៈការសហការជាមួយមូលដ្ឋាន ក្នុងការលើកកម្ពស់ គុណភាពបរិស្ថាន សោភ័ណភាព និងសុខុមាលភាពរបស់ប្រជាជនក្នុងតំបន់ ។

តំ លោក ជូ គីមច្រឺ អនុប្រធានមន្ទីរ សាធារណការ និងដឹកជញ្ជូន រាជធានីភ្នំពេញ

- សូម ចូលរួមគាំទ្រចំពោះគម្រោងកែលម្អការអប់រំឧត្តមសិក្សារបស់ក្រសួងអប់រំ យុវជន និង កីឡា ដែលបានចូលរួមចំណែកក្នុងការអភិវឌ្ឍធនធានមនុស្សសម្រាប់ការអភិវឌ្ឍរាជធានីភ្នំពេញ។ ទន្ទឹមនឹងការអភិវឌ្ឍនេះ ខ្ញុំសូមចូលរួមមតិយោបល់មួយចំនួនសម្រាប់ការវាយតម្លៃផលប៉ះពាល់បរិស្ថាន និងសង្គមដូចខាងក្រោម:

  ១-ដំណាក់កាលសាងសង់ក្រុមហ៊ុនត្រូវចូលរួមអនុវត្តនូវការងារចាំបាច់មួយចំនួនដូចជា:
  - រៀចំប្រព័ន្ធបង្ហូរទឹក ទាំងនៅក្នុងបរិវេណ និងជុំវិញបរិវេណឱ្យបានត្រឹមត្រូវ និងត្រូវដោះស្រាយការបង្ហូរចេញឱ្យបានសមស្របតាមលក្ខណៈបច្ចេកទេស។
  - ចំពោះបន្ទប់ទឹកបង្គន់អនាម័យត្រូវសាងសង់អាងស៊ិបទិចឱ្យបានត្រឹមត្រូវតាមបទដ្ឋានបច្ចេកទេសមុននឹងបង្ហូរចូលលូសាធារណៈ។
  - ការដឹកជញ្ជូនសម្ភារសំណង់ មិនត្រូវដឹកលើសទម្ងន់កម្រិតកំណត់ គ្របឱ្យបានត្រឹមត្រូវ និងលាងសំអាតកង់រថយន្តចេញ-ចូលការដ្ឋានផងដែរ។
  - ត្រូវគោរពពេលវេលាចេញ-ចូលក្នុងរាជធានីភ្នំពេញទៅតាមការណែនាំរបស់រដ្ឋបាលរាជធានីភ្នំពេញចំពោះរថយន្តធុនធ្ងន់ និងមិនត្រូវដឹកលើសទម្ងន់កម្រិតកំណត់ដែលបណ្តាលឱ្យខូច ឬប្រេះស្រុតផ្លូវសាធារណៈ។
  - មិនត្រូវចោលកាកសំណល់សំណង់នៅតាមចិញ្ចើមផ្លូវ ក៏ដូចជាការលក់ដូរលើចិញ្ចើមផ្លូវ។
  - ត្រូវមានសន្តិសុខជួយសម្រួលចរាចរនៅច្រកចេញ-ចូលការដ្ឋាន។

  ២-ដំណាក់កាលប្រតិបត្តិការក្រុមហ៊ុនត្រូវអនុវត្តដូចជា:
  - រៀចំប្រព័ន្ធបង្ហូរទឹក ទាំងក្នុងបរិវេណឱ្យបានត្រឹមត្រូវ និងត្រូវដោះស្រាយការបង្ហូរចេញឱ្យបានសមស្របតាមលក្ខណៈបច្ចេកទេស ដោយឆ្លងយោបល់បច្ចេកទេសពីមន្ទីរសាធារណការ
  - ត្រូវសាងសង់អាងប្រព្រឹត្តិកម្មឱ្យបានត្រឹមត្រូវតាមបទដ្ឋានបច្ចេកទេសមុននឹងបង្ហូរចូលលូសាធារណៈ។
  - មិនត្រូវចោលកាកសំណល់នៅតាមចិញ្ចើមផ្លូវ ក៏ដូចជាការលក់ដូរលើចិញ្ចើមផ្លូវ។
  - ត្រូវមានសន្តិសុខជួយសម្រួលចរាចរនៅច្រកចេញ-ចូល។
  - ត្រូវជួយជូសជុលផ្លូវច្រកចេញចូលក្នុងករណីមានការប្រេះស្រុតដោយការដឹកជញ្ជូនពេលសាងសង់អគារ។
  - ត្រូវរៀបចំនូវចំណតរថយន្តនៅក្នុងបរិវេណអគារឱ្យបានគ្រប់គ្រាន់និងត្រូវរៀបចំប្រព័ន្ធចរាចរណ៍នៅច្រកចេញ-ចូល អគារឱ្យបានត្រឹមត្រូវ។

៤.មតិ លោក អ៊ិន អាស្មា នាយករងទីចាត់ការគ្រប់គ្រងសំណល់និងបរិស្ថាន នៃរដ្ឋបាលរាជធានីភ្នំពេញ

- សូមគាំទ្រគម្រោង១០០%
- ស្នើសុំឱ្យក្រុមហ៊ុនសាងសង់គោរពទៅតាមលិខិតអនុញ្ញាតសាងសង់របស់ក្រសួងរៀបចំដែនដីនគរូបនីយកម្ម និងសំណង់
- ដំណាក់កាលសាងសង់ត្រូវធ្វើការហ៊ឺព័ទ្ធការដ្ឋាន
- ត្រូវរៀបចំឱ្យមានរោងស្នាក់នៅរបស់កម្មករឱ្យបានសមរម្យ
- ត្រូវលាងកង់រថយន្តនៅពេលចេញ-ចូលការដ្ឋានម្តងៗ
- ការសាងសង់ត្រូវគោរពតាមម៉ោងពេលវេលាដែលច្បាប់កំណត់
- ត្រូវដាក់ស្លាកសញ្ញានិងភ្លើងបំភ្លឺការដ្ឋាន
- ត្រូវមានទីតាំងទុកដាក់សំរាមសំណល់រឹងឱ្យបានត្រឹមត្រូវ
- ត្រូវយកចិត្តទុកដាក់ទៅលើបញ្ហាសំណល់រាវ មុនបង្ហូរចូលលូសាធារណៈ
- ត្រូវយកចិត្តទុកដាក់ទៅលើបញ្ហាសំឡេងរំខាន និងធូលីហ៊ុយ
- ត្រូវរៀបចំឱ្យមានទីតាំងទុកដាក់គ្រឿងចក្រ
- ស្នើសុំឱ្យមានកិច្ចសហការល្អជាមួយអាជ្ញាធរមូលដ្ឋាន។

៥.មតិ លោក ពិន ផាន់នី អនុប្រធានមន្ទីរ កសិកម្ម រុក្ខាប្រមាញ់ និងនេសាទ រាជធានីភ្នំពេញ

- សូមគាំទ្រទាំងស្រុងចំពោះគម្រោងកែលម្អការអប់រំឧត្តមសិក្សារបស់ក្រសួងអប់រំយុវជន និងកីឡា ក្នុងការរៀបចំគម្រោងសាងសង់សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ និងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជាលើទំហំផ្ទៃដីសរុប ១០ហិចតា ដែលមានទីតាំងស្ថិតនៅតំបន់អភិវឌ្ឍន៍ លី យ៉ុងផាត់ ភូមិ ព្រែកតាវ័ត្ត សង្កាត់ ព្រែកតាសេក ខណ្ឌ ជ្រោយចង្វារ រាជធានីភ្នំពេញ។ ព្រោះគម្រោងនេះមានការរៀបចំផែនការអនុវត្តបានល្អ ដោយមានការសិក្សាអំពីហេតុប៉ះពាល់បរិស្ថាន និងសង្គមបានជាក់លាក់។ ទីតាំងសាងសង់ធំទូលាយ ដែលអាចបង្កើតផ្ទៃបៃតង សម្រាប់ទ្រទ្រង់ដល់សុខុមាលភាពនិស្សិត ក៏ដូចជាប្រជាពលរដ្ឋក្នុងតំបន់ផងដែរ។ ការអនុវត្តគម្រោងបានផ្តល់នូវឱកាសការងារដល់ប្រជាពលរដ្ឋមួយចំនួនមានការងារធ្វើ ជាបុគ្គលិក កម្មករ ក៏ដូចជាសិស្សនិស្សិត ជាពិសេសគម្រោងនេះបានរៀបចំឱ្យមានអន្តោវាសិកដ្ឋានសម្រាប់និស្សិតស្នាក់នៅ ដែលនិស្សិតនៅតាមបណ្តាខេត្តនានាមានការសិក្សាល្អតែខ្វះខាតដីវាលអាចមានលទ្ធភាពមកបន្តការសិក្សាដើម្បីបំពេញក្តីស្រមៃបាន។
- តាមរយៈបទបង្ហាញពិនិត្យឃើញថានៅទីតាំងគម្រោងសាងសង់សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ ក៏ដូចជាវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជាដែរ គឺមានទីតាំងសម្រាប់រៀបចំលំហបៃតង។ ប៉ុន្តែនៅផ្នែកខាងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជាឃើញថាមានគម្រោងដាំដើមឈើច្រើន (ជុំវិញរបង តាមដងផ្លូវក្នុងបរិវេណវិទ្យាស្ថាន ជុំវិញទីតាំងចំណតរថយន្ត និងទីតាំងផ្សេងៗទៀត) បានបង្កើតជាគម្របផ្ទៃបៃតងស្រស់បំព្រង ដែលផ្តល់នូវបរិយាកាសដ៏ល្អប្រសើរសម្រាប់ជីវិតមនុស្ស សត្វ។ រីឯផ្នែកខាងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ ឃើញមានតែសួនច្បារនៅចំកណ្តាលតែប៉ុណ្ណោះ។
- ជាសំណូមពរ
- សូមឱ្យគម្រោងសាងសង់សាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ រៀបចំផែនការដាំដើមឈើបន្ថែមឱ្យបានច្រើនតាមដែលអាចធ្វើបាន។ ជាមួយគ្នានេះ ដោយទីតាំងគម្រោងផ្នែកវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា និងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញដែរ គឺមានផ្ទៃដីធំទូលាយ (៥ហិចតាដូចគ្នា) ប្រសិនបើអាចធ្វើ

បានគួរមានរៀបចំទីតាំងសម្រាប់ធ្វើសួនបន្លែនៅលើទីតាំងទាំងពីរផ្នែក ដើម្បីបញ្ជាបចំណេះដឹងដែលទាក់ទងទៅ និងដីវាលស៊ីនៅប្រចាំថ្ងៃដល់សិស្សនិស្សិត ដែលអាចប្រើប្រាស់ជាប្រយោជន៍សម្រាប់ពួកគេទៅអនាគត។

- ដើម្បីកាត់បន្ថយផលប៉ះពាល់បរិស្ថាន និងសង្គម ឱ្យបានជាអតិបរមា ជៀសផុតពីទំនាស់ផ្សេងៗដែលអាចកើតមានឡើងជាយថាហេតុ សូមឱ្យម្ចាស់គម្រោងអនុវត្តឱ្យបានត្រឹមត្រូវ តាមផែនការដែលបានរៀបចំស្របតាមបទដ្ឋានបច្ចេកទេស និងគោលការណ៍ច្បាប់ជាធរមាន។

៦.មតិ លោក ម៉ី ចិត្រ្តា អនុប្រធានមន្ទីរ រៀបចំដែនដី នគរូបនីយកម្ម សំណង់ និងសុរិយោដី

- សូមគាំទ្រនូវគម្រោងនេះ ដោយសំណូមពរឱ្យក្រុមហ៊ុនសាងសង់គោរពទៅតាមលិខិតអនុញ្ញាតសាងសង់របស់ក្រសួងរៀបចំដែនដី នគរូបនីយកម្ម និងសំណង់។

៧.មតិ លោកស្រី រ៉ុង រីណា ប្រធានការិយាល័យ ស ជ អ ប ស ខណ្ឌ ជ្រោយចង្វារ

- សូមគាំទ្រគម្រោង
- ប្រសិនបើពេលអនុវត្តគម្រោងមានអគារស្នាក់នៅរបស់កម្មករ សូមមេត្តាពិនិត្យលើប្រព័ន្ធបង្ហូរទឹកកខ្វក់ឱ្យបានត្រឹមត្រូវ និងទីតាំងទុកដាក់សំណល់រឹងសំរាមឱ្យបានត្រឹមត្រូវ។

៨.មតិ លោក ធីយ សំណាង អនុប្រធានការិយាល័យ វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន នៃមន្ទីរបរិស្ថាន

- សូមគាំទ្រគម្រោងសាងសង់អគារសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ និងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា ព្រោះគម្រោងនេះបានជម្រុញអោយវិស័យអប់រំ ក៏ដូចជាការបង្កើននូវធនធានមនុស្ស ចំណេះដឹងនៅកម្ពុជាមានការរីកចំរើនជាពិសេសនៅរាជធានីភ្នំពេញផ្ទាល់តែម្តង។
- សំណូមពរទៅកាន់ ម្ចាស់ឬ តំណាងក្រុមហ៊ុន
- ចំពោះបញ្ហាការបំពុលខ្យល់ក្នុងដំណាក់កាលសាងសង់ត្រូវយកចិត្តទុកដាក់ឱ្យបានខ្ពស់លើសកម្មភាពការដឹកជញ្ជូនសម្ភារសំណង់ផ្សេងៗចេញ-ចូល ត្រូវទុកដាក់ និងគ្របឱ្យបានជិត ហើយត្រូវគោរពឱ្យស្របទៅតាមស្តង់ដារបទដ្ឋានច្បាប់ ។
- បញ្ហាកម្រិតសំឡេង និងរំញ័រ ក្នុងដំណាក់កាលសាងសង់ ខាងក្រុមហ៊ុនត្រូវយកចិត្តទុកដាក់ឱ្យបានខ្ពស់ទៅលើដំណើរការគ្រឿងម៉ាស៊ីនផ្សេងៗក្នុងការសាងសង់ឬការប្រើប្រាស់មធ្យោបាយផ្សេងក្នុងសកម្មភាពប្រតិបត្តិគម្រោងនិងត្រូវគោរពទៅតាមស្តង់ដារបទដ្ឋានច្បាប់ ។
- ចំពោះបញ្ហាការគ្រប់គ្រងសំណល់រាវ (អាងប្រព្រឹត្តកម្ម) ត្រូវបង្កើនការយកចិត្តទុកដាក់ឱ្យបានខ្ពស់ក្នុងការគ្រប់គ្រង និងប្រើប្រាស់ទាំងក្នុងដំណាក់កាលសាងសង់ និងដំណាក់កាលប្រតិបត្តិ ឱ្យស្របទៅតាមស្តង់ដារបទដ្ឋានបច្ចេកទេសឱ្យបានត្រឹមត្រូវ។
- ត្រូវណែនាំបុគ្គលិក-កម្មករ ឱ្យចេះទុកដាក់ វេចខ្ចប់ និងញែកសំណល់ផ្សេងៗ ឬសំណល់ផ្ទះបាយឱ្យបានត្រឹមត្រូវ។ ពាល់ក្រុមហ៊ុន ដែលមកប្រមូលដឹកយកត្រូវមានអាជ្ញាប័ណ្ណត្រឹមត្រូវនិងទទួលស្គាល់ដោយស្ថាប័នពាក់ព័ន្ធ ។
- ត្រូវរៀបចំឱ្យមានធុងដាក់សំរាមជាពីរប្រភេទ (សើម និងស្ងួត) តាមទីកន្លែងសមស្របក្នុងទីបរិវេណគឺ ធុងនីមួយៗត្រូវមានបិទរូបសញ្ញា ឬអក្សរសម្គាល់ឱ្យបានច្បាស់លាស់ ។
- ត្រូវណែនាំបុគ្គលិក-កម្មករ ឱ្យយកចិត្តទុកដាក់ឱ្យបានខ្ពស់លើសុវត្ថិភាពការងារ និងអនាម័យក្នុងការរស់នៅ។

- ច្រកចេញ-ចូល ឬនៅក្នុងការដ្ឋានត្រូវដាក់ស្លាកសញ្ញាដែលពាក់ព័ន្ធដើម្បីឱ្យកម្មករ ឬអ្នកធ្វើដំណើរឆ្លងកាត់មានការប្រុងប្រយ័ត្ន។
- ត្រូវបង្កើនផ្ទៃបៃតង និងដាំដើមឈើឱ្យបានច្រើន ។
- គួរបន្ថែម ឬប្រើប្រាស់ថាមពលពន្លឺព្រះអាទិត្យ(Solar) នៅក្នុងទីតាំងរបស់ខ្លួនដើម្បីចូលរួមចំណែកយ៉ាងសំខាន់ក្នុងកិច្ចគាំពារបរិស្ថានដែលផ្តោតសំខាន់លើការប្រើប្រាស់ថាមពលកកើតឡើងវិញ ។

ទ.មតិ លោក ខឹម ណារ៉ា ប្រធានការិយាល័យ គ្រប់គ្រងសំណល់រឹង នៃមន្ទីរបរិស្ថានរាជធានីភ្នំពេញ

- សូមគាំទ្រគម្រោងសាងសង់អគារសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ(RUPP) និងអគារវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា(ITC)សម្រាប់គម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) របស់ក្រសួងអប់រំយុវជន និងកីឡា ដែលមានទីតាំងស្ថិតនៅក្នុងតំបន់អភិវឌ្ឍន៍ លី យ៉ុងផាត់ ភូមិព្រែកតាវ័ត្ន សង្កាត់ ព្រែកតាសេក ខណ្ឌ ជ្រោយចង្វារ រាជធានីភ្នំពេញ របស់ក្រសួងអប់រំ យុវជន និងកីឡា។ ប៉ុន្តែដើម្បីឱ្យគម្រោងអភិវឌ្ឍន៍នេះទទួលបានជោគជ័យមិនប៉ះពាល់ដល់បរិស្ថាន និងសុខភាពសាធារណៈលើការងារគ្រប់គ្រងសំរាម សំណល់រឹង ស្របតាមអនុក្រឹត្យលេខ ១១៣ អនក្រ.បក ស្តីពីការ គ្រប់គ្រងសំរាមសំណល់រឹងទីប្រជុំជន ម្ចាស់គម្រោងត្រូវអនុវត្តឱ្យបានល្អដូចខាងក្រោម៖

១.ដំណាក់កាលសាងសង់គម្រោង

- ត្រូវរៀបចំឱ្យមានធុងដាក់សំរាមជាពីរប្រភេទ (សំរាមសើម និងស្ងួត) ទៅតាមទីកន្លែងសមស្របក្នុងបរិវេណ គឺ ធុងនីមួយៗត្រូវមានបិទរូបសញ្ញា ឬអក្សរសម្គាល់ឱ្យបានច្បាស់លាស់
- អប់រំណែនាំកម្មករ បុគ្គលិក ឱ្យចូលរួមវេចខ្ចប់ និងទុកដាក់សំរាមឱ្យបានត្រឹមត្រូវតាមប្រភេទសំរាម និងមិនចោលសំរាមក្រៅធុងសំរាម
- ត្រូវមានលិខិតអនុញ្ញាតបញ្ចេញសំណល់រឹងពីរដ្ឋបាលរាជធានីភ្នំពេញ តាមរយៈមន្ទីរបរិស្ថាន
- ចំពោះក្រុមហ៊ុនដែលទទួលដឹកសំរាមចេញពីការដ្ឋានត្រូវទទួលស្គាល់ដោយរដ្ឋ
- មិនត្រូវដុតសំរាមសំណល់រឹងក្នុងឬក្រៅបរិវេណទោះក្នុងគោលបំណងណាមួយក៏ដោយ
- ត្រូវអនុវត្តឱ្យបានល្អតាមគោលការណ៍3R ដើម្បីកាត់បន្ថយបរិមាណសំរាមដែលត្រូវបោះចោលឱ្យបានតិច
- រៀបចំឱ្យមានដេប៉ូឬបន្ទប់ដាក់សំរាមតាមប្រភេទដែលធានាបាននូវសុវត្ថិភាពអនាម័យនិងបរិស្ថាន
- អប់រំកម្មករ បុគ្គលិក ឱ្យចូលរួមធ្វើការបែងចែក ឬញែក និងទុកដាក់សំរាម សំណល់រឹងទៅតាមប្រភេទ
- ត្រូវធ្វើសកម្មភាព សម្អាតអនាម័យបរិស្ថានក្នុងការដ្ឋានឱ្យបានស្អាតជាប្រចាំ ។

២.ដំណាក់កាលប្រតិបត្តិគម្រោង

- រៀបចំធុងដាក់សំរាមជាបីប្រភេទ(សំរាមសើម ស្ងួត និងគ្រោះថ្នាក់) នៅតាមទីកន្លែងសមស្របក្នុងទីបរិវេណសាលា
- រៀបចំឱ្យមានដេប៉ូឬបន្ទប់ដាក់សំរាម ដែលធានាបាននូវសុវត្ថិភាពអនាម័យបរិស្ថានល្អ
- ត្រូវអនុវត្តឱ្យបានល្អតាមគោលការណ៍3R ដើម្បីកាត់បន្ថយបរិមាណសំរាមដែលត្រូវបោះចោលឱ្យបានតិច
- ចំពោះក្រុមហ៊ុនដែលទទួលដឹកជញ្ជូនសំរាមចេញពីទីតាំងត្រូវទទួលស្គាល់ដោយរដ្ឋ

១០.មតិ លោកស្រី កាន់ រតនៈឧប្បល ប្រធានមន្ទីរកិច្ចការជជានីភ្នំពេញ

- តាមគោលការណ៍របស់ រាជរដ្ឋាភិបាលក៏ដូចជាក្រសួងអប់រំយុវជននិងកីឡា បានកំពុងធ្វើកែទម្រង់ប្រព័ន្ធអប់រំ នៅកម្ពុជា ឲ្យស្របតាមនិយាមអន្តរជាតិ ដែលតម្រូវឲ្យមានសាស្ត្រាចារ្យ ដែលល្បីៗ និងមានសមត្ថភាពខ្ពស់ ក្នុងគោលបំណងលើកម្ពស់គុណភាព សមត្ថភាពនិស្សិតគ្រប់បណ្តាសាកលវិទ្យាល័យ ឬឧត្តមសិក្សា រាជរដ្ឋាភិបាលក៏ដូចជាក្រសួងអប់រំ យុជន និងកីឡា បានកំណត់ចក្ខុវិស័យលើកកម្ពស់គុណភាពអប់រំ មានដូចជាភាពង្រឹងសមត្ថភាពសាស្ត្រាចារ្យ សាកលវិទ្យាធិការ សាកលវិទ្យាធិការរងទទួលបន្ទុកតាមផ្នែកមហាវិទ្យាល័យ និងការទំនាក់ទំនងអន្តរជាតិជាដើម
- សាកលវិទ្យាល័យ នីមួយៗត្រូវមានទីធ្លារដ្ឋទូលាយ សួនច្បារលំហែរកាយ កន្លែងលេងកីឡា (បាល់បោះ បាល់ទាត់ បាល់ទះ និងកន្លែងហាត់ប្រាណ) ។ល។ មានក្រុមសិល្បៈ តន្ត្រី ប្រចាំសាកលវិទ្យាល័យ និងអគារស្នាក់នៅរបស់និស្សិត (ស្រី-ប្រុស) ស្នាក់នៅដោយឡែកពីគ្នា ។
- មានកិច្ចសហការជាមួយសាកលវិទ្យាល័យល្បីៗនៅលើពិភពលោក ធ្វើការផ្លាស់ប្តូរនិស្សិត និងការចុះធ្វើកម្មសិក្សា ។ មានបណ្ណាល័យ ដែលសំបូរនូវសៀវភៅតាមមុខជំនាញស្រាវជ្រាវ និងឯកសារនៅលើបណ្តាញអ៊ិនធើណេតជាដើម ។
- មានសាស្ត្រាចារ្យ ល្បីៗមានបទពិសោធន៍សម្រាប់ដឹកនាំនិស្សិតចុះធ្វើកម្មសិក្សា ឬស្រាវជ្រាវតាមមុខជំនាញ កំពុងសិក្សានៅតាមបណ្តាក្រុមហ៊ុន សហគ្រាស ស្ថាប័នរដ្ឋ ទាំងស៊ីវិល និងយោធា ។
- សាកលវិទ្យាល័យត្រូវមានវេទិកាពិភាក្សារវាងឥស្សរជនល្បីៗ ពាណិជ្ជករល្បីៗ ដែលទទួលជោគជ័យក្នុងមុខជំនួញ ចូលរួមធ្វើបឋកថា ដើម្បីផ្តល់ពុទ្ធិ និងបទពិសោធន៍ថ្មីៗល្អៗដល់និស្សិត ។
- សំណូមពរ
- សូមឲ្យសាកលវិទ្យាល័យ លើកទឹកចិត្តដល់និស្សិតមានពិការភាព ទទួលបានឱកាសបន្តការសិក្សានៅថ្នាក់កំរិតបរិញ្ញាបត្រ អនុបណ្ឌិត និងថ្នាក់បណ្ឌិត ព្រមទាំងមានកន្លែងស្នាក់នៅសមរម្យ និងមានទីជម្រាលសម្រាប់ធ្វើដំណើរឡើងចុះនិងផ្តល់ភាពងាយស្រួលសំរាប់ជនពិការផងដែរ៕

១១.មតិ លោក សាត ម៉េងស្រ៊ុន ប្រធានការិយាល័យ មន្ទីរផែនការ រាជធានីភ្នំពេញ

- សូមគាំទ្រគម្រោង ១០០% និងសូមអបអរសាទរ ចំពោះសមិទ្ធផលថ្មីមួយទៀត របស់រាជធានីភ្នំពេញ ដែលនឹងជួយបង្កើននូវការពង្រឹងគុណភាពអប់រំ បង្កើនគុណភាពការងារ បង្កើនសេដ្ឋកិច្ច និងការរួមចំណែកកាត់បន្ថយភាពក្រីក្ររបស់ប្រជាជន។
- យុទ្ធសាស្ត្រចតុកោណ ដំណាក់កាលទី៤ របស់រាជរដ្ឋាភិបាល បានចាត់ទុកការអភិវឌ្ឍន៍ធនធានមនុស្សជាអាទិភាពទី១ និងក្នុងផែនការយុទ្ធសាស្ត្រវិស័យអប់រំឆ្នាំ(២០១៩-២០២៣)ក៏បានប្តេជ្ញាសម្រេចឲ្យបានគោលដៅអភិវឌ្ឍន៍ប្រកបដោយចីរភាព (២០១៥-២០៣០) ស្តីពីការអប់រំ ដោយឈរលើគោលការណ៍ គុណភាព សមធម៌បរិយាបន្ន និងការសិក្សាពេញមួយជីវិតសម្រាប់ទាំងអស់គ្នា។ ដូចនេះហើយគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (Higher Education Improvement Project (HEIP)) ខាងលើនេះបានចូលរួមចំណែកយ៉ាងសំខាន់ក្នុងការជួយសម្រេចបាននូវគោលដៅយុទ្ធសាស្ត្ររបស់រាជរដ្ឋាភិបាល ក៏ដូចជាផែនការយុទ្ធសាស្ត្រ វិស័យអប់រំ របស់ក្រសួងអប់រំ យុវជន និងកីឡា ដែលបានដាក់ចេញនាពេលកន្លងមក។
- ការអភិវឌ្ឍដែលមាននិរន្តភាពគឺជាការអភិវឌ្ឍ ដែលគិតគូរដល់បរិស្ថាន។ រាជរដ្ឋាភិបាលកម្ពុជាបានកំណត់យកការអភិវឌ្ឍបៃតង ជាគោលការណ៍សំខាន់ នៃការរៀបចំផែនការអភិវឌ្ឍន៍សេដ្ឋកិច្ច

និងសង្គមរបស់ខ្លួនព្រមទាំងប្រើប្រាស់ការអភិវឌ្ឍបៃតងធ្វើជាយន្តការមួយឈានទៅសម្រេចគោលដៅអភិវឌ្ឍន៍ប្រកបដោយចីរភាព ដែលនឹងរួមចំណែករក្សាកំណើនសេដ្ឋកិច្ចជាតិ លើកកម្ពស់គុណភាពបរិស្ថាននិងកាត់បន្ថយភាពក្រីក្រ។ ឈរលើគោលការណ៍របស់រាជរដ្ឋាភិបាល ក៏ដូចជាក្រសួងបរិស្ថាននិងមន្ទីរបរិស្ថាន ខ្ញុំបាទសូមស្នើសុំទៅម្ចាស់គម្រោងនូវយោបល់មួយចំនួនដូចខាងក្រោម៖

- ត្រូវគោរព និងអនុវត្តអោយបានខ្ជាប់ខ្ជួននូវច្បាប់នានា និងគោលការណ៍អភិវឌ្ឍបៃតង
- ត្រូវអនុវត្តឲ្យបានខ្ជាប់ខ្ជួននូវផែនការគ្រប់គ្រងបរិស្ថានរយៈពេលវែង
- ត្រូវអនុវត្តតាមបទដ្ឋានបច្ចេកទេសសំណង់ឲ្យបានត្រឹមត្រូវស្របតាមច្បាប់ដែលបានកំណត់
- ត្រូវបង្កើនតំបន់បៃតងឱ្យបានយ៉ាងតិច៣០% លើទីតាំងគម្រោង
- គ្រប់គ្រងសំណល់និងការបែងចែកសំណល់ឱ្យបានត្រឹមត្រូវ និងបញ្ចេញសំណល់ឱ្យបានទៀងទាត់
- កែច្នៃ និងការប្រើប្រាស់សំណល់ឡើងវិញ (ចំពោះសំរាមកែច្នៃបាន)
- កំណត់ម៉ោងសម្រាប់រថយន្តធំចេញ-ចូលក្នុងទីតាំងគម្រោង ដើម្បីបញ្ចៀសការកកស្ទះចរាចរ
- រថយន្តដឹកខ្សាច់ និងដឹកដីចេញ-ចូល ក្នុងទីតាំងគម្រោងត្រូវគ្របឲ្យបានត្រឹមត្រូវ និងលាងសម្អាតកង់រថយន្តផងដែរ
- មានកិច្ចសហការល្អជាមួយអាជ្ញាធរមូលដ្ឋាន និងអង្គភាព ស្ថាប័នពាក់ព័ន្ធ
- ផ្តល់សម្ភារ និងឧបករណ៍ការពារសុវត្ថិភាពដល់បុគ្គលិក-កម្មករឲ្យបានគ្រប់គ្រាន់
- ត្រូវអប់រំ ផ្សព្វផ្សាយដល់បុគ្គលិក-កម្មករ អំពីការទុកដាក់សំរាមឲ្យបានត្រឹមត្រូវ។
- ត្រូវយកចិត្តទុកដាក់ខ្ពស់ទៅលើការគ្រប់គ្រងប្រព័ន្ធលូ និងប្រព័ន្ធប្រព្រឹត្តកម្ម ទឹកកខ្វក់។
- ត្រូវយកចិត្តទុកដាក់ខ្ពស់ទៅលើបញ្ហាសុវត្ថិភាព បុគ្គលិក-កម្មករ ត្រូវការពារនិងបង្ការជម្ងឺកូវីដ ១៩ ដោយតម្រូវឱ្យកម្មករ-បុគ្គលិក អនុវត្តនូវវិធានការ ៣កុំ ៣ការពារ ជានិច្ច។

១២.មតិ លោក ឆឺ ពុទ្ធារ័ត្ន ប្រធានការិយាល័យ គ្រប់គ្រងគុណភាពទឹក មន្ទីរបរិស្ថានរាជធានីភ្នំពេញ

- សូមគាំទ្រចំពោះគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP)
- ម្ចាស់គម្រោងត្រូវបែងចែកប្រព័ន្ធលូជាពីរប្រភេទ៖ លូទឹកភ្លៀង និងលូសំណល់រាវចេញពីបង្គន់
- ត្រូវរៀបចំកន្លែងទុកដាក់សំណល់កកំចេញពីអាងប្រព្រឹត្តកម្មឬអាងស៊ិបទិចឱ្យបានត្រឹមត្រូវមុននិងឱ្យក្រុមហ៊ុនដឹកចេញ។
- ម្ចាស់គម្រោងត្រូវធ្វើការវិភាគគុណភាពទឹកនៅមន្ទីរពិសោធន៍ក្រសួងបរិស្ថានឱ្យបានជាប់ជាប្រចាំ
- ចំណុចទី២ ក្របខណ្ឌច្បាប់គឺនៅខ្វះអនុក្រឹត្យលេខ២៣៥ អនក្រ.បក ស្តីពីការគ្រប់គ្រងប្រព័ន្ធលូ និងប្រព្រឹត្តកម្មទឹកកខ្វក់។
- មិនមានការបង្ហាញអំពីប្លង់អាងប្រព្រឹត្តកម្ម ឬអាងស៊ិបទិច
- ម្ចាស់គម្រោងជួយពន្លឿនការសាងសង់ឱ្យបានឆាប់រហ័ស ដើម្បីកាត់បន្ថយរាល់ផលប៉ះពាល់ផ្សេងៗដែលកើតចេញពីការប្រតិបត្តិគម្រោងផ្ទាល់តែម្តង។
- ម្ចាស់គម្រោងត្រូវមានកិច្ចសហការល្អជាមួយអាជ្ញាធរមូលដ្ឋាន មន្ទីរជំនាញ និងអង្គភាពពាក់ព័ន្ធ។

១៣.មតិ លោក ទេស នរារិទ្ធ ប្រធានការិយាល័យ វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន នៃមន្ទីរបរិស្ថាន

- សូម គាំទ្រលើគម្រោង កែលម្អការអប់រំឧត្តមសិក្សា របស់ក្រសួងអប់រំ យុវជន និងកីឡា ដែលមានទីតាំងស្ថិតនៅក្នុងតំបន់អភិវឌ្ឍន៍ លី យ៉ុងផាត់ ភូមិព្រែកតារ័ត្ន សង្កាត់ព្រែកតាសេក ខណ្ឌជ្រោយ

ចង្វារ រាជធានីភ្នំពេញ ។

- ក្នុងបទបង្ហាញពុំមានបង្ហាញពីកម្មសិទ្ធិដីធ្លីស្របច្បាប់និងរយៈពេលនៃគម្រោងចាប់ផ្តើមដំណើរការសាងសង់?
- គម្រោងចាប់ផ្តើមដំណើរការសាងសង់នៅឆ្នាំណា និងបញ្ចប់នៅឆ្នាំណាដែរ?
- សូម ឱ្យក្រុមហ៊ុនបង្ហាញពីលទ្ធផលវិភាគសំណាកគុណភាពទឹក នៅមន្ទីរពិសោធន៍ក្រសួងបរិស្ថាន
- ពាក់ព័ន្ធ និងអាងប្រព្រឹត្តកម្មសំណល់រាវ តើខាងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា និងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ គ្រោងនិងសាងសង់អាងប្រព្រឹត្តកម្មចំនួន ០២ ផ្សេងគ្នាឬយ៉ាងណា?
- សូម ឱ្យក្រុមហ៊ុនបង្ហាញពីការវិភាគផ្នែកសេដ្ឋកិច្ច តើគម្រោងទាំងពីរខាងលើ មានផែនការក្នុងការបំពាក់ប្រព័ន្ធសូឡា ជំនួយសម្រាប់ការប្រើប្រាស់ថាមពលអគ្គិសនី នាពេលអនាគតដែរឬទេ?
- សូម ឱ្យក្រុមហ៊ុន យកចិត្តទុកដាក់ទៅលើបញ្ហាសំណល់រឹងសំអាម និងសំណល់ផ្សេងៗដោយមិនត្រូវដុត ឬបោះចោលរ៉ាយប៉ាយជាដាច់ខាត។
- សូម ឱ្យក្រុមហ៊ុនយកចិត្តទុកដាក់ទៅលើបញ្ហាសំឡេង ការចល័តគ្រឿងចក្រ និងការដឹកជញ្ជូនដីចេញពីការដ្ឋាន ដោយត្រូវលាងសំអាតកង់រថយន្តមុនចេញ-ចូលការដ្ឋានព្រមទាំងមានការគ្របតង់ការពារការជ្រុះធ្លាក់អាចមន៍ដីលើផ្លូវសាធារណៈដែលនាំឱ្យមានការបំពុលខ្យល់ផងដែរ។
- សូមឱ្យក្រុមហ៊ុនយកចិត្តទុកដាក់ទៅលើបញ្ហាសំណល់រាវ អាងចម្រោះសំណល់រាវ និងអាងប្រព្រឹត្តកម្មសំណល់រាវដោយគោរពតាមស្តង់ដារកំណត់របស់ក្រសួងបរិស្ថានដែលគុណភាពទឹកលូមុននិងបញ្ចេញទៅប្រព័ន្ធលូសាធារណៈត្រូវអនុលោមតាមអនុក្រឹត្យ ២៧ អនក្រ.បក ស្តីពីការត្រួតពិនិត្យការបំពុលទឹក និងអនុក្រឹត្យលេខ ២៣៥ អនក្រ.បក ស្តីពីការគ្រប់គ្រងប្រព័ន្ធលូ និងប្រព័ន្ធប្រព្រឹត្តកម្មទឹកកខ្វក់។
- សូម ឱ្យក្រុមហ៊ុន យកចិត្តទុកដាក់ទៅលើបញ្ហាសំណល់រាវ ដោយសារតំបន់មួយចំនួនក្នុងខណ្ឌជ្រោយចង្វារមិនទាន់មានប្រព័ន្ធលូសាធារណៈគ្រប់គ្រាន់ ដើម្បីជៀសវាងនូវការហូរហៀរទៅតំបន់លំនៅឋានរបស់ប្រជាពលរដ្ឋ រស់នៅជុំវិញទីតាំងគម្រោង ។
- តើខាងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា និងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ មានត្រៀមបំរុងម៉ាស៊ីនភ្លើងនៅពេលដាច់ចរន្តអគ្គិសនីដែរឬទេ?
- តើមានត្រៀមទីតាំង ឬបន្ទប់សម្រាប់ដាក់ម៉ាស៊ីនភ្លើងបំរុងដែរឬទេ? ការមិនបានត្រៀមបំរុងទុកដែលជាហេតុបង្កឱ្យមានជាសំឡេងនិងរំញ័រកើតចេញពីការបញ្ចេះម៉ាស៊ីនភ្លើងបំរុងនេះ?
- អត់ឃើញបង្ហាញពីប្រព័ន្ធការពារគ្រោះអគ្គីភ័យ ដែលនិងអាចកើតឡើងដាយថាហេតុ?
- សូម ឱ្យក្រុមហ៊ុន យកចិត្តទុកដាក់ទៅលើបញ្ហាសុវត្ថិភាព ចំពោះបុគ្គលិក-កម្មករ ការពារ និងបង្ការជម្ងឺឆ្លងកូវីដ១៩ នៅព្រះរាជាណាចក្រកម្ពុជា យើងផងដែរ ដោយតម្រូវឱ្យ បុគ្គលិក-កម្មករ ត្រូវពាក់ម៉ាស បាញ់អាល់កុលដៃ រក្សាគម្លាត ព្រមទាំងអនុវត្តតាមវិធានការ ៣កុំ ៣ការពារ ជានិច្ច។
- សូម ឱ្យក្រុមហ៊ុន យកចិត្តទុកដាក់ទៅលើបញ្ហាការដឹកជញ្ជូនសម្ភារ ចេញ-ចូលការដ្ឋាន សូមគោរពតាមការកំណត់របស់រដ្ឋបាលរាជធានីភ្នំពេញ ម៉ោងចេញ-ចូល ទម្ងន់ផ្ទុក ល្បឿនកំណត់នៃការបើកបរត្រង់តំបន់ទីប្រជុំជន ។
- សូមឱ្យក្រុមហ៊ុន យកចិត្តទុកដាក់ទៅលើបញ្ហាផ្ទៃបៃតង៣០% សួនច្បារ ដាំដើឈើ និងចំណតយានយន្ត ឱ្យបានគ្រប់គ្រាន់។

- សូម ឱ្យក្រុមហ៊ុន មានកិច្ចសហការល្អជាមួយមន្ទីរជំនាញពាក់ព័ន្ធ និងអាជ្ញាធរមូលដ្ឋាន។

១៤.មតិ លោក គង់ ថុ នាយរងការិយាល័យ បង្ការ ពន្លត់អគ្គីភ័យ និងសង្គ្រោះ

- សូមគាំទ្រចំពោះគម្រោងកែលម្អការអប់រំឧត្តមសិក្សារបស់ក្រសួងអប់រំ យុវជន និងកីឡា ដែលបានចូលរួមចំណែកក្នុងការអភិវឌ្ឍធនធានមនុស្សសម្រាប់ការអភិវឌ្ឍរាជធានីភ្នំពេញឱ្យមានការរីកចម្រើនបន្ថែមទៀត។
- នៅពេលសាងសង់ តំរូវឱ្យក្រុមហ៊ុនមានសម្ភារសំរាប់ការពារបង្ការនឹងពន្លត់អគ្គីភ័យ
- ត្រូវមានបំពង់ពន្លត់អគ្គីភ័យនឹងសម្ភារ ការពារនៅពេលមានអគ្គីភ័យកើតឡើងដាយថាហេតុ
- សំណូមពរឱ្យសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ នឹងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជាបំពាក់បូសទឹកនៅពីមុខអគារដើម្បីងាយស្រួលនៅពេលមានហានីភ័យកើតឡើងអាចឱ្យរថយន្តពន្លត់អគ្គីភ័យបូមទឹកបាញ់ពន្លត់ភ្លើងទាន់ពេលវេលា។
- សំណូមពរ ឱ្យខាងក្រុមហ៊ុនតបូសទឹកអគ្គីភ័យ ឱ្យត្រូវតាមស្តង់ដារនៃការប្រើប្រាស់របស់រថយន្តពន្លត់អគ្គីភ័យ ស្នងការនគរបាលរាជធានីភ្នំពេញ ពីព្រោះកន្លងមកមានការបំពាក់សម្ភារខុសពីជំនាញ នាំឱ្យមានផលលំបាកនៅពេលមានហានីភ័យកើតឡើង ដែលមិនអាចតភ្ជាប់ទុយោសំរាប់បាញ់អគារនៅតាមជាន់នីមួយៗនិងក្បាលឡង់សម្រាប់បាញ់ពន្លត់អគ្គីភ័យបាន។

១៥.មតិ លោក ឃុយ គុយនី ប្រធានការិយាល័យ ត្រួតពិនិត្យការបំពុលបរិស្ថាន នៃមន្ទីរបរិស្ថាន

- សូម គាំទ្រ ១០០% លើគម្រោងកែលម្អការអប់រំ ឧត្តមសិក្សា របស់ ក្រសួងអប់រំ យុវជន និងកីឡា
- ក្រោយពីស្តាប់ការធ្វើបទបង្ហាញយ៉ាងយកចិត្តទុកដាក់មក ខ្ញុំមានការត្រេកអរជាខ្លាំងនូវគម្រោងកែលម្អការអប់រំឧត្តមសិក្សា (HEIP) ដើម្បីពង្រីកសក្តានុពលវិស័យអប់រំ ដល់យុវជនខ្មែរយើង។ ជាមួយគ្នានេះដែរ ខ្ញុំបាទមានចំណាប់អារម្មណ៍ខ្លាំងលើផលប៉ះពាល់បរិស្ថាន ដែលក្រុមហ៊ុនសាងសង់ត្រូវយកចិត្តទុកដាក់និងអនុវត្តឱ្យបានខ្ជាប់ខ្ជួននិងគោរពតាមស្តង់ដារកំណត់នៃច្បាប់អនុក្រឹត្យ ប្រកាស របស់ក្រសួងបរិស្ថាន៖
- គុណភាពខ្យល់:
- ភាគល្អិតនិចល PM10 និង PM2.5 រួមទាំងសារធាតុអណ្តែតនៅក្នុងខ្យល់ TSP និងរួមមាន CO, NO_2, SO_2 ,O_3 និងPb ត្រូវគោរពតាមស្តង់ដារកំណត់។
- សកម្មភាពការងារនៅពេលសាងសង់គឺមានភាពមមាញឹកខ្លាំងពីដំណើរការរបស់គ្រឿងចក្រ យានយន្តគ្រប់ប្រភេទ ដែលបានបង្កឱ្យមានផលប៉ះពាល់បរិស្ថានរួមមាន៖
- ការដឹកជញ្ជូន ចេញ-ចូល ការដ្ឋានធ្វើឱ្យមានផ្សែងចំហេះឥន្ធនៈ ហុយធូលីដី គ្រឿងសំណង់ ដីខ្សាច់ ថ្ម ស៊ីម៉ង់ត៍ នៅតាមដងផ្លូវនិងក្នុងបរិវេណការដ្ឋានដែលជាហេតុធ្វើឱ្យប៉ះពាល់បរិស្ថាន និងប្រជាពលរដ្ឋដែលប្រកបរបរ និងរស់នៅក្បែរទីតាំង។ ដូចនេះម្ចាស់ក្រុមហ៊ុនសាងសង់ត្រូវគោរពតាមបទដ្ឋានលក្ខណៈបច្ចេកទេសដើម្បីបញ្ចៀសផលប៉ះពាល់បរិស្ថាន និងសុខភាពមនុស្ស។
- កម្រិតបញ្ចេញសំឡេង និងរំញ័រ៖
- សំឡេង និងរំញ័រនេះក៏ត្រូវយកចិត្តទុកដាក់ផងដែរ ពីព្រោះវាក៏ធ្វើឱ្យប៉ះពាល់បរិស្ថាន និងសុខភាពមនុស្សដែរ។ រាល់សកម្មភាពចល័តគ្រឿងចក្រ យានយន្តធំ តូច ការដឹកជញ្ជូនសម្ភារសំណង់ចេញ-ចូល ត្រូវតែគោរពតាមស្តង់ដារកំណត់របស់ក្រសួងបរិស្ថាន ជាពិសេសសកម្មភាពនៅពេលយប់ ដែលជាពេលសម្រាករបស់ប្រជាពលរដ្ឋទូទៅផងដែរ ។

១៦.មតិ លោក ជា អនុជិត អនុប្រធានមន្ទីរ ធនធានទឹក និងឧតុនិយម រាជធានីភ្នំពេញ

- សូម គាំទ្រគម្រោង១០០% និងគាំទ្ររាល់មតិយោបល់របស់សមាជិកអង្គប្រជុំ ក្នុងន័យរួមគ្នាគិតដើម្បីគម្រោងទទួលបានលទ្ធផលល្អ។
- សំណូមពរ
- ត្រូវសិក្សាឱ្យបានច្បាស់លាស់នូវកម្រិតកម្ពស់នៃទីតាំងគម្រោងដើម្បីជៀសវាងការលេចទឹកពីព្រោះទីតាំងគម្រោងស្ថិតក្នុងតំបន់ទំនាបចាក់ខ្សាច់បំពេញ។

១៧.មតិ លោក សាំង សុផល តំណាងមន្ទីរ អប់រំ យុវជន និងកីឡា រាជធានីភ្នំពេញ

- សូម គាំទ្រគម្រោង១០០%
- សូម ឱ្យក្រុមហ៊ុនសាងសង់គោរពទៅតាមច្បាប់ និងលិខិតបទដ្ឋានគតិយុត្តរបស់សំណង់។

១៨.មតិ បកស្រាយ របស់ក្រុមហ៊ុនទីប្រឹក្សា៖

- សមាជិកអង្គប្រជុំមានការគាំទ្រគម្រោង១០០%
- ពាក់ព័ន្ធច្បាប់ការងារស្នើសុំឱ្យដាក់បញ្ចូលក្របខណ្ឌច្បាប់បន្ថែមពាក់ព័ន្ធនិងរបបសន្តិសុខសង្គម
- ត្រូវមានកិច្ចសហការល្អជាមួយមន្ទីរជំនាញនិងអាជ្ញាធរពាក់ព័ន្ធ
- ពាក់ព័ន្ធច្បាប់ទេសចរណ៍ត្រូវចូលរួមអនុវត្តនូវស្មារតីទីក្រុងស្អាត
- ពាក់ព័ន្ធនិងអាងប្រព្រឹត្តកម្មសំណល់រាវត្រូវឱ្យក្រុមហ៊ុនគោរពតាមស្តង់ដារបរិស្ថានកំណត់
- ពាក់ព័ន្ធនិងលំហបៃតងឃើញថាខាងវិទ្យស្ថានបច្ចេកវិទ្យាកម្ពុជាមានការរៀបចំលំហបៃតងបានច្រើននិងខាងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញមានតែសួនច្បារដូច្នេះខាងក្រុមហ៊ុនទីប្រឹក្សានិងពិភាក្សាជាមួយសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញបន្ថែមទៀត។
- ពាក់ព័ន្ធនិងការសាងសង់តម្រូវឱ្យក្រុមហ៊ុនគោរពទៅតាមបទដ្ឋានបច្ចេកទេសសំណង់និគោរពតាមច្បាប់អនុញ្ញាតរបស់ក្រសួងរៀបចំដែនដី នគរូបនីយកម្ម និងសំណង់។
- គាំទ្រឱ្យមានអគារស្នាក់នៅរបស់និស្សិត និងប្រព័ន្ធបង្ហូរទឹកកខ្វក់ត្រូវគោរពតាមស្តង់ដារកំណត់
- ការលើកឡើងរបស់វាគ្មិនស្ថិតក្នុងដំណាក់កាលសាងសង់និងប្រតិបត្តិគម្រោងត្រូវដាក់បញ្ចូលក្នុងរបាយការណ៍វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាននិងសង្គម។
- ស្នើសុំឱ្យមានការបែងចែកអគារស្នាក់នៅរបស់និស្សិតស្រីនិងប្រុសដាច់ដោយឡែកពីគ្នា។
- ពាក់ព័ន្ធនិងការឆ្លើយតបយុទ្ធសាស្ត្រដំណាក់កាលទី៤របស់រាជរដ្ឋាភិបាល និងសំណូមពរជាច្រើនចំណុចក្រុមហ៊ុន និងទទួលយកដាក់បញ្ចូល ក្នុងរបាយការណ៍វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន និងសង្គម។
- ពាក់ព័ន្ធ និងក្របខណ្ឌច្បាប់បរិស្ថានអនុក្រឹត្យលេខ ២៣៥ អនក្រ.បក ស្តីពីការគ្រប់គ្រងប្រព័ន្ធលូ និងអាងប្រព្រឹត្តកម្មទឹកកខ្វក់។
- ពាក់ព័ន្ធ និងប្លង់អាងប្រព្រឹត្តកម្ម សំណល់រាវ និងប្លង់រចនាសំណង់អគារ កាគីម្ងាស់គម្រោងកំពុងសិក្សា និងធានាថារាល់សំណល់រាវចេញពីមន្ទីរពិសោធន៍ និងទឹកកខ្វក់ត្រូវអនុលោមតាមស្តង់ដារបរិស្ថានកំណត់មុនបង្ហូរចូលប្រព័ន្ធលូសាធារណៈ។
- ពាក់ព័ន្ធនិងប្លង់កម្មសិទ្ធិដីស្របច្បាប់ ខាងក្រុមហ៊ុនមានប្លង់រឹងហើយ គឺក្រុមហ៊ុនបានទិញដីពីក្រុមហ៊ុន លី យ៉ុងផាត់។
- ពាក់ព័ន្ធនិងការដំណើរការសាងសង់សំណង់អគារ គឺក្រុមហ៊ុនចាប់ដំណើរការសាងសង់នៅដើមខែ

កម្ពៈផ្នាំ២០២២ និងមានរយៈពេលសាងសង់០២ឆ្នាំ ដែលនិងបញ្ចប់នៅចុងឆ្នាំ២០២៤។

- ពាក់ព័ន្ធនិងអាងប្រព្រឹត្តកម្មសំណល់រាវ គឺមានការសាងសង់អាងចំនួន០២ជាប់ដោយឡែកពីគ្នា។
- ពាក់ព័ន្ធនិងការវិភាគផ្នែកសេដ្ឋកិច្ច តើគម្រោងមានផែនការបំពាក់ផ្ទាំងសូឡា ជំនួសឱ្យការប្រើប្រាស់ភ្លើងអគ្គិសនីដែរឬទេ? នោះខាងក្រុមហ៊ុន និងពិភាក្សាគ្នាជាមួយខាងម្ចាស់គម្រោងបន្ថែមទៀត អាចជាការបំពាក់នូវអំពូលសូឡាសម្រាប់បំភ្លឺតាមផ្លូវក្នុងបរិវេណសាលាផងដែរ។
- ពាក់ព័ន្ធ និងការប្រើប្រាស់ម៉ាស៊ីនភ្លើងបំរុង នៅពេលមានការដាច់ចរន្តអគ្គិសនីម្តងម្កាលនោះ គឺចាំបាច់ត្រូវតែមានចំពោះអានុភាពកំលាំងប៉ុន្មានការពារអានោះខាងក្រុមហ៊ុននិងជជែកគ្នាបន្តទៀត
- ពាក់ព័ន្ធនិងបញ្ហាអគ្គីភ័យស្នើសុំឱ្យក្រុមហ៊ុនបំពាក់សម្ភារការពារបង្ការនិងពន្លត់អគ្គីភ័យ
- ពាក់ព័ន្ធនិងបញ្ហាអគ្គីភ័យស្នើសុំឱ្យក្រុមហ៊ុនបំពាក់ក្បាលបូសទឹកសម្រាប់រថយន្តអគ្គីភ័យនៅពីមុខសាលាដើម្បីងាយស្រួលពេលមានគ្រោះអគ្គីភ័យកើតឡើងជាយថាហេតុ។
- ស្នើសុំឱ្យមានការបំពាក់តំណរបណ្តាញពន្លត់អគ្គីភ័យត្រូវគ្នា និងតំណរថយន្តពន្លត់អគ្គីភ័យផង។
- ពាក់ព័ន្ធ និងការសាងសង់សំណង់អគារ ស្នើសុំឱ្យមានការសិក្សាលម្អិតពីកម្រិតនីវ៉ូទឹកទន្លេ ដោយសារទីតាំងគម្រោងស្ថិតក្នុងតំបន់ទំនាបចាក់ដីលុបបំពេញ។
- ពាក់ព័ន្ធ និងការសាងសង់សំណង់អគារ ស្នើសុំឱ្យម្ចាស់គម្រោងអនុវត្តទៅតាមច្បាប់និងលិខិតបទដ្ឋានគតិយុត្តនៃសំណង់។

១៩.មតិ បកស្រាយ របស់តំណាងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា

- ក្នុងនាមខ្ញុំបាទតំណាងឱ្យវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា សូមទទួលយកនូវរាល់មតិយោបល់ ដែលបានលើកឡើងទៅជម្រាបជូនថ្នាក់ដឹកនាំ ដើម្បីធ្វើឱ្យគម្រោងសាងសង់វិទ្យាស្ថានយើងប្រព្រឹត្តទៅមានភាពល្អប្រសើរនិងមិនប៉ះពាល់ដល់បរិស្ថាន និងសង្គម។

២០.មតិ បកស្រាយ របស់តំណាងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ

- ក្នុងនាមនាងខ្ញុំ មន្ត្រីតំណាងឱ្យក្រសួងអប់រំ យុវជន និងកីឡា និងជាសមាជិកនៃក្រុមការងារកិច្ចការពារសុវត្ថិភាពបរិស្ថាន និងសង្គមថ្នាក់កណ្តាល នៅក្នុងគម្រោងកែលម្អការអប់រំ ឧត្តមសិក្សាក៏បានជួបពិភាក្សាគ្នាជាមួយក្រុមហ៊ុនទីប្រឹក្សាសិក្សាគម្រោងនិងខាងធនាគាពិភពលោក ដែលជាអ្នកគាំទ្រគម្រោងក៏បានកោតសរសើរដល់ក្រុមហ៊ុនទីប្រឹក្សា ក្នុងការចុះទៅសិក្សាស្វែងយល់ពីបរិស្ថាន និង សង្គម។ ឆ្លៀតក្នុងឱកាសនេះដែរ ក៏សូមថ្លែងអំណរគុណនូវការផ្តល់មតិយោបល់ ពីអង្គភាពស្ថាប័នពាក់ព័ន្ធ និងសមាជិក សមាជិកាចូលរួមទាំងអស់ហើយក្រុមការងារយើងខ្ញុំ និងសហការជាមួយក្រុមហ៊ុនទីប្រឹក្សាពិភាក្សាគ្នាលើបញ្ហាទាំងឡាយដែលបានផ្តល់ក្នុងកិច្ចប្រជុំនាពេលនេះ។

ឃ.<u>សេចក្តីសន្និដ្ឋាន និងសំណូមពរ</u>

ជាសេចក្តីសន្និដ្ឋាន លោក គាត រង្សី ប្រធានអង្គប្រជុំមានមតិលើកឡើងថា គម្រោងកែលម្អការអប់រំឧត្តមសិក្សានេះមានការគាំទ្រគម្រោង១០០%និងទទួលបាននូវធាតុចូលជាច្រើនពាក់ព័ន្ធនិងការរៀបចំកែលម្អការអប់រំឧត្តមសិក្សា ដែលនិងរំលេចចេញជារូបរាងឡើងមានភាពល្អប្រសើរ ធ្វើឱ្យការសិក្សាកម្រិតឧត្តមសិក្សានៅប្រទេសកម្ពុជាមានកម្រិតខ្ពស់។ ហើយបើនិយាយដោយឡែកនៅរាជធានីភ្នំពេញយើងនេះ គឺកាន់តែមានភាពទាក់ទាញមួយកម្រិតបន្ថែមទៀត ដែលជាចំណុចប្រាថ្នាចង់បានមិនថាតែចំពោះប្រជាពលរដ្ឋកម្ពុជានោះទេ រូបខ្ញុំបាទផ្ទាល់ក៏យល់ឃើញថានេះជាសេចក្តីប្រាថ្នារបស់ខ្ញុំបាទក៏ដូចជាប្រជាជនទូទាំងប្រទេសផងដែរ។

ខ្ញុំសូមសំណូមពរទៅក្រុមហ៊ុនទីប្រឹក្សាសិក្សាគម្រោងត្រូវដាក់បញ្ចូលនូវមតិរបស់វាគ្មិននៃអង្គប្រជុំ ដែលបានលើកឡើងនេះសរសេរបន្ថែម ក្នុងរបាយការណ៍វាយតម្លៃហេតុប៉ះពាល់បរិស្ថាន និងសង្គម ឱ្យបានស៊ីជម្រៅបន្ថែមទៀត ។

ជាចុងបញ្ចប់ លោក គាត រង្សី ប្រធានអង្គប្រជុំ មានមតិ ថ្លែងអំណរគុណ ដល់ ឯកឧត្តម លោកជំទាវ អស់លោក-លោកស្រី តំណាងក្រសួង អប់រំ យុវជន និងកីឡា តំណាងសាកលវិទ្យាល័យភូមិន្ទភ្នំពេញ តំណាងវិទ្យាស្ថានបច្ចេកវិទ្យាកម្ពុជា តំណាងអង្គភាព ស្ថាប័ន អាជ្ញាធរមូលដ្ឋាន និងមន្ទីរជំនាញពាក់ព័ន្ធដែលបានចូលរួមក្នុងកិច្ចប្រជុំនេះ សូមមាន សុខភាពល្អ ការធ្វើដំណើរប្រកបដោយសុវត្ថិភាព ជៀសផុតពីជម្ងឺឆ្លង កូវីដ ១៩ ទាំងអស់គ្នា និងសូមប្រកាសបិទកិច្ចប្រជុំពិគ្រោះយោបល់ចាប់ពីពេលនេះតទៅ។

កិច្ចប្រជុំនេះ ត្រូវបានបញ្ចប់ នៅវេលាម៉ោង ១៦:០០ រសៀល នាថ្ងៃ ខែ ឆ្នាំ ដដែល ប្រកបដោយបរិយាកាសរីករាយ និងស្និតស្នាល ។

អ្នកធ្វើកំណត់ហេតុ

ទេស នភារិទ្ធិ

បានឃើញ និង ឯកភាព

ប្រធានអង្គប្រជុំ

គាត រង្សី

Appendix 6: Certificate Mine Clearance for entire ITC Campus

HANDOVER CERTIFICATE OF CLEARED LAND MINE/UXO AREA

PART 1-GENERAL INFORMATION	
1.1 Battle Field ID: N/A	**1.2** Demining Unit : DDU, CMAC
1.3 Project Supported by: Institute of Technology of Cambodia.	**1.4** Demining Tool : TSC, Team
Total Area of Land	
Mine/UXO field Size (m²): 50,000 m²	Full Clearance (m²): 50,000 m²
PART 2-OPERATIONAL INFORMATION	
2.1 Province Phnom Penh	**2.2** Commune
2.3 District :	**2.4** Village :
2.5 Task Start Date 02/06/2021	**2.6** Task End Date : 10/06/2021
2.7 Methods and technologies used for Clearance: ☑ Manual Mechanical Dogs Combined	**2.8** Clearance depth: 1 Meters by using the metal detectors in 2 typed: (1)- Vallon VMH3CS, (2)- Vallon VMX10.
2.9 Quality Control Carried Out by: Mr. Chiel Chanthol, Site Manager conducted a quality control check of 100% of the land cleared.	**2.10** Beneficiaries: Building Construction
2.11 Quantity of Devices Found and Destroyed:	

AP	AT	UXO	Others	Fragment	Small Arms (kg)
No	No	0	No	149	No

Note: Mine/UXO were found at this site during the demining operation of CMAC team.

PART 3-DECLARATION	
A-Declaration by senior representative of the organization responsible for mine clearance.	**B**-Declaration by responsible district authority or private sector.
I declare that the area described within this report has been cleared in accordance with the CMAC, CMAS and International Mine Action Standard (IMAS) and that it is to the best of my knowledge, experience and belief free of landmines and unexploded ordnance (UXO).	**B.1** This declaration of clearance is officially accepted. **B.2** The area described within this report has been cleared completely of landmines and unexploded ordnance (UXO) in accordance with the CMAC, CMAS and IMAS Standard.
Name : **HENG RATANA**	Name :
Position : Director General	Position :
Date: 10/06/2021	Date :
Signature:	Signature :
THIS DOCUMENT HAS BEEN DISTRIBUTED AS SHOWN BELOW	
a. Original/Copy to: : Institute of Technology of Cambodia.	b. Original to: Data Base Office, CMAC, HQ.

ព្រះរាជាណាចក្រកម្ពុជា
ជាតិ សាសនា ព្រះមហាក្សត្រ

Kingdom of Cambodia

Nation Religion King

មជ្ឈមណ្ឌលសកម្មភាព
កំចាត់មីនកម្ពុជា

File: 298 /DG/CMAC/21
Date: 10 June 2021

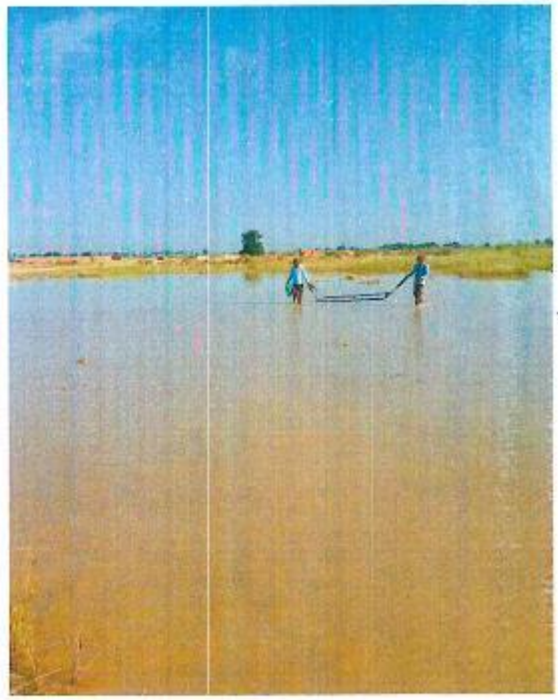
Insurance Certificate of Landmine/UXO Clearance

The Cambodian Mine Action Centre (CMAC) declares that landmine/UXO clearance operation at the Institute of Technology of Cambodia project area (New Building Construction) has been successfully completed with professionalism in accordance with Standard Operation Procedure (SoP) of CMAC, Cambodian Mine Action Standard (CMAS) and International Mine Action Standard (IMAS) and that it is to the best of my knowledge, experience and belief free of landmines and unexploded ordnance (UXO).

Heng Ratana
Delegate of the Royal Government
in charge as Director General of CMAC

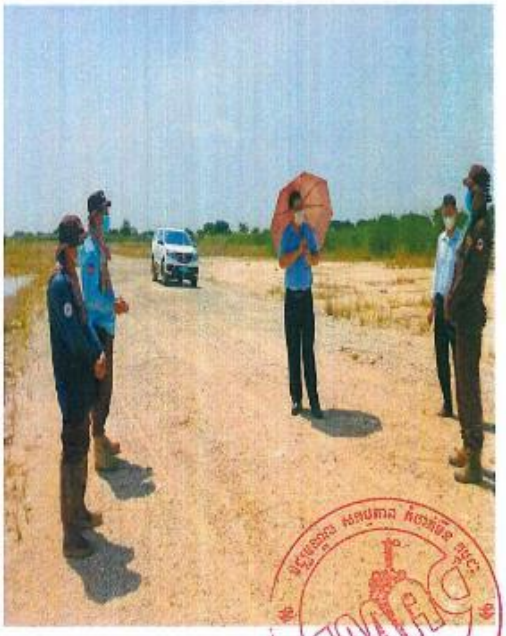
CMAC Building , Duong Ngeap Street, Phum Trung Moan, Sangkat O'Bek Khaom
Khan Sen Sok, Phnom Penh, Cambodia, P.O Box 116, email: info@cmac.gov.kh
Tel: 855-23-995437/8, Fax: 855-23-995439

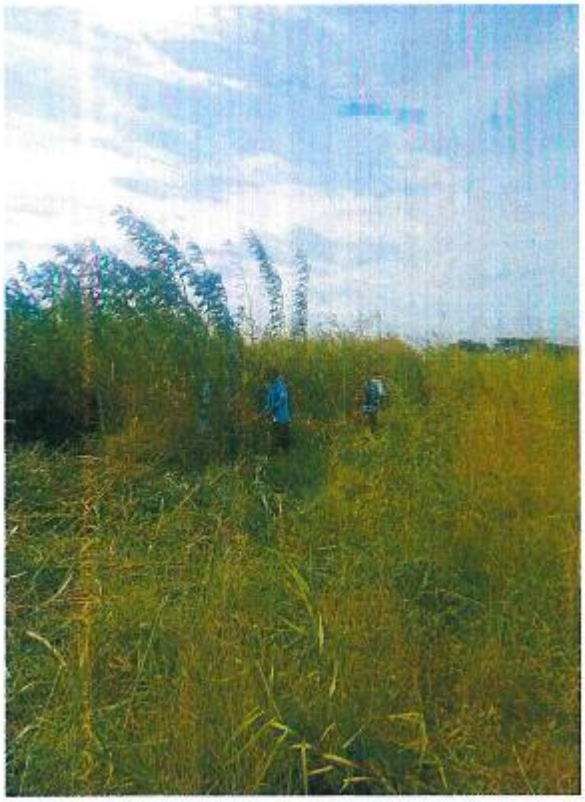
អាគារស៊ីម៉ាក់, វិថីងួនអៀប, ភូមិត្រពាំងមាន, សង្កាត់អូរបែកក្អម, ខណ្ឌសែនសុខ, រាជធានីភ្នំពេញ, កម្ពុជា
ប្រអប់សំបុត្រ ១១៦, email: info@cmac.gov.kh
ទូរស័ព្ទ: ៨៥៥ ២៣ ៩៩៥៤៣៧/៨ ទូរសារ: ៨៥៥ ២៣ ៩៩៥៤៣៩



CAMBODIAN MINE ACTION CENTRE

Mine/UOX Clearance Activities:





Appendix 7: Template for Annual Safeguard Monitoring Report

Safeguards Monitoring Report

Annual Report
xxx {month} 20xx

COUNTRY: xxx {Project name}, xxx {sub-project name, if report covers only one sub-project}

Prepared by the Project Management Unit of {complete name of Implementing Agency} for the {complete name of the borrower} and the Asian Development Bank.

NOTE

(i) In this report, "$" refers to US dollars.

This safeguards monitoring report is a document of the borrower. The views expressed herein do not necessarily represent those of ADB's Board of Directors, Management, or staff, and may be preliminary in nature.

In preparing any country program or strategy, financing any project, or by making any designation of or reference to a particular territory or geographic area in this document, the Asian Development Bank does not intend to make any judgments as to the legal or other status of any territory or area.

I. Executive Summary

{Read and delete: Provide short summary of the following items:

- **Summary of EMP Implementation**
- **Description of monitoring activities** carried out (e.g. field visits, environment effect monitoring, survey questionnaire, public consultation meetings, focus group discussions, etc)
- **Key issues**, any **corrective actions** already taken, and any **grievances**
- Key activities planned in the next reporting period
- Recommendations

Use the paragraph numbering format provided below throughout the report}

6. xxx

7. xxx

II. Project Overview, General safeguard matters

1. Project Overview

{Read and delete: Briefly describe project objectives, scope and components – can be taken from PAM or other relevant document}

8. xxx

9. xxx

2. Project Progress

{Read and delete: Using most recent project progress report, describe status of project implementation, including full list of contracts, status of contract awarding and implementation, name of contractor, Project Supervision Consultant.}

10. xxx

11. xxx

Table 1: Project Overview, Snapshot of Project Progress

Project Number and Title:		
Safeguards Category	Environment	
	Indigenous Peoples	
	Involuntary Resettlement	
Reporting period:		

Last report date:	
Key sub-project activities since last report:	*{Read and delete: This section should include, among others, the following:}* • Contract awarding • Progress of Work (% physical completion) • Status of Safeguard Approvals / Permits / Consents
Report prepared by:	

3. Safeguard Plans Implementation Arrangements

{Read and delete: Describe institutional arrangements and responsibilities for EMP implementation, internal and external monitoring, and reporting, defining roles of PMU, Engineer, Implementation Consultant, Contractors. (Table format as needed)}

12. xxx

13. xxx

4. Incorporation of Safeguards Requirements into Project Contractual Arrangements

{Read and delete: Define manner by which EMP and/or RP requirements are incorporated into bidding documents, contracts.

14. xxx

15. xxx

III. Environmental Performance Monitoring

1. Status of EMP implementation (Mitigation Measures)

{Read and delete: Summarize main mitigation/protection measures implemented in the reporting period (narrative section). Structure in accordance to phases (detailed design, construction preparation, construction, and operation).}

16. xxx

17. xxx

{Read and delete: Include EMP table or updated EMP table if applicable. Assess compliance of environmental management activities with the original or updated EMP. For that purpose, include additional columns entitled "Compliance Status", "Comment or Reasons for Non-Compliance", and "Issues for Further Action". }

Table 2: Compliance with EMP Requirements (Environmental Performance)

EMP Requirements	Compliance Status (Yes, No, Partial)	Comment or Reasons for Non-Compliance	Issues for Further Action
Use KPIs as main heading			

Table 3: Issues for Further Action

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
New Issues from This Report			

2. Health and Safety

{Read and delete: Provide narrative of occupational and community health and safety issues that occurred during the reporting period. Any accident involving injury or death of workers or community members must be reported. Provide details in the Table below}.

18. xxx

19. xxx

Table 4: Health and Safety Issues

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
New Issues from This Report			

IV. Indigenous People Performance Monitoring

{Read and delete: Provide narrative of status of implementation of the REGDP(s)/IPP(s), including but not limited to: status of REGDP or IP Framework updating; implementation updates on the IP component during the reporting period; outstanding activities; etc}.

20. xxx

21. xxx

Table 6: Summary of Compliance with IP Requirements

IP Requirements	Compliance status Yes/No/Partial	Comment or Reasons for Compliance, Partial Compliance/Non-Compliance	Issues for Further Action[18]

Table 7: Issues for Further Action

Issue	Required Action	Responsibility and Timing	Resolution
Old Issues from Previous Reports			
New Issues from This Report			

V. Compliance with safeguards related project covenants

{Read and delete: List all environment and resettlement related loan covenants, and assess project's compliance with the covenants (Table format is appropriate, with concluding statement on compliance, partial compliance or non-compliance, and corrective actions as needed)

[18] To be elaborated further in table 3.b (Issues for Further Action)

Schedule	Para No.	Covenant	Remarks/Issues (Status of Compliance)
Schedule 5	xxx		Complied with / Partially complied with / Not complied with. *{Identify reason for partial or non-compliance}*

VI. Public consultation, Information Disclosure, Capability Building

{Read and delete: Describe public consultation activities during the reporting period. Present planned consultation activities in next reporting period. Use Tables as appropriate.}

- Field Visits (sites visited, dates, persons met)
- Public Consultations and meetings (Date; time; location; agenda; number of participants disaggregated by sex and ethnic group, not including project staff; Issues raised by participants and how these were addressed by the project team)
- Training (Nature of training, number of participants disaggregated by gender and ethnicity, date, location, etc.)
- Press/Media Releases
- Material development/production (e.g., brochure, leaflet, posters)
- Information disclosure

VII. Grievance Redress Mechanism

{Read and delete: Describe mechanisms established to address and redress public complaints and grievances related to social and environment safeguards. Summarize grievances received, if any, and measures implemented to redress them.}

- Number of new grievances, if any, since last monitoring period: ____
- Number of grievances resolved: _____
- Number of outstanding grievances: _____

Type of Grievance	Details (Date, person, address, contact details, etc.)	Required Action, Responsibility and Timing	Resolution
Old Issues from Previous Reports			

New Issues from This Report			

VIII. Conclusion

{Read and delete: Highlight important results from the implementation of EMP monitoring; recommendations to improve EMP management, implementation, and monitoring; key activities planned in next reporting period}.

22. xxx

23. xxx

IX. Attachments

- Consents / permits
- Inspection checklists
- Photographs
- Others