

Project Administration Manual

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Kingdom of Cambodia: Science and Technology
Project in Upper Secondary Education

ABBREVIATIONS

ADB	–	Asian Development Bank
CPD	–	continuous professional development
CSTC	–	Cambodia Science and Technology Center
DDR	–	due diligence report
DGE	–	Directorate General of Education
DSF	–	design and supervision firm
EdTech	–	education technology
EMIS	–	education management information system
EMR	–	environmental monitoring report
FMA	–	financial management assessment
GAP	–	gender action plan
GTHS	–	general technical high school
GRM	–	grievance redress mechanism
ITC	–	Institute of Technology of Cambodia
LMS	–	learning management system
MoEYS	–	Ministry of Education, Youth and Sport
MTEF	–	medium-term expenditure framework
NIE	–	National Institute of Education
NWS	–	network school
PAM	–	project administration manual
PIST	–	project implementation support team
PSC	–	project steering committee
SBM	–	school-based management
SOE	–	statement of expenditures
SPS	–	Safeguard Policy Statement
SRS	–	secondary resource school
STEM	–	science, technology, engineering, and mathematics
STEP UP	–	Science and Technology Project in Upper Secondary Education
TOR	–	terms of reference
USE	–	upper secondary education
USESDP2	–	Second Upper Secondary Education Sector Development Program
USS	–	upper secondary school

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Project Administration Manual Purpose and Process

The project administration manual (PAM) describes the essential administrative and management requirements to implement the project on time, within budget, and in accordance with the policies and procedures of the government and Asian Development Bank (ADB). The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The executing and implementing agencies are wholly responsible for the implementation of ADB-financed projects, as agreed jointly between the borrower and ADB, and in accordance with the policies and procedures of the government and ADB. ADB staff is responsible for supporting implementation including compliance by executing and implementing agencies of their obligations and responsibilities for project implementation in accordance with ADB's policies and procedures.

At loan negotiations, the borrower and ADB shall agree to the PAM and ensure consistency with the loan agreement. Such agreement shall be reflected in the minutes of the loan negotiations. In the event of any discrepancy or contradiction between the PAM and the loan agreement, the provisions of the loan agreement shall prevail.

After ADB Board approval of the project's report and recommendations of the President (RRP), changes in implementation arrangements are subject to agreement and approval pursuant to relevant government and ADB administrative procedures (including the Project Administration Instructions) and upon such approval, they will be subsequently incorporated in the PAM.

I. PROJECT DESCRIPTION

1. The proposed project will support the government's human capital development agenda by improving the effectiveness of upper secondary education. It will increase access to quality education, strengthen science, technology, engineering, and mathematics (STEM) teaching and learning, and strengthen educational leadership and management capacity. This project continues the Asian Development Bank's (ADB) support in Cambodia to the upper secondary education system with a focus on STEM education. The Science and Technology Project in Upper Secondary Education (STEP UP) aims to address the increasing demand for high-quality human resources to support Cambodia's rapidly evolving industrial, technology-oriented, and knowledge-based economy. The project interventions will target secondary resource schools that have received previous ADB support as well as equitably broadening the scope to raise standards in other upper secondary schools (USSs) including general technical high schools (GTHSs) across the country.

2. **Impact and outcome.** The project is aligned with the following impact: high quality human resources for a knowledge-based society developed.¹ The project will have the following outcome: effectiveness of upper secondary education improved.²

3. **Output 1: Equitable access to standard-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 education technology (EdTech) and STEM equipment. Output 1 will specifically:

- (i) Develop minimum service standards (MSS) for USE inputs and outputs to ensure equitable resource allocation across all USSs 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, class furniture, and learning equipment. MSS for outputs including on gross enrolment rate, completion rate and dropout rate will also be defined. Relevant departments will collaborate to develop these MSS.
- (ii) Develop and implement a 5-year secondary education medium-term expenditure framework (MTEF), including multi-year budget estimates, aligned with the Cambodia Secondary Education Blueprint 2030. The executing agency will use the MSS targets, and based on the secondary education sector priorities, strategies, and targets, the MTEF will be developed early in the project to guide secondary sub-sector planning for the next 5 years.
- (iii) 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.³ The action plan will be implemented through coordination between the executing agency and relevant ministries, especially with the Ministry of Labor and Vocational Training, and other training providers, through partnership arrangements and joint delivery programs.

¹ Government of Cambodia, Ministry of Education, Youth and Sport (MoEYS). 2021. *Cambodia Secondary Education Blueprint 2030*. Phnom Penh.

² The design and monitoring framework is in Appendix 1 of the Report and Recommendation of the President, and in section IX, Performance Monitoring, Evaluation, Reporting, and Communication, of this project administration manual (PAM).

³ National Training Board (February 2012). The Cambodia Quality Framework 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.

- (iv) Upgrade facilities of 14 upper secondary network schools (NWSs) 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).
- (v) Install multi-purpose life skills and project-based classrooms in 25 secondary resource schools (SRSs).
- (vi) Upgrade water and sanitation facilities in 18 SRSs and 50 SRS NWSs, including the 14 new upper secondary NWSs, including providing separate toilets for girls and boys.
- (vii) Install voltage stabilizers in 36 SRSs with unstable electricity supply in 18 SRSs, 25 SRS NWSs, including the new ones, and 10 general secondary schools to sensitive electronics which are otherwise often damaged from frequent voltage spikes.
- (viii) Provide 50 SRSs, 101 SRS NWSs, 4 GTHSs, and 103 general USSs 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 four GTHSs will also be provided STEM equipment to improve teaching and learning of the technical subjects taught in these schools.
- (ix) Provide innovative digital technology to support effective STEM teaching and learning to 50 SRSs, 101 SRS NWSs, 4 GTHSs, in addition to 103 general USSs (e-libraries only). Driving towards minimal school standards on access to computers for students, staff and teachers, the primary component will be the 'single computer board'. Targeted USS will be supplied smart classrooms which feature an LCD projector, projection screen, sound system and single computer board-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 and library use and student and teacher research. Selected USS will be provided maker kits and 3D printing which will help advance integrated STEM. STEP UP will deploy information technology 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 learning management system (LMS) and e-Library. In addition to initial training, there will be follow up continuous professional development (CPD) (e.g., professional learning community or PLC, discussions, locally organized needs-based workshops, etc.) and coaching and mentoring to ensure the systems are in place and maintained, and that all target schools are able to integrate and use the tools effectively.
- (x) Provide support to SRS in the accreditation process to enable at least 3 to become new generation schools (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: (a) upgrading and/or provision of classrooms, science rooms, computer labs, libraries,

faculty offices, student affairs facilities, auditoriums; (b) provision of laptops for teachers; and (c) consultant support for the school management reforms.

4. 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 holistic approach. Output 2 will (i) develop and facilitate CPD for in-service STEM teachers and National Institute of Education (NIE) STEM lecturers on effective and innovative teaching strategies, integration of digital technologies 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 Center (CSTC). Output 2 will specifically:

- (i) 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 and higher education institutions for research and teaching purposes; connect industry and secondary schools; and connect with regional and global STEM communities.
- (ii) Develop and implement a school-based STEM Framework appropriate for effective, gender equality and social inclusion (GESI)-responsive teaching and learning in 30 target USS.⁴ 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.
- (iii) Develop and facilitate CPD for at least 25 NIE STEM-subject 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.⁵
- (iv) Develop and facilitate CPD for 775 USS STEM teachers (including THS technical teachers) from 50 SRS, 101 US NWSs, and 4 GTHSs on effective and innovative teaching strategies, integration of technology in USS STEM teaching, action research methods, and improving pedagogical content knowledge.
- (v) Apply Learning and Knowledge Management Systems for teacher pre-service training and CPD (digital delivery).⁶ The teacher trainings will leverage and increase use of the existing online Ministry of Education, Youth and Sport (MoEYS) learning and knowledge management system.

⁴ The 30 pilot schools consist of 5 SRS in smart provinces, 10 SRSs in disadvantaged provinces, 10 upper secondary network schools, and 5 general USSs.

⁵ 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.

⁶ LMS will store resources for teachers and students (i.e., STEM lesson plans and modules for use in pre-service training 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 and online LMS (<https://learningequality.org/kolibri/>).

- (vi) Develop and implement competency-based STEM assessment for USS.⁷ 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 pre-service training 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.
- (vii) Strengthen utilization of EdTech in technical education programs in four target GTHS. STEP UP will develop and implement information technology-related modules (Years 1–3) in the targeted GTHS technical education programs. To address workforce development needs, modules will be developed covering: (a) information technology office equipment maintenance, (b) multimedia digital graphics and videography, (c) application and information and communications technology systems, and (d) networking and/or telecommunications. These modules will be integrated into existing technical courses. STEP UP will support the Vocational Orientation Department and the target GTHS 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.

5. Output 3: Institutional capacity for planning, management and delivery of education strengthened. This output addresses the important role school leaders and education staff on STEM education delivery and learning outcomes. This output includes the following:

- (i) Support MoEYS's aim to enable and empower all schools, their communities and stakeholders to take more active responsibility for improving the learning of students through school-based management (SBM). It will support schools in implementing their SBM action plans and develop an objective assessment tool to rigorously measure progress in meeting the SBM effectiveness standards.
- (ii) 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.⁸
- (iii) Establish at least three USS partnerships on STEM CPD and curriculum enhancement established and implemented with tertiary and polytechnic education and training institutions, private or nongovernment organizations, 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.
- (iv) Establish at least three partnerships between USS and post-secondary or private

⁷ Performance-based assessment is developmental focused on improving student learning outcomes as THS technical subjects, Years 1-3, currently do, rather than punitive.

⁸ Integrate the school-based STEM Framework, where appropriate (i.e., 25 SRS as per Activity 2.2)

sector to enhance student learning and career preparation including guest speakers, site visits, work experience programs, etc. 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.

- (v) Strengthen system-wide analysis and planning functions through capacity development of technical and education specialists, and integration of OpenEMIS census and school information systems. OpenEMIS software will upgrade the existing education management and information system (EMIS) and be customized to the Cambodia context by EMIS 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.
- (vi) 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 targeted at SRS and NWS teachers and school leaders. 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.
- (vii) Upskill at least 50 technical and education specialists, education staff of provincial and district offices, and school managers (with at least 50% available female specialists and education staff) in project implementation, gender-based analysis, policy analysis, and results-based monitoring and evaluation. These selected specialists will develop skills to 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.

II. IMPLEMENTATION PLANS

A. Project Readiness Activities

Table 1: Project Readiness Activities

Indicative Activities	2022					Responsible Unit/Agency
	Aug	Sep	Oct	Nov	Dec	
Advance contracting actions		x				PMU, PIUs, ADB
Establish project implementation arrangements	x					MoEYS
Loan negotiations	x					MEF, ADB
ADB Board approval				x		ADB
Loan signing				x		MEF, ADB
Government legal opinion provided					x	
Loan effectiveness					x	RGC, ADB

ADB = Asian Development Bank, MEF = Ministry of Economy and Finance, MoEYS = Ministry of Education, Youth and Sport, PIU = project implementation unit, PMU = project management unit, RGC = Royal Government of Cambodia.

Source: ADB.

Activity	2022 (Qtr)		2023 (Qtr)				2024 (Qtr)				2025 (Qtr)				2026 (Qtr)				2027 (Qtr)				2028 (Qtr)				2029 (Qtr)			
	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
- Renovations of candidate NGS																														
- Renovation of NWS, USS and GTHS classrooms to science classrooms																														
- Renovation of SRS classrooms to project rooms																														
- Renovation of NWS classrooms to libraries																														
- WASH facilities for NWS																														
- Science & Technology Center Construction																														
Equipment and furniture																														
- Furniture and equipment candidate NGS																														
- Equipment for NWS, USS, GTHS science classrooms																														
- Equipment for SRS project rooms																														
- Furniture and equipment and books for NWS libraries																														
- Additional STEM equipment for SRS, NWS, GTHS, USS																														
- EdTech equipment for SRS, NWS, GTHS, USS																														
- Science & Technology Center furniture & equipment and displays																														
Non-consulting services																														
- English training provider																														
- STEM social media campaign																														
Consultant selection																														
- Project Implementation Support Consultants																														
- Firm to set up and train on OpenEMIS																														
- Science & Technology Center feasibility study																														
- NGS expansion project management & support contract																														
- Science & Technology Center Design & Supervision																														
Environment management plan key activities																														
Gender action plan key activities																														
Communication strategy key activities																														
Semi-annual and midterm review																														
Overall Project Management, Implementation, Supervision, Monitoring and Report preparation																														

CPD = Continuing Professional Development, CSTC = Cambodia Science and Technology Center, EdTech = Education Technology, EMIS = education management information system, GTHS = General and Technical High School, MSS = Minimum Service Standards, MTEF = Medium Term Economic Framework, NGS = New Generation School, NWS = Network School, Qtr = quarter, SRS = Secondary Resource School, STEM = Science, Technology, Engineering, and Mathematics, USS = Upper Secondary School, WASH = Water, Sanitation, and Hygiene

Key to shadings:

	Bidding/recruitment
	Implementation/Construction

Source: Asian Development Bank

III. PROJECT MANAGEMENT ARRANGEMENTS

A. Project Implementation Organizations: Roles and Responsibilities

6. The executing agency of the project will be the MoEYS while the implementing agencies will be the Institute of Technology of Cambodia (ITC), National Institute of Education (NIE) and the Directorate General of Education (DGE).

7. The executing agency will establish a project steering committee (PSC) to provide overall strategic and policy guidance, advice, and direction to the project to ensure achievement of project outcomes and facilitate inter-ministry coordination. The PSC will be co-chaired by the Minister, MoEYS, and Permanent Secretary of State, Ministry of Economy and Finance (MEF). Members of the PSC include: (i) relevant Secretary of State and Under Secretary of State of the executing agency, (ii) representatives from MEF (General Department of International Cooperation and Debt Management and General Department of Budget); (iii) General Department of Administration and Finance, and Directorate General for Policy and Planning, MoEYS; and (iv) Deputy Director General for Policy and Planning and Chair of the NIE Reform Committee as the Secretariat. The executing agency will also appoint a project director and a project manager, to be responsible for the overall management and day-to-day administration of the project implementation, respectively, and, if necessary, to appoint a deputy project manager to support the work of the project manager. Both the project director and project manager will report to the PSC on a quarterly basis.

8. MoEYS will establish a project management unit (PMU) headed by a project director. The project director will be supported by a project manager who will manage a team to monitor and supervise project implementation activities. The PMU will be supported by full-time counterpart staff and the project management consultant team. The PMU, with the support of its consultants, will provide overall administration and oversight as the executing agency of the project. A project implementation unit (PIU) will be established at the ITC, NIE, and DGE. The PIUs will be responsible for day-to-day management and operation of project implementation activities.

9. Project stakeholders' roles and responsibilities are presented in Table 3 below.

Table 3: Project Management Roles and Responsibilities

Project implementation organizations	Management Roles and Responsibilities
Ministry of Economy and Finance	Borrower (i) Review and approve the project's AWPB and allocation and release counterpart funds (ii) Facilitate opening an advance account of the EA for transferring funds (iii) Review SOEs, endorse withdrawal applications to ADB, and release funds to the designated advance account (iv) Submit the audited project financial statement on time (v) Provide oversight of procurement, disbursements, and resettlement matters (vi) Process and submit to ADB any request when required, for allocating the loan proceeds (vii) Participate in the regular meetings of the PSC
Project Steering Committee	(i) Oversight body co-chaired by Minister of MoEYS and Permanent Secretary of State of MEF with representatives from senior management of the EA and the General Departments of MEF (ii) Provide overall direction and guidance to the EA and PMU (iii) Convene regular meetings, at least thrice a year during the project implementation period, to review and endorse the project's AWPB

Project implementation organizations	Management Roles and Responsibilities
Executing Agency: Ministry of Education, Youth and Sport	<ul style="list-style-type: none"> (iv) Provide guidance on inter-ministerial or strategic issues (i) Establish the PMU, PIUs, and TIUs (ii) Assign and evaluate the performance of the project manager and deputy project manager, PMU staff, and Heads of TIUs, counterpart staff, including education specialists (iii) Arrange offices for the PIC firm and other contracting services providers (iv) Prepare the project AWPB based on the project implementation schedule for review and endorsement by the PSC and approval by MEF (v) Implement the program in accordance with the loan agreement (vi) Ensure that the project outputs and outcome are delivered and achieved on time and within budget (vii) Submit to the PSC and ADB the quarterly technical progress and semi-annual environment and social safeguards reports and audited project financial statements in accordance with the loan agreement covenants and ADB requirements (viii) Ensure implementation and monitoring of GAP activities
Project Management Unit, MoEYS	<ul style="list-style-type: none"> (i) Administer the project on behalf of the EA (ii) Coordinate with all the PIUs to prepare AWPB for the project by consolidating proposals from the IAs (iii) Facilitate disbursement and WAs for the PIUs (iv) Provide MEF with data and documents for WAs and replenishment (v) Communicate with ADB for any amendments in the reallocation of the loan proceeds (vi) Lead communication and reporting on the project between the EA and the IAs and ADB (vii) Conduct quality assurance review of project documents from the IAs (viii) Establish and maintain a monitoring framework for all the project components (ix) Ensure compliance with agreed guidelines and procedures for the procurement of goods and selection of consultants (x) Recruit consultants who will support the PMU and manage their contracts (xi) Prepare project financial statements in accordance with government accounting laws and regulations and have it audited by an acceptable auditor to ADB (xii) Manage financial reporting and accountability aspects (WAs, financial reports, audits, bank account statements, etc.) (xiii) Maintain the advance account, including managing disbursements to the subaccount (xiv) Ensure compliance with ADB's financial management requirements (xv) Lead financial management per ADB's Loan Disbursement Handbook (xvi) Be responsible for overall safeguards implementation, monitoring and reporting as delegated by MoEYS, as per the respective safeguards documents
Implementing Agency: Institute of Technology of Cambodia	<ul style="list-style-type: none"> (i) Manage and supervise the STC as per the term of reference (ii) Establish the PIU-1 and assign a PIU manager and counterpart staff and education specialists to be endorsed by the EA in consultation with ADB before submission to MEF (iii) Facilitate conduct of the feasibility study, and phased implementation and operations of the STC (iv) Provide technical inputs (technical specifications and requirements for procurement) to the PMU's procurement and finance teams and supervise the implementation of relevant procurement contracts and other relevant partnership programs under the IA in accordance with procurement and financial plans and procedures (v) Prepare regular progress reports and submit for compilation to PMU for the EA, PSC, and ADB (vi) Maintain and administer the subaccount and provide reconciliation statements to PMU (vii) Ensure compliance with environmental and social safeguards requirements. (viii) Implement climate-adaptive measures of the STC (ix) Implement relevant activities of the GAP

Project implementation organizations	Management Roles and Responsibilities
	(x) Collaborate with the assigned team of education specialists from NIE to deliver integrated STEM CPD programs, including mentoring and coaching support, for USS teachers and GTHS teachers
Implementing Agency: National Institute of Education	<ul style="list-style-type: none"> (i) Establish the PIU-2 and assign a PIU manager and counterpart staff to be endorsed by the EA in consultation with ADB before submission to MEF (ii) Ensure smooth and successful implementation of the project DMF targets and indicators (iii) Coordinate and collaborate with relevant technical departments to implement the Teacher Upgrading Program and CPD programs (iv) Implement the STEM teachers and school management upgrading programs (v) Provide technical inputs (technical specifications and requirements) to the PMU's Procurement and Finance teams and supervise the implementation of relevant procurement contracts and other relevant partnership programs (vi) Prepare regular progress reports and submit for compilation to PMU for the EA, PSC, and ADB (vii) Ensure compliance with environmental and social safeguards requirements. (viii) Implement relevant activities of the GAP
Implementing Agency: Directorate General for Education	<ul style="list-style-type: none"> (i) Manage, supervise, and coordinate with PIUs as per the terms of reference to be prepared by the IA and approved by the EA (ii) Establish the PIU-3 and assign a PIU manager, three TIU managers, and counterpart staff to be endorsed by the EA in consultation with ADB before submission to MEF (iii) Manage and supervise TIUs and ensure smooth and successful implementation of the project DMF targets and indicators (iv) Provide technical inputs (technical specifications and requirements for procurement) to the PMU's procurement and finance teams and supervise the implementation of relevant procurement contracts and other relevant partnership programs under the IA in accordance with procurement and financial plans and procedures (v) Prepare regular progress reports and submit for compilation to PMU for the EA, PSC, and ADB (vi) Ensure compliance with environmental and social safeguards requirements (vii) Implement relevant activities of the GAP (viii) Coordinate and collaborate with PIU-1 and PIU-2 to deliver the project's DMF targets and indicators and implement milestone activities.
Technical Implementation Units	<ul style="list-style-type: none"> (i) Support and report to PIU-3 on implementation progress and actions to address implementation bottlenecks toward successful implementation of activities and key outputs and sub-outputs under PIU-3; and (ii) In collaboration with PIC and individual consultants, contract/partnership services, education specialists and counterpart staff under PIU-1 and PIU-2, POEs and targeted schools to ensure successful implementation of activities and interventions and delivery of DMF targets under each responsible TIU (list of key technical departments under each TIU are presented in Figure 1)
Asian Development Bank	<ul style="list-style-type: none"> (i) Assist the PMU and PIUs in providing timely guidance at each stage of the project implementation in accordance with the agreed implementation arrangements (ii) Review all the documents that require ADB approval (iii) Conduct periodic loan review missions, a midterm review, a final review mission for the project, and an overall project completion review mission (iv) Monitor and require compliance to all loan covenants (v) Timely process withdrawal applications and release eligible funds (vi) Monitor and require the compliance of financial audit recommendations (vii) Regularly update ADB's project performance review reports (viii) Regularly post on ADB website the updated project information documents, including safeguards documents following ADB's disclosure requirements

ADB = Asian Development Bank; AWPB = annual work plan and budget; CPD = continuous professional development; DMF = design and monitoring framework; EA = executing agency; GAP = gender action plan; GTHS = general technical high school; IA = implementing agency; ITC = Institute of Technology Cambodia; MEF = Ministry of Economy and Finance; MoEYS = Ministry of Education, Youth and Sport; NIE = National Institute of Education; PIC = project's implementation consultants; PIU = project implementing unit; PMU = project management unit; POE = Provincial Offices of Education; PSC

= Project Steering Committee; SOE = statement of expenditure; STC = Science and Technology Center; STEM = science, technology, engineering, and mathematics; TIU = technical implementation unit; TTD = Teacher Training Department; USS = upper secondary school; VOD = Vocational Orientation Department; WA = withdrawal application.
Source: Asian Development Bank.

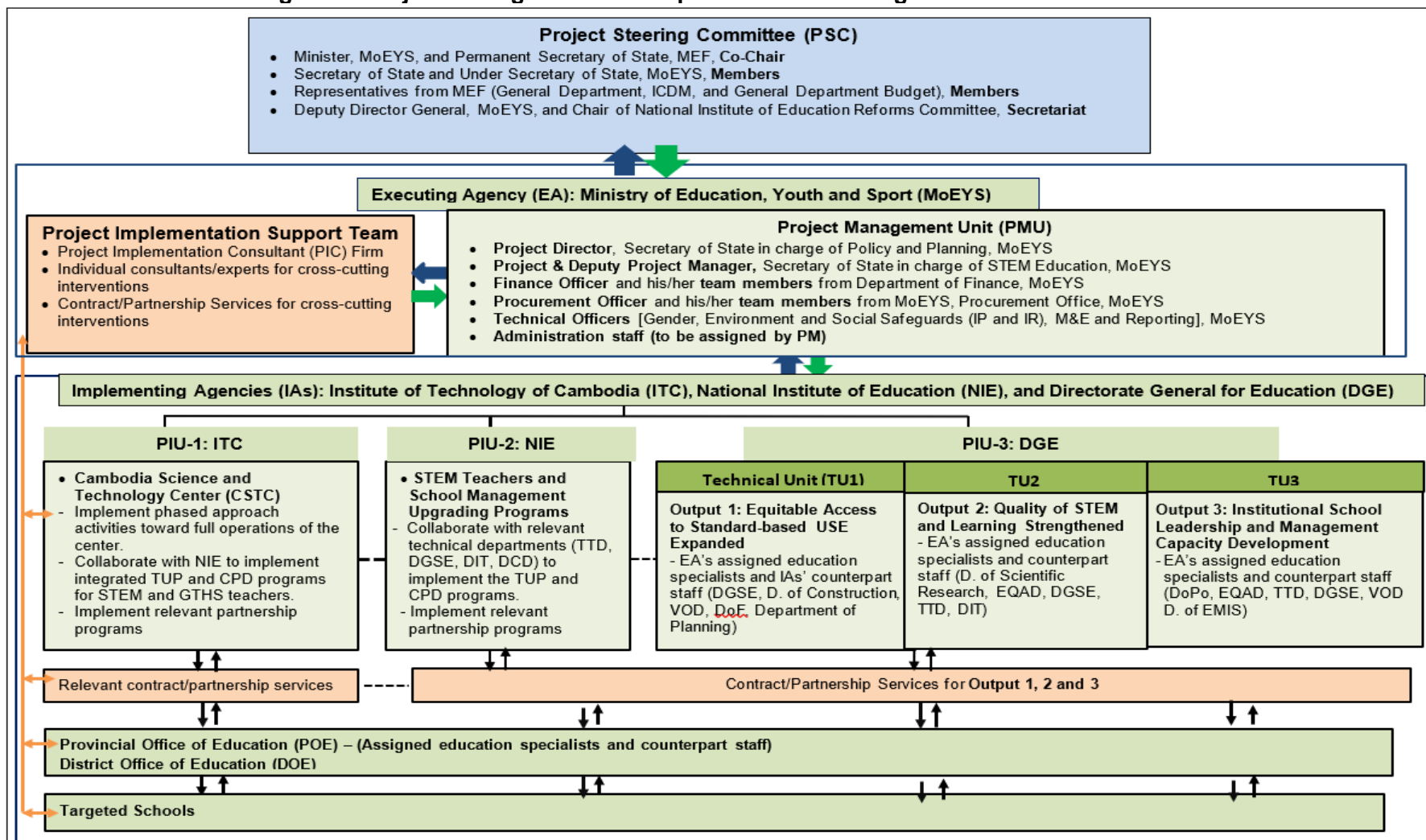
B. Key Persons Involved in Implementation

Executing Agency Ministry of Education, Youth and Sport	H.E. Dr. Hang Chuon Naron Minister Telephone: (855 23) 722 512 Email address: hangnaron@yahoo.com Office address: 89 Preah Norodom Blvd. Phnom Penh, Cambodia
Asian Development Bank Human and Social Development Division	Ayako Inagaki Director Human and Social Development Division Telephone No.: +63 2 8632-6612 Email address: ainagaki@adb.org
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C. Project Organization Structure

10. Diagrams showing the organizational structure of the project and the relationships among the various agencies are shown in Figure 1.

Figure 1: Project Management and Implementation Arrangements for STEP UP



CPD = Continuous Professional Development; D = director; DCD = Department of Curriculum Development; DGSE = Department of General Secondary Education; DIT = Department of International Trade; DOF = Department of Finance; DOPO = Department of Policy; EMIS = education management information system; EQAD = Education Quality Assurance Department; GTHS = General Technical High School; IA = implementing agency; ICDM = International Cooperation and Debt Management; IP = indigenous people; IR = involuntary resettlement; M&E = monitoring and evaluation; PIU = project implementing unit; PM = project manager; SRS = secondary resource school; STEM = science, technology, engineering, and mathematics; TTD = Teacher Training Department; TUP = Teacher Upgrading Program; VOD = Vocational Orientation Department.

IV. COSTS AND FINANCING

11. The project is estimated to cost \$78.24 million, with a concessional loan from ADB's ordinary capital resources for \$70 million. ADB will finance the expenditures in relation to works, goods, consulting and non-consulting services, capacity development and recurrent costs including taxes for these expenditures (except for taxes for consulting services and vehicles). The government will provide counterpart funding of \$8.24 million which will mainly cover salary supplements for project staff, operating costs for schools undergoing the NGS accreditation process, salary supplements for NGSs, external audit fees and financing charges. In addition, the government will provide in-kind contributions of \$1.25 million in the form of staff, office accommodation and facilities, and tax exemptions for consulting services and vehicles.

Table 4: Summary Cost Estimates
(\$ million)

Item	Amount ^a
A. Base Cost^b	
1. Equitable access to standards-based upper secondary education expanded	42.01
2. Quality of science, technology, engineering, and mathematics teaching and learning strengthened	17.66
3. Institutional capacity for planning, management and delivery of education strengthened.	7.95
Subtotal (A)^b	67.62
B. Contingencies^c	8.67
C. Financial Charges During Implementation^d	1.95
Total (A+B+C)^e	78.24

^a Includes taxes and duties of \$4.07 million to be financed by ADB. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of \$1.10 million through exemption.

^b In mid-2022 prices as of July 2022

^c Physical contingencies are computed at 10% on civil works and 5% on other cost categories. Price contingencies computed at average of 1.8% on foreign exchange costs

^d Includes interest during construction computed at 1% per year during the grace period.

^e The total amount excludes government in-kind contributions of \$1.25 million for tax exemptions and office space for consultants.

Source: Asian Development Bank

Table 5: Summary Financing Plan

Source	Amount (\$ million)	Share of Total (%)
Asian Development Bank		
Ordinary capital resources (concessional loan)	70.00	89.5
Government	8.24	10.5
Total	78.24	100.0

Source: Asian Development Bank estimates.

12. The proceeds of the loan shall be used to finance eligible expenditures. All goods, works, and services to be financed out of the loan proceeds shall be procured in accordance with the loan agreement and shall be used exclusively in carrying out the project. ADB may refuse to finance a contract where goods or services have not been procured under procedures in accordance with those agreed between the government and ADB, or where the terms and conditions of the contract are not satisfactory to ADB.

A. Cost Estimates Preparation and Revisions

13. Cost estimates were prepared in June 2022. The ADB project team prepared the cost estimates based on unit cost information from the local and international markets, MoEYS, and key stakeholders. The cost estimates will be reviewed and if necessary, updated by ADB and the PMU during review missions based on unit cost information obtained in the local and international markets, and approved by the project steering committee.

14. The cost estimates are fluid and may change as the scope of the project is refined to accommodate specific facility and equipment needs.

B. Key Assumptions

15. The following key assumptions underpin the cost estimates and financing plan:
- (i) Exchange rate: KHR 4,061 = \$1.00 (as of July 2022);
 - (ii) Price contingencies based on expected cumulative inflation over the implementation period are as follows:

Table 6: Escalation Rates for Price Contingency Calculation

Item	2022	2023	2024	2025	2026	2027	2028	Average
Domestic rate of price inflation	4.7%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.2%
Foreign rate of price inflation	1.7%	1.7%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%

Source: Asian Development Bank.

C. Detailed Cost Estimates by Expenditure Category

Table 7: Detailed Cost Estimates by Expenditure Category
(\$ million)

Item	Amount ^a	% of base cost
A Investment Costs		
1. Civil Works	20.50	30.3%
2. Goods ^e	19.52	28.8%
3. Non-consulting services	1.55	2.3%
4. Consultants	8.74	13.0%
5. Capacity development	7.69	11.4%
Subtotal (A)	57.99	85.8%
B Recurrent Costs		
1. Operating costs (ADB funded)	3.47	5.1%
2. Operating costs (RGC funded) ^c	6.16	9.1%
Subtotal (B)	9.63	14.2%
Total Base Cost^b	67.62	100.0%
C Contingencies		
1. Physical	4.10	6.0%
2. Price	4.58	6.7%
Subtotal (C)	8.67	12.7%
D. Financial Charges During Implementation		
1. Interest during construction	1.95	2.9%
Subtotal (D)	1.95	2.9%
Total Project Cost (A+B+C+D)^d	78.24	115.7%

ADB = Asian Development Bank; RGC = Royal Government of Cambodia.

Note: Numbers may not sum precisely because of rounding.

- ^a Includes taxes and duties of \$4.07 million. Such amount does not represent an excessive share of the project cost.
- ^b In mid-2022 prices as of July 2022.
- ^c Includes estimated audit fees of \$0.12 million for the audit of the annual project financial statements for the period 2023–2028 to be financed from government resources.
- ^d Excludes in-kind contributions of \$1.25 million for tax exemptions on consulting services, and vehicles and office space for consultants.
- ^e Includes \$0.23 million for vehicles. This amount is financed exclusive of taxes and duties.
- Source: Asian Development Bank.

D. Allocation and Withdrawal of Loan Proceeds

16. Except as ADB may otherwise agree, each item of expenditure shall be financed from the proceeds based on the percentages set forth in the table below:

Table 8: Allocation and Withdrawal of ADB Loan Proceeds

Number	Category	Total Amount Allocated for ADB Financing	Percentage and basis for withdrawal from the loan account
1	Works, Goods (equipment and furniture), Non-consulting Services, capacity development and operating costs	52,490,000	100% of total expenditure claimed
2	Consulting Services and Goods (vehicles)	8,970,000	100% of total expenditure claimed ^a
3	Unallocated	8,540,000	
	Total	70,000,000	

^a Exclusive of taxes and duties imposed within the territory of the Borrower.

E. Detailed Cost Estimates by Financier

Table 9: Detailed Cost Estimates by Financier

Item	ADB		Government		Total Cost ^a	
	Amount	% of Cost Category	Amount	% of Cost Category	Amount	Taxes and Duties
A. Investment Costs						
1. Civil works	20.50	100%	0.00	0.00%	20.50	1.86
2. Goods ^b	19.52	100%	0.00	0.00%	19.52	1.75
3. Nonconsulting services	1.55	100%	0.00	0.00%	1.55	0.14
4. Consultants	8.74	100%	0.00	0.00%	8.74	0.00
5. Capacity development	7.69	100%	0.00	0.00%	7.69	0.00
Subtotal (A)	57.99	100%	0.00	0.00%	57.99	3.76
B. Recurrent Costs						
1. Operating costs (ADB-funded) ^c	3.47	100%	0.00	0.00%	3.47	0.32
2. Operating costs (RGC-funded) ^d	0.00	100%	6.16	100.00%	6.16	0.00
Subtotal (B)	3.47	36.0%	6.16	64.0%	9.63	0.32
Total Base Cost^e	61.46		6.16		67.62	4.07
C. Contingencies (C)	8.54	98.5%	0.13	1,5%	8.67	0.00
D. Financial Charges During Implementation (D)	0.00	0.00%	1.95	100.0%	1.95	0.00
Total Project Cost (A+B+C+D)^f	70.00	89.5%	8.24	10.5%	78.24	4.07
% Total Project Cost	89.5%		11.5%		100%	

ADB = Asian Development Bank, RGC = Royal Government of Cambodia.

Note: Numbers may not sum precisely because of rounding.

^a Includes taxes and duties of \$4.07 million financed by ADB. Such amount does not represent an excessive share of the project cost. The government will finance taxes and duties of \$1.10 million through exemption.

^b Includes \$0.23 million for vehicles. This amount is financed exclusive of taxes and duties.

^c ADB will finance \$3.47 million of operating costs covering monitoring missions, meetings, vehicle costs, and office costs.

^d Includes NGS operation budget to be funded under the MoEYS annual budget; also includes estimated audit fees of \$0.12 million for the audit of the annual project financial statements for the period 2023–2028 to be financed from government resources.

^e In mid-2022 prices as of July 2022.

^f Excludes in-kind contributions of \$1.25 million for office space and tax exemptions on consulting services and vehicles.

Source: Asian Development Bank.

F. Detailed Cost Estimates by Outputs

Table 10: Detailed Cost Estimates by Outputs
(\$ million)

Item	Total Cost ^a	Output 1		Output 2		Output 3	
		Amount	% of Cost Category	Amount	% of Cost Category	Amount	% of Cost Category
A. Investment Costs							
1. Civil works	20.50	11.75	57.3%	8.74	42.6%	0.01	0.0%
2. Goods ^b	19.52	18.01	92.3%	1.47	7.5%	0.04	0.2%
3. Non-consulting services	1.55	0.00	0.0%	0.96	62.4%	0.58	37.6%
4. Consulting services	8.74	4.59	52.6%	3.39	38.8%	0.75	8.6%
5. Capacity development	7.69	0.60	7.8%	1.46	19.0%	5.63	73.2%
Subtotal (A)	57.99	34.96	60.3%	16.02	27.6%	7.01	12.1%
B. Recurrent Costs							
1. Operating costs (ADB funded) ^c	3.47	1.64	47.4%	1.11	32.2%	0.71	20.4%
2. Operating costs (RGC funded) ^d	6.16	5.41	87.8%	0.52	8.4%	0.23	3.7%
Subtotal (B)	9.63	7.05	73.3%	1.63	17.0%	0.94	9.7%
Total Base Cost^e	67.62	42.01	62.1%	17.66	26.1%	7.95	11.8%
C. Contingencies							
1. Physical	4.10	2.42	59.0%	1.29	31.6%	0.39	9.4%
2. Price	4.58	2.81	61.3%	1.20	26.2%	0.57	12.5%
Subtotal (C)	8.67	5.22	60.2%	2.49	28.7%	0.96	11.0%
D. Financial Charges During Implementation							
1. Interest during construction	1.95	1.21	61.9%	0.51	26.4%	0.23	11.7%
Subtotal (D)	1.95	1.21	61.9%	0.51	26.4%	0.23	11.7%
Total Project Cost (A+B+C+D)^f	78.24	48.45	61.9%	20.66	26.4%	9.13	11.7%

ADB = Asian Development Bank, RGC = Royal Government of Cambodia.

Note: Numbers may not sum precisely because of rounding.

^a Includes taxes and duties of \$4.07 million. Such amount does not represent an excessive share of the project cost.

^b Includes \$0.23 million for vehicles. This amount is financed exclusive of taxes and duties.

^c ADB will finance \$3.47 million of operating costs covering monitoring missions, meetings, vehicle costs, and office costs.

^d Includes estimated audit fees of \$0.12 million for the audit of the annual project financial statements for the period 2023-2028 to be financed from government resources.

^e In mid-2022 prices as of July 2022.

^f Excludes in-kind contributions of \$1.25 million for office space and tax exemptions on consulting services and vehicles

Source: Asian Development Bank.

G. Detailed Cost Estimates by Year

Table 11: Detailed Cost Estimates by Year
(\$ million)

Item	Total Cost ^a	2023	2024	2025	2026	2027	2028
A. Investment Costs							
1. Civil works	20.50	0.05	1.74	6.38	6.45	5.57	0.30
2. Goods ^b	19.52	0.33	0.24	7.79	6.08	4.69	0.39
3. Non-consultant services	1.55	0.09	0.47	0.47	0.34	0.19	0.00
4. Consultants	8.74	0.93	1.44	2.13	2.25	1.45	0.55
5. Capacity Development	7.69	0.17	1.34	2.03	1.70	1.30	1.14
Subtotal (A)	57.99	1.57	5.24	18.79	16.82	13.19	2.38
B. Recurrent Costs							
1. Operating costs (ADB funded) ^c	3.47	0.53	0.57	0.51	0.54	0.64	0.68
2. Operating costs (RGC funded) ^d	6.16	0.25	0.31	0.79	1.46	1.96	1.40
Subtotal (B)	9.63	0.78	0.88	1.29	2.00	2.60	2.08
Total Base Cost^e	67.62	2.35	6.11	20.09	18.81	15.79	4.46
C. Contingencies (C)	8.67	0.15	0.61	2.41	2.57	2.37	0.56
D. Financial Charges During Implementation (D)	1.95	0.01	0.05	0.20	0.40	0.60	0.69
Total Project Cost (A+B+C+D)^f	78.24	2.51	6.77	22.70	21.78	18.76	5.72
% Total Project cost	100%	3%	9%	29%	28%	24%	7%

ADB = Asian Development Bank; RGC = Royal Government of Cambodia

Note: Numbers may not sum precisely because of rounding.

^a Includes taxes and duties of \$4.07 million. Such amount does not represent an excessive share of the project cost.

^b Includes \$0.23 million for vehicles. This amount is financed exclusive of taxes and duties.

^c ADB will finance \$3.47 million of operating costs covering monitoring missions, meetings, vehicle costs, and office costs.

^d Includes estimated audit fees of \$0.12 million for the audit of the annual project financial statements for the period 2023-2028 to be financed from government resources.

^e In mid-2022 prices as of July 2022.

^f Excludes in-kind contributions of \$1.25 million for tax exemptions on consulting services, and vehicles and office space for consultants.

Source: Asian Development Bank

H. Contract and Disbursement S-Curve

17. Table 12 shows the indicative contract awards and disbursements projections, which will be recorded and reported in eOperations.

Table 12: Indicative Contract Awards and Disbursements projection

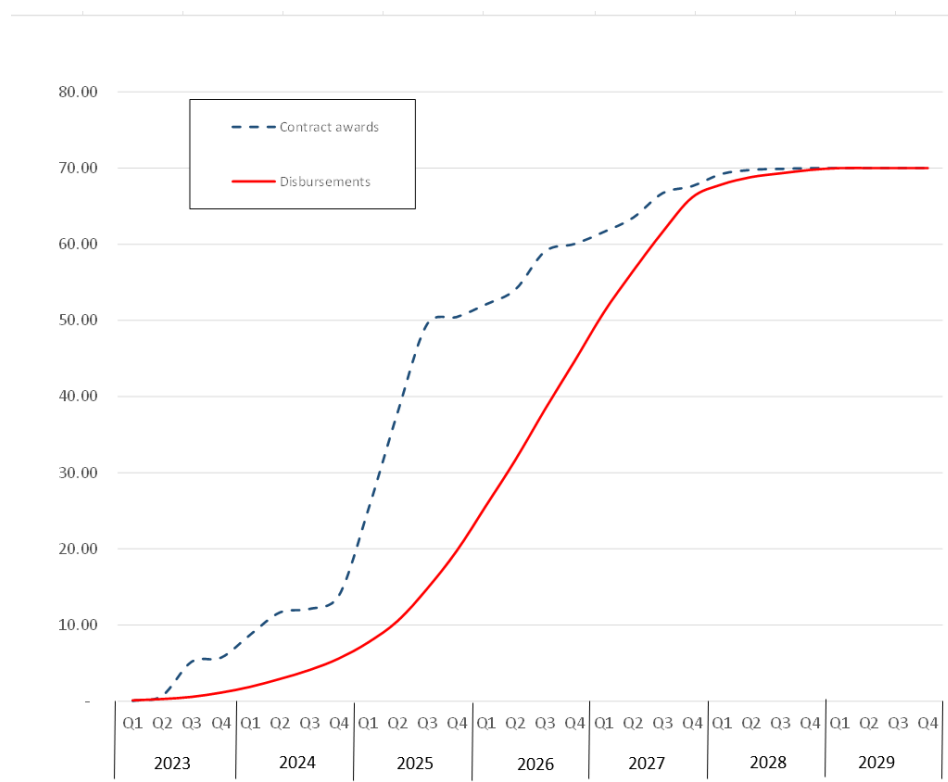
	Contract Awards (in \$ million)					Disbursements (in \$ million)				
	Q1	Q2	Q3	Q4	Total	Q1	Q2	Q3	Q4	Total
2023	0.04	0.67	4.47	0.54	5.71	0.11	0.17	0.28	0.56	1.13
2024	3.03	2.90	0.46	1.73	8.13	0.76	1.03	1.16	1.52	4.48
2025	11.29	12.82	11.56	0.92	36.60	2.11	2.82	4.23	4.93	14.10
2026	1.67	1.96	4.99	0.98	9.59	5.97	6.02	6.61	6.30	24.91
2027	1.58	1.88	3.21	0.92	7.59	6.43	5.48	5.10	4.52	21.53
2028	1.60	0.53	0.14	0.10	2.38	1.70	0.97	0.50	0.44	3.61
2029	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.25
	Total Contract Awards				70.00	Total Disbursements				70.00

Q = quarter.

Note: Numbers may not sum precisely because of rounding.

Source: Asian Development Bank

Figure 2: Contract Awards and Disbursement S-Curve (\$ Million)



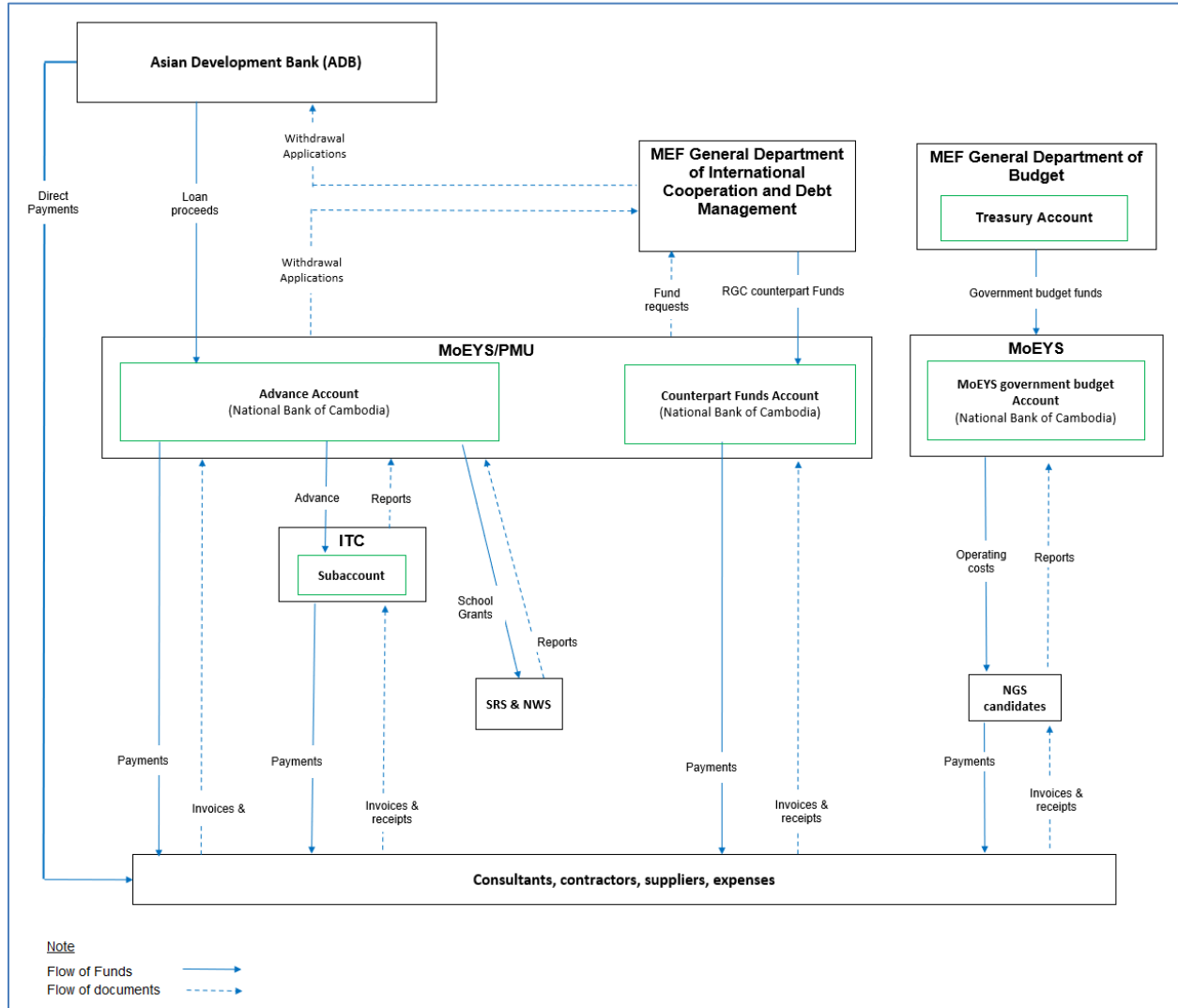
Q = quarter.

Source: Asian Development Bank.

I. Fund Flow Diagram

18. The fund flow diagram is indicated below:

Figure 3: Fund Flow Diagram



ITC = Institute of Technology of Cambodia; MEF = Ministry of Economy and Finance; MoEYS = Ministry of Education, Youth and Sport; NGS = new generation school; NWS = network school; PMU = project management unit; RGC = Royal Government of Cambodia; SRS = Secondary resource school.

V. FINANCIAL MANAGEMENT

A. FINANCIAL MANAGEMENT ASSESSMENT

19. The financial management assessment (FMA) was conducted from September 2021 to May 2022 in accordance with ADB’s Guidelines for the Financial Management and Analysis of Projects and the Financial Due Diligence: A Methodology Note. The FMA considered the capacity of the MoEYS, DGE, ITC, and NIE, including funds flow arrangements, staffing, accounting and financial reporting systems, financial information systems, and internal and external auditing

arrangements. The FM responsibilities during project implementation will remain at the MoEYS (PMU) level. MoEYS has supervision and control over the IAs. Based on the assessment, the key financial management risks identified are:

- (i) The project component of the Second Upper Secondary Education Sector Development Program (USESDP 2)⁹ has at times run out of funds because withdrawal applications have not been prepared on time, and there is a risk that the project will not have funds constantly available for activities if withdrawal applications for replenishments or advances are not submitted with sufficient frequency.
- (ii) Some staff in the Department of Finance and DGE of MoEYS work on multiple projects in addition to continuing with their core government work. There is a risk that the project finance staff will have insufficient time for the project.
- (iii) Some of the proposed PMU finance unit staff do not have experience of ADB projects and have not been trained in the MEFs' Standard Operating Procedures on Financial Management for all Externally Financed Projects/Programs in Cambodia.
- (iv) There has been a challenge to recruit a national finance consultant for the USESDP2 project and there is a risk that a strong national finance consultant with the required skills cannot be recruited for this project.
- (v) MoEYS has yet to comply with instructions issued by the MEF in 2020 on the format that externally funded projects should use to prepare their annual workplan and budget. There is a risk that, if the project does not use this format, the MEF may delay the approval of the annual budget which will also delay project implementation.
- (vi) The process to make payments to contractors and suppliers can be slow. There have been instances of delayed payments to contractors in USESDP2 and there is a risk of late payments for the new project.
- (vii) The Department of Finance is preparing a MoEYS-specific Standard Operating Procedures on Project Financial Management to be used for all MoEYS projects, to augment the MEF's Standard Operating Procedures on Financial Management. The Standard Operating Procedures on Project Financial Management are currently in draft form. Our review found a few weaknesses and omissions in the current draft. There is a risk that the project will not have an adequate set of financial procedures in place.
- (viii) There is a risk that a perceived lack of flexibility in activity budgets can prevent the project from making timely adjustments as needs change, which leads to delayed implementation.
- (ix) Vehicles procured under the USESDP2 project for provincial based Regional School Improvement Teams have not been used as planned. There is a risk that vehicles to be procured for additional Regional School Improvement Teams under the STEP UP project would also not be used for their intended purpose.
- (x) The Internal Audit Department staff have limited capacity and have not conducted internal audits of any ongoing projects. There is a risk that the Internal Audit Department will not conduct internal audits of the project. There is also a risk that, if internal audits are conducted, they will not be of sufficiently high quality.
- (xi) Individual implementing departments do not receive regular monthly financial reports showing the expenditure against budget for the activities they are

⁹ ADB. [Cambodia: Second Upper Secondary Education Sector Development Program](#).

responsible for. There is a risk of insufficient regular finance reports to monitor project progress.

- (xii) The accounting software implemented for projects is often used by only one or two staff within the finance unit, and some finance reports are prepared from parallel excel systems. There is a risk that inconsistent financial information could be reported.

20. It is concluded that the overall pre-mitigation financial management risk of the project is substantial. The MoEYS, DGE, ITC, and NIE have therefore agreed to implement an action plan as key measures to address the deficiencies. The financial management action plan is provided in Table 13. Taking these risk mitigating activities into account, the FMA concluded that the MoEYS has adequate capacity to establish sufficient internal control, accounting, and auditing procedures to administer advance account and statement of expenditures (SOE) procedures.

Table 13: Financial Management Time-Bound Action Plan

Risk	Risk Mitigating Activity	Timeline	Responsible Entity
MoEYS and DGE will not have sufficient time to focus on this project because they are implementing multiple projects concurrently, with a consequent risk of low disbursements and delay in implementation and reporting, especially in early years of the project.	MoEYS will nominate staff to the PMU who should be available to devote sufficient time for the project.	Before effectiveness	MoEYS
The project will not have funds constantly available for activities if withdrawal applications for replenishments or advances are not submitted with sufficient frequency.	The project will prepare bi-annual 6-month expenditure forecasts and request an increase in the advance level whenever necessary.	By 30 June and 31 December each year	PMU / finance unit
PMU finance unit staff will have insufficient time for the project due to work commitments for core government work and other projects.	The PMU finance officer will be required to allocate 50% of their time for the project, and not be nominated for other projects during the life of STEP UP.	Throughout the project	PMU / finance unit
	The PMU finance officer will monitor the time that other finance staff are able to work for the project and check finance tasks are completed on time.	Throughout the project	PMU / finance unit
	A national finance consultant will be recruited to provide additional support and will be responsible for setting up accounting systems providing finance staff capacity building.	Within 3 months of effectiveness	PMU
FM arrangements are not properly managed due to some PMU and ITC finance staff's lack of experience implementing ADB-funded projects and lack of training in the MEF SOP/FM.	DOF under MoEYS will conduct a training for the PMU and ITC finance staff on the MEF SOP/FM. Trainings on ADB loan disbursement handbook and financial management will also be provided.	Within 6 months of effectiveness	PMU / finance unit

Risk	Risk Mitigating Activity	Timeline	Responsible Entity
A strong national finance consultant with the required skills cannot be recruited.	The TOR and personal specification for a national finance consultant should be set at a realistic level.	Before effectiveness	PMU
Late approval of the budget by the MEF will delay project implementation, especially if the project does not follow the format and procedures set by the MEF.	The project will be required to follow the format set by the MEF to prepare the annual workplan and budget.	By 30 November each year	PMU
Late payments to suppliers which could impact timely implementation of the project.	The finance unit will monitor the time taken to pay suppliers by setting up a payment register and record the date that invoices were received from suppliers/contractors and the date they are paid.	Within 6 months of effectiveness	PMU / finance unit
	Finance and procurement units will meet with NGOs and contractors when contracts are signed to explain the invoicing procedures and contract conditions.	Throughout the project	Finance and procurement units
Project does not have an adequate set of financial procedures in place resulting to inadequate financial management policies and practices.	The DOF will complete the MoEYS SOP/PFM, taking note of feedback comments and submit to the Minister for approval.	Within 6 months of effectiveness	DOF
	The project will prepare a set of short project-specific finance guidelines as an addendum to the MoEYS SOP/PFM that may include details of the bank and withdrawal application signatories for, details of bank accounts, petty cash limits, the project coding structure/chart of accounts, and procedures for project-specific activities.	Within 6 months of effectiveness	PMU / finance unit
Perceived lack of flexibility in activity budgets can prevent the project from making timely adjustments as needs change, which leads to delayed implementation.	Include budget flexibility rules in the MoEYS SOP/PFM or the project finance guidelines that clearly explain the amount of discretion that departments have, that project management has, and when no objection must be requested from ADB and approval from MEF.	Within 6 months of effectiveness	PMU / finance unit
	As part of project start-up / orientation, explain the nature of cost estimates, i.e., that they can be updated during project implementation, and explain that indicative lists are, as the same implies, indicative and should be refined during implementation.	Within 6 months of effectiveness	PMU / finance unit
Assets procured by the project are not used for their intended purpose.	Confirm use of assets, including vehicles procured for the STEP UP project through annual physical check and project review.	Throughout the project	PMU

Risk	Risk Mitigating Activity	Timeline	Responsible Entity
IAD will not conduct internal audits of the project, and even if internal audits are conducted, they will not be of sufficiently high quality due to lack of capacity.	The IAD will nominate staff to be responsible for internal audits of externally funded projects.	Within 3 months of effectiveness	IAD
	All nominated staff will be trained on the MEF's SOP/FM, MEF-GDIA internal audit guidelines for projects and MoEYS' SOP/PFM.	Within 12 months of effectiveness	IAD
	Internal audits will be conducted at least 2 times during the project, following the MEF-GDIA internal audit guidelines for projects	By 31 December 2025 and 31 December 2027	IAD
Insufficient regular financial reports to monitor project progress.	The PMU finance unit will develop a set of monthly financial reports that can be produced automatically from the accounting software.	Within 6 months of effectiveness	PMU / finance unit
ITC does not produce a set of annual financial statements that are in accordance with Cambodian or International accounting standards.	The ITC will start to prepare consolidated annual financial statements in accordance with Cambodian accounting standards.	First consolidated annual financial statements for 2026, by 30 June 2027. Annually thereafter.	ITC
Project accounting software will not be used by all finance staff, and that inconsistent financial information could be reported by staff using parallel excel systems.	Implement an appropriate accounting software such as Sage 50 for the project. The project may consider using online software.	Within 6 months of effectiveness	PMU / finance unit
	All the PMU finance unit staff will be trained to use the accounting software and ensure that all finance staff have access to the software, and that finance staff do not use parallel excel systems to produce reports.	Within 6 months of effectiveness	PMU / finance unit

ADB = Asian Development Bank, DOF = Department of Finance, FMM = financial management manual, GDIA = General Department of Internal Audit, IAD = Internal Audit Department, MEF = Ministry of Economy and Finance, MoEYS = Ministry of Education, Youth and Sport, NGO = nongovernment organization, PFM = public financial management, PMU = Project Management Unit, SOP = standard operating procedure, STEP UP = Science and Technology Project in Upper Secondary Education.

Source: Asian Development Bank.

B. Disbursement

1. Disbursement Arrangements for ADB Funds

21. The loan proceeds will be disbursed in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time),¹⁰ and detailed arrangements agreed upon between the government and ADB.

22. **Direct payment procedures.** Direct payment procedures may be used for large contracts under the project. Suppliers, contractors, and consultants are required to submit approved invoices and other supporting documentation to ADB in accordance with the ADB's Loan Disbursement Handbook (2017, as amended from time to time).

¹⁰ The handbook is available electronically from the ADB website(<http://www.adb.org/documents/loan-disbursement-handbook>)

23. **Advance fund procedure.** MoEYS will establish an advance account at the National Bank of Cambodia. The currency of the advance account will be in US dollars. The advance account is to be used exclusively for the ADB's share of eligible expenditures. The MoEYS PMU, who administers the account is accountable and responsible for proper use of advances to the advance account including advances to the sub-account to be established and managed by ITC for the operating costs related to the CSTC.

24. The total outstanding advance to the advance account should not exceed the estimate of ADB's share of expenditures to be paid through the advance account for the forthcoming 6 months. MoEYS may request for initial and additional advances to the advance account based on an Estimate of Expenditure Sheet¹¹ setting out the estimated expenditures to be financed through the accounts for the forthcoming 6 months. Supporting documents should be submitted to ADB or retained by the MoEYS in accordance with ADB's Loan Disbursement Handbook (2017, as amended from time to time) when liquidating or replenishing the advance account. All withdrawal applications will be sent to ADB for processing.

25. **Statement of expenditure procedure.**¹² The SOE procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the advance account. Supporting documents and records for the expenditures claimed under the SOE should be maintained and made readily available for review by ADB's disbursement and review missions, upon ADB's request for submission of supporting documents on a sampling basis, and for independent audit. The ceiling for the SOE procedure is the equivalent of \$100,000 per individual payment. Reimbursement and liquidation of individual payments in excess of the SOE ceiling should be supported by full documentation when submitting the withdrawal application to ADB.

26. Before the submission of the first withdrawal application, the borrower should submit to ADB sufficient evidence of the authority of the person(s) who will sign the withdrawal applications on behalf of the government, together with the authenticated specimen signatures of each authorized person. The minimum value per withdrawal application is set in accordance with the Loan Disbursement Handbook (footnote 10). Individual payments below this amount should be paid (i) by the executing or implementing agency and subsequently claimed to ADB through reimbursement, or (ii) through the advance account procedure, unless otherwise accepted by ADB. The borrower should ensure sufficient category and contract balances before requesting disbursements. Use of ADB's Client Portal for Disbursements (CPD)¹³ system is encouraged for submission of withdrawal applications to ADB.

2. Disbursement Arrangements for Counterpart Fund

27. The MEF is responsible for ensuring that the government counterpart funds are made available to the projects in accordance with the loan agreement and as required by the project's annual work plans and budgets. Withdrawal of the government counterpart funds must be made in accordance with the Standard Operating Procedures on Financial Management for all Externally Financed Projects/Programs in Cambodia (MEF, 2019). The MoEYS will be responsible for submitting withdrawal applications to the MEF. The government will finance salary

¹¹ Estimate of Expenditure sheet is available in Appendix 8A of ADB's Loan Disbursement Handbook (2017, as amended from time to time)

¹² SOE forms are available in Appendix 7B of ADB's Loan Disbursement Handbook (2017, as amended from time to time).

¹³ The CPD facilitates online submission of WA to ADB, resulting in faster disbursement. The forms to be completed by the Borrower are available online at <https://www.adb.org/documents/client-portal-disbursements-guide>

supplements for government staff, operation costs of candidate NGSs, and external audit fees. Funds for the NGSs will be transferred from the national treasury to the MoEYS government funds bank account. MoEYS will then transfer funds to the existing bank account managed by each school. The government will finance local taxes and duties under the project for consulting services and vehicles, through tax exemptions. The MoEYS will submit tax exemption request letters to the MEF, giving details of the packages and/or contracts for which tax exemption is requested. The MEF will provide tax exemption certificates.

C. Accounting

28. The MoEYS will maintain, or cause to be maintained, separate books and records by funding source for all expenditures incurred on the project following Financial Management Manual for externally financed projects/programs in Cambodia (MEF, December 2019). The MoEYS will prepare project financial statements in accordance with the Cash Basis of Cambodian Public Accounting Standards which are aligned with International Public Sector Accounting Standard for cash-based accounting.

D. Auditing and Public Disclosure

29. The MoEYS will cause the detailed project financial statements to be audited in accordance with International Standards on Auditing, by an independent auditor acceptable to ADB. The MoEYS will submit to ADB, the audited project financial statements together with the auditor's opinion in the English language, within 6 months from the end of the fiscal year.

30. The audit report for the project financial statements will include a management letter and auditor's opinions, which cover (i) whether the project financial statements present an accurate and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting standards; (ii) whether the proceeds of the loan were used only for the purpose(s) of the project; and (iii) whether the borrower or executing agency was in compliance with the financial covenants contained in the legal agreements (where applicable).

31. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal program supervision, and followed up regularly with all concerned, including the external auditor.

32. The government, MoEYS, DGE, and ITC have been made aware of ADB's approach to delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.¹⁴ ADB reserves the right to require a change in the auditor (in a manner consistent with the constitution of the borrower), or for additional support to be provided

¹⁴ ADB's approach and procedures regarding delayed submission of audited project financial statements:

- (i) When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (a) the audit documents are overdue; and (b) if they are not received within the next 6 months, requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.
- (ii) When audited project financial statements are not received within 6 months after the due date, ADB will: (a) withhold processing of requests for new contract awards and disbursement such as new replenishment of advance accounts, processing of new reimbursement, and issuance of new commitment letters, (b) withhold the extension of the loan closing date; and (c) defer negotiation or Board presentation of new loan proposals. ADB will (a) inform the executing agency of ADB's actions; and (b) advise that the loan may be suspended if the audit documents are not received within the next 6 months.
- (iii) When audited project financial statements are not received within 12 months after the due date, ADB may suspend or cancel the loan.

to the auditor, if the audits required are not conducted in a manner satisfactory to ADB, or if the audits are substantially delayed. ADB reserves the right to verify the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

33. Public disclosure of the audited project financial statements, including the auditor's opinion on the project financial statements, will be guided by ADB's Access to Information Policy, 2018.¹⁵ After the review, ADB will disclose the audited project financial statements and the opinion of the auditors on the project financial statements no later than 14 days of ADB's confirmation of their acceptability by posting them on ADB's website. The management letter, additional auditor's opinions, and audited entity financial statements will not be disclosed.¹⁶

VI. PROCUREMENT AND CONSULTING SERVICES

A. Advance Contracting and Retroactive Financing

34. Retroactive financing is not envisaged. All advance contracting will be undertaken following ADB's Procurement Policy (2017, as amended from time to time)¹⁷ and Procurement Regulations for ADB Borrowers for Goods, Works, Non-consulting, and Consulting Services (2017, as amended from time to time).¹⁸ The issuance of invitations to bid and requests for proposal under advance contracting will be subject to ADB approval. The borrower, MoEYS have been advised that approval of advance contracting does not commit ADB to finance the project. For expenditures under the eventual contracts to be eligible for ADB financing, ADB requires that:

- (i) the procurement procedures, including advertising, be in accordance with ADB's Procurement Policy, Procurement Regulations for ADB Borrowers and associated Guidance Notes;
- (ii) ADB reviews the borrower's process;
- (iii) the borrower undertakes such advance contracting at its own risk; and
- (iv) any concurrence by ADB with the procedures, documentation, or proposal for an award does not commit ADB to finance the project in question.

35. A strategic procurement planning carried out during project preparation informed the selection of critical activities to be procured in consultation with MoEYS before proceeding with advance contracting. To improve project readiness, recruitment of consulting firms for project implementation, OpenEMIS, and feasibility study of the CSTC are suggested to be procured by advance contracting, as well as several small consultancies for procurement and financial management assistance in the PMU (Refer to Section C, Procurement Plan for details on these activities). All are considered essential for early implementation of activities, capacity building and assistance to MoEYS with technical expertise requirements for the CSTC.

36. The following will be procured through advance contracting:

- (i) **Works**
 - (a) CW-07 (\$54,000); Renovations to PMU and (2) PIUs
- (ii) **Goods**
 - (a) GD-01-Purchase of 7 vehicles for PMU (\$210,000)
 - (b) GD-02-Purchase of motorbikes for PMU (\$15,000)

¹⁵ ADB. [2018 Access to Information Policy](#).

¹⁶ This type of information would generally fall under public communications policy exceptions to disclosure. ADB. 2018. *Access to Information Policy*. Paragraph 5 (4).

¹⁷ Available at <https://www.adb.org/documents/adb-procurement-policy>.

¹⁸ Available at <https://www.adb.org/documents/procurement-regulations-adb-borrowers>.

- (c) GD-03-Purchase of IT equipment for PMU (\$59,850)
- (d) GD-04-Purchase of furniture for PMU (\$28,300)
- (e) GD-05-Purchase of accounting software (\$20,000)
- (f) GD-07-Furniture and equipment candidate NGS (\$2,586,400)
- (g) GD-08-Laptops for subject specialists (\$50,000)
- (iii) **Consultant recruitment**
 - (a) CS-01-Project Implementation Support Consultants (\$4,561,355)
 - (b) CS-03, Science & Technology Centre feasibility study (\$228,720)
 - (c) ICS-02-National specialist for MSS and MTEF (\$8,000)
 - (d) ICS-03-National financial management consultant (\$157,500)
 - (e) ICS-04/05-National procurement consultants X 2 (\$315,000)
 - (f) ICS-06-International school leadership specialist (\$48,000)
 - (g) ICS-07-National school leadership specialist (\$32,000)
 - (h) ICS-08-International Science Centre specialist (\$90,000)

37. The steps to be concluded in advance contracting for consultant selection will include (i) finalization of the terms of reference, cost estimates, and shortlisting evaluation criteria, (ii) advertisement, (iii) submission of shortlisting of consultants, and a draft request for proposal to ADB for review, (iv) issuance of the request for proposals, and (v) evaluation of proposals and the final ranking.

B. Procurement of Goods, Works, and Consulting Services

38. All procurement of goods and works follows ADB's Procurement Policy (2017, as amended from time to time) and Procurement Regulations for ADB Borrowers for Goods, Works, Non-consulting and Consulting Services (2017, as amended from time to time) and is also the preferred method under the Royal Government of Cambodia's Standard Operating Procedures on Procurement for All Externally Financed Projects/Programs in Cambodia (2019). ADB procurement shows no distinction between international and national bidding and threshold limits no longer apply; procurement methods are selected based on the ADB procurement principles.

39. A strategic procurement planning exercise was carried out to ensure that fit-for-purpose procurement approaches are developed to achieve value for money and the project's development objectives. The proposed project strategy, packaging, and bidding documents are expected to contribute to improving value for money for the project by: (i) advance contracting of essential procurement, and technical and financial consultants to support project implementation through the early preparation of bidding documents; (ii) having technical experts that will support procurement staff to develop technical specification requirements coupled with relevant evaluation criteria, thus alleviating risk of delays and non-responsive bidding; (iii) bundling of goods and equipment requirements for the various educational facilities into larger packages to increase the likelihood of a strong market response whilst at the same time reducing the administrative burden to the IA of multiple tenders; (iv) procurement of the design and construction of the CSTC will be on a single responsibility basis following the design and build method using ADB's Standard Bidding Documents for Plant Design Supply and Install. This offers protection to MoEYS by selection of a qualified firm to undertake the full design and construction on MoEYS behalf; (v) Use of merit point criteria (MPC) in evaluation of technical expertise and qualifications of bidders. MPC can be used to score and rank various aspects of innovation of design, methodology, logistical challenges, management plans sustainable solutions such as "green buildings;" (vi) recruitment of consulting firms for English language development for STEM teachers and support for NGSs will be procured as non-consultant services as outputs are

physical and are restricted to agreed school and teacher numbers; and (vii) procurement of simple civil works and goods and equipment for schools has been packaged to take advantage of the national contracting and supply market, thus supporting the government's strategic objectives and diluting concerns over likely COVID-19 impacts.

40. The number of contracts reflects the priority identified by EA/IA during the strategic procurement planning process to set contract requirement to a level that maximizes market competition especially local bidders. To reduce and/or manage the risk of delays in project implementation due to the number of contract packages, adequate resources to support the PMU to procure and manage the contract will be provided. This area also requires ongoing monitoring and recalibration or, where necessary further consolidation, to ensure balancing between enabling local bidder participation and facilitating contract and disbursement implementation.

C. Procurement Plan

Basic Data		
Project Name: Science and Technology Project in Upper Secondary Education (STEP UP)		
Project Number: 55134-001	Approval Number:	
Country: Cambodia	Executing Agency: Ministry of Education, Youth and Sport (MoEYS)	
Project Procurement Classification: B	Implementing Agencies: Institute of Technology of Cambodia (ITC); National Institute of Education (NIE); Directorate General of Education (DGE)	
Procurement Risk: Moderate		
Project Financing Amount: \$78.24 million ADB Financing: \$70 million Cofinancing: n/a Non-ADB Financing: \$8.24 million	Project Closing Date: 30 June 2029	
Date of First Procurement Plan: 6 December 2022	Date of this Procurement Plan: 12 September 2022	
Procurement Plan Duration: 18 months	Advance contracting: yes	eGP: no

Source: Asian Development Bank

1. Methods, Review and Procurement Plan

41. Except as ADB may otherwise agree, the following methods shall apply to procurement of goods, works, non-consulting services, and consulting services.

Procurement of Goods, Works, and Non-consulting Services	
Method	Comments
Open competitive bidding (OCB) for Goods	International advertisement if the Goods are not available locally. National advertisement if the Goods are locally available. Prior review will be applied for all OCB international and the first OCB national and high-risk Goods contracts of each university. Post review (sampling) for the remaining packages.
Open competitive bidding (OCB) for Works	Prior review will be applied for the first OCB national contract in each university. Post review (sampling) for the remaining packages
Request for Quotation for Goods	Post review.

Source: Asian Development Bank.

Consulting Services	
Method	Comments
Open competitive bidding (OCB) using Quality and Cost-Based Selection (QCBS)	
Competitive for Individual Consultant	For individual consultant contract.

Source: Asian Development Bank.

2. List of Active Procurement Packages (Contracts)

42. The following table lists goods, works, non-consulting services, and consulting services contracts for which the procurement activity is either ongoing or expected to commence within the procurement plan duration.

Goods, Works, and Non-consulting services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
CW-07	Renovations to 1 x Project Management Unit (PMU) and Renovations to 2 x Project implementation Units (3 @ 18,000 each)	54,000	RFQ	Post (Sampling)		Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference: No Advance Contracting: Yes Bidding Document: RFQ, RGoC High Risk Contract: No E-GP: NO Covid-19 Response: No
GD-01	Purchase of 7 vehicles for PCU	210,000	OCB	Prior	1S1E	Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference: No Advance Contracting: Yes E-GP: NO Bidding Document: Goods
GD-02	Purchase of 5 motorbikes for PCU	15,000	RFQ	Post (Sampling)		Q4/2022	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: Yes E-GP: NO Bidding Document: RGoC RFQ
GD-03	Purchase of IT equipment for PCU	59,850	RFQ	Post (Sampling)		Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: Yes E-GP: NO Bidding Document: RGoC RFQ
GD-04	Purchase of furniture for PCU	28,300	RFQ	Post (Sampling)		Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: National

Goods, Works, and Non-consulting services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							No. Of Contracts: 1 Domestic Preference: No Advance Contracting: Yes E-GP: NO Bidding Document: RGoC RFQ
GD-05	Purchase of accounting software	20,000	RFQ	Post (Sampling)		Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: Yes E-GP: NO Bidding Document: RGoC RFQ
GD-07	Furniture and equipment candidate NGS	2,586,400	OCB	Post (Sampling)	1S1E	Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: Yes E-GP: NO Bidding Document: RGoC SOP GOODS
GD-08	Laptops for subject specialists	50,000	RFQ	Post (Sampling)		Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: Yes E-GP: NO Bidding Document: RGoC SOP RFQ
NCS-01	English training provider	509,150	OCB	Prior	1S1E	Q1/2023	Non-Consulting Services: YES Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: No Bidding Document: Nonconsulting services,
NCS-02	Print Little Scientist magazines	86,700	RFQ	Post (Sampling)		Q2/2023	Non-Consulting Services: YES Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: No E-GP: NO Bidding Document: Nonconsulting services, RFQ
NCS-03	STEM social media campaign	270,000	OCB	Post (Sampling)	1S1E	Q1/2023	Non-Consulting Services: YES

Goods, Works, and Non-consulting services							
Package Number	General Description	Estimated Value (\$)	Procurement Method	Review	Bidding Procedure	Advertisement Date	Comments
							Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: No Bidding Document: Nonconsulting services,
NCS-04	Producing videos on how to do project-based learning and practical exercises in science laboratory	99,000	RFQ	Post (Sampling)		Q2/2023	Non-Consulting Services: YES Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: No E-GP: NO Bidding Document: Nonconsulting services, RFQ
NCS-05	Set up and train on OpenEMIS	581,796	OCB	Post (Sampling)	1S1E	Q1/2023	Non-Consulting Services: YES Advertising: National No. Of Contracts: 1 Domestic Preference: No Advance Contracting: No Bidding Document: Nonconsulting services

Source: Asian Development Bank.

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
ICS-01	Project Implementation Support Consultants	4,561,355	QCBS	Prior	FTP	Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: OCB International 80:20 ratio No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP High Risk Contract: No E-GP: NO
CS-03	Science & Technology Center feasibility study	228,720	CQS	Prior	STP	Q4/2022	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: OCB International 80:20 ratio No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP High Risk Contract: No E-GP: NO
CS-04	NGS expansion project management & support	1,408,319	QCBS	Post (Sampling)	STP	Q1/2023	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: OCB

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
	contract						International 80:20 ratio No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP High Risk Contract: No E-GP: NO
CS-06	Development of virtual outreach, digital materials for Science & Technology Center	1,000,000	QCBS	Post (Sampling)	STP	Q1/2023	RGoC SOP Advance Procurement Non-Consulting Services: No Advertising: OCB International 80:20 ratio No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP High Risk Contract: No E-GP: NO
CS-07	Independent evaluations	40,000	CQS	Post (Sampling)	STP	Q2/2023	Non-Consulting Services: No Advertising: OCB International 80:20 ratio No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP High Risk Contract: No E-GP: NO
CS-08	Independent Engineering Supervisory for STC	250,000	CQS	Post (Sampling)	STP	Q3/2023	Non-Consulting Services: No Advertising: OCB International 80:20 ratio No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP High Risk Contract: No E-GP: NO
ICS-01	International specialist for MSS and MTEF	36,000	ICS	Post (Sampling)	CSRN EOI	Q4/2022	Non-Consulting Services: No Advertising: International No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-02	National specialist for MSS and MTEF	8,000	ICS	Post (Sampling)	CSRN EOI	Q4/2022	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-03	National financial management consultant	157,500	ICS	Post (Sampling)	CSRN EOI	Q4/2022	Non-Consulting Services: No Advertising: National No. Of Contracts: 1

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
							Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-04/05	National procurement consultants (2 positions)	315,000	ICS	Prior	CSRN EOI	Q4/2022	Non-Consulting Services: No Advertising: National No. Of Contracts: 2 Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-06	International school leadership specialist	48,000	ICS	Post (Sampling)	CSRN EOI	Q1/2023	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-07	National school leadership specialist	32,000	ICS	Post (Sampling)	CSRN EOI	Q1/2023	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-08	International Science Center specialist	90,000	ICS	Post (Sampling)	CSRN EOI	Q1/2023	Non-Consulting Services: No Advertising: International No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-09	National instructional designer consultant (for CDDE)	84,000	ICS	Post (Sampling)	CSRN EOI	Q2/2023	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-10	National graphical designer consultant (for CDDE)	84,000	ICS	Post (Sampling)	CSRN EOI	Q2/2023	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO
ICS-11	National LMS developer/code r consultant (for CDDE)	84,000	ICS	Post (Sampling)	CSRN EOI	Q3/2024	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP ICS

Consulting Services							
Package Number	General Description	Estimated Value (\$)	Selection Method	Review	Type of Proposal	Advertisement Date	Comments
							High Risk Contract: No E-GP: NO
ICS-12	National consultant to develop an IT Technician curriculum (for THS)	24,000	ICS	Post (Sampling)	CSRN EOI	Q3/2024	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Advance Contracting: YES Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO

Source: Asian Development Bank.

3. List of Indicative Packages (Contracts) Required under the Project

43. The following table lists goods, works, non-consulting services, and consulting services contracts for which the procurement activity is expected to commence beyond the procurement plan duration and over the life of the project (i.e., those expected beyond the current procurement plan duration).

Goods, Works, and Non-consulting services						
Package Number	General Description	Estimated Value ¹⁹	Procurement Method	Review	Bidding Procedure	Comments
CW-01	Renovations of candidate New Generation Schools	2,021,600	OCB	Post	1S1E	Non-Consulting Services: No Advertising: International No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference: No Advance Contracting: No Bidding Document: Small works (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
CW-02	Renovation of Network Schools (NWS), Upper Secondary Schools (USS) and General Technical High Schools (GTHS) classrooms to science classrooms and/or libraries	7,260,000	OCB	Prior	1S1E	Non-Consulting Services: No Prequalification of Bidders: No Domestic Preference: No Advance Contracting: No Bidding Document: Civil works RGoC High Risk Contract: No E-GP: No Covid-19 Response: No
CW-03	Water and Sanitation Health facilities for Network Schools	621,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Small works (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No

¹⁹ Exchange rate used: \$1=IDR 14,400

Goods, Works, and Non-consulting services						
Package Number	General Description	Estimated Value ¹⁹	Procurement Method	Review	Bidding Procedure	Comments
CW-04	Renovation of Secondary Resource Schools (SRS) classrooms to project rooms	357,010	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Small works (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
CW-05	Renovation of NWS classrooms to libraries	1,287,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Small works (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
CW-06	Science & Technology Center Construction	9,200,000	Design/Build OCB	Prior	1S1E	Non-Consulting Services: No Advertising: International No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference: No Advance Contracting: No Bidding Document: Design Build, Plant Design Supply and Install High Risk Contract: No E-GP: No Covid-19 Response: No
CW-08	Upgrading of school electrical load (cabling)	183,600	RFQ	Post (Sampling)		Non-Consulting Services: No Advertising: International No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference: No Advance Contracting: No Bidding Document: Small works RFQ RGoC High Risk Contract: No E-GP: No Covid-19 Response: No
GD-13	Lot 1: Science equipment for GE programme of 4 General Technical High School (GTHS) Lot 2: Enhanced science equipment for Secondary Resource Schools (SRS) and Network Schools (NWS) and General Technical High	52,000 232,200	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No

Goods, Works, and Non-consulting services						
Package Number	General Description	Estimated Value ¹⁹	Procurement Method	Review	Bidding Procedure	Comments
	School (GTHS)					
GD-15	Lot 1: Science classroom safety equipment	141,900	RFQ	Post (Sampling)		Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
	Lot 2: Safety equipment for THS	2,800				
GD-17	Lot 1: Equipment for CDDE for developing digital training materials as part of LMS	7,200	RFQ	Post (Sampling)		Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
	Lot 2: Equipment for IT technician course	200,000				
Computer IT Equipment						
GD-19 incl. GD-20/GD-21/GD-22	GTHS co-puter labs - IT equipment	310,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: International No. Of Contracts: 4 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods ADB SBD Dec 2021 High Risk Contract: No E-GP: No Covid-19 Response: No
	NGS co-puter labs - IT equipment	762,600				
	SRS co-puter labs - IT equipment	4,003,650				
	NWS co-puter labs - IT equipment	3,287,500				
Smart Classrooms						
GD-23 incl. GD-24/GD-25/GD-26	GTHS smart classrooms	42,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: International No. Of Contracts: 4 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods ADB SBD Dec 2021 High Risk Contract: No E-GP: No Covid-19 Response: No
	NGS smart classrooms	84,000				
	SRS smart classrooms	441,000				
	NWS smart classrooms	1,060,500				
Digital Libraries						

Goods, Works, and Non-consulting services						
Package Number	General Description	Estimated Value ¹⁹	Procurement Method	Review	Bidding Procedure	Comments
GD-27 incl. GD-28/GD-29/GD-30/GD-31	Lot 1: GTHS digital library	960	RFQ	Post (Sampling)		Non-Consulting Services: No Advertising: National No. Of Contracts: 5 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
	Lot 2: NGS digital library	1,920				
	Lot 3: SRS digital library	10,080				
	Lot 4: NWS digital library	34,000				
	Lot 5: USS digital library	34,240				
Printing Equipment						
GD-32 incl. GD-33/GD-34	Lot 1: GTHS Maker kit + 3D printing	10,840	RFQ	Post (Sampling)		Non-Consulting Services: No Advertising: National No. Of Contracts: 3 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
	Lot 2: NGS Maker kit + 3D printing	22,000				
	Lot 3: SRS Maker kit	31,500				
Computer Labs - Furniture						
GD-35 incl. GD-36/GD-37/GD-38	Lot 1: GTHS computer labs - furniture	25,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 4 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
	Lot 2: NGS computer labs – furniture	61,500				
	Lot 3: SRS computer labs – furniture	322,875				
	Lot 4: NWS computer labs - furniture	265,125				
Various Equipment						
GD-39	Equipment for NWS and USS science classrooms	1,521,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: International No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods ADB SBD Dec 2021 High Risk Contract: No E-GP: No Covid-19 Response: No
GD-40	Equipment for SRS project rooms	125,000	RFQ	Post (Sampling)		Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO

Goods, Works, and Non-consulting services						
Package Number	General Description	Estimated Value ¹⁹	Procurement Method	Review	Bidding Procedure	Comments
						Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
GD-41	Voltage stabilizers for selected SRS	72,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
GD-42	Smart classroom package for NWS and USS science classrooms	456,300	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
GD-43	Furniture and equipment for NWS and USS libraries	1,345,500	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
GD-44	Science & tech equipment for technical workshops of 4 GTHS	260,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No
GD-45	Science & Technology Center furniture & equipment	300,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No

Goods, Works, and Non-consulting services						
Package Number	General Description	Estimated Value ¹⁹	Procurement Method	Review	Bidding Procedure	Comments
						E-GP: No Covid-19 Response: No
GD-46	Science & Technology Center permanent & temporary STEM displays	1,000,000	OCB	Post (Sampling)	1S1E	Non-Consulting Services: No Advertising: National No. Of Contracts: 1 Prequalification of Bidders: No Domestic Preference No Advance Contracting: NO Bidding Document: Goods (RGoC) High Risk Contract: No E-GP: No Covid-19 Response: No

Source: Asian Development Bank.

Consulting Services						
Package Number	General Description	Estimated Value	Selection Method	Review	Type of Proposal	Comments
CS-06	Development of virtual outreach, digital materials for Science & Technology Center	1,000,000	QCBS	Post	STP	Non-Consulting Services: No Advertising: OCB International 80:20 ratio No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP High Risk Contract: No E-GP: NO
ICS-23	International School Based Management consultant	45,000	ICS	TBD	CSRN EOI	Non-Consulting Services: No Advertising: International No. Of Contracts: 1 Advance Contracting: No Bidding ADB SRFP ICS High Risk Contract: No E-GP: NO

Source: Asian Development Bank.

4. List of Awarded and Completed Contracts

44. The following table lists the awarded contracts and completed contracts for goods, works, non-consulting services, and consulting services.

Goods, Works, and Non-consulting services					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments

Consulting Services					
Package Number	General Description	Contract Value	Date of ADB Approval of Contract Award	Date of Completion	Comments

5. Non-ADB Financing

45. The following table lists goods, works, and consulting services contracts over the life of the project, financed by non-ADB sources.

Goods, Works, and Non-consulting services				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Procurement Method	Comments
None				

Consulting Services				
General Description	Estimated Value (cumulative)	Estimated Number of Contracts	Selection Method	Comments

D. Consultant's Terms of Reference

1. Project Implementation Support Consultant

Minimum Required Qualifications	Outline Terms of Reference
International Team Leader/Learning Assessment and Education Management Specialist (40 person-months, intermittent, 2023–2028)	
<ol style="list-style-type: none"> 1. At least 15 years previous (education) program/project management experience required. 2. At least 10 years school management and learning assessment experience required. 3. Experience in STEM Education and/or EdTech would be an added advantage. 4. Tertiary qualification in education. 5. Fluent English language skills (spoken and written). 6. Data analysis, reporting and presentation skills would be an added advantage. 7. Experience with education projects and programs in Cambodia, and/or other Southeast Asian project implementation experience required. 8. Khmer language skills would be an added advantage. 	<p>The Team Leader will work with and support the STEP UP Project Management (the EA's Project management unit (PMU) and project implementation units (PIUs)) to ensure objectives and activities are met across interventions of STEP UP. S/he, supported by the Deputy Team Leader, will be responsible for:</p> <ol style="list-style-type: none"> (i) providing directions to and coordinating with international and national consultants of the project's implementation consultants (PIC) firm, and collaborating with other individual consultants and other services contract providers of the project in the performance and delivery of their activities and deliverables in a quality and timely manner; (ii) providing quality technical inputs to the EA's Project Director, the PMU's management team and the PIU heads toward ensuring achievements of targets and performance indicators presented in the project's design and monitoring framework (DMF), Gender Action Plan (GAP) and Project Management Manual (PAM) through the following: <ol style="list-style-type: none"> (a) guiding the EA, the PMU management and the IAs/PIUs' on planning and monitoring their responsible interventions, milestone activities and targets and performance indicators as presented in the project's DMF and GAP; (b) guiding and coordinating with the PMU's and PIUs' responsible staff and consultants on planning, implementing and monitoring their responsible interventions and milestone activities as presented in PAM, Procurement Plan, Contract Award and Disbursement Projections Plan, Environment and Social Safeguards Plans; and (c) guiding and coordinating with the EA's assigned education specialists and IAs/PIUs' staff on planning, implementing and monitoring their responsible interventions and milestone activities at school level.

Minimum Required Qualifications	Outline Terms of Reference
	<p>supporting providing oversight to Pre-Service Training and Continuous Professional Development (CPD) interventions at NIE, Secondary Resource Schools (SRS), SRS Network Schools, New Generation Schools (NGS), and other target upper secondary schools (USS) through the EA's and IAs' staff and education specialists;</p> <p>(iii) providing technical guidance to the PIC experts and EA's/IAs' responsible staff and education specialists in undertaking immediate impact studies or assessments of interventions under the project as well as establishing quality control measures and reporting systems to ensure immediate impact or positive changes of education interventions are regularly monitored, evaluated, and reported for necessary improvements and interventions;</p> <p>(iv) establishing quality control measures and reporting system to ensure civil works complies with and delivers high quality renovation, rehabilitation, and construction in accordance with the design standards (i.e., photographic and reported evidence at key construction stages) to be adhered to by project's site engineer(s) and the EA's supervising engineer;</p> <p>(v) ensuring the implementation of the Gender Action Plan and other social safeguards requirements and reporting the achievements in quarterly progress reports and semi-annual safeguards monitoring reports;</p> <p>(vi) overseeing the completion of baseline and other relevant studies and ensuring that data is disaggregated by gender, beneficiary groups (indigenous peoples) and region/province;</p> <p>(vii) working with and supporting the PMU to prepare the regular implementation progress of the project for reporting to the EA's head, and regular meeting of the project steering committee;</p> <p>(viii) working and supporting the PMU to prepare (i) quarterly and annual project implementation progress and (ii) semi-annual environment and social safeguards monitoring reporting for submission to ADB; and</p> <p>(ix) supporting the EA to prepare the project completion report for submission to Ministry of Economy and Finance and ADB.</p>
International Education Technology (EdTech) Specialist (20 person-months, intermittent, 2023-2027)	
<ol style="list-style-type: none"> 1. A post-graduate degree in field of learning design and education technology is required. 2. At least 10 years' experience in design, development, and delivery of ICT solutions for education systems (school, government, and/or private sector). 3. At least 7 years' experience with ADB, World Bank, or other major donor or government financed projects in the education sector. 4. Prior experience in Cambodia and/or other Southeast Asian countries is desirable. 5. Strong English language skills required (spoken and written). 	<p>The Education Technology Specialist (International) will have extensive experience in the application of digital technologies to improve education outcomes either in developed and, or developing country contexts. The EdTech specialist will work with and support the EA's assigned education specialists and IAs'/Project Implementation Units' (PIUs) staff to ensure goals are met across key interventions of EdTech covering hardware, software, automation, data collection, professional development and student learning improvement. The overall focus will be to ensure integration of digital technologies to achieve education outcomes from a schooling perspective. As a key expert of the STEM-EdTech project team, the specialist will have responsibility for providing technical inputs to and work with the assigned specialists and staff in the development of a range of digital technology solutions in the project's target upper secondary schools, and throughout the various IAs of the EA.</p> <p>S/he will be responsible to:</p>

Minimum Required Qualifications	Outline Terms of Reference
	<p>(i) collaborate with and assist the EA's assigned education specialists and IAs'/PIUs' staff to guide a specialized firm to design, develop, implement (deploy and train key stakeholders in the MoEYS–(EMIS Department, Department of Planning), and troubleshoot a modern “real-time”²⁰ school data collection and analysis system (school information system and education management information system/EMIS). This will include:</p> <ul style="list-style-type: none"> (a) assisting the EA's/IA's in managing a selected firm that will install, configure, and develop the capacity of the selected EA's education specialists and IAs' staff, education staff of provincial and district offices, and the project's targeted schools to be able to fully carry out their respective duties in data collection data, entering data, performing data analysis functions, data reporting and sharing, and managing OpenEMIS²¹ to meet school, provincial and national planning parameters; (b) incorporation of the OpenEMIS census and school information systems with rollout to all 554 USS during the 3-year training and operationalization period; (c) assisting DGPP in planning for and implementation of training to school directors of the targeted USS on the use of OpenEMIS at the school information level and to relevant POE and DOE personnel for inclusion and oversight; (d) providing support to DGPP in monitoring the use of the OpenEMIS system in 554 USS as the basis for future expansion into all public schools (and possibly private schools); and (e) guiding and monitoring DGPP in conducting evaluation study in Years 2 and 5 to capture lessons learned and immediate positive changes or impact resulting from the project's investment. <p>(ii) Apply best practices²² in edtech to support the stem-edtech project team to develop and facilitate²³ a continuous professional development (CPD) program²⁴ for national institute of education (NIE) lecturers, general and technical upper secondary stem teachers, and school principals focused on integration of technology in teaching and learning, especially strengthening stem education in upper secondary schools (i.e., school-based stem framework, competency-based education and assessment, lab safety, and technology in</p> <ul style="list-style-type: none"> (a) guiding and monitoring DIT and DGSE in conducting evaluation study in years 3 and 5 to capture lessons

²⁰ Real-time refers to the ability of the system to display data automatically as it is collected.

²¹ OpenEMIS will include specific functions that cover what is commonly referred to as school information system in addition to national level EMIS

²² Best practice in this context refers to modernization of CPD that motivates and encourages systemic change that will lead to changes in the way STEM is perceived at NIE and the school level. At current there are crucial blocks to STEM delivery that may be insurmountable in the context of this project, yet through experience in similar country contexts STEP UP can apply a range of practices that have proven effective elsewhere.

²³ Through the use of EdTech in a range of CPD activities the EdTech specialist will incorporate modern ways that help circumvent traditional delivery issues (noting that CPD does not refer to training alone).

²⁴ MoEYS. (2019). *Continuous Professional Development (CPD) for Teachers and School Directors, 2019-2023*. Phnom Penh: Teacher Training Department.

Minimum Required Qualifications	Outline Terms of Reference
	<p>learned and immediate positive changes or impact resulting from the project's investment.</p> <ul style="list-style-type: none"> (iii) provide digital education technical assistance to NIE to effectively implement an improved STEM practicum approach including a feedback system on the relevance of PRESET for program improvement; (iv) provide digital education technical assistance as needed to CDDE in the development of project-based learning, e-books, and training materials (OpenEMIS); (v) assist responsible IA/PIU in facility needs assessments (space requirements, electricity loads, device settings/placement etc.) prior to design and deployment of all EdTech equipment at the school, training institute, and MoEYS department levels (vi) provide technical input to the IA's technical department(s) and PMU's procurement team in preparing technical specifications for EdTech equipment procurement?; (vii) guide, monitor, and provide continuous feedback and improvement for school level EdTech equipment deployment to ensure installation and training at targeted GTHS and USS is completed satisfactorily; (viii) assist the VOD in the selection of service to develop and deliver digital education modules²⁵ including periodic feedback and monitoring of progress and deployment of the new modules and teacher capacity to deliver such modules; (ix) provide digital education advice, as required, during the design/implementation phase of the Cambodia Science and Technology Center (CSTC); (x) ensure the implementation of the Gender Action Plan as it relates to EdTech in targeted upper secondary schools; and (xi) assist the project, where needed, on all other EdTech related issues as is prudently requested by the IA.
International Education Monitoring and Evaluation Specialist (12 person-months, intermittent, 2023 – 2028)	
<ol style="list-style-type: none"> 1. Post-graduate degree in the field of education policy implementation and monitoring, social sciences, and/or economics. 2. At least 10 years' experience in designing and developing education M&E systems, and evaluation/impact assessment of education programs and policies. 3. At least 5 years' experience with ADB, World Bank (WB), other major donors or government agency-financed projects in the education sector. 4. Strong English language skills (written and spoken). 5. Experience in Cambodia and/or other Southeast Asian countries is desirable. 	<p>The specialist (International) will work closely with national M&E specialist, the PMU's/IAs' assigned education specialist/counterpart staff, and relevant international and national specialists. S/he will report to the PIC's International and National Team Leader and have overall responsibility for ensuring all project indicators are understood, agreed, and implemented. S/he will also be key to ensuring all project activities are properly monitored, the results of activities are evaluated, and support to project reporting is upheld.</p> <p>S/he will be responsible to:</p> <ul style="list-style-type: none"> (i) develop a comprehensive project M&E framework (PMEF) to generate qualitative and quantitative data systematically on the project's outcome and output performance indicators as stated in the project design and monitoring framework (DMF), Risk Management Matrix (RMM), and other indicators for the project performance monitoring including STEM- school level framework, school-based management, continuous professional development programs for subject teachers and

²⁵ There will be four modules developed A. IT equipment maintenance and repair, B. application development, C. networking and telecoms, D. multimedia and graphics.

Minimum Required Qualifications	Outline Terms of Reference
	<p>school management, joint-partnership programs, capacity development of technical and education specialists;²⁶</p> <ul style="list-style-type: none"> (ii) develop tools for PMEF implementation and reporting to be used by the PMU's and IAs' to track, analyse and report the overall implementation progress of the project and produce report for the project steering committee, project management, project performance rating (PPR), quarterly and annual progress reports, project implementation support mission, midterm and project completion reports; (iii) assess the existing capacity of the PMU's and IAs' assigned M&E specialists/counterpart staff, based on the capacity assessment findings, conduct capacity and skills and offer assistance to them to strengthen the project monitoring and evaluation at all levels; provide technical support to the PMU's and IAs' assigned M&E education specialists/counterpart staff to conduct orientation training to (a) the EA's/IAs' education specialists/counterpart staff, and relevant PIC specialists and individual experts, and (b) school management of the project's target schools; (iv) provide technical inputs and, or recommend to the PMU, IA's education research specialists/counterpart staff, and pic's team leader on specific evaluation or impact studies to ensure the project's key intervention elements/areas are covered and available secondary data/information is shared; (vi) assess the requirement of any tools or digital platforms that can improve the reach, targeting, and reporting of activities (i.e., OpenEMIS, online surveys, collaborative documents, etc.) and provide technical input to the IA's technical departments and PMU's procurement team in finalizing ToRs for procurement specialist; (v) assist the PIC team leader and EA's civil engineering-counterpart staff in establishing quality control measures and reporting systems to ensure civil works complies with and delivers high quality renovation, rehabilitation, and construction in accordance with the design standards; (vi) perform other tasks as maybe reasonably required by the EA and ADB.
International Public-Private Partnership Specialist (3 person-months, 2023-2024)	
<ol style="list-style-type: none"> 1. At least 10 years of experience in establishing public-private partnership (PPP). 2. A tertiary qualification in education, TVET, industrial relations, or other related fields. 3. At least 15 years of work experience, preferably with a focus in Southeast Asia. 4. Strong English language skills (spoken and written). 5. Experience in the education and training area and/or with science/innovation centers would be desirable. 	<p>The Public-Private Partnership Specialist (International) will have extensive experience in establishing public-private partnerships (PPP). The international PPP specialist will work closely with the national PPP specialist and the implementing agencies (Institute of Technology Cambodia and Directorate-General of Education) to: (i) develop a PPP strategy for the proposed Cambodia Science and Technology Center (CSTC), and (ii) advise MoEYS on how best to develop and implement PPP approaches in secondary education with tertiary and private sectors.</p> <p>The PPP specialist (international) will be responsible for:</p> <ul style="list-style-type: none"> (i) collaborating with the Institute of Technology Cambodia (ITC), business and industry, development partners, and the CSTC Feasibility Study consultant to develop a strategic PPP plan to be implemented during the establishment and operation of the CSTC;

²⁶ Where relevant, data and information shall be disaggregated by sex, school years, ethnic groups, geographical locations, subject areas, education streams, level of education, type of training or capacity development, disability, etc.

Minimum Required Qualifications	Outline Terms of Reference
	<p>(ii) collaborating with the Directorate-General of Education (DGE) to develop a PPP approach to upper secondary education with tertiary and private sectors, which engages students in exploring post-secondary career opportunities (i.e., tertiary advanced placement, work experience, internships and apprenticeships, summer institutes, private sector support to USS curriculum, instruction, and resources, etc.); and</p> <p>(iii) integrating gender and inclusive approaches, where appropriate and/or required.</p>
International Education and Vocational Education and Training Qualifications Specialist (4 person-months, Intermittent, 2023-2024)	
<ol style="list-style-type: none"> 1. At least a post-graduate degree in education (general and/or technical) . 2. At least 10 year-experience in developing education and TVET qualifications frameworks and/or secondary/post-secondary education and TVET related organizational development and harmonizing of the general secondary/post-secondary education and TVET. 3. Strong English language skills (spoken and written). 4. A background in career guidance counselling and, or industry-partnerships and education and TVET marketing would be an added advantage. 5. Previous Cambodian and/or other Asian experience would be an added advantage. 	<p>The specialist will have overall responsibility for facilitating the consultancy objectives and supported by the Qualifications Harmonization Specialist (National), s/he will be responsible for:</p> <ol style="list-style-type: none"> (i) providing technical input to VOD to develop a MoEYS's and MLVT's harmonized education and vocational training framework with action plan, including operational guidelines, on promoting learning and vocational training paths of upper secondary students; (ii) based on the approved harmonized framework and action plan, including the operational guidelines, providing technical input to VOD to design and implement partnership arrangements with training providers and industries; (iii) developing resource materials for USS Career Guidance Counsellors to support career preparation for secondary students; (iv) providing capacity building training to VoD of MoEYS on management, implementation, monitoring and reporting the approved harmonized framework and action plan, including the operational guidelines, and the materials for the career guidance counsellors; (v) collaborating with project team members where there is overlap or alignment with other elements of the project (i.e., STEM careers); (vi) performing other tasks as maybe reasonably required by the EA, IA and ADB; and (vii) ensuring the implementation of the Gender Action Plan as it relates to career preparation.
International STEM Specialist (24 person-months, intermittent over 3 years)	
<ol style="list-style-type: none"> 1. A tertiary qualification in STEM education field is required. 2. At least 7 years teaching experience in secondary-level science and/or mathematics including competency-based education and assessment. 3. Strong English language skills (spoken and written). 4. A working knowledge of continuous professional development (CPD) approaches in school settings is desirable. 5. Previous Cambodian and/or other Southeast Asian project 	<p>As a key expert of the STEM-EdTech project team, the specialist will have responsibility for working with and advising the EA and IAs/PIUs specialists and staff at all level on the development of STEM Education in target secondary schools and throughout the various IAs of the EA.</p> <p>S/he will be responsible for:</p> <ol style="list-style-type: none"> (i) collaborating with relevant EA's assigned education specialists and IAs'/PIUs' staff and the project's targeted USSs to develop and implement a school-based STEM Framework²⁷ leading to effective implementation of STEM curriculum at school level including: <ol style="list-style-type: none"> (a) a suite of multi-level documentation (i.e., guides, action plans, assessment tools) appropriate for

²⁷ As per CAM STEP UP briefing paper on *School-based STEM Frameworks* (2022).

Minimum Required Qualifications	Outline Terms of Reference
<p>implementation experience would be an added advantage.</p>	<p>Cambodian schools of various capacities/facilities/types;</p> <ul style="list-style-type: none"> (b) a range of expected behaviors and achievable targets across key areas (i.e., school governance, instruction, assessment, lab designs, extracurricular activities, community outreach) to enable school leaders, teachers, and mentors to pro-actively drive change at school level; (c) assessment strategies to evaluate school STEM Education capability and development; and (d) an implementation plan to pilot the STEM Framework across 30 Upper Secondary Schools (USS) with regular monitoring and evaluation to ascertain the suitability of the framework, while identifying appropriate refinements with a view to nationwide integration. <ul style="list-style-type: none"> (ii) co-leading the STEM-EdTech project team to develop and facilitate a continuous professional development (CPD) program²⁸ for National Institute of Education (NIE) teacher-educators, general and technical upper secondary STEM subject teachers, and school principals focused on strengthening STEM curriculum implementation in upper secondary schools (i.e., school-based STEM Framework, competency-based education and assessment, lab safety, and technology in education); (iii) providing technical assistance to NIE to effectively implement an improved STEM practicum approach including a feedback system on the relevance of PRESET for program improvement on an annual basis; (iv) collaborate with the relevant EA's assigned education specialists and school-based STEM subject technical leaders, and regional school improvement advisors to support the integration and implementation of the school-based STEM Framework through professional learning communities (PLC); (v) building on the available designs and laboratory safety/operations guidelines produced under the upper secondary education sector development programs (USESDP and USESDP-2) to design/update a STEM classroom/laboratory safety system including teacher guidelines for safe laboratory practices, use of safety equipment, student safety induction guidelines and code of conduct, safety signage, and a reporting system for accidents. (vi) Providing technical input to NIE for the production of lab safety videos. (vii) providing advice, as required, during the design phase of the Cambodia Science and Technology Center (CSTC). (viii) ensuring the implementation of the Gender Action Plan as it relates to STEM Education in target upper secondary schools.
<p>National Deputy Team Leader/Education Management Specialist (60-person months intermittent, 2023–2028)</p>	
<ol style="list-style-type: none"> 1. At least 10 years previous (education) program management experience required. 2. Previous project planning and implementation experience of education 	<p>The Deputy Team Leader will have overall responsibility for guiding the project activities and assisting the Team Leader. S/he will be responsible for assisting the Team Leader:</p> <ul style="list-style-type: none"> (i) in the provision of technical and project management support;

²⁸ MoEYS. 2019. *Continuous Professional Development (CPD) for Teachers and School Directors, 2019-2023*. Phnom Penh: Teacher Training Department.

Minimum Required Qualifications	Outline Terms of Reference
<p>projects funded by one or more of the Government's major development partners in Cambodia is required</p> <p>3. Fluent English language skills (spoken and written)</p> <p>4. A tertiary qualification in education or a related field.</p> <p>5. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams.</p> <p>6. Experience in STEM Education and/or EdTech would be an added advantage.</p>	<p>(ii) to schedule and coordinate all project interventions and consultant inputs;</p> <p>(iii) providing directions to and coordinating with international and national consultants of the project's implementation consultants (PIC) firm, and collaborating with other individual consultants and other services contract providers of the project in the performance and delivery of their activities and deliverables in a quality and timely manner;</p> <p>(iv) providing quality technical inputs to the Project Director, the PMU's management team and the PIU heads toward ensuring achievements of targets and performance indicators presented in the project's design and monitoring framework (DMF), Gender Action Plan (GAP) and Project Management Manual (PAM) through the following;</p> <p>(v) guiding the EA, the PMU management and the IAs/PIUs' on planning and monitoring their responsible interventions, milestone activities and targets and performance indicators as presented in the project's DMF and GAP;</p> <p>(vi) guiding and coordinating with the PMU's and PIUs' responsible staff and consultants on planning, implementing and monitoring their responsible interventions and milestone activities as presented in PAM, Procurement Plan, Contract Award and Disbursement Projections Plan, Environment and Social Safeguards Plans; and</p> <p>(vii) (c) guiding and coordinating with the EA's assigned education specialists and IAs/PIUs' staff on planning, implementing and monitoring their responsible interventions and milestone activities at school level;</p> <p>(viii) supporting providing oversight to Pre-Service Training (PRESET) and Continuous Professional Development (CPD) interventions at NIE, Secondary Resource Schools (SRS), SRS Network Schools, New Generation Schools (NGS), and other target upper secondary schools (USS) and the EA's and IAs' staff and education specialists;</p> <p>(ix) providing technical guidance to the PIC experts and EA's/IAs' responsible staff and education specialists in undertaking immediate impact studies or assessments of interventions under the project as well as establishing quality control measures and reporting systems to ensure immediate impact or positive changes of education interventions are regularly monitored, evaluated, and reported for necessary improvements and interventions;</p> <p>(x) establishing quality control measures and reporting system to ensure civil works complies with and delivers high quality renovation, rehabilitation, and construction in accordance with the design standards (i.e., photographic and reported evidence at key construction stages) to be adhered to by project's site engineer(s) and the EA's supervising engineer;</p> <p>(xi) ensuring the implementation of the Gender Action Plan and other social safeguards requirements and reporting the achievements in quarterly progress reports and semi-annual safeguards monitoring reports;</p> <p>(xii) overseeing the completion of baseline and other relevant studies and ensuring that data is disaggregated by sex, beneficiary groups (indigenous peoples) and region/province;</p>

Minimum Required Qualifications	Outline Terms of Reference
	<p>(xiii) working with and supporting the PMU to prepare the regular implementation progress of the project for reporting to the EA's head, and regular meeting of the project steering committee;</p> <p>(xiv) working and supporting the PMU to prepare (a) quarterly and annual project implementation progress and (b) semi-annual environment and social safeguards monitoring reporting for submission to ADB; and</p> <p>(xv) supporting the EA to prepare the project completion report for submission to Ministry of Economy and Finance and ADB.</p> <p>(xvi) to carry out other tasks as may be required or instructed by the Team Leader.</p>
National Education Technology (EdTech) Specialist (20 person-months, intermittent, 2023-2027)	
<ol style="list-style-type: none"> 1. A tertiary qualification in education or related fields in combination with a deep understanding of IT. 2. At least 5 years' experience in design, development, and delivery of ICT solutions for education systems (school, government, and/or private sector). 3. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 4. Strong English language skills are required (spoken and written). 	<p>As a member of the STEM-EdTech project team, the national specialist will have responsibility for supporting the development of a range of digital technology solutions in target secondary schools, and throughout the various implementing agencies responsible to the project.</p> <p>S/he will be responsible to support the international EdTech Specialist to:</p> <ol style="list-style-type: none"> (i) collaborate with and assist relevant MoEYS departments to guide a specialized firm to design, develop, implement (deploy and train key stakeholders), and troubleshoot a modern "real-time"²⁹ school data collection and analysis system (school information system and education management information system/EMIS). This will include: <ol style="list-style-type: none"> (a) assisting MoEYS in managing a selected firm that will install, configure, and develop the capacity of selected MoEYS technical and education specialists, education staff of provincial and district offices (respective to targeted schools) to be able to fully carry out their respective duties in entering data, managing the system, and performing data analysis functions to meet national planning parameters; (b) incorporation of the OpenEMIS census and school information systems with rollout to all 554 USS during the 3-year training and operationalization period; (c) assisting DGPP in planning for and implementation of training to school directors of targeted USS on the use of OpenEMIS at the school information level and to relevant POE and DOE personnel for inclusion and oversight; (d) providing support to MoEYS in monitoring the use of the OpenEMIS system in 554 USS as the basis for future expansion into all public schools (and possibly private schools); and (e) guiding DGPP in conducting evaluation research in Years 2-5 to capture lessons learned and immediate positive changes or impact resulting from the project's investment. (ii) apply best practices in EdTech to support the STEM-EdTech project team to develop and facilitate a continuous

²⁹ Real-time refers to ability of the system to display data automatically as it is collected.

Minimum Required Qualifications	Outline Terms of Reference
	<p>professional development (CPD) program³⁰ for National Institute of Education (NIE) lecturers, general and technical upper secondary STEM teachers, and school principals focused on strengthening STEM Education in upper secondary schools (i.e., school-based STEM Framework, competency-based education and assessment, lab safety, and technology in education);</p> <p>(iii) provide digital education technical assistance to NIE to effectively implement an improved STEM practicum approach including a feedback system on the relevance of PRESET for program improvement;</p> <p>(iv) provide digital education technical assistance as needed to CDDE in the development of project-based learning, e-books, and training materials (OpenEMIS);</p> <p>(v) assist MoEYS in quality assurance (appropriate devices to be selected based on need and application) of all stages of EdTech equipment procurement;</p> <p>(vi) assist MoEYS in facility needs assessments (space requirements, electricity loads, device settings/placement etc.) prior to design and deployment of all EdTech equipment at the school, training institute, and MoEYS department levels;</p> <p>(vii) guide, monitor, and provide continuous feedback and improvement for school level EdTech equipment deployment to ensure installation and training at targeted GTHS and USS is completed satisfactorily;</p> <p>(viii) assist the VOD in the selection of service to develop and deliver digital education modules including periodic feedback and monitoring of progress and deployment of the new modules and teacher capacity to deliver such modules;</p> <p>(ix) provide digital education advice, as required, during the design/implementation phase of the Cambodia Science and Technology Center (CSTC);</p> <p>(x) ensure the implementation of the Gender Action Plan as it relates to EdTech in targeted upper secondary schools; and</p> <p>(xi) assist the project, where needed, on all other EdTech related issues as requested by the international specialist.</p>
National Environment Consultant (PISC-EC) (8 person months intermittent, 2023-2028)	
<ol style="list-style-type: none"> 1. The safeguards specialist shall have a graduate or post-graduate degree in environmental engineering/sciences, sociology, applied social sciences, or equivalent discipline. 2. At least 7 years' experience in environmental management, monitoring, impact assessment, and environmental safeguards implementation. 3. Working knowledge of ADB environmental safeguards requirements and national environmental management procedures. 4. Willingness to regularly travel to the project sites; ability to communicate and work effectively with local communities, 	<p>The consultant will provide technical assistance and support to the PMU and PIUs/IAs in fulfilling their responsibilities for EMP implementation, monitoring and reporting and safeguard documentation.</p> <p>The role will include and not be limited to:</p> <ol style="list-style-type: none"> (i) PISC-EC will function as point of contact for the DSCF EHS consultant and will co-ordinate all safeguard activities for the project including: (ii) Procurement: Ensure EMP is part of bidding documents. (iii) Review environmental capacity and experience of DSCF during recruitment. (iv) Document Reviews: Review and clear any contractor response to bidding document environmental requirements on behalf of the PMU, ensuring the contractors' response

³⁰ MoEYS. 2019. *Continuous Professional Development (CPD) for Teachers and School Directors, 2019–2023*. Phnom Penh: Teacher Training Department.

Minimum Required Qualifications	Outline Terms of Reference
<p>contractors, and government agencies.</p> <p>5. Good Khmer and English language communication skills (oral and written) and problem-solving skills; ability to analyze data and prepare technical reports.</p> <p>6. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams.</p>	<p>to the bidding documents is fully responsive to the project environmental safeguard requirements.</p> <p>(v) Prepare the semi-annual Environmental Monitoring Reports for submission to ADB.</p> <p>(vi) Update IEE and EMP to reflect final project design, as needed, or in case of unanticipated impacts, for submission to ADB.</p> <p>(vii) Grievance Redress Mechanism and disclosure: Ensure GRM is established and functions during implementation. Record all GRM complaints and resolutions. Ensure the EMP is translated into Khmer and disclosed locally.</p> <p>(viii) Permits: Ensure the contractor and/or project owner has requisite permits and permissions are in place for all works.</p> <p>(ix) Training: Raise awareness of ADB environmental safeguards requirements for the project within PMU and participating schools are aware of key steps in the ADB environmental safeguards process. Conduct training for the GRM focal points to ensure their roles and responsibilities are understood.</p>
National Gender Equality and Social Inclusion (GESI) Specialist (20 person-months, intermittent, 2023 - 2028)	
<p>1. At least 7 years of experience in gender-related work in education, including the provision of capacity building, mentoring / on-the-job training.</p> <p>2. A tertiary qualification in social sciences, development studies, gender, or a related discipline.</p> <p>3. In-depth, working knowledge of the Gender Equality and Social Inclusion (GESI) Framework.</p> <p>4. A working knowledge of gender, diversity, and education policies and practices in Cambodia.</p> <p>5. Previous experience on multilateral development projects, preferably financed by development partners including ADB.</p> <p>6. Strong English language skills (spoken and written).</p> <p>7. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams.</p>	<p>The National GESI Specialist will be responsible to:</p> <p>(i) ensure the project GAP is translated into Khmer and distributed to all target stakeholders at all levels during the first quarter (Q1) of the project's implementation;</p> <p>(ii) orient the GMSP focal points to the GAP and assist them in monitoring GAP activities in line with the MoEYS Gender Mainstreaming Strategic Plan in Education (GMSP 2021-2025) and the SDG indicators on gender and education;</p> <p>(iii) lead in the provision of training on GESI in collaboration with external GESI resource persons;</p> <p>(iv) ensure MSS development process takes into consideration gender equality and social inclusion principles and elements;</p> <p>(v) ensure that all STEM teachers in target schools receive training on GESI and promote real time application at their school level;</p> <p>(vi) ensure that gender equality and social inclusion (GESI) principles are integrated in the content and pedagogical process of target upper secondary schools (USS);</p> <p>(vii) provide technical support in the inclusion of gender equality and social inclusion principles in the design and adaptation of innovative teaching and learning materials in teaching STEM;</p> <p>(viii) take active part in all phases of Cambodia Science & Technology Center (CSTC) implementation;</p> <p>(ix) ensure regular monitoring and reporting – at last quarterly - to the PMU and Asian Development Bank (ADB) on the progress of the GAP's implementation;</p> <p>(x) work with the PMU monitoring and evaluation (M&E) consultants and GMAG members to gather sex-disaggregated quantitative and qualitative information on the impacts of all project interventions on beneficiaries (e.g., via success stories, case studies, and quality of life changes) of USS teachers and non-teaching staff – especially on STEM related work experiences;</p> <p>(xi) assist the PMU and GMAG focal points to track male and female USS student STEM performance (based on school assessments); monitor the disbursement and evaluate the</p>

Minimum Required Qualifications	Outline Terms of Reference
	<p>impact of the external STEM skills extra-curricular program for USS students;</p> <p>(xii) conduct field monitoring missions to collect data reflecting progress on GAP targets and indicators, and prepare GAP progress reports to be submitted;</p> <p>(xiii) based on the findings from regular monitoring of GAP implementation and field visits, review and refine GAP activities with the main aim of ensuring intended gender results will be achieved;</p> <p>(xiv) ensure that the project's monitoring reports inform gender equality outcomes for the annual MoEYS Education Congress Reports;</p> <p>(xv) support the GMAG to attend the Annual Review Meetings of the Cambodian National Council for Women (CNCW), and feedback relevant information to the MoEYS departments involved in all CAM STEP UP project outputs;</p> <p>(xvi) work with multi-media agencies and communication consultants to showcase GESI-responsive STEM Education practices, including outstanding female students;</p> <p>(xvii) provide support for ADB review mission teams to ensure that GAP implementation is being adequately assessed and reported on; and</p> <p>(xviii) Prepare gender equality results at project completion</p> <p>(xix) perform other duties, as necessary.</p>
National Monitoring and Evaluation Specialist (25 person-months intermittent, 2023–2028)	
<ol style="list-style-type: none"> 1. Tertiary qualification in the field of education policy implementation and monitoring, social sciences, and/or economics. 2. At least 5 years' experience in designing and developing M&E systems that focus on education systems (school, government and/or private sector). 3. At least 3 years' experience with ADB, World Bank (WB), other major donors or government agency-financed projects in the education sector. 4. Strong English language skills (written and spoken). 	<p>The Monitoring and Evaluation Specialist (National) will support the international M&E Specialist to:</p> <ol style="list-style-type: none"> (i) develop a comprehensive project M&E framework that ensures all indicators are properly accounted for, monitoring of such indicators is standardized, and leads to international standard evaluation of key activities; (ii) support the implementing agencies (IA) to prepare a report identifying M&E capacity gaps for relevant MoEYS departments containing recommendations for strengthening of M&E systems with data disaggregated by sex, age, and disability completed and endorsed by project leadership; (iii) support the project to develop the capacity of collecting, monitoring, reporting, and analyzing sex-, and age-disaggregated data on program implementation; (iv) work with all project consultants and IAs to ensure the M&E framework is understood and properly implemented including social inclusion and gender issues; (v) assess the existing M&E capability at MoEYS and offer assistance to strengthen project monitoring where need be; (vi) support developing a detailed plan to strengthen the monitoring and evaluation mechanisms; (vii) assess the targeted groups (staff, students, schools, etc.) to ensure ADB guidelines in economic status, geographic coverage, age, gender, disability, and other measures of vulnerability are adhered to and suggest measures for improvement; (viii) recommend measures, prepare training proposals, and conduct trainings to improve the performance of the M&E program; (ix) assess the requirement of any tools or digital platforms that can improve the reach, targeting, and reporting of activities

Minimum Required Qualifications	Outline Terms of Reference
	<p>(i.e., OpenEMIS, online surveys, collaborative documents, etc.); and</p> <p>(x) assist the team leader in establishing quality control measures and reporting systems to ensure civil works complies with and delivers high quality renovation, rehabilitation, and construction in accordance with the design standards.</p>
National Public-Private Partnership Specialist (3 person-months, 2023-2024)	
<ol style="list-style-type: none"> 1. At least 5 years of experience in establishing public-private partnership (PPP) in Cambodia. 2. A tertiary qualification in education, TVET, industrial relations, or other related fields. 3. Strong English language skills (spoken and written). 4. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 5. Experience in the education and training sector would be desirable. 	<p>The Public-Private Partnership Specialist (National) will have responsibility for supporting the international specialist to:</p> <ol style="list-style-type: none"> (i) collaborate with the Institute of Technology Cambodia (ITC), business and industry, development partners, and the CSTC Feasibility Study consultant to develop a strategic PPP plan to be implemented during the establishment and operation of the CSTC; (ii) collaborate with the Directorate-General of Education (DGE) to develop a PPP approach to upper secondary education with tertiary and private sectors, which engages students in exploring post-secondary career opportunities (i.e., tertiary advanced placement, work experience, internships and apprenticeships, summer institutes, private sector support to USS curriculum, instruction, and resources, etc.); and (iii) integrate gender and inclusive approaches, where appropriate and/or required.
National Qualifications Harmonization Specialist (4 person-months, 2023-2024)	
<ol style="list-style-type: none"> 1. A tertiary qualification in education (general and/or technical) or other relevant field. 2. At least 7 years' experience in general education and/or technical and vocational education and training (TVET). 3. Strong English language skills (spoken and written). 4. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 5. A background in career guidance counselling would be an added advantage. 	<p>The Qualifications Harmonization Specialist (National) will have responsibility for supporting the international specialist to:</p> <ol style="list-style-type: none"> (i) providing technical input to VOD to develop a MoEYS's and MLVT's harmonized education and vocational training framework with action plan, including operational guidelines, on promoting learning and vocational training paths of upper secondary students; (ii) based on the approved harmonized framework and action plan, including the operational guidelines, providing technical input to VOD to design and implement partnership arrangements with training providers and industries; (iii) developing resource materials for USS Career Guidance Counsellors to support career preparation for secondary students; (iv) providing capacity building training to VoD of MoEYS on management, implementation, monitoring and reporting the approved harmonized framework and action plan, including the operational guidelines, and the materials for the career guidance counsellors; (v) collaborating with project team members where there is overlap or alignment with other elements of the project (i.e., STEM careers); (vi) performing other tasks as maybe reasonably required by the EA, IA and ADB; and (vii) ensuring the implementation of the Gender Action Plan as it relates to career preparation.
National STEM Subject Specialists (3 specialists required, 36 person-months)	
<ol style="list-style-type: none"> 1. A tertiary qualification in a STEM subject. 	<p>The STEM Subject Specialists (National) will support the international specialist to:</p>

Minimum Required Qualifications	Outline Terms of Reference
<ol style="list-style-type: none"> 2. At least 5 years teaching experience at upper secondary level in Cambodia in 2 or more STEM subjects selected from: <ol style="list-style-type: none"> (i) Chemistry (ii) Biology (iii) Physics (iv) Earth Sciences (v) ICT (vi) Mathematics 3. Strong Khmer and English language skills (spoken and written). 4. A working knowledge of continuous professional development (CPD) approaches in school settings including professional learning communities would be an added advantage. 5. Previous experience in education project implementation would be an added advantage. 	<ol style="list-style-type: none"> (i) provide advice and local context to the international STEM specialist to support the development of the school-based STEM Framework; (ii) work within the STEM-EdTech project team assisting in the design and delivery of a continuous professional development (CPD) program³¹ for National Institute of Education (NIE) lecturers, general and technical upper secondary STEM teachers, and school principals focused on strengthening STEM Education in upper secondary schools (i.e., school-based STEM Framework, competency-based education and assessment, lab safety, and technology in education); (iii) collaborate with school-based mentors and Regional School Improvement Advisors to establish professional learning communities (PLC) in target USS using a phased approach and incorporating follow-up sessions to ensure ongoing teacher support and sustainability of CPD learning outcomes; (iv) liaise with school-based STEM department heads and mentors, Regional School Improvement Advisors, and other key personnel to support the integration of the school-based STEM Framework through professional learning communities (PLC); (v) assist in the establishment of national/sub-national professional subject associations to promote sharing and learning among STEM teachers (i.e., Secondary Mathematics Teachers Association). (vi) collaborate with the EdTech Specialists to ensure integration of technology in STEM teaching in target USS classrooms; (vii) work with the STEM-EdTech project team and MoEYS personnel in the design and implementation of a competency-based STEM assessment; and (viii) to design a laboratory safety system appropriate to the local context.

2. Individual consultants

Minimum Required Qualifications	Outline Terms of Reference
International Education Economist (3 person-months, 2023)	
<ol style="list-style-type: none"> 1. An advanced degree in economics and statistics or related disciplines. 2. At least 10 years of relevant work experience, preferably with a focus in Southeast Asia. 3. Expertise in economic and financial analysis in the education sector and preparing education sector expenditure frameworks. 4. Fluent English language skills (spoken and written) 5. Mastery of Excel software. 	<p>The consultant will have responsibility for:</p> <ol style="list-style-type: none"> (i) reviewing MoEYS policies and programs related to minimum service standards (MSS) in secondary education; (ii) analyzing school-level data to summarize and map existing secondary education service standards in Cambodia; (iii) collaborating with the Ministry of Education, Youth & Sport (MoEYS) and the Ministry of Economy & Finance (MEF) to develop MSS for secondary schools; (iv) consolidating the medium-term cost estimates and resource projections embedded in existing secondary education sector plans with the approved MSS; (v) creating projection models for the growth of secondary education enrolments and completion in the medium term; and

³¹ MoEYS. 2019. *Continuous Professional Development (CPD) for Teachers and School Directors, 2019-2023*. Phnom Penh: Teacher Training Department.

Minimum Required Qualifications	Outline Terms of Reference
	(vi) collaborating with MoEYS and MEF to develop a medium-term expenditure framework (MTEF) for secondary education.
International School Leadership & Management Specialist (4 person-months, 2023-2024)	
<ol style="list-style-type: none"> 1. At least 10 years prior educational leadership and management experience required. 2. A tertiary qualification in education or a related field. 3. A demonstrable working knowledge of CPD approaches in school settings. 4. Fluent English language skills (spoken and written). 5. Previous working experience in this or a similar field in Cambodia and/or other Southeast Asian would be an added advantage. 6. Previous working experience in donor funded projects would be an added advantage. 	<p>The specialist will have responsibility for advising on and facilitating the development of a strategic plan by the project for the continuous professional development (CPD) of school principals in target schools. S/he will be responsible for:</p> <ol style="list-style-type: none"> (i) collaborating with the Department of General Secondary Education (DGSE) and the National Institute of Education (NIE) on a strategic/work plan for the development and implementation of CPD for USS principals focused on the major interventions of CAM STEP UP in target schools (i.e., school-based STEM Framework, instructional leadership, teacher PLCs in schools, community and private sector engagement, public-private partnerships, and technology in education); (ii) advising on modern school leadership and management frameworks and practices to be integrated into school principal CPD promoting school effectiveness; (iii) collaborating with the project STEM-EdTech team to integrate STEM-EdTech interventions in CPD, as required; (iv) consulting with relevant teacher education institutions (TEI), higher education institutions (HEI), and civil society to partner with school principal CPD; (v) developing, in collaboration with DGSE, NIE, and the Education Quality Assurance Department, appropriate performance appraisal instruments aligned with the MoEYS School Director Professional Standards; and (vi) The specialist will actively collaborate with relevant implementing agencies (IA) during the inception phase of CPD (Weeks 12–16) for school principals as per the strategic/work plan (vii) ensuring the implementation of the gender action plan as it relates to school leadership and management.
International Science & Technology Center Specialist (6 person-months)	
<ol style="list-style-type: none"> 1. Tertiary qualifications in STEM or other relevant disciplines 2. At least 10 years experience in the development and operation of regional science centers. Demonstrable collaborative skills including analytical and creative thinking, problem solving, team building, and mentorship. 3. Fluent in English language skills (oral and written). 4. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 	<p>The specialist will collaborate with CAM STEP UP project management and related project specialists to achieve the objectives of this upper secondary education project. The specialist will be responsible to:</p> <ol style="list-style-type: none"> (i) advise the implementing agency (Institute of Technology of Cambodia) on the overall development and operation of the proposed Science and Technology Center including addressing the findings of the feasibility study, and preparing a strategic plan for the design, construction, build management, and operation of the center; (ii) promote a balanced approach between on-site facilities and digital outreach programming; (iii) collaborate with and liaise amongst relevant project specialists (i.e., public-private partnerships, STEM, EdTech, etc.), architectural design team, and government personnel enabling smooth communication and understanding across all parties promoting a sense of unity in the development and operation of the center; (iv) provide technical assistance, when appropriate, to ensure suitable solutions are identified, that are feasible

Minimum Required Qualifications	Outline Terms of Reference
	<p>and culturally appropriate, for problems that may arise; and</p> <p>(v) provide the Minister of Education, Youth & Sport, MoEYS senior management, and CAM STEP UP PMU/PISC with an overview of the CSTC process including risk assessment and ensure the CAM STEP UP objectives are kept at the core of the design process.</p>
National Environmental, Health and Safety (EHS) Specialist (12 person-months intermittent, 2023-2028)	
<ol style="list-style-type: none"> 1. An undergraduate degree or higher in environmental engineering/sciences, sociology, applied social sciences, or equivalent discipline. 2. A minimum of 7 years in safeguards work or related area and in the oversight of project implementation and compliance. 3. A working knowledge of environmental regulations and requirements in Cambodia 4. Previous working experience on ADB or other MDB financed projects is desirable. 5. Fluent Khmer and English language communication skills (oral and written) and problem-solving skills. 6. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 	<p>The consultant will conduct periodic site monitoring and reporting and safeguard documentation. The role will include and not be limited to:</p> <ol style="list-style-type: none"> (i) Safeguard Documents: Review and update, as needed, the IEE and EMP to ensure alignment with the final detailed design of the CSTC and any future variation orders in order to meet ADB SPS (2009) requirements. (ii) Monitoring: Monitor EMP implementation by the Contractor with particular attention paid to pollution prevention and control, health, and safety conditions on the active construction site. (iii) Consultation and Communication: Monitor impacts on students, staff and local community through conducting consultation with potentially affected people (including nearby tenants and residents) prior to and then within two months of the project physical works commencing. Support the IA and PMU with conducting consultations. Develop a communication plan to identify who needs information about the project, including school management, affected people around the construction sites, GRM members, local authorities, when information is to be issued, including at what stage of the project development and implementation. (iv) Reporting: Ensure contractor submits required weekly reports on EHS and EMP implementation to an acceptable level of quality. Review and clear reports. Contribute as needed to annual environmental monitoring reports specified by PMU based on the monitoring plan defined in the IEE/EMP. (v) Training: Conduct training for the contractor on EMP requirements including Site Specific Environmental Management Plan (SSEMP) expectations to ensure that any ADB and national environmental compliance requirements are understood. Training will be conducted within one month of contractor engagement. (vi) Ensure that relevant national environmental clearances are obtained by the relevant party before civil works commences.
National Financial Management Consultant for PMU (45 person-months, full time for 2 years, then intermittent).	
<ol style="list-style-type: none"> 1. At least Bachelor's degree in accounting or finance, or Certified Accounting Technician qualification, 2. At least 5 years' experience of projects funded by ADB, World Bank, or other multilateral funding agencies or international donors, 3. Demonstrable working experience with government ministries or NGOs, 	<p>The National Financial Management Consultant will support the PMU and IAs to ensure that all aspects of the project financial management system are set up and operating effectively and will conduct extensive knowledge transfer to staff in the PMU finance unit.</p> <p>S/he will be responsible for:</p>

Minimum Required Qualifications	Outline Terms of Reference
<ol style="list-style-type: none"> 4. Practical skills in accounting software, 5. Practical skills in preparing financial reports and annual financial statements, 6. Practical skills in preparing budgets, 7. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 8. Fluent in written and spoken English and Khmer. 	<ol style="list-style-type: none"> (i) Ensuring that the project's accounting software is set up and operating effectively and can produce the required finance reports, (ii) Preparing and updating supplementary project financial management guidelines, (iii) Ensuring that all project registers are set up and working effectively (including advance registers, contract registers, asset registers), (iv) Guiding and supporting the PMU finance unit to prepare withdrawal applications, prepare six-month forecasts and request advances of ADB funds (v) Guiding and supporting the finance unit to prepare monthly finance reports, quarterly Performance Monitoring Reports, and other regular finance reports, (vi) Leading on the preparation of annual project financial statements, (vii) Supporting the PMU to prepare annual workplans and budgets, (viii) Supporting the PMU to review the expenditure against annual budget and disbursement targets, identify bottlenecks and propose solutions, (ix) Supporting the project to implement the project Financial Management Action Plan, recommendations from external auditors and FM actions from ADB missions, (x) Providing support to the ITC to manage a sub-account, maintain proper accounting records and produce finance reports, (xi) Ensuring skills transfer to government finance staff through extensive on-the-job training, <p>Conducting orientations to project staff on relevant finance procedures.</p>
National Graphic Design Specialist (CDDE) ³² (14 person-months, intermittent)	
<ol style="list-style-type: none"> 1. A tertiary qualification in a relevant discipline 2. demonstrable proven capability in graphic design for teaching/learning taking into account modern teaching/learning theory that incorporates 21st Century learning. 3. At least 3 years' experience in design, development, and delivery of graphic elements in learning materials for education systems (school, government, and/or private sector). 4. Previous working experience with ADB, World Bank, or other major donor or government financed projects. 5. Fluent English language skills required (necessary to source materials internationally). 6. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 	<p>Working in collaboration with the IT Instructional Designer and Learning Management System (LMS) Developer under the direction of the CDDE, s/he will be responsible to:</p> <ol style="list-style-type: none"> (i) Analyze – under the direction of the IT Instructional Designer, assist in conducting needs assessment of learners under each key task and audience. Focus on user interface design with a focus on multimedia products (audio, video, graphics, text, simulation). Ensure clear lines of discussion with target audiences to make certain that all materials are aligned with their needs; (ii) Design/Develop – create and source multimedia content to enliven course materials including presentation materials, participant guides, handouts, and assessment tools; (iii) Implement/Evaluate – collaborate with project specialists to guide CDDE in piloting and evaluation of training materials including assessing what was learned and whether the learning solution led to measurable behavior change; and (iv) Where possible ensure the Digital Principles www.digitalprinciples.org are being followed and, as much as possible, borrow coursework from open educational resources rather than writing all materials from scratch, i.e., https://www.ccoer.org/ and other sources such as www.alison.com.
National IT Instructional Design Specialist (6 person-months, intermittent)	

³² Center for Distance and Digital Education (MoEYS).

Minimum Required Qualifications	Outline Terms of Reference
<ol style="list-style-type: none"> 1. A post-graduate degree in education or related fields 2. At least 5 years' experience in design, development, and delivery of ICT solutions for education systems (school, government, and/or private sector). 3. At least 2 years' experience with ADB, World Bank, or other major donor or government financed projects in the education sector. 4. Fluent English language skills required (necessary to source course materials). 5. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 	<p>The National IT Instructional Design Specialist will have broad experience across a range of IT technical skills and their application to pedagogical integration at the secondary education level. S/he will be responsible to:</p> <ol style="list-style-type: none"> (i) Analyze – under the direction of the Vocational Orientation Department (VOD), conduct a brief exploration to assess how the four aforementioned modules will be integrated in the current curriculum (timing, capacity, future desires, challenges, etc.). Ensure clear lines of discussion with teachers and students of GTHS to ensure that the modules are aligned with their needs; (ii) Design – a curricular approach (course work, training materials, assessment, etc.) that ensures current technical education programs will be able to integrate key features of the modules as they modernize an integrated approach to technical education delivery that incorporate digital technologies; (iii) Develop – 3- and 6-month modules (noting that in the time-frame the students must attend many others courses, thus the goal is a few lessons per week over the course of the module) for the four areas of: (i) IT office equipment maintenance, (ii) digital graphics/videography (graphic/multimedia), (iii) application and ICT systems, and (iv) networking and/or telecommunications. Ensure the modules integrate with the current GTHS curriculum; (iv) Implement – work with VOD to pilot-test selected sections of the modules and provide teacher professional development to the targeted schools, thus ensuring that designated IT teachers are capable of delivery; (v) Evaluate – guide VOD on tools to assess integration of the modules with technical education programs; and (vi) Where possible ensure the Digital Principles www.digitalprinciples.org are being followed and as much as possible; borrow coursework from open educational resources rather than writing all materials from scratch, i.e., https://www.cccoer.org/ and others sources such as www.alison.com. <p>Responsibilities</p> <ol style="list-style-type: none"> (i) Hold weekly meetings with VOD curriculum section to update on progress, ensure timeline is being followed, and agree on layout and design of the four modules.
<p>National Learning Management System (LMS) Development Specialist (CDDE)³³ (14 person-months, intermittent, 2023-2026)</p>	
<ol style="list-style-type: none"> 1. A tertiary qualification in what discipline? 2. proven capability in web-based frameworks and open-source web application tools and programming languages that incorporate modern teaching/learning theory of 21st Century learning. 3. At least 5 years' experience in design, development, and delivery of graphic elements in learning materials for 	<p>Working in collaboration with the IT Instructional Design and Graphic Design Specialists under the direction of the CDDE, s/he will be responsible to:</p> <ol style="list-style-type: none"> (i) Analyze – under the direction of the IT Instructional Design Specialist, assist in conducting needs assessment of learners under each key task and audience. Focus on selecting a user-interface LMS to be deployed under CDDE/MoEYS (Note that the knowledge management platform under CDDE has already been developed – <i>Duraseksa</i>). Ensure clear lines of discussion with target

³³ Center for Distance and Digital Education (MoEYS).

Minimum Required Qualifications	Outline Terms of Reference
<p>education systems (school, government, and/or private sector).</p> <ol style="list-style-type: none"> 4. At least 1 year experience with ADB, World Bank, or other major donor or government financed projects. 5. Fluent English language skills required (necessary to source materials internationally). 6. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 	<p>audiences to make certain that all materials are aligned with their needs;</p> <ol style="list-style-type: none"> (ii) Design/Develop – work within the project team to ensure the education platforms –LMS, Knowledge Management System (offline/online libraries) – are fully functional and optimized for the target audiences; (iii) Implement/Evaluate – collaborate with project specialists to guide CDDE in piloting and evaluation of platforms (LMS and KMS solutions) including assessing what was learned and whether the learning solution led to measurable behavior change; and (iv) Where possible ensure the Digital Principles www.digitalprinciples.org are being followed and, as much as possible, borrow coursework from open educational resources rather than writing all materials from scratch, i.e., https://www.ccoer.org/ and other sources such as www.alison.com. <p>Responsibilities</p> <ol style="list-style-type: none"> (i) Hold weekly, or as agreed, meetings with CDDE leadership team to update on progress, ensure the timeline is being followed, and agree on the layout and design of materials. (ii) Maintain leadership of all aspects of the platforms – ensure all coding and user interface elements are done according to best international practices. (iii) Maintain strong working partnerships with other digital education tasks of CAM STEP UP and ensure the implementing agency (IA), Directorate-General (Education), is informed and consulted in work planning (i.e., Department of General Secondary Education, Department of Curriculum Development, EMIS Department, etc.). (iv) Work in cooperation with CDDE to schedule workshops (for materials development)
National School Leadership & Management Specialist (8 person-months intermittent, 2023-2024)	
<ol style="list-style-type: none"> 1. At least 5 years prior educational leadership and management experience required. 2. A tertiary qualification in education or a related field. 3. Fluent English language skills (spoken and written). 4. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 5. A working knowledge of continuous professional development (CPD) approaches in school settings would be an added advantage. 	<p>The National School Leadership & Management Specialist will have extensive experience in educational leadership and management and institutional development for education. The specialist will have responsibility for assisting the international specialist to advise on and facilitate the development of a strategic plan for the continuous professional development (CPD) of school principals in target schools.</p> <p>S/he will be responsible for supporting the international specialist to:</p> <ol style="list-style-type: none"> (i) actively collaborate with relevant implementing agencies (IA) during the inception phase of CPD (Weeks 12-24) for school principals as per the strategic/work plan and support the IA during Weeks 24-32. (ii) collaborate with the Department of General Secondary Education (DGSE) and the National Institute of Education (NIE) on a strategic/work plan for the development and implementation of CPD for USS principals focused on the major interventions of CAM STEP UP in target schools (i.e., school-based STEM Framework, instructional leadership, teacher PLCs in schools, community and private sector engagement, public-private partnerships, and technology in education);

Minimum Required Qualifications	Outline Terms of Reference
	<ul style="list-style-type: none"> (iii) advise on modern school leadership and management frameworks and practices to be integrated into school principal CPD promoting school effectiveness; (iv) collaborate with the project STEM-EdTech team to integrate STEM-EdTech interventions in CPD, as required; (v) consult with relevant teacher education institutions (TEI), higher education institutions (HEI), and civil society to partner with school principal CPD; (vi) develop, in collaboration with DGSE, NIE, and the Education Quality Assurance Department, appropriate performance appraisal instruments aligned with the MoEYS School Director Professional Standards;
National TVET Specialist (National, 2 person-months)	
<ol style="list-style-type: none"> 1. A TVET qualification in a STEM-related major. 2. At least 5 years teaching experience of a STEM-related major in a technical education program at a GTHS such as electricity, electronics, agronomy, animal husbandry, food processing, etc. 3. Capacity to understand the STEM equipment needs of multiple STEM-related majors. 4. Strong English and Khmer language skills (spoken and written). 5. Computer applications proficiency such as MSWord, Excel, Power Point, Messenger, Telegram, and video conferencing through Zoom, Google Meet, and MS Teams. 6. Previous experience in education project implementation would be an added advantage. 	<p>The specialist will provide technical assistance to the project team in relation to the upgrade of STEM equipment in GTHS workshops, with a view to strengthening the teaching and learning of STEM principals in the technical education program</p> <p>In particular, s/he will be responsible for:</p> <ul style="list-style-type: none"> (i) preparing an inventory of the existing STEM teaching and learning equipment in the 4 target GTHS; (ii) conducting a needs assessment to determine the requirements for STEM teaching and learning equipment; (iii) preparing a recommended shopping list, including detailed technical specifications, for STEM teaching and learning equipment to be procured; (iv) providing guidance to the target GTHSs in relation to proper positioning, training, maintenance, and use of workshop safety equipment; and (v) ensuring all work will be aligned with the CAM STEP UP Gender Action Plan (GAP).

Source: Asian Development Bank.

VII. SAFEGUARDS

46. In compliance with ADB's Safeguard Policy Statement (SPS) (2009), the safeguard categories for the project are as follows.³⁴

A. Environment

47. **Categorization and due diligence.** The project is classified as category B for environment as per the ADB SPS (2009). Construction works for facilities to be rehabilitated or newly constructed under outputs 1 and 2, respectively, may cause minor adverse environmental impacts, primarily noise, vibration, and dust emissions as well as construction waste generation, and could result in injuries to workers and nearby communities if safety risks are not adequately mitigated. In general, the short-term construction impacts can be prevented or mitigated with good construction management practices in line with the International Finance Corporation Environment, Health, and Safety (EHS) Guidelines (2007). The initial environmental examination report including the environmental management plan (EMP) prepared for the project shall guide

³⁴ ADB. [Safeguard Categories](#).

environment and safety risk management during minor civil works.³⁵ The EMP provides mitigation measures and monitoring requirements and shall be included in full as an appendix in all bidding and contract documents of works contracts.

48. In addition to ADB's SPS, the project subscribes to all applicable environment related laws, regulations of Cambodia, most importantly the Ministry of Environment Prakas No. 21: Classification of Environmental Impact Assessment for Development Project (2020). The exact size of the proposed CSTC is not yet defined. The feasibility study and detailed engineering design will be studied during project implementation. Therefore, domestic safeguards requirements, i.e., initial environmental and social impacts assessment as per Ministry of Environment Prakas No. 21 will need to be confirmed once the feasibility study is available. However, it is anticipated that the CSTC will not be subject to initial environmental and social impacts assessment since the entire ITC campus was subject to environmental and social impacts assessment in 2021.

49. **Institutional arrangements for environmental management plan implementation.** MoEYS will recruit a project implementation support team (PIST) to support the PMU in project implementation, and a CSTC-Design and Supervision Firm (DSF) in charge of detailed engineering design and construction supervision of the CSTC. The PIST will include a national environment consultant that will act on PMU's behalf as the EMP implementation coordinator. The CSTC-DSF will include a national EHS specialist in charge of all EHS supervision during CSTC construction. The terms of reference of the PIST environment consultant and the CSTC-DSF EHS consultant are described in Section VI.D.

50. Works contractors will assign qualified EHS staff at each construction site to supervise and monitor the EMP and ensure compliance with safeguards requirements of ADB and Cambodia.

51. **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 PIST) 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 quarterly progress reports will also report on EMP implementation. In addition, the PMU will submit annual environment monitoring reports and semiannual social safeguards monitoring report to ADB. These will be disclosed in accordance with the ADB Access to Information Policy, 2018 (footnote 15).

52. **A grievance redress mechanism (GRM)** will be established for the project, consistent with the GRM outlined in the initial environmental examination. MoEYS and the PMU shall ensure: (i) an efficient project-specific 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 the GRM; (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 are recorded and included in the annual environment 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.

³⁵ Initial Environmental Examination (available from the list of linked documents in Appendix 2 of the RRP).

B. Involuntary Resettlement

53. The project is categorized C for involuntary resettlement. It will not entail land acquisition and involuntary resettlement issues. In general, the school campuses in Cambodia occupy large tracts of land, allowing for future building expansions. The proposed construction of the CSTC will be done within the 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. A due diligence report (DDR) will be produced from a sample of schools and the ITC site to confirm the IR impact of the project. The DDR will also indicate that site screening of other schools not included in the sample will be done during project implementation to assess the IR impact before the commencement of civil works. The results of the site screening should be added in the safeguard monitoring reports or in another DDR during the implementation stage. The DDR has to be cleared and approved by ADB, and disclosed on the Project's website before commencement of civil works. A desk review of legal documents (land titles or transfer of land ownership) confirm that the land use for school building and other proposed facilities are unencumbered. In the event that involuntary resettlement issues are identified during project implementation, specific mitigation measures will be prepared in accordance with applicable government laws and regulations and ADB's SPS on involuntary resettlement safeguards.

C. Indigenous Peoples

54. The project is categorized B for indigenous peoples safeguard. Project activities and interventions are expected to have only very positive impact on indigenous students/teachers particularly in terms of increased access to quality education and improved capacity of indigenous peoples students and teachers in the project areas. There will be clear benefits for indigenous children's education participation, quality of education as well as post-education employment prospects. The poverty and social impact assessment has determined that no project activities will adversely affect the indigenous peoples' identity, dignity, human rights, livelihood systems, and cultural uniqueness. However, the indigenous peoples in the northeastern provinces possess vulnerability characteristics in terms of poverty incidence and educational outcomes that the project is seeking to address. Though the project will provide only positive impact on indigenous peoples, and indigenous peoples components are integrated into the overall project's outputs and design and monitoring framework, an indigenous peoples plan has been prepared. If there is any information related to potential beneficiaries or other impact to indigenous peoples during project implementation, the executing agency will take steps required to ensure that the project complies with applicable government laws and regulations and with ADB SPS. Meaningful consultation with indigenous peoples and ethnic minority families and students will continue to be conducted and documented throughout implementation. The PMU will ensure during project implementation that indigenous peoples data collection strengthened, redounding to overall benefits to indigenous students, teachers, and their families.

55. **Prohibited investment activities.** Pursuant to ADB's Safeguard Policy Statement (2009), ADB funds may not be applied to the activities described on the ADB Prohibited Investment Activities List set forth at Appendix 5 of the Safeguard Policy Statement (2009).³⁶

³⁶ ADB. 2009. *Safeguard Policy Statement*. Manila.

VIII. GENDER AND SOCIAL DIMENSIONS

56. The Summary Poverty Reduction and Social Strategy provides key gender issues relevant to the project and identifies the gender action plan (GAP) as measures to promote gender equality.

57. The project's gender classification is gender equity theme. Gender is featured in the project outcomes and outputs with an objective of narrowing gender disparities through opportunities that challenge the gender stereotypes and empower female graduates in pursuing labor market opportunities.

58. The GAP includes the following: (i) upgrading of school facilities with gender-equitable and inclusive features; (ii) building capacity of equitably targeted female and male STEM teachers on innovative teaching strategies and integration of technology into STEM teaching; (iii) equitable access of female and male students to STEM-oriented co-curricular activities outside the classroom; (iv) integrating gender equality and social inclusion principles in the content and pedagogical processes in target USSs; and (v) conducting public awareness campaigns on the importance of girls in STEM.

59. The PMU will be responsible for ensuring GAP implementation. PMU will recruit a national gender specialist who will be deployed with the PMU to assist in GAP planning, budgeting, implementation, monitoring, and reporting. The GAP will be updated and monitored on a regular basis. Sex-disaggregated data will be regularly collected and included in quarterly progress reports for submission to ADB.

60. The PIUs will implement the GAP with support from consultant teams.

Table 14: Gender Action Plan

Gender Objectives	Activities/Indicators/Targets	Responsibilities	Timeframe
Outcome 1: Effectiveness of USE improved			
Equitable access and participation of boys and girls in science stream courses is improved.	By 2029: a. At least 1.5 percentage increase in the proportion of female and male USE science stream students from 50 SRS schools passing Grade 12 national exam (SY2021/22 baseline: TBD) ^a (DMF a)	PIU, DGE, POE, DOE	2023–2029 with annual progress review
	b. At least three SRSs accredited as NGSs with at least 1,400 girls and at least 1,400 boys enrolled (SY2021 / 22 baseline: 0) (DMF c)	PIU, DGE	
Output 1: Equitable access to standards-based USE expanded			
1.1 MSS include gender-equitable and inclusive school facilities (e.g., science classrooms with science laboratories and equipment, ICT packages, multi-purpose classrooms, and libraries) for STEM learning.	1.1.1 117 USSs upgraded with standardized facilities of SRS, with gender-responsive, socially inclusive ^b and climate-adaptive design-features (SY2021/22 Baseline: 0) (DMF1a)	PIU, DGE, USS targeted schools	2024–2028
	1.1.2. At least 50% of female students benefit from upgraded standardized facilities with gender responsive, socially inclusive ^b and climate-adaptive design in 117 USS (14 US NWS and 103 general secondary schools, (SY 2021/2022 baseline: 0)		
	1.1.3 Budget provisions for gender equality and social inclusion are included in the 5-year secondary Medium-Term Expenditure Framework ^c	MoEYS, MEF, DGE, DOF, PIU	2024
	1.1.4 Functional, safe, and separate water, sanitation, and hygiene facilities for male and female in target 18 SRS and 50 NWS regularly maintained.	PIU, DGE, USS targeted schools	2024–2028
Output 2: Quality of STEM teaching and learning strengthened			

Gender Objectives	Activities/Indicators/Targets	Responsibilities	Timeframe
2.1 GESI principles 4 are integrated in the content and pedagogical process of target USS	2.1.1. 775 USE STEM teachers from 50 SRS, 101 NWS, and 4 GTHS (at least 40% women) report overall increased pedagogical content knowledge, understanding of innovative teaching strategies and integration of technology into STEM teaching, and are engaged in professional learning communities (SY2021/22 baseline: 0) (DMF 2a)	PIU, DGE, USS targeted schools	2023–2028
	2.1.2. 25 NIE lecturers of STEM subjects (including at least 80% of available female NIE STEM lecturers) report overall increased knowledge and understanding of effective and innovative teaching strategies, integration of technology into STEM teaching, and increased pedagogical content knowledge (baseline: 0) (DMF 2b)	NIE, PIU	2025–2028
	2.1.3 A 1-day basic orientation on GESI principles in STEM as part of the required introduction course for all newly recruited STEM subject teachers conducted	PIU; NIE, GMAG	2024–2026
	2.1.4 A 3-day training on GESI-responsive content and pedagogy in STEM courses as part of the continuing professional development of teachers and STEM subject specialists in 155 USS schools conducted		
	2.1.5 Annual workshop series with all STEM teachers in target schools that integrates gender sessions on the use of available STEM resources in classroom teaching and co-curricular activities in target schools conducted	PIU; USS targeted school leaders; GMAG	2023–2028
2.2 Female and male students have access to STEM-oriented co-curricular activities outside the classroom.	2.2.1 At least 50% of participants among USS students in STEM-oriented co-curricular activities in 155 USS schools (50 SRS, 101 NWS, 4 GTHS) are female. (SY 2020/21 baseline: 0)	PIU, USS targeted school teachers and leaders	2023–2028
	2.2.2 CSTC established, fully equipped, staffed, and operational with gender-responsive, climate-smart features and socially inclusive aspects. (SY2021/22 Baseline: 0) ^d (DMF 2c)	PIU, ITC, DGE	
	2.2.3 GESI-responsive and inclusive social media materials are developed as part of a public awareness campaign on STEM.	MoEYS, PIU, ITC, DGE	2024–2028
Output 3: Institutional capacity for planning, management and delivery of education strengthened			
3.1. Levels of engagement of schools, community leaders and private sector in gender-responsive transformation of schools towards NGS level are enhanced.	3.1.1 155 school leaders (at least 80% of available female school leaders) report overall increased knowledge of understanding of instructional leadership, partnership building, resource mobilization, and stakeholder engagement (SY2021/22 baseline: 0) (DMF 3a)	PIU; NGS and school leaders of 50 SRS, 101 NWS, 4 GTHS	2023–2028
	3.1.2 At least 50% SRSs operationalize partnerships for joint delivery programs for USS students with gender-responsive professional safety guidelines. ^e (SY2021/22 baseline: 0) (DMF 3c)	PIU; NGS, Development Curriculum Department; VOD	2024–2028
	3.1.3 At least one research study including lessons learned and recommendations on STEM/ EdTech interventions in target USS focusing on gender-responsive and socially inclusive aspects is conducted, published and disseminated to MoEYS' management and staff.	PIU; MoEYS	2024–2028
	3.1.4 Two dialogues per year conducted with the participation of both parents and community leaders in each of the 155 USS schools (50 SRS and 101 NWS and 4 GTHS) project schools to promote STEM course choices among girls and boys, preventing early school leaving, address issues of adolescent sexuality and reproductive health; prevent gender-based violence.	School principals, school guidance counselors, student associations, parents, village leaders	2023–2028 Bi-annual dialogue
	3.1.5 At least 50 technical and education specialists, teachers, provincial and district offices education staff, and school managers (at least 40% female) report improved	PIU; school leaders, GMAG; POEs, DOEs	2023–2028

Gender Objectives	Activities/Indicators/Targets	Responsibilities	Timeframe
	capacity on project implementation, gender-based analysis, and results-based monitoring and evaluation. (SY2021/22 baseline: 0) (DMF 3d)		

Project Management and Gender-Specific Activities:

1. National social development and gender specialist will be recruited as part of the PMU team to support GAP implementation, quarterly reporting, monitoring, and reporting of the project GAP. ADB Gender specialist will also monitor GAP implementation.
1. Orient the PMU and partners on the GESI framework and GAP for the Science and Technology Project in Upper Secondary Education Project.
2. At least 40% of the women staff among PMU and relevant MoEYS departments (ITC, NIE, DGE, and IU-3-TU1: DGE, DGSE, VOD, Department of Planning) participate in project training opportunities.
4. Collect and analyze data disaggregated by sex where relevant and integrate gender performance indicators (from the DMF and the GAP) in the project performance monitoring system.

CSTC = Cambodia Science and Technology Center; DGE = *Directorate General of Education*; DGSE = Department of General Secondary Education; DIT = Department for International Trade; DMF = design and monitoring framework; DOE = Department of Education; Edtech = education technology; EQAD = Education Quality Assurance Department; GAP = gender action plan; GESI = gender equality and social inclusion; GMAG = Gender Mainstreaming Action Group; GTHS = general technical high school; ICT = information and communications technology; ITC = Institute of Technology Cambodia; IU = implementing unit; MoEYS = Ministry of Education, Youth and Sport; MSS = minimum service standard; NGS = new generation school; NIE = National Institute of Education; NWS = network school; OP = operational priority; PIU = project implementation unit; POE = provincial offices of education; Q = quarter; SRS = secondary resource school; STEM = science, technology, engineering and mathematics; SY = school year; TTD = Teacher Training Department; TU = technical unit; USE = upper secondary education; USS = upper secondary school; VOD = Vocational Orientation Department.

^a The baseline will be determined in December 2022, once the SY 2021/22 grade 12 assessment data is available.

^b Gender-responsive features include separate toilets for boys and girls and people with disabilities with MHM facilities, and adequate water supply. Safety features include adequate lighting and proper lockable doors.-

^c The 5-year MTEF provides the budget framework for gender equality and social inclusion (GESI) activities, e.g., capacity building for school administrators and STEM teachers on GESI framework and community dialogue with students, parents and village leaders to increase the participation of boys and girls in STEM activities.

^d The gender-responsive features of CSTC include gender-fair content, images, and language in interactive materials, and showcasing modules on equal gender roles in STEM.

^e The gender responsive professional safety guidelines will include a code of conduct to prevent sexual harassment and gender-based violence.

Source: Asian Development Bank.

IX. PERFORMANCE MONITORING, EVALUATION, REPORTING, AND COMMUNICATION

A. Project Design and Monitoring Framework

Impact the Project is Aligned with

High-quality human resources for a knowledge-based society developed (Cambodia Secondary Education Blueprint 2030)^a

Results Chain	Performance Indicators	Data Sources and Reporting Mechanism	Risks and Critical Assumptions
<p>Outcome Effectiveness of USE improved</p>	<p>By 2029:</p> <p>a. At least 1.5 percentage point increase in the proportion of female and male USE science stream students in 50 SRSs passing grade 12 national exam (SY2022 baseline: TBD^b [sex-disaggregated]) (OP 1.1; OP 2.2.1)</p> <p>b. At least 2% increase in the proportion of SRSs meeting MSS for outputs^c (SY2023 baseline: TBD)^d (OP 1.1; OP 6.2.1)</p> <p>c. At least three SRSs accredited as new-generation schools with at least 1,400 girls and at least 1,400 boys enrolled (SY2022 baseline: 0) (OP 1.1; OP 2.2.1; OP 6.2)</p>	<p>a. MoEYS EMIS and MoEYS annual education congress reports</p> <p>b.–c. MoEYS EMIS reports</p>	<p>R: Government may prioritize allocation of resources for social and economic recovery during and after the coronavirus disease pandemic, shifting resources and funds away from the project.</p>
<p>Outputs 1. Equitable access to standards-based USE expanded</p> <p>2. Quality of STEM teaching and learning strengthened</p>	<p>By 2028:</p> <p>1a. 117 USSs upgraded with standardized SRS facilities, with gender-responsive, socially inclusive, and climate-adaptive design features^e (SY2022 baseline: 0) (OP 1.1; OP 3.2.5; OP 6.2.1)</p> <p>1b. STEM and education technology equipment provided to 258 USSs (SY2022 baseline: 0) (OP 1.1; OP 6.2.1)</p> <p>1c. 5-year secondary education medium-term expenditure framework, including multiyear budget estimates and aligned with Cambodia's Secondary Education Blueprint 2030, developed and implemented (2022 baseline: NA) (OP 6.2; OP 6.2.1)</p> <p>1d. Action plan to harmonize pathways for upper secondary students to the education and technical training programs and certifications based on the Cambodia Qualifications Framework developed and implemented (2022 baseline: NA) (OP 1.1; OP 6.2)</p> <p>2a. 775 USE STEM teachers (at least 40% women) from 50 SRSs, 101 SRS network schools, and four general technical high schools report overall increased pedagogical content knowledge, understanding of</p>	<p>1a.–b. MoEYS quarterly project reports</p> <p>1c. MoEYS medium-term expenditure framework document and quarterly project reports</p> <p>1d. MoEYS quarterly project reports</p> <p>2a. MoEYS quarterly project reports, review mission reports, pre-</p>	<p>R: An adequate number of qualified teachers is not available for</p>

Results Chain	Performance Indicators	Data Sources and Reporting Mechanism	Risks and Critical Assumptions
3. Institutional capacity for planning, management, and delivery of education strengthened ⁹	<p>innovative teaching strategies, and integration of technology into STEM teaching, and are engaged in professional learning communities (SY2022 baseline: 0) (OP 1.1.1; OP 2.1.1)</p> <p>2b. 25 NIE STEM lecturers (including at least 80% of available female NIE STEM lecturers) report overall increased knowledge and understanding of effective and innovative teaching strategies, integration of technology into STEM teaching, and increased pedagogical content knowledge (SY2022 baseline: 0) (OP 1.1.1; OP 2.1.1)</p> <p>2c. CSTC established, fully equipped, staffed, and operational with gender-responsive, climate-smart features and socially inclusive aspects^f (SY2022 baseline: 0) (OP 1.1; OP 2.1.4; OP 3.2.5)</p> <p>2d. STEM school-level model action plans for effective teaching and learning, and competency-based student assessment piloted in 30 target USSs (SY2022 baseline: 0) (OP 1.1; OP 6.2)</p> <p>3a. 155 school directors (including at least 80% of available female school directors) report overall increased knowledge of understanding of instructional leadership, partnership building, resource mobilization, and stakeholder engagement (SY2022 baseline: 0) (OP 1.1.1; OP 2.3.1; OP 6.1)</p> <p>3b. At least three new USS partnerships on teacher and school director CPD and STEM curriculum implementation established and implemented with tertiary and polytechnic education and training institutions, nongovernment organizations, international schools, and industry and business (SY2022 baseline: 0) (OP 6.2)</p> <p>3c. At least 50% of SRSs operationalize partnerships for joint delivery programs for USS students with gender-responsive professional safety guidelines^h (SY2022 baseline: TBD) (OP 1.1; OP 6.2)</p>	<p>and post- training surveys</p> <p>2b. MoEYS quarterly project reports, review mission reports</p> <p>2c. MoEYS quarterly project reports, CSTC reports</p> <p>2d. MoEYS quarterly project reports</p> <p>3a. MoEYS quarterly project reports, pre- and post- training surveys</p> <p>3b.–3c. MoEYS quarterly project reports</p>	<p>recruitment because of increased demand from higher-paying employers</p> <p>R: Low take-up of partnerships between USSs and industry, business, tertiary education, and training institutions</p>

Results Chain	Performance Indicators	Data Sources and Reporting Mechanism	Risks and Critical Assumptions
	3d. At least 50 technical and education specialists, teachers, provincial and district office education staff, and school directors (at least 40% female) report improved capacity on project implementation, gender-based analysis, and results-based monitoring and evaluation (SY2022 baseline: 0) (OP 1.1.1; OP 2.1.1; OP 6.1.1)	3d. MoEYS quarterly project reports, pre- and post- training surveys	

Key Activities with Milestones

1. Equitable access to standards-based USE expanded

- 1.1 Develop USE MSS (Q4 2023).
- 1.2 Provide target USSs with enhanced STEM equipment and innovative digital technology (Q2 2027).
- 1.3 Develop a 5-year secondary education medium-term expenditure framework (Q4 2023).
- 1.4 Upgrade network schools and regular USSs with science classrooms, libraries, and WASH facilities (Q4 2027).
- 1.5 Harmonize education and technical training programs and certifications based on the Cambodia Qualifications Framework (Q4 2024).

2. Quality of STEM teaching and learning strengthened

- 2.1 Adopt STEM school-level framework in target schools (Q4 2026).
- 2.2 Conduct feasibility study of CSTC (Q4 2023).
- 2.3 Complete construction of CSTC (Q4 2027).
- 2.4 Deliver educational technology and STEM pedagogy CPD to NIE STEM lecturers and USS STEM teachers (Q4 2027).

3. Institutional capacity for planning, management and delivery of education strengthened

- 3.1 Develop SBM assessment and scoring tool (Q2 2023).
- 3.2 Install and implement OpenEMIS (Q3 2026).
- 3.3 Deliver school director CPD (Q4 2027).
- 3.4 Establish partnerships between secondary and post-secondary institutions and industries to enhance student learning and career preparation (Q4 2027).
- 3.5 Train technical and education staff in monitoring policy implementation, gender analysis, and results-based monitoring and evaluation (Q4 2027).
- 3.6 Conduct and disseminate research studies on STEM education delivery with gender-sensitive and socially inclusive aspects (Q4 2027).

Project Management Activities

Start advance action for consultants' recruitment.

Establish project management unit.

Recruit project management unit consultants.

Establish baselines and targets (sex-disaggregated).^{b, d, g}

Conduct inception mission within 2 months of loan effectiveness, midterm review mission in 2025, final review mission in 2028, and project completion review in 2029.

Inputs

Asian Development Bank: \$70.00 million (concessional loan)

Government of Cambodia: \$8.24 million

CPD = continuous professional development; CSTC = Cambodia Science and Technology Center; EMIS = education management information system; MoEYS = Ministry of Education, Youth and Sport; MSS = minimum service standards, NA = not applicable, NIE = National Institute of Education; OP = operational priority; Q = quarter; R = risk; SBM = school-based management; SRS = secondary resource school; STEM = science, technology, engineering, and mathematics; SY = school year; TBD = to be determined; USE = upper secondary education; USS = upper secondary school; WASH = water, sanitation, and hygiene.

^a Government of Cambodia, MoEYS. 2021. *Cambodia Secondary Education Blueprint 2030*. Phnom Penh.

^b The baseline is to be determined in December 2022 once the SY2022 grade 12 assessment data is available.

^c Completion, dropout, and enrollment rates will be used for output standards.

- ^d The baseline will be determined in May 2023 after the MSS and targets for outputs are developed and an assessment of the USSs meeting the MSS for outputs are completed.
- ^e Facilities, infrastructure, and teaching and learning spaces to be provided under the project will integrate gender-responsive and socially inclusive design features, which respond to the unique and/or special needs of male and female learners and teachers, including provision of separate female and male toilets and safe and potable water, menstrual hygiene facilities, and safety features such as adequate lighting and safely locking toilet doors.
- ^f Gender-responsive features of the CSTC include gender-fair content, images, and language in interactive materials; and showcasing modules on equal gender roles in STEM.
- ^g An additional indicator on the minimum percentage of SRSs meeting the SBM effectiveness standards, together with a SY2024 baseline, will be added to the design and monitoring framework at midterm review or earlier, once the SBM activities to develop the assessment tools and to set the baseline have been completed.
- ^h The gender-responsive professional safety guidelines will include a code of conduct to prevent sexual harassment and gender-based violence.

Contribution to Strategy 2030 Operational Priorities

Expected values and methodological details for all OP indicators to which this operation will contribute results are detailed in Contribution to Strategy 2030 Operational Priorities (accessible from the list of linked documents in Appendix 2).

Source: Asian Development Bank.

B. Monitoring

61. **Project performance monitoring.** Project progress, inputs, outputs, outcomes, and impacts will be monitored regularly. MoEYS, with the support of IAs, will be responsible for monitoring the implementation and performance of the STEP UP 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. MoEYS, and IAs will prepare quarterly progress reports describing: (i) project implementation progress; (ii) issues, challenges, and constraints; (iii) progress of financial management action plans; and (iv) proposed actions and solutions for submission to the government and ADB. Disaggregated baseline data for output and outcome indicators gathered during project processing will be updated and reported through these quarterly progress reports and after each ADB project review mission.

62. At the start of project implementation, the PMU will use baseline information to develop a comprehensive project performance management system to generate data systematically on the inputs, outputs, and indicators to be used to measure project impact, taking into account the scope of the outputs. The baseline for outcome indicator a on the proportion of female and male USE science stream students in 50 SRSs passing Grade 12 national exam will be determined in December 2022, once the SY 2022 grade 12 exam data is obtained. The PMU will confirm achievable targets; finalize monitoring, recording, and reporting arrangements; and establish systems and procedures, no later than 3 months after project loan effectiveness.

63. **Compliance monitoring.** Loan covenants—policy, financial, economic, environmental safeguards, and others—will be monitored through the quarterly progress reports and ADB review missions.

64. **Environment safeguards monitoring.** Throughout the construction period, each contractor will submit monthly works progress and EMP implementation reports to the CSTC design build and supervision firm(s). The quarterly project progress reports prepared by the PMU for ADB should include a short summary of EMP implementation progress and any grievances raised/resolved in the reporting period. The PIST environment consultant will support the PMU in preparing and submitting the annual environmental monitoring reports (EMRs) to MoEYS and ADB.³⁷ The EMR will include progress of construction, results of site inspections and environmental monitoring, progress made in EMP implementation, status of compliance with

³⁷ Report template is annexed to the IEE.

domestic environmental regulatory requirements and other clearances, record of community complaints, unforeseen environmental impacts, and suggested corrective actions for the next monitoring period. The EMRs shall be submitted to ADB until the project completion report is prepared.

65. **Social safeguards monitoring.** As the involuntary resettlement category is C, no land acquisition and resettlement are anticipated. The EA will integrate the annual social monitoring report for both involuntary resettlement and indigenous peoples into the environmental annual monitoring report and the project's quarterly progress report to describe the progress of the implementation of resettlement activities, compliance issues, and any corrective action plan/s. The poverty and social impact assessment has determined that no project activities will adversely affect the IP's identity, dignity, human rights, livelihood systems, and cultural uniqueness. All activities conducted, including meaningful consultations with Indigenous Peoples and Ethnic Minority families and students will be documented. The PMU's project implementation consultant Social Safeguards Specialist will keep ADB Social Safeguards Specialists updated on the progress of project implementation.

66. **Gender and social dimensions monitoring.** The progress in GAP implementation will be included in the PMU and PIU quarterly and annual progress reports. The national gender specialist to be recruited by the PMU will support monitoring and reporting.³⁸ The ADB Gender specialist will also monitor GAP implementation.

C. Evaluation

67. **Inception mission.** ADB will conduct an inception mission within two months after project effectiveness. The main purpose of the inception mission are to (i) reconfirm the working arrangements between ADB and MoEYS; (ii) review the project implementation schedule as well as the contract awards and disbursement projections, (iii) finalize the detailed disbursement arrangements, and (iv) provide any additional training as required.

68. **Review missions** will be conducted every six months thereafter. The review mission will check overall project implementation, including progress against the DMF outcome and output indicators, covenant compliance, safeguards, gender and 'green' dimensions, and a review of FM performance including achievement of contract awards and disbursement targets, and utilization of both ADB and counterpart funds, compliance with financial reporting and auditing requirements, and the progress of the financial management action plan. The project implementation schedule will also be updated, as necessary.

69. **A midterm review** will be undertaken in year 3 of implementation. The midterm review will consider whether the projects' outcomes are likely to be achieved. The focus will be on overall project strategy and achievements which may require adjustments of targets and processes and reallocation of resources. It will include a review of the FM performance, the adequacy of costs and financing and reallocation of loan proceeds, and compliance with loan covenants.

70. **Project completion review mission.** ADB, with the borrower and MoEYS, will field a project completion review mission to evaluate whether the project outcome was achieved, and to assess the performance of ADB and MoEYS. Within 6 months of project physical completion,

³⁸ ADB's Handbook on Social Analysis: A Working Document, is available at: <http://www.adb.org/Documents/Handbooks/social-analysis/default.asp>, *Staff Guide to Consultation and Participation*: <http://www.adb.org/participation/toolkit-staff-guide.asp>, and, *CSO Sourcebook: A Staff Guide to Cooperation with Civil Society Organizations*: <http://www.adb.org/Documents/Books/CSO-Staff-Guide/default.asp>.

MoEYS will submit a project completion report to ADB. ADB will also prepare and disclose its own project completion report within one year of financial closing.³⁹

D. Reporting

71. The MoEYS will provide ADB with (i) quarterly progress reports in a format consistent with ADB's project performance reporting system; (ii) consolidated annual reports including (a) progress achieved by output as measured through the indicator's performance targets, (b) key implementation issues and solutions, (c) updated procurement plan, and (d) updated implementation plan for the next 12 months; (iii) report on the implementation of financial management action plans as detailed in Table 13 of this PAM; (iv) annual environment monitoring reports; (v) semiannual indigenous peoples plan monitoring; and (vi) a project completion report within 6 months of physical completion of the project. To ensure that projects will continue to be both viable and sustainable, project accounts and the executing agency audited financial statement together with the associated auditor's report, should be adequately reviewed.

E. Stakeholder Communication Strategy

72. The project, in collaboration with the MoEYS and the PIUs, will develop a communication strategy and subsequent communications plan as early as possible after loan effectiveness to ensure robust project coordination and delivery within the internal stakeholder community, including the ADB, and project promotion with external stakeholders. The communication strategy will build on approaches already in use by the ADB but will be enhanced through consultation with MoEYS and other key stakeholders to ensure goodness of fit with Cambodian institutional and cultural expectations and practices. The strategy will set general direction regarding what is to be achieved by the communications plan and will be reviewed and revised in response to normal project review activities and their recommendations. As a minimum, the strategy and its plan should be reviewed by the project steering committee in addition to semi-annual review missions.

73. The communication plan will provide specific guidance regarding steps to be followed and the expected outcomes of each step. The plan will assign responsibilities and timelines for the creation and transmission of communication products including, inter alia, an informal reporting system for the PMU, PIUs, and relevant ADB officers to stay mutually informed of project progress, prospects, and problems.

X. ANTICORRUPTION POLICY

74. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the project.⁴⁰ All contracts financed by ADB shall include provisions specifying the right of ADB to audit and examine the records and accounts of the executing agency and all project contractors, suppliers, consultants, and other service providers. Individuals and/or entities on ADB's anticorruption debarment list are ineligible to participate in ADB-financed activity and may not be awarded any contracts under the project.⁴¹

75. To support these efforts, relevant provisions are included in the loan agreements/regulations and the bidding documents for the project.

³⁹ Project completion report format is available at: <http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar>.

⁴⁰ Anticorruption Policy: <https://www.adb.org/documents/anticorruption-policy>.

⁴¹ ADB's Office of Anticorruption and Integrity website: <https://www.adb.org/site/integrity/main>.

XI. ACCOUNTABILITY MECHANISM

76. People who are, or may in the future be, adversely affected by the project may submit complaints to ADB's Accountability Mechanism. The Accountability Mechanism provides an independent forum and process whereby people adversely affected by ADB-assisted projects can voice, and seek a resolution of their problems, as well as report alleged violations of ADB's operational policies and procedures. Before submitting a complaint to the Accountability Mechanism, affected people should make an effort in good faith to solve their problems by working with the concerned ADB operations department. Only after doing that, and if they are still dissatisfied, should they approach the Accountability Mechanism.⁴²

XII. RECORD OF CHANGES TO THE PROJECT ADMINISTRATION MANUAL

77. All revisions and/or updates during the course of implementation should be retained in this section to provide a chronological history of changes to implemented arrangements recorded in the PAM, including revision to contract awards and disbursement s-curves.

⁴² Accountability Mechanism. <http://www.adb.org/Accountability-Mechanism/default.asp>.

GENDER ACTION PLAN MONITORING TABLE

Date of Update:

Project Title: Cambodia Science and Technology Project in Upper Secondary Education (STEP UP)

Country: Cambodia

Project No.:

Type of Project (Loan/Grant/TA):

Approval and Timeline:

Gender Category: Gender Equity (GEN)

Mission Leader:

Project Impact:

Project Outcome: Effectiveness of USE improved by 2029: a) At least 1.5 percentage increase in the proportion of female and male of USE science-stream students from 50 SRS schools passing Grade 12 national exam; b) At least 3 SRS accredited as NGS with at least 1,400 girls and at least 1,400 boys enrolled (SY 2021.22 baseline: 0)

Gender Action Plan (GAP Activities, Indicators and Targets, Timeframe and Responsibility)	Progress to date (as of _____) (This should include information on period of actual implementation, sex-disaggregated quantitative updates (e.g., number of participating women, women beneficiaries of services, etc.), and qualitative information. However, some would be on- going - so explain what has happened so far towards meeting the target.	Issues and Challenges (Please include reasons why an activity was not fully implemented, or if targets fall short, or reasons for delay, etc., and provide recommendations on ways to address issues and challenges)
Output 1: Equitable access to standards-based USE expanded		
a. 117 USSs upgraded with standardized facilities of SRS, with gender-responsive, socially inclusive and climate-adaptive design features (SY201/22, Baseline: 0; DMF a	Achieved: (example) As of Q4- 2023, 23 USS (20 % of target) are upgraded.	
b. At least 50 percent female students benefit from upgraded standardized facilities with gender-responsive, socially inclusive and climate-adaptive design in 117 USS (14 NWS, 103 general secondary schools (SY 2021/2022; baseline 0)		

<p align="center">Gender Action Plan (GAP Activities, Indicators and Targets, Timeframe and Responsibility)</p>	<p align="center">Progress to date (as of _____) (This should include information on period of actual implementation, sex-disaggregated quantitative updates (e.g., number of participating women, women beneficiaries of services, etc.), and qualitative information. However, some would be on-going - so explain what has happened so far towards meeting the target.</p>	<p align="center">Issues and Challenges (Please include reasons why an activity was not fully implemented, or if targets fall short, or reasons for delay, etc., and provide recommendations on ways to address issues and challenges)</p>
<p>c. Budget provisions for gender equality and social inclusion are included in the five-year secondary MTEF.</p>		
<p>d. Functional, safe and separate water and sanitation facilities for male and female in 18 SRS and 50 MWS.</p>		
<p>Output 2: Quality of STEM teaching and learning strengthened.</p>		
<p>1.</p>		
<p>2.</p>		
<p>3.</p>		
<p>Output 3: Institutional capacity for planning, management and delivery of education strengthened.</p>		
<p>1.</p>		

Comments/ Remarks:

Accomplished by : _____

Date Accomplished: _____

NONCONSULTING SERVICES TERMS OF REFERENCE

A. English Language Training Institute

1. The services of an English language training institute (ELTI) will be engaged by the Ministry of Education, Youth and Sport (MoEYS), the executing agency, to design and deliver an English language training program for upper secondary school (USS) science, technology, engineering, and mathematics (STEM) subject teachers (teachers of chemistry, biology, physics, earth science, mathematics and information communication and technology [ICT]) as part of the executing agency's extensive framework for the continuous professional development (CPD) of STEM teachers. The ELTI should be an accredited foreign language training institution with significant experience in development of English language curricula and delivery of customized English language training, especially for upper secondary STEM subject teachers, by using digital materials to enhance the teaching and learning of STEM subjects and broaden the range of resources available to teachers. The ELTI shall be required to use a holistic approach building a supportive environment and employing a variety of methods, both online and face-to-face, to ensure sustainability and maximize impact.

2. The ELTI, in collaboration with the assigned education specialist and staff of the implementing agency/Directorate General of Education (DGE), shall be responsible for:
 - (i) pre-assessment of teacher English language proficiency and standards, analysis and subsequent streaming to appropriate skill levels, and producing eligible short-listed upper secondary education STEM subject teachers for attending the training program;
 - (ii) the design and delivery of the training program that
 - (a) is accessible by eligible USSs teachers,
 - (b) utilizes a combination of face-to-face and digital components,
 - (c) builds capacity in both fundamental English language skills and English in the STEM context,
 - (d) is suitable for teachers of various levels of English language proficiency (pre-assessment built-in),
 - (e) utilizes a combination of modern teaching techniques/methodologies (e.g., formal learning, learning by doing, autonomous learning), and
 - (f) promotes the use of digital resources.
 - (iii) maximizing impact and sustainability by establishing Professional Learning Communities in collaboration with school-based mentors and English language teachers.
 - (iv) certification upon completion with pre-determined levels of achievement.
 - (v) draft final report to the executing agency and the Asian Development Bank (ADB) reflecting the program's outputs and deliverables, including immediate impact or positive changes assessment and recommendations at least 30 days ahead of its completion of the contract; and
 - (vi) final report (Khmer and English languages in hard and electronic versions) within the completion time and presenting the final report to the executing and implementing agencies, and ADB.

3. **Qualifications.** The ELTI will have:
 - (i) at least 10 years' experience in English language program design and delivery in Cambodia;

- (ii) knowledge of the Cambodian education sector, expertise in English training in the STEM context, capacity to deliver the program to target USS, and experience in the incorporation of digital solutions for program content and delivery; and
- (iii) capacity to provide pre-assessment and certification of STEM teachers upon completion.

B. Creative Media Agency (STEM Social Media Campaign)

4. The creative media agency will work closely with the implementing agency (Institute of Technology of Cambodia) and the executing agency's Department of Information Technology (DIT) to design, create, and deliver a professional, branded social media campaign to raise public, especially youth/secondary education students, parents and teachers) awareness of STEM education and careers and its role in socio-economic and industrial development of Cambodia. The agency will familiarize itself with the Cambodia STEP UP project objectives, discuss and agree campaign branding/design concepts with the executing agency's DIT and ITC-run Cambodia Science and Technology Center (CSTC), and devise a targeted communications strategy. The agency will be responsible for digital content creation according to MoEYS-approved design outlines, along with subsequent campaign management following the agreed communications strategy. All aspects of the campaign design will align with gender equality and social inclusion concepts.

5. The agency will be responsible to:

- (i) create an exciting and recognizable STEM brand;
- (ii) design and create digital content that will deepen understanding and ignite interest in STEM among students, parents, teachers, and the general public, while making clear the connection between STEM education, STEM careers, and Cambodia's socio-economic aspirations. Content may include explainer videos of STEM topics (i.e., STEM education, climate change, Industrial Revolution 4.0, careers and professions), interviews profiling STEM professionals, industry visits, STEM student profiles, competitions, challenges, etc.;
- (iii) highlight the spectrum of STEM employment opportunities in Cambodia and international to familiarize students and parents with STEM careers and the flexibility of a STEM qualification;
- (iv) develop distinctive marketing strategies using multiple social platforms to foster active student engagement, including under-represented groups as well as lower and USS students, early-school-leaving students, and parents;
- (v) manage delivery of the campaign and collaborate with CSTC, DIT and General Secondary Education Department to promote local and regional engagement to ensure the campaign reaches local schools and is actively circulated among school communities; and
- (vi) field-test the campaign's impact by conducting focus groups with students at both secondary and tertiary education levels, teachers, parents, and private-sector partners.

6. **Qualifications.** The agency will have at least 10 years' experience in digital marketing and communications in the Cambodian context. Knowledge of the STEM education in Cambodia, expertise in science communication in both English and Khmer, and experience creating and managing delivery of targeted social media campaigns.

C. Firm to set up and train on OpenEMIS

7. The Firm to set up and train on OpenEMIS will have extensive experience in advising governments on national education management information system (EMIS) and school information management systems. The firm should have a long track record of needs analysis, system design, open-source application development and field experience in delivering a tailor-made solution that fits the Cambodian context. The firm will primarily collaborate with the Cambodia STEP UP implementing agency, Director General of Education and particularly the Department of EMIS (as lead), Department of Planning and the Center for Distance and Digital Education (digital training) to ensure comprehensive system viability and subsequent implementation. They will assure key stakeholders at the MoEYS, targeted provincial/district education offices and project schools are fully capable of implementing OpenEMIS by year 3.

8. Indicative activities:

- (i) Policy and Planning Services
 - (a) Needs Assessment and Gap Analysis
 - (b) Human Resources Capacity Assessment
 - (c) Architecture Design
- (ii) Implementation Services
 - (a) System Installation and Configuration
 - (b) Data Migration – Institutions, Students, Staff
- (iii) Analytical Services
 - (a) Indicator Development
 - (b) Online Data Dashboard – Institutions, Students, Staff
- (iv) Capacity Development
 - (a) OpenEMIS Core Fundamentals - Users TOT, Administrators, User and Security Management, Analytics Fundamentals
 - (b) OpenEMIS Core Fundamentals - Administrators Configuration and Administration Analytics for Indicator Building, Data Analytics for Thematic Dashboard, Building Monitoring for National Education Strategic Plan Monitoring
- (v) Software Development
 - (a) Feature Development
- (vi) Implementation Services
 - (a) Data Migration (existing databases)- Institutions, Students, Staff, Data Warehouse, education sector plans
- (vii) Analytical Services
 - (a) Custom Reports (ensure functionality and appropriate local viability)
 - (b) Configure Online Data Dashboards - Data Quality, Absenteeism, Performance, Risks, Infrastructure (assets), School Location, Inclusive Education, Sustainable Development Goal 4
- (viii) Software Development Services
 - (a) Feature Development
- (ix) EMIS Standard Operating Procedures and EMIS Guide
- (x) EMIS Operational Plan – for national scaling up
- (xi) Support Services
 - (a) Project Management
- (xii) Support and Maintenance
 - (a) Cloud Hosting Subscription (optional)
 - (b) Support and Maintenance Service Desk Subscription (optional)

9. **Qualifications.** The firm will have:
- (i) at least 7 years' experience delivering national EMIS with positive results (*References, examples of work, and personnel to be included in bid*);
 - (ii) previous experience working on ADB, World Bank and or United Nations project with proven track record of on time delivery of measurable results;
 - (iii) previous experience working closely with government agencies on delivery of complex software projects;
 - (iv) extensive experience and understanding of international education indicators (United Nations Educational, Scientific and Cultural Organization Institute for Statistics, ADB, World Bank, etc.);
 - (v) ability to delivery and provide online support throughout the activity span; and
 - (vi) previous experience delivering OpenEMIS in challenging environments is highly desirable.

OTHER CONSULTING FIRMS TERMS OF REFERENCE

A. Science and Technology Center feasibility study

1. A science, technology, engineering, and mathematics (STEM) Education approach involves integration of science, technology, engineering, and mathematics into, engaging hands-on activities, challenging students to solve real world problems while developing 21st century skills. It transforms traditional educational methods from a teacher-centered, to student-centered contextualized environment, building a community of ethical, well-informed citizens with a sense of social and environmental responsibility.

2. The integration of a Cambodia Science and Technology Center (CSTC) within a STEM education eco-system, would play a central role in driving the shift towards a STEM approach nationwide, while contributing to educational, economic, and recreational growth for Cambodia.

Expected outcomes of the CSTC will include:

- (i) improved understanding of the role of historically important scientific discoveries and technological breakthrough innovations;
- (ii) improved self-confidence with respect to their abilities to learn new scientific concepts, apply existing and emerging technologies, and innovate new solutions;
- (iii) application of scientific methods and technology inspired principles and processes in problem solving and everyday decision making;
- (iv) demonstrated ability to effectively collaborate, communicate and share experiences;
- (v) positive contributions to improving local and global communities; and
- (vi) gaining a deeper understanding of STEM, and increased awareness of STEM career paths accessible in Cambodia.

3. **Scope.** The CSTC Feasibility Study Consultant will have extensive experience in conducting quality feasibility studies of similar science and education facilities in the region. The consultant will collaborate with Ministry of Education, Youth and Sport (the executing agency) and Institute of Technology Cambodia (the implementing agency), to conduct a comprehensive feasibility study (the study) with recommendations for the proposed CSTC (the Center). The study objectives are to (i) assess the practicality of the Center through strengths, weaknesses, opportunities, and threats analysis; (ii) evaluate the Center's proposed potential for success as well as quality science and technology education advancement in Cambodia; and (iii) recommend a phased approach development and operations of the Center.

4. **The scope of the study.** The consultant will be responsible for addressing the following topics considering integration, benefits, issues (existing or perceived) with recommendations:

- (i) vision and mission of the Center;
- (ii) location and site assessment;
- (iii) program concepts including on-site and digital/mobile outreach;
- (iv) proposed facilities with schematic concept;
- (v) projected users, revenue flows, and economic and social (education) impact;
- (vi) potential public-private partnerships;
- (vii) institutional capabilities of the Institute of Technology Cambodia;
- (viii) operational considerations (management, human resources, systems, cost estimate, etc.); and
- (ix) sustainability of funding post-Cambodia STEP UP.

5. **Qualifications.** The consultant will have:

- (i) at least 10 years of experience conducting pre-design feasibility studies (*references, examples of work, and personnel to be included in bid*);
- (ii) experience with science and/or education center feasibility studies is required; and
- (iii) previous experience in Southeast Asia is desirable.

B. New Generation School Expansion Project Management and Support Contract

6. The service of new generation school (NGS) expansion management and support consulting contract will be engaged by the Ministry of Education, Youth and Sport to expand NGSs at upper secondary education level. The consulting service contractor should have extensive experience in improving the quality of and access to education in Cambodian secondary schools. The contractor will work closely with the implementing agency/Directorate General of Education (DGE), and other stakeholders to expand the existing NGS network by at least three new NGSs during the Cambodia STEP UP period. The contractor will follow the executing agency's NGS Policy (2016) and Operating Guidelines (2017) to support up to eight candidate schools to achieve NGS accreditation.

7. The contractor will be responsible for:
- (i) establishing working relationships with the DGE to collaborate on the NGS expansion process;
 - (ii) managing the identification and selection of candidate upper secondary schools in collaboration with the DGE;
 - (iii) managing the induction process for successful candidate schools (orientation with school staff and communities) and the initial infrastructure upgrades (procurement and disbursement, project management, etc.);
 - (iv) providing ongoing professional development support to candidate school personnel;
 - (v) overseeing government and other funding streams for NGS candidate schools;
 - (vi) ensuring effective deployment of school-based mentors in candidate schools;
 - (vii) ensuring the implementation of the project gender action plan as it relates to the new generation school concept and operation;
 - (viii) ongoing monitoring and assessment of candidacy towards accreditation after 3 years; and
 - (ix) supporting the executing agency accreditation of successful candidates with ongoing support post-certification (during the project period) to ensure sustainability and alignment with guidelines.
8. **Qualifications.** The contractor will have:
- (i) a working knowledge of the executing agency's NGS approach for improving upper secondary schools' operations and student learning outcomes.
 - (ii) at least 15 years' proven experience working in the Cambodian education sector.
 - (iii) a bond (reserve fund) of at least \$XXXX.