# Project Administration Manual

Project Number: 45010
Loan Number: LXXXX
November 2014

# Mongolia: Skills for Employment Project

# Contents

**APPENDICES**

## 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 Government and Asian Development Bank (ADB) policies and procedures. The PAM should include references to all available templates and instructions either through linkages to relevant URLs or directly incorporated in the PAM.

The Ministry of Labor as the executing agency and the implementing agency and the Ministry of Education and Science as the implementing agency are wholly responsible for the implementation of ADB financed projects, as agreed jointly between the borrower and ADB, and in accordance with Government and ADB's policies and procedures. ADB staff is responsible to support implementation including compliance by the Ministry of Labor and the Ministry of Education and Science 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.

## Abbreviations

| | | |
|---|---|---|
| ADB | = | Asian Development Bank |
| ADF | = | Asian Development Fund |
| CBC | = | competency-based curriculum |
| CBT | = | competency-based training |
| CBT&A | = | competency-based training and assessment |
| CQS | = | consultants' qualifications selection |
| DACUM | = | developing a curriculum |
| DMF | = | design and monitoring framework |
| EMP | = | environmental management plan |
| GDP | = | gross domestic product |
| ICB | = | international competitive bidding |
| ICS | = | individual consultants selection |
| M&E | = | monitoring and evaluation |
| MEDS | = | Ministry of Education and Science |
| MOF | = | Ministry of Finance |
| MOJ | = | Ministry of Justice |
| MOL | = | Ministry of Labor |
| NCB | = | national competitive bidding |
| NCVET | = | National Council on Vocational Education and Training |
| PAM | = | project administration manual |
| PIU | = | project implementation unit |
| QCBS | = | quality- and cost- based selection |
| QIP | = | quality improvement plan |
| RRP | = | report and recommendation of the President to the Board |
| SBD | = | standard bidding document |
| S-EARF | = | simplified environmental assessment and review framework |
| SOE | = | statement of expenditure |
| SPS | = | Safeguard Policy Statement |
| SPRSS | = | summary poverty reduction and social strategy |
| TOR | = | terms of reference |
| TVET | = | technical and vocational education and training |

# I. PROJECT DESCRIPTION

## A. Rationale

1. Mongolia's economy has grown rapidly with a two-fold increase in gross domestic product (GDP) per capita from 2001 to 2012,[1] due in large part to the booming mining sector, which boosted its share of GDP from 9.0% to 18.6%. The rapid growth of the economy has significantly changed the structure of employment and the demand for skills. In 2012, the agriculture sector share of GDP (14.8%) was second after the mining sector, while agriculture employed the largest proportion of the labor force (35.0%), but its share of GDP and employment decreased by more than 10 percentage points during 2001-2012. The share of employment in the construction and mining sectors, on the other hand, had almost doubled in the same period, accounting for 5.6% (construction) and 4.4% (mining) in 2012. The three priority sectors (agriculture, construction, and road and transportation) contributed 22.9% of GDP as a whole and employed 45.9% of the labor force; women accounted for a minority of employment (46.8% in agriculture, 21.1% in construction, and 19.8% in transportation and storage).[2]

2. The supply of skills, however, has not responded flexibly to labor market demand. Despite a strong demand for skilled workers, only 55.6% of TVET graduates found employment in 2012;[3] the labor force participation rate remained at 63.6%, lower than the world average;[4] and the national unemployment rate was 8.2%, with higher rates in urban areas (9.7%), and among youths aged 20–24 (18.3% for women, 16.1% for men). This situation can be partly explained by the country's TVET system whose linkages with industries and employers were weakened considerably during the transition from central planning to a market-based economy, and have never been fully restored.

3. The shortage of skilled workers constrains growth in some key sectors of the Mongolian economy. First, although Mongolia has unique and abundant agricultural resources, these have remained largely underutilized because of poor product quality and productivity, despite recent favorable government policies to support the introduction of modern technology in the production and the processing of agricultural products. This underutilization can be explained in part by difficulties in finding skilled workers in the sector. Second, the recent growth of public and private investments in housing and public facility development has generated employment opportunities in the building construction sector, which recorded the largest number of job vacancies of all sectors in Mongolia in the first quarter of 2013.[5] Third, Mongolia is large, sparsely populated and landlocked, and the government has invested in road and railway construction projects to improve connectivity, both internally and with neighboring countries.

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[1] GDP per capita, purchasing power parity (constant 2005 international $). World Bank. 2001–2012. *World Development Indicators, 2001–2012*. Washington, DC.

[2] Government of Mongolia, National Statistical Office. 2012. *Statistical Yearbook 2012*. Ulaanbaatar; Government of Mongolia, National Statistical Office. 2012. *Labor Force Survey Report 2012*. Ulaanbaatar.

[3] 28.6% of graduates from TVET programs remained unemployed and 15.8% of graduates went to study at higher education institutions in 2012.

[4] World Bank. 2011. *World Development Indicators, 2011*. Washington, DC. The global average labor force participation rate was 69%.

[5] Data from the Labor Exchange Central Office indicates the construction sector had 73,246 out of 249,791 job vacancies (29.3%).

However, serious shortages of skilled workers have often forced contractors to hire foreign workers.[6]

4. To improve the responsiveness of the TVET system to labor market demand, the government initiated reforms beginning in the 2000s that have involved employers, and industry and professional associations. The amendment to the TVET law in 2009 was a landmark in recent TVET system reforms, establishing a specialized TVET agency,[7] and the National Council on Vocational Education and Training (NCVET) as an institution to actively engage employers, and industry and professional associations in TVET policy development. Four sector subcouncils have been established under NCVET, but NCVET and the sector subcouncils have yet to become functional. With the support of development partners, competency-based curricula (CBC) have been developed for certain occupations,[8] using standards set in collaboration with some employers. However, no standards have been approved by NCVET or sector subcouncils and widely recognized by the relevant employers, and industry and professional associations. CBCs were introduced relatively recently, and remain in an early stage of implementation. Moreover, graduates from TVET programs and courses have not been independently assessed and certified, and competency varies across TVET providers, programs, and courses.

5. In SY2012/13, there were 75 formal TVET providers,[9] 49 of which were public. The government is the largest financier in the TVET sector, enabling public providers to offer tuition-free TVET, with dormitories and teaching–learning materials that are largely free. Private TVET providers are also subsidized by the government. Student enrollment was 45,225 in SY2012/13; 45.6% were female. In SY2011/12 program and course enrollment in the three priority sectors was 2,088 in agriculture (27.3% female), 14,528 in construction (5.1% female), and 4,227 in road and transportation (11.9% female). Although both the number of TVET providers and TVET enrollment have increased dramatically in less than a decade,[10] most TVET programs and courses have been offered without adequate training equipment and facilities. With the exception of those that have been supplied training equipment under projects funded by development partners, many TVET providers, particularly in remote areas, have been operating with training equipment that is outdated or can no longer be used, and training facilities that require repairs.[11] Licenses have been given to TVET providers that meet basic requirements, but these requirements are insufficient to ensure quality at program, course, and institution levels. Inadequate training equipment and facilities are major constraints on the development of a TVET system that is responsive to labor market demand.

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[6] The construction sector employed the largest number of foreign workers (21.6%) of all sectors, followed by the mining sector (18.3%), and the transportation and storage sector (13.4%). (Government of Mongolia, Ministry of Labor, Employment Service Center. 2013. *Report on Labor Market Trend in February 2013.* Ulaanbaatar.)

[7] Prior to the establishment of the Agency for Vocational Education and Training, the former Ministry of Education, Culture, and Science was responsible for TVET along with the other levels of education. The agency was disbanded in 2012 with responsibility for TVET transferred to the newly created Ministry of Labor.

[8] The list of occupations for which CBC have been developed is in Appendix 4 of the Project Administration Manual (PAM, accessible from the list of linked documents in Appendix 2).

[9] The 75 formal TVET providers include 40 vocational training production centers (18,629 students), 13 polytechnic colleges (11,257 students), 7 branches of tertiary level institutes (5,884 students), and 15 branches of universities (9,455 students). Vocational training production centers offer both long-term programs (2.5–3.0 years leading to complete secondary and vocational certificates) and short-term courses (up to 1 year leading to vocational certificates). Others provide short-term courses. Currently, levels of vocational certificates offered by different types of institutions are not clearly differentiated.

[10] Government of Mongolia, Ministry of Education, Culture, and Science. 2010. *Education Statistics, 2009–2010*. Ulaanbaatar. In 2005 there were only 38 formal TVET providers which enrolled 23,249 students.

[11] Total public expenditures on TVET are estimated to be less than 1% of GDP, of which capital expenditures are around 10%.

6. The lack of both technical and vocational skills and experience among teachers is another constraint faced by the TVET system. In SY2012/13, there were 2,236 full-time teachers; 1,468 (65.7%) taught technical and vocational subjects, but about 92.5% of them had only 0–4 years of industry experience in the subjects they teach. Most TVET teachers have been trained as general secondary education teachers, because qualifications for teachers in the TVET system have not been clearly specified.[12] Institutional mechanisms for in-service training for teachers in technical and vocational skills are almost non-existent. Additionally, most management staff of TVET providers lack the industry experience and skills needed to develop and manage TVET programs and courses in collaboration with employers, and industry and professional associations.

7. Because of its poor public image, TVET remains a secondary option to most students and parents. The growth of student TVET enrollment has resulted largely from the monthly stipends given to TVET students, rather than their informed choice. Career information and guidance have not been provided for junior secondary students, who must choose between senior secondary education and TVET after graduation. As a result, TVET has enrolled students who are generally academically less successful and come from poorer families. Notwithstanding academic success, existing senior secondary and tertiary education do a poor job of preparing students for work, as evidenced by the low labor force participation rates for youths aged 15–24, and high unemployment rates for graduates from tertiary education.

8. **Strategic fit.** The Government Platform, 2012–2016 highlights employment as one of five goals in creating a sustainable and competitive economy.[13] Many initiatives are underway to reform TVET and general education systems in order to better prepare the country's labor force. The project will support the government's reform initiatives in the TVET and secondary education sectors. The project is included in Asian Development Bank (ADB)'s country operations business plan, 2014–2016 for Mongolia, and is aligned with ADB's interim country partnership strategy, 2014–2016 for Mongolia, which has a focus on achieving inclusive growth and social development through broad-based employment generation.[14]

9. **Innovative features.** The project will introduce several innovations to Mongolia's TVET system, including (i) support for sector subcouncils, industry and professional associations, and employers to set standards for TVET programs and courses; (ii) creation of an independent competence assessment and certification system; (iii) strengthening of workplace training for TVET students and teachers; (iv) introduction of career guidance in junior secondary schools prior to tracking; and (v) development of a credit transfer system between senior secondary education, tertiary education, and TVET within a national qualifications framework.

10. **Lessons.** The project builds on past and ongoing projects in the TVET sector supported by development partners and the private sector.[15] It also draws on lessons from previous involvement by ADB in the Mongolian TVET and general education sectors.[16] Major lessons

[12] The Law on Vocational Education and Training (Article 18) requires TVET teachers to have "proper experience in production work" and "a high vocational degree"; these have not yet been defined.

[13] Government of Mongolia. 2012. *Government Platform, 2012–2016.* Ulaanbaatar.

[14] ADB. 2014. *Country Operations Business Plan: Mongolia, 2014–2016*. Manila; ADB. 2014. *Interim Country Partnership Strategy: Mongolia, 2014–2016*. Manila.

[15] Major development partners and the private sector that have supported the Mongolian TVET sector include the European Commission, German development cooperation through Deutsche Gesellschaft für Internationale Zusammenarbeit, the Korean International Cooperation Agency, the Millennium Challenge Account-Mongolia, Oyu Tolgoi LLC, Singapore Polytechnic, and the Swiss Agency for Development and Cooperation.

[16] ADB. 2001. *Report and Recommendation of the President to the Board of Directors: Proposed Loans and Technical Assistance Grant to Mongolia for the Social Security Sector Development Program.* Manila; ADB. 2006. *Proposed Grant Assistance to Mongolia for the Nonformal Skills Training for Unemployed Youth and Adults*

from these projects are (i) various interventions—such as development of training curricula and materials, upgrading of equipment and facilities, and training for TVET teachers—need to be aligned with standards set in collaboration with employers, and industry and professional associations; (ii) institutionalized technical and vocational skills training for TVET teachers is indispensable for keeping skills of TVET teachers upgraded; (iii) provision of career information and guidance in early grades is essential to enable students to make an informed choice regarding their career, and prepare for work; and (iv) active public communication and consultations are key to sustainable reforms of TVET and general education systems.

### B. Impact and Outcome

11. The impact of the project will be increased employment in the three priority sectors (agriculture, construction, and road and transportation). The outcome of the project will be enhanced responsiveness of the TVET system to labor market demand in the three priority sectors.

### C. Outputs

12. The project will have five outputs:

#### 1. Component 1: Establishment of Industry-driven Technical and Vocational Education and Training System in the Three Priority Sectors

13. The project will, in collaboration with employers, and industry and professional associations, support the establishment of an industry-driven TVET system in the three priority sectors by (i) developing occupational and other related standards for key occupations; and (ii) establishing accredited assessment and certification centers with rehabilitated and/or refurbished testing facilities, adequate testing equipment, and accredited center personnel.[17] The role of sector subcouncils in developing, approving, and registering standards, and assessment and certification, will be reviewed and strengthened.

##### a) Output 1: Standards for Key Occupations Developed in Collaboration with Employers, and Industry and Professional Associations in the Three Priority Sectors

14. Occupational standards, standard lists of equipment and facilities, program and course quality standards, and other related standards for at least 15 key occupations in the priority sectors will be developed by panels of experts and standard development committees consisted of expert workers and supervisors of these workers in the occupations. Draft standards documents thus developed will be validated by employers, and industry and professional associations. Levels of competency will be aligned with the national qualifications framework. By using these occupational standards and other related standards, master trainers will be trained to develop competency-based training (CBT) materials and assessment criteria/methods for the key occupations in the priority sectors. The master trainers will then train teachers of selected TVET providers. In order to facilitate the processes, communication, consultation and capacity building activities will be conducted for employers, and industry and professional associations.

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*Project.* Manila; ADB. 2006. *Report and Recommendation of the President to the Board of Directors: Proposed Loan to Mongolia for the Third Education Development Project.* Manila.

[17] The methodology and procedures for developing standards are in Appendix 4 of the PAM. The criteria and procedures for institutions to be accredited as assessment and certification centers are in Appendix 5 of the PAM. The indicative list of 15 key occupations is Appendix 10 of the PAM.

### b) Output 2: Assessment and Certification Centers Established in Collaboration with Employers, and Industry and Professional Associations in the Three Priority Sectors

15. Based on the occupational standards and other related standards, CBT materials, and assessment criteria/methods for the key occupations in the priority sectors, assessment instruments/tools/procedures and certification policies/guidelines will be developed and validated by employers, and industry and professional associations. The project will support the establishment of three assessment and certification centers for the priority sectors by rehabilitating and/or refurbishing testing facilities, providing equipment, training and accrediting directors, assessors, and test developers of the assessment and certification centers, and developing cost recovery mechanisms for the centers.

## 2. Component 2: Upgrading of Selected Technical and Vocational Education and Training Providers to Implement Competency-based Training and Assessment in the Three Priority Sectors

16. The project will support the upgrading of selected TVET providers to implement competency-based training and assessment for the key occupations in the three priority sectors by (i) providing up-to-date equipment for the key occupations, and rehabilitating and/or refurbishing training facilities for at least 20 selected TVET providers;[18] (ii) delivering training programs to managers and teachers of the selected TVET providers; and (iii) strengthening industry partnerships with the selected TVET providers based on sector or subsector human resource development plans and guidelines for teacher industry placement and student internships. The selected TVET providers will be trained to conduct graduate tracer studies and employer satisfaction surveys to adjust competency-based training programs and courses to employers' needs.

### a) Output 3: Selected Technical and Vocational Education and Training Providers Upgraded

17. Based on self-assessment reports, quality improvement plans (QIPs), and the simplified environmental assessment and review framework,[19] 20 selected TVET providers will be upgraded with up-to-date equipment and tools and rehabilitation/refurbishment of training facilities to deliver competency-based training programs and courses for the key occupations. Self-assessment tools and procedures for preparing self-assessment reports and QIPs will be developed in accordance with the standard lists of equipment and the program and course quality standards for the key occupations validated by employers, and industry and professional associations. The managers of the selected TVET providers will be trained to prepare self-assessment reports and QIPs.

### b) Output 4: Managers and Teachers of Selected Technical and Vocational Education and Training Providers Trained

18. At least 30 managers of the selected TVET providers will be trained in industry-driven TVET management, and tools and handbooks for managers will be developed. Industry-based technical and vocational skills training will be delivered to at least 170 teachers of the selected

[18] The procedures for selecting TVET providers and the list of pre-selected TVET providers are in Appendix 6 of the PAM.
[19] The simplified environmental assessment and review framework is in Appendix 3.

TVET providers for the key occupations. Training will be provided based on technical and vocational skills teacher training plans prepared by the selected TVET providers.

#### c) Output 5: Industry Partnerships with Selected Technical and Vocational Education and Training Providers Strengthened

19. Industry partnership programs of the selected TVET providers, such as industry placement for teachers of the key occupations and internships for students in the key occupations, will be supported by preparing sector or sub-sector human resource development plans, developing guidelines for teacher industry placement and student internships, and training industry supervisors/mentors for the key occupations. At least 50 teachers and trainers of the selected TVET providers will be trained in technical and vocational skills for the key occupations through industry placement and 350 students will complete internships for the key occupations.

### 3. Component 3: Establishment of Training Systems for Technical and Vocational Education and Training Managers and Teachers in the Three Priority Sectors

20. The project will support the establishment of systems for training TVET managers and teachers for the key occupations in the three priority sectors by developing (i) a training program for managers in industry-driven TVET management at the Academy of Management; and (ii) industry-based technical and vocational skills training programs for teachers of the key occupations that combine institution-based, short-term training courses at accredited technical and vocational skills training institutions and workplace training through industry placement.[20] The sector subcouncils, industry and professional associations, and employers will be involved in developing training modules and materials, and selecting master technical and vocational skills trainers in the key occupations.

#### a) Output 6: Training Programs for Managers in Industry-driven Technical and Vocational Education and Training Management Developed

21. Training modules and materials for managers on industry-driven TVET management will be developed. Master trainers of the Academy of Management will be trained to deliver training program on industry-driven TVET management for managers.

#### b) Output 7: Technical and Vocational Skills Training Programs for Teachers of the Key Occupations Developed

22. Based on the occupational standards and other related standards for the key occupations, training programs for master technical and vocational skills trainers for the key occupations will be developed and validated in collaboration with employers, and industry and professional associations. Master technical and vocational skills trainers in the priority sectors will be trained to provide technical/vocational skills training for teachers. Pedagogy and assessment training modules and materials including use of training equipment, technical English, IT, and self-learning skills will be integrated with technical/vocational skills training. In

[20] The strategy for establishing a training system for TVET managers is in Appendix 7 of the PAM. The strategy for establishing a technical and vocational skills training system for TVET teachers is in Appendix 8 of the PAM.

order to ensure that skills of teachers and trainers are adequate, the qualifications framework for TVET teachers will be revised and TVET teacher training and retention policy will be developed.

### 4. Component 4: Support for Secondary Education Career Guidance and Schools that Specialize in Technology

23. The project will support the (i) implementation of eighth and ninth grade civic education curriculum that integrates career guidance modules in all schools; and (ii) establishment of 30 independent senior secondary schools which will offer occupation-oriented technology elective courses.[21] Credits of the elective courses can be transferred to higher education institutions. Quality assurance mechanisms, entrance exams, and evaluation and assessment systems will be developed and implemented.

#### a) Output 8: Eighth and Ninth Grade Civic Education Curriculum that Integrates Career Guidance Modules Implemented

24. In order to inform students of their future career options, career guidance modules, materials, assessment and evaluation tools, teachers' guides, online aptitude tests and self-exploration tools will be developed based on lifelong career development competencies and will be integrated with eighth and ninth grade civic education curriculum. Coupled with these, training modules and materials on career guidance and online career guidance course for eighth and ninth grade teachers will be developed. About 90% of eighth and ninth grade teachers will be trained in career guidance. The training modules and materials on career guidance will be adapted to pre-service teacher training programs. Teacher educators of pre-service teacher training institutes will be trained to teach career guidance.

#### b) Output 9: Independent Senior Secondary Schools that Offer Occupation-oriented Technology Elective Courses Established

25. Senior secondary students will be provided opportunities to pursue their interests through elective courses whose credits can be transferred to higher education and TVET institutions. Guidelines for independent senior secondary schools, quality assurance mechanisms, evaluation/assessment methods and tools, and documents detailing institutional arrangements for establishing a credit transfer system for independent senior secondary schools will be prepared. Curriculum, teaching-learning materials, assessment and evaluation methods and tools will be developed for occupation-oriented technology elective courses. Equipment and tools to implement occupation-oriented technology elective courses will be provided for 30 independent senior secondary schools. Technology teachers, school principals and assessors will be trained to ensure the quality of the occupation-oriented technology elective courses.

### 5. Component 5: Establishment of Effective Project Management System

26. The project will support the establishment of an effective project management system by developing the capacity of the executing agency and implementing agencies for project implementation, and monitoring and evaluation.

[21] The concept of independent senior secondary schools with occupation-oriented technology elective courses is presented in Appendix 9 of the PAM.

### a) Output 10: Capacity for project implementation and monitoring and evaluation developed

27. The project performance management system will be established by collecting baseline data, providing training for staff of the project implementation unit, the executing agency and the implementing agencies and generating quarterly and annual reports. The gender action plan will be implemented, monitored and reported.

# II. IMPLEMENTATION PLANS

## A. Project Readiness Activities

| Activities | 2014 | | | | | | 2015 | | | | | | Responsible Agency(s) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 8 | 9 | 10 | 11 | 12 | 1 | 2 | 3 | 4 | 5 | 6 | |
| Advance contracting actions | | | | | | | | | | | | | ADB, MOL |
| Loan negotiations | | | | | | | | | | | | | ADB, MOF, MOL, MEDS |
| Project management training | | | | | | | | | | | | | ADB, PPTA consultants, MOL, MEDS |
| ADB Board approval | | | | | | | | | | | | | ADB |
| Loan signing | | | | | | | | | | | | | ADB, MOF |
| Establishment of project implementation arrangements | | | | | | | | | | | | | MOL, MEDS |
| Government legal opinions | | | | | | | | | | | | | MOJ |
| Loan effectiveness | | | | | | | | | | | | | ADB |
| Government budget inclusion | | | | | | | | | | | | | MOL, MEDS |

ADB = Asian Development Bank, MEDS = Ministry of Education and Science, MOF = Ministry of Finance, MOJ = Ministry of Justice, MOL = Ministry of Labor, PPTA = project preparatory technical assistance.
Source: Asian Development Bank.

## B. Overall Project Implementation Plan

| Activities | 2015 | | | 2016 | | | | 2017 | | | | 2018 | | | | 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| **Component 1: Development of industry-driven TVET system in the three priority sectors** | | | | | | | | | | | | | | | | | |
| **1. Standards for key occupations developed in collaboration with employers, and industry and professional associations in the three priority sectors** | | | | | | | | | | | | | | | | | |
| 1.1 Review the role of sector subcouncils in developing, approving and registering standards, and assessment and certification | | | | | | | | | | | | | | | | | |
| 1.2 Establish DACUM panels of experts | | | | | | | | | | | | | | | | | |
| 1.3 Organize workshops to develop Occupation Profile Charts for 15 key occupations | | | | | | | | | | | | | | | | | |
| 1.4 Send Occupation Profile Charts to companies through professional and industry associations | | | | | | | | | | | | | | | | | |
| 1.5 Organize workshops to revise and validate Occupation Profile Charts | | | | | | | | | | | | | | | | | |
| 1.6 Establish standard development committees | | | | | | | | | | | | | | | | | |
| 1.7 Organize workshops to develop occupational performance standards, standard lists of equipment, program and course quality standards, and other related standards for 15 key occupations | | | | | | | | | | | | | | | | | |
| 1.8 Send occupational standards and other related standards to companies through professional and industry associations | | | | | | | | | | | | | | | | | |
| 1.9 Organize workshops to revise and validate occupational standards and other related standards | | | | | | | | | | | | | | | | | |
| 1.10 Align competency levels for 15 key occupations with national qualifications framework | | | | | | | | | | | | | | | | | |
| 1.11 Identify master trainers who will develop CBT materials and assessment criteria/methods | | | | | | | | | | | | | | | | | |
| 1.12 Train master trainers in developing CBT materials and assessment criteria/methods by using occupational standards and other related standards for 15 key occupations | | | | | | | | | | | | | | | | | |
| 1.13 Prepare procurement packages of textbooks and training materials | | | | | | | | | | | | | | | | | |
| 1.14 Procure and deliver textbooks and training materials to selected TVET providers | | | | | | | | | | | | | | | | | |
| 1.15 Organize training workshops for TVET teachers of selected TVET providers in developing CBT materials for 15 key occupations | | | | | | | | | | | | | | | | | |

| Activities | 2015 | | | 2016 | | | | 2017 | | | | 2018 | | | | 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| 1.16 Conduct workshops to sensitize professional/industry associations to occupational and other standards | | | | | | | | | | | | | | | | | |
| **2. Assessment and certification centers established in collaboration with employers, and industry and professional associations in the three priority sectors** | | | | | | | | | | | | | | | | | |
| 2.1 Identify institutions which will become accredited assessment and certification centers for the three priority sectors | | | | | | | | | | | | | | | | | |
| 2.2 Evaluate identified institutions and agree on improvement plans | | | | | | | | | | | | | | | | | |
| 2.3 Prepare procurement packages of equipment, software, minor civil works, and others | | | | | | | | | | | | | | | | | |
| 2.4 Procure and deliver equipment, software, minor civil works, and others to three assessment and certification centers | | | | | | | | | | | | | | | | | |
| 2.5 Develop director training course and train three assessment and certification center directors | | | | | | | | | | | | | | | | | |
| 2.6 Organize workshops to set fees for examinations for 15 key occupations | | | | | | | | | | | | | | | | | |
| 2.7 Develop cost recovery mechanisms for three assessment and certification centers | | | | | | | | | | | | | | | | | |
| 2.8 Identify assessors for 15 key occupations | | | | | | | | | | | | | | | | | |
| 2.9 Develop assessor training course and train assessors | | | | | | | | | | | | | | | | | |
| 2.10 Identify test developers for 15 key occupations | | | | | | | | | | | | | | | | | |
| 2.11 Develop test developer training course and train test developers | | | | | | | | | | | | | | | | | |
| 2.12 Evaluate and accredit assessment and certification centers | | | | | | | | | | | | | | | | | |
| 2.13 Develop certification guidelines/policies for 15 key occupations | | | | | | | | | | | | | | | | | |
| 2.14 Organize workshops on certification guidelines/policies for 15 key occupations | | | | | | | | | | | | | | | | | |
| 2.15 Develop assessment instruments/tools/procedures for 15 key occupations | | | | | | | | | | | | | | | | | |
| 2.16 Administer examinations | | | | | | | | | | | | | | | | | |
| **Component 2: Upgrading of selected TVET providers to implement CBT&A in the three priority sectors** | | | | | | | | | | | | | | | | | |
| **3. Selected TVET providers upgraded** | | | | | | | | | | | | | | | | | |
| 3.1 Revise and validate self-assessment tools and templates, and procedures for self-assessment and QIPs | | | | | | | | | | | | | | | | | |

| Activities | 2015 | | | 2016 | | | | 2017 | | | | 2018 | | | | 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| 3.2 Train managers of preselected TVET providers in conducting self-assessment and preparing QIPs | | | | | | | | | | | | | | | | | |
| 3.3 Review self-assessment reports and QIPs of selected TVET providers | | | | | | | | | | | | | | | | | |
| 3.4 Finalize the list of selected TVET providers to upgrade based on self-assessment reports and QIPs | | | | | | | | | | | | | | | | | |
| 3.5 Prepare procurement packages of equipment and minor civil works | | | | | | | | | | | | | | | | | |
| 3.6 Procure equipment and minor civil works | | | | | | | | | | | | | | | | | |
| **4. Managers and teachers of selected TVET providers trained** | | | | | | | | | | | | | | | | | |
| 4.1 Develop and validate handbook and tools for industry-driven TVET management for managers | | | | | | | | | | | | | | | | | |
| 4.2 Deliver training programs for managers of selected TVET providers | | | | | | | | | | | | | | | | | |
| 4.3 Develop technical/vocational skills teacher training plans of selected TVET providers | | | | | | | | | | | | | | | | | |
| 4.4 Deliver technical/vocational skills training programs for teachers of selected TVET providers | | | | | | | | | | | | | | | | | |
| 4.5 Implement CBT programs and courses for 15 key occupations | | | | | | | | | | | | | | | | | |
| **5. Industry partnerships with selected TVET providers strengthened** | | | | | | | | | | | | | | | | | |
| 5.1 Prepare and validate human resource development plans in the three priority sectors | | | | | | | | | | | | | | | | | |
| 5.2 Develop and validate guidelines for industry placement for TVET teachers and internships for students | | | | | | | | | | | | | | | | | |
| 5.3 Present and disseminate guidelines for industry placement for TVET teachers and internships for students | | | | | | | | | | | | | | | | | |
| 5.4 Train industry supervisors/mentors for industry placement for TVET teachers and internships for students | | | | | | | | | | | | | | | | | |
| 5.5 Place teachers of selected TVET providers at industry for technical/vocational skills training | | | | | | | | | | | | | | | | | |
| 5.6 Place students of selected TVET providers for internships at industry | | | | | | | | | | | | | | | | | |
| 5.7 Develop and validate design, tools and guidelines for graduate tracer studies and employer satisfaction surveys | | | | | | | | | | | | | | | | | |

| Activities | 2015 | | | 2016 | | | | 2017 | | | | 2018 | | | | 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| 5.8 Train selected TVET providers in conducting graduate tracer studies and employer satisfaction surveys | | | | | | | | | | | | | | | | | |
| 5.9 Administer graduate tracer studies and employer satisfaction surveys | | | | | | | | | | | | | | | | | |
| 5.10 Present and disseminate graduate tracer studies and employer satisfaction surveys | | | | | | | | | | | | | | | | | |
| 5.11 Train teachers of selected TVET providers in career guidance | | | | | | | | | | | | | | | | | |
| **Component 3: Establishment of training systems for TVET managers and teachers in the three priority sectors** | | | | | | | | | | | | | | | | | |
| **6. Training program for managers on industry-driven TVET management developed** | | | | | | | | | | | | | | | | | |
| 6.1 Develop and validate training modules and materials on industry-driven TVET management and training plan for master trainers of the Academy of Management | | | | | | | | | | | | | | | | | |
| 6.2 Print training modules and materials | | | | | | | | | | | | | | | | | |
| 6.3 Train master trainers of the Academy of Management | | | | | | | | | | | | | | | | | |
| **7. Technical/vocational skills training programs for teachers for the key occupations developed** | | | | | | | | | | | | | | | | | |
| 7.1 Develop and validate training programs for master technical/vocational skills trainers for the key occupations | | | | | | | | | | | | | | | | | |
| 7.2 Develop and validate pedagogy (including use of training equipment, technical English, IT and self-learning skills) and assessment training modules and materials for the key occupations | | | | | | | | | | | | | | | | | |
| 7.3 Prepare list of textbooks and teaching-learning guides for master technical/vocational skills trainers of accredited training institutes and teachers of selected TVET providers | | | | | | | | | | | | | | | | | |
| 7.4 Procure textbooks and teaching-learning guides | | | | | | | | | | | | | | | | | |
| 7.5 Conduct training programs for master technical/vocational skills trainers of accredited training institutes in the priority sectors | | | | | | | | | | | | | | | | | |
| 7.6 Revise TVET teacher and trainer qualifications framework | | | | | | | | | | | | | | | | | |
| 7.7 Validate TVET teacher and trainer qualifications framework | | | | | | | | | | | | | | | | | |
| 7.8 Develop TVET teacher and trainer training and retention policy | | | | | | | | | | | | | | | | | |
| 7.9 Validate TVET teacher and trainer training and retention policy | | | | | | | | | | | | | | | | | |

| Activities | 2015 | | | 2016 | | | | 2017 | | | | 2018 | | | | 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| **Component 4: Support for secondary education career guidance and schools that specialize in technology** | | | | | | | | | | | | | | | | | |
| **8. Eighth and ninth grade civic education curriculum that integrates career guidance modules implemented** | | | | | | | | | | | | | | | | | |
| **8.1 Integration of career guidance modules with eighth and ninth grade civic education curriculum** | | | | | | | | | | | | | | | | | |
| 8.1.1 Develop and validate lifelong career development competencies | | | | | | | | | | | | | | | | | |
| 8.1.2 Develop career guidance modules, assessment and evaluation criteria, methods and tools | | | | | | | | | | | | | | | | | |
| 8.1.3 Develop and validate functional requirements of aptitude tests and other self-exploration tools | | | | | | | | | | | | | | | | | |
| 8.1.4 Develop and pilot online career guidance modules, aptitude tests, and other self-exploration tools | | | | | | | | | | | | | | | | | |
| 8.1.5 Develop teachers' guides to integrate career guidance modules, assessment and evaluation criteria, methods and tools, and aptitude tests and other self-exploration tools in eighth and ninth grade civic education curriculum | | | | | | | | | | | | | | | | | |
| 8.1.6 Train eighth and ninth grade teachers of pilot schools to pilot career guidance modules, assessment and evaluation criteria, methods and tools, aptitude tests and other self-exploration tools, and teachers' guides | | | | | | | | | | | | | | | | | |
| 8.1.7 Develop and validate career guidance modules, assessment and evaluation criteria, methods and tools, aptitude tests and other self-exploration tools, and teachers' guides | | | | | | | | | | | | | | | | | |
| 8.1.8 Print and deliver career guidance modules, assessment and evaluation tools, users' manual of online aptitude tests and self-exploration tools, and teachers' guides | | | | | | | | | | | | | | | | | |
| 8.1.9 Implement integrated eighth and ninth grade civic education curriculum in phases | | | | | | | | | | | | | | | | | |
| **8.2 Training of eighth and ninth grade teachers in career guidance** | | | | | | | | | | | | | | | | | |
| 8.2.1 Develop and validate career guidance competencies for eighth and ninth grade teachers | | | | | | | | | | | | | | | | | |
| 8.2.2 Develop teacher career guidance training modules and materials | | | | | | | | | | | | | | | | | |
| 8.2.3 Develop functional requirements of online teacher training course on career guidance | | | | | | | | | | | | | | | | | |

| Activities | 2015 | | | 2016 | | | | 2017 | | | | 2018 | | | | 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| 8.2.4 Develop and pilot online teacher training course on career guidance | | | | | | | | | | | | | | | | | |
| 8.2.5 Train teacher educators of pre-service teacher training institutes who will train eighth and ninth grade teachers of pilot schools in career guidance (pilot) | | | | | | | | | | | | | | | | | |
| 8.2.6 Print teacher career guidance training modules and materials, and users' manual of online teacher training course on career guidance | | | | | | | | | | | | | | | | | |
| 8.2.7 Train eighth and ninth grade teachers in career guidance (roll-out) | | | | | | | | | | | | | | | | | |
| 8.2.9 Implement career guidance modules as part of pre-service teacher training curriculum | | | | | | | | | | | | | | | | | |
| **9. Independent senior secondary schools that offer technology elective courses established** | | | | | | | | | | | | | | | | | |
| 9.1 Develop and validate guidelines for independent senior secondary schools, quality assurance mechanisms, evaluation/assessment methods and tools, and documents detailing institutional arrangements for establishing a credit transfer system for independent senior secondary schools | | | | | | | | | | | | | | | | | |
| 9.2 Develop and validate a plan for training teachers teaching technology subject in 30 schools, school principals, and assessors | | | | | | | | | | | | | | | | | |
| 9.3 Develop and validate curriculum, teaching-learning materials, list of equipment, and assessment/evaluation methods and tools | | | | | | | | | | | | | | | | | |
| 9.4 Prepare procurement packages of equipment and tools, and textbooks and teaching-learning materials | | | | | | | | | | | | | | | | | |
| 9.5 Procure and deliver equipment and tools, textbooks, and teaching-learning materials | | | | | | | | | | | | | | | | | |
| 9.6 Train teachers in curriculum, teaching-learning materials, assessment/evaluation methods, and tools | | | | | | | | | | | | | | | | | |
| 9.7 Train teachers in use and maintenance of equipment and tools | | | | | | | | | | | | | | | | | |
| 9.8 Train school principals in guidelines for independent senior secondary schools, quality assurance mechanisms, entrance exam/evaluation/assessment methods and tools, and tracer studies | | | | | | | | | | | | | | | | | |
| 9.9 Train assessors in quality assurance mechanisms | | | | | | | | | | | | | | | | | |
| 9.10 Implement curriculum, entrance exam/evaluation/assessment and quality assurance mechanisms for independent senior secondary schools | | | | | | | | | | | | | | | | | |
| **Component 5: Establishment of Effective Project Management System** | | | | | | | | | | | | | | | | | |
| **10. Capacity for project implementation and M&E developed** | | | | | | | | | | | | | | | | | |

| Activities | 2015 | | | 2016 | | | | 2017 | | | | 2018 | | | | 2019 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 |
| 10.1 Establish PIU | | | | | | | | | | | | | | | | | |
| 10.2 Train staff in disbursement, procurement, financial management, M&E, and reporting | | | | | | | | | | | | | | | | | |
| 10.3 Conduct inception/annual/midterm review missions | | | | | | | | | | | | | | | | | |
| 10.4 Train staff of the executing agency and implementing agencies in project management | | | | | | | | | | | | | | | | | |
| 10.5 Award all contracts | | | | | | | | | | | | | | | | | |
| 10.6 Start and complete loan closing procedures | | | | | | | | | | | | | | | | | |
| 10.7 Prepare project completion report | | | | | | | | | | | | | | | | | |

CBT = competency-based training, DACUM = developing a curriculum, M&E = monitoring and evaluation, PIU = project implementation unit, QIP = quality improvement plan, TVET = technical vocational education and training.

## III. PROJECT MANAGEMENT ARRANGEMENTS

### A. Project Implementation Organizations – Roles and Responsibilities

| Project implementation organizations | Management Roles and Responsibilities |
|---|---|
| • Executing agency – Ministry of Labor | ➢ Establish project implementation unit.<br>➢ Establish project steering committee.<br>➢ Establish systems, procedures, and mechanisms to ensure effective and efficient project implementation.<br>➢ Oversee overall project implementation and management activities to ensure smooth and timely implementation and completion of project activities. |
| • Project steering committee | ➢ Approve annual budgets and plans for the project.<br>➢ Oversee progress in project implementation.<br>➢ Guide and support project implementation.<br>➢ Provide coordination between ministries and other stakeholders involved in project implementation. |
| • Implementing Agency – Ministry of Labor | ➢ Establish a technical working group to provide strategic, policy, and coordination support for the implementation of components 1–3.<br>➢ Supervise all project activities under components 1–3 and 5. |
| • Implementing agency – Ministry of Education and Science | ➢ Establish a technical working group to provide strategic, policy, and coordination support for the implementation of component 4.<br>➢ Supervise all project activities under component 4. |
| • Project implementation unit | ➢ Assume day-to-day management of the project.<br>➢ Coordinate and implement project activities, including procurement, recruitment, disbursement, contract administration, monitoring, and reporting.<br>➢ Prepare, on behalf of the executing and implementing agencies, bidding documents, terms of reference, reports, and other supporting documents and submit them for review and approval.<br>➢ Maintain on behalf of the executing agency the imprest account; and prepare and submit withdrawal applications and supporting documents, quarterly and annual reports, annual audit reports and financial statements. |
| • Asian Development Bank | ➢ Provide technical support for project implementation.<br>➢ Supervise and ensure compliance by the executing and implementing agencies with Asian Development Bank's policies and procedures in project implementation. |

28. The Ministry of Labor (MOL) will be the executing agency of the project and will oversee overall project implementation and management activities to ensure smooth and timely implementation and completion of project activities. The MOL will be the implementing agency of components 1, 2, 3, and 5. The Ministry of Education and Science (MEDS) will be the implementing agency of component 4. Technical working groups will be established under the MOL and the MEDS to provide strategic, policy and coordination support for the implementation of components 1-4.

29. The project steering committee (PSC) will be established by the MOL. The PSC will be chaired by the Minister of Labor and composed of senior officials of the MOL, the MEDS, the Ministry of Finance (MOF), and representatives of employers, and industry and professional associations. The PSC will meet quarterly to (i) approve annual budgets and plans for the project; (ii) review progress in project implementation; (iii) guide and support project implementation; and (iv) provide coordination between ministries and other stakeholders involved in project implementation. The operational costs of the PSC will be funded by the MOL.

30. The project implementation unit (PIU) will be established by the MOL. On behalf of the executing and implementing agencies, the PIU will assume day-to-day management of the project and will be responsible for coordinating and implementing project activities, including procurement, recruitment, disbursement, contract administration, monitoring and reporting. The PIU will be staffed by: a project manager, a project coordinator responsible for component 4, a procurement specialist, an accountant/financial management specialist, a CBT&A specialist, a training specialist, an M&E specialist, an education specialist (senior secondary technology subject), an education specialist (career guidance), a project assistant, and a driver.

### B. Key Persons Involved in Implementation

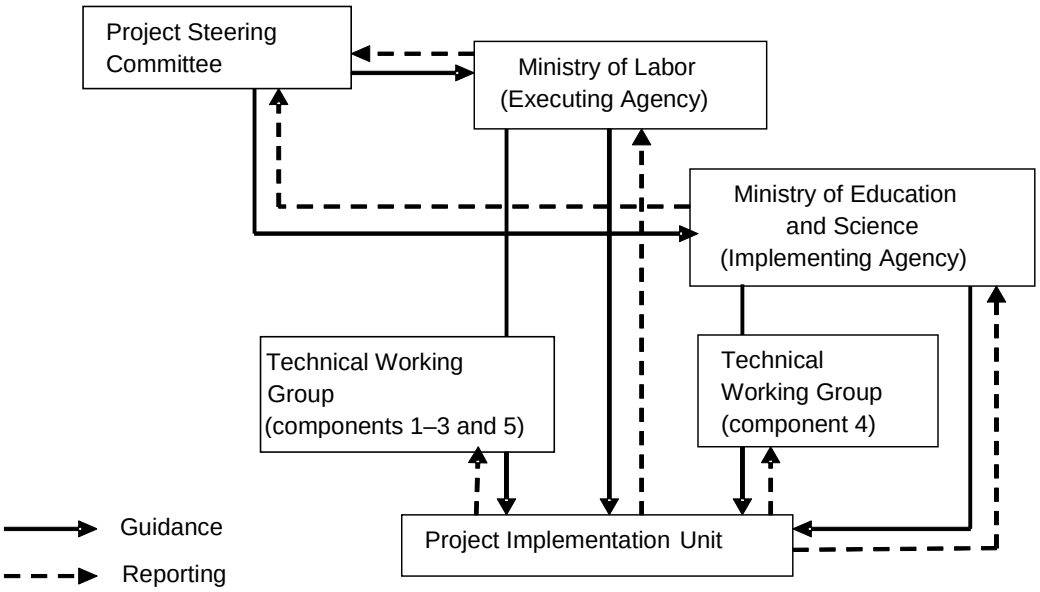
**Executing Agency**

| | |
|---|---|
| Ministry of Labor | Officer's Name: Myagmarjav Jadamba<br>Position: Director<br>Telephone No.: +976 622 63012<br>Email address: jadamba@mol.gov.mn<br>Office Address: Government Building IX, Peace Avenue-16<br>Ulaanbaatar-13370, Mongolia |

**ADB**

| | |
|---|---|
| Urban and Social Sectors Division,<br>East Asia Department | Staff Name: Sangay Penjor<br>Position: Officer-in-Charge<br>Telephone No.: +63 2 632 5340<br>Email address: spenjor@adb.org |
| Mission Leader | Staff Name: Asako Maruyama<br>Position: Education Specialist<br>Telephone No.: +63 2 632 4311<br>Email address: amaruyama@adb.org |

## C. Project Organization Structure



## IV. COSTS AND FINANCING

31. The project is estimated to cost $28.59 million, including physical and price contingencies, taxes and duties of $0.87 million, and financing charges during implementation (Table). The total project cost will be financed by an Asian Development Fund loan of $25 million equivalent, and the Government of Mongolia will fund the remaining $3.59 million equivalent, including taxes and duties, $2.60 million for contingencies, and $0.99 million for in-kind contribution to recurrent costs. The recurrent costs consistof salaries and allowances, and operation and maintenance (O&M) costs for equipment, civil works and the project implementation unit (PIU), estimated based on unit costs for salaries of industry supervisors and mentors, TVET teachers, student interns, and eighth and ninth grade teachers; O&M costs per TVET provider and per school; a monthly rent for the PIU office space, and operational costs of bid evaluation and consultant selection committees and the project steering committee.

**Table : Project Investment Plan**
($ million)

| Item | | | Amount[a] |
|---|---|---|---|
| **A.** | **Base Cost[b]** | | |
| | 1. | Output 1: Establishment of industry-driven TVET system | 3.42 |
| | 2. | Output 2: Upgrading of selected TVET providers | 13.23 |
| | 3. | Output 3: Establishment of training systems | 0.44 |
| | 4. | Output 4: Support for career guidance and technology specialization | 6.79 |
| | 5. | Output 5: Establishment of project management system | 1.37 |
| | | **Subtotal (A)** | **25.25** |
| **B.** | **Contingencies[c]** | | **2.60** |
| **C.** | **Financing Charges During Implementation[d]** | | **0.74** |
| | | **Total (A+B+C)** | **28.59** |

TVET = technical and vocational education and training.

[a] Includes taxes and duties of $0.87 million to be financed from government resources ($0.07 million, tax exemptions) and ADB loan resources ($0.80 million). The financing of taxes and duties is necessary to avoid delays in procurement. The amount of taxes and duties is determined on the grounds that (i) the amount will not represent an excessive share of the project investment plan, (ii) the taxes and duties apply only to ADB-financed expenditures, and (iii) the financing of taxes and duties is relevant to the success of the project.

[b] In mid-2014 prices.

[c] Physical contingencies computed at 5.0% for base investment costs. Price contingencies computed on average at 2.19% on foreign exchange costs and 2.79% on local currency costs; includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

[d] Interest during implementation for ADB loan has been computed at the interest rate of 2% to be covered under loan proceeds.

Source: Asian Development Bank estimates.

32. The investment costs of the project include minor civil works and equipment for 3 assessment and certification centers and 20 selected TVET providers which will implement CBT&A for the key occupations in the three priority sectors, equipment for technology laboratories of 30 independent senior secondary schools, and IT software; textbooks and teaching-learning materials, and printing of training modules and other materials; workshops for developing and validating competency standards and other related standards, CBT materials, assessment and certification guidelines/policies, self-assessment tools and template/procedures for quality improvement plans for pre-selected TVET providers, career guidance module and materials, and guidelines for independent senior secondary schools; training of directors, assessors and test developers of assessment and certification centers, training of teachers and managers of the selected TVET providers, training of master trainers in CBT materials development, industry-driven TVET management, and technical and vocational skills, training of eighth and ninth grade teachers in career guidance, training of teachers and principals of independent senior secondary schools; consulting services; and project management.

33. The government has requested a loan from ADB's Special Funds resources to help finance the project. The loan will have a 25-year term, including a grace period of 5 years, an interest rate of 2.0% per annum during the grace period and thereafter, and such other terms and conditions set forth in the loan agreement.

## A. Detailed Cost Estimates by Expenditure Category

| Item | | | Foreign Exchange | Local Currency | Total[a] Cost | % of Total Base Cost |
|---|---|---|---|---|---|---|
| | | | ($ million) | | | |
| **A.** | **Investment Costs[b]** | | | | | |
| | 1 | Civil works | 0.00 | 2.30 | 2.30 | 9.1 |
| | 2 | Equipment | 17.61 | 0.50 | 18.11 | 71.7 |
| | 2a | Training and testing equipment | 11.91 | 0.35 | 12.26 | 48.5 |
| | 2b | Technology laboratory equipment | 5.70 | 0.00 | 5.70 | 22.6 |
| | 2c | Other equipment | 0.00 | 0.15 | 0.15 | 0.6 |
| | 3 | Printing and materials | 0.25 | 0.38 | 0.63 | 2.5 |
| | 4 | Workshops | 0.00 | 0.33 | 0.33 | 1.3 |
| | 5 | Training | 0.00 | 0.59 | 0.59 | 2.3 |
| | 6 | Consulting services | 0.55 | 0.40 | 0.95 | 3.8 |
| | 7 | Project management[c] | 0.19 | 1.11 | 1.30 | 5.2 |
| | | **Subtotal (A)** | **18.60** | **5.61** | **24.21** | **95.9** |
| **B.** | **Recurrent Costs** | | | | | |
| | 1 | Administrative costs[d] | 0.00 | 0.05 | 0.05 | 0.2 |
| | 2 | Salaries and allowances – in-kind | 0.00 | 0.69 | 0.69 | 2.7 |
| | 3 | Civil works operation and maintenance – in-kind | 0.00 | 0.02 | 0.02 | 0.1 |
| | 4 | Equipment operation and maintenance – in-kind | 0.00 | 0.21 | 0.21 | 0.8 |
| | 5 | Project implementation unit operation and maintenance – in-kind | 0.00 | 0.07 | 0.07 | 0.3 |
| | | **Subtotal (B)** | **0.00** | **1.04** | **1.04** | **4.1** |
| | | **Total Base Cost** | **18.60** | **6.65** | **25.25** | **100.0** |
| **C.** | **Contingencies** | | | | | |
| | 1 | Physical[e] | 0.93 | 0.28 | 1.21 | 4.8 |
| | 2 | Price[f] | 0.61 | 0.78 | 1.39 | 5.5 |
| | | **Subtotal (C)** | **1.54** | **1.06** | **2.60** | **10.3** |
| **D.** | **Financing Charges During Implementation** | | | | | |
| | 1 | Interest during implementation[g] | 0.74 | 0.00 | 0.74 | 2.9 |
| | 2 | Commitment charges | 0.00 | 0.00 | 0.00 | 0.0 |
| | | **Subtotal (D)** | **0.74** | **0.00** | **0.74** | **2.9** |
| **Total Project Cost (A+B+C+D)** | | | **20.88** | **7.70** | **28.59** | **113.2** |

Note: Numbers may not sum precisely due to rounding.

[a] Includes taxes and duties of $0.87 million to be financed from government resources ($0.07 million, tax exemptions) and ADB loan resources ($0.80 million). The financing of taxes and duties is necessary to avoid delays in procurement. The amount of taxes and duties is determined on the grounds that (i) the amount will not represent an excessive share of the project investment plan, (ii) the taxes and duties apply only to ADB-financed expenditures, and (iii) the financing of taxes and duties is relevant to the success of the project.

[b] In mid-2014 prices.

[c] Includes PIU staff salaries (PIU staff will not be civil servants receiving salaries from the government); project implementation start-up specialist; M&E specialist; PIU vehicle; furniture and ICT equipment; training on procurement, disbursement, and financial management; PIU operational costs; and annual audit costs ($25,000).

[d] Includes development of test items and administration of exams at assessment and certification centers, site visits and inspections to selected TVET providers, administration of tracer studies and employer satisfaction surveys by selected TVET providers, and administration of TVET manager training program and institution-based short-term technical and vocational skills training courses for TVET teachers.

[e] Physical contingencies computed at 5% for base investment costs.

[f] Price contingencies computed on average at 2.19% on foreign exchange costs and 2.79% on local currency costs. Includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

[g] Interest during implementation for ADB loan computed at the interest rate of 2% to be covered under loan proceeds.

## B. Allocation and Withdrawal of Loan Proceeds

| No. | Item | Total Amount Allocated for ADB Financing (SDR) Category | Basis for Withdrawal from the Loan Account |
|---|---|---|---|
| 1 | Works | 1,561,000 | 100% of total expenditure claimed |
| 2 | Equipment | 12,287,000 | 100% of total expenditure claimed |
| 3 | Printing/Materials | 424,000 | 100% of total expenditure claimed |
| 4 | Workshops | 222,000 | 100% of total expenditure claimed |
| 5 | Training | 402,000 | 100% of total expenditure claimed |
| 6 | Consulting Services | 647,000 | 100% of total expenditure claimed |
| 7 | Project Management | 885,000 | 100% of total expenditure claimed |
| 8 | Recurrent Costs | 36,000 | 100% of total expenditure claimed |
| 9 | Financing Charges | 501,000 | 100% of total amounts due |
| | **Total** | **16,965,000** | |

## C. **Detailed Cost Estimates by Financier**

($ million)

| | Item | ADB Amount | ADB % of Cost Category | Government Amount | Government % of Cost Category | Total Cost[a] |
|---|---|---|---|---|---|---|
| **A.** | **Investment Costs[b]** | | | | | |
| 1 | Civil works | 2.30 | 100.0 | 0.00 | 0.0 | 2.30 |
| 2 | Equipment | 18.11 | 100.0 | 0.00 | 0.0 | 18.11 |
| 2a | Training and testing equipment | 12.26 | 100.0 | 0.00 | 0.0 | 12.26 |
| 2b | Technology laboratory equipment | 5.70 | 100.0 | 0.00 | 0.0 | 5.70 |
| 2c | Other equipment | 0.15 | 100.0 | 0.00 | 0.0 | 0.15 |
| 3 | Printing and materials | 0.63 | 100.0 | 0.00 | 0.0 | 0.63 |
| 4 | Workshops | 0.33 | 100.0 | 0.00 | 0.0 | 0.33 |
| 5 | Training | 0.59 | 100.0 | 0.00 | 0.0 | 0.59 |
| 6 | Consulting services | 0.95 | 100.0 | 0.00 | 0.0 | 0.95 |
| 7 | Project management[c] | 1.30 | 100.0 | 0.00 | 0.0 | 1.30 |
| | **Subtotal (A)** | **24.21** | **100.0** | **0.00** | **0.0** | **24.21** |
| **B.** | **Recurrent Costs** | | | | | |
| 1 | Administrative costs[d] | 0.05 | 100.0 | 0.00 | 0.0 | 0.05 |
| 2 | Salaries and allowances – in-kind | 0.00 | 0.0 | 0.69 | 100 | 0.69 |
| 3 | Civil works operation and maintenance – in-kind | 0.00 | 0.0 | 0.02 | 100.0 | 0.02 |
| 4 | Equipment operation and maintenance – in-kind | 0.00 | 0.0 | 0.21 | 100.0 | 0.21 |
| 5 | Project implementation unit operation and maintenance – in-kind | 0.00 | 0.0 | 0.07 | 100.0 | 0.07 |
| | **Subtotal (B)** | **0.05** | **5.1** | **0.99** | **94.9** | **1.04** |
| | **Total Base Cost** | **24.26** | **96.1** | **0.99** | **3.9** | **25.25** |
| **C.** | **Contingencies** | | | | | |
| 1 | Physical[e] | 0.00 | 0.0 | 1.21 | 100.0 | 1.21 |
| 2 | Price[f] | 0.00 | 0.0 | 1.39 | 100.0 | 1.39 |
| | **Subtotal (C)** | **0.00** | **0.0** | **2.60** | **100.0** | **2.60** |
| **D.** | **Financing Charges During Implementation** | | | | | |
| 1 | Interest during implementation[g] | 0.74 | 100.0 | 0.00 | 0.0 | 0.74 |
| 2 | Commitment charges | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 |
| | **Subtotal (D)** | **0.74** | **100.0** | **0.00** | **0.0** | **0.74** |
| | **Total Project Cost (A+B+C+D)** | **25.00** | **87.4** | **3.59** | **12.6** | **28.59** |
| | **% Total Project Cost** | | **87.4%** | | **12.6%** | **100%** |

Note: Numbers may not sum precisely due to rounding.

[a] Includes taxes and duties of $0.87 million to be financed from government resources ($0.07 million, tax exemptions) and ADB loan resources ($0.80 million). The financing of taxes and duties is necessary to avoid delays in procurement. The amount of taxes and duties is determined on the grounds that (i) the amount will not represent an excessive share of the project investment plan, (ii) the taxes and duties apply only to ADB-financed expenditures, and (iii) the financing of taxes and duties is relevant to the success of the project.

[b] In mid-2014 prices.

[c] Includes PIU staff salaries (PIU staff will not be civil servants receiving salaries from the government); project implementation start-up specialist; M&E specialist; PIU vehicle; furniture and ICT equipment; training on procurement, disbursement, and financial management; PIU operational costs; and annual audit costs ($25,000).

[d] Includes development of test items and administration of exams at assessment and certification centers, site visits and inspections to selected TVET providers, administration of tracer studies and employer satisfaction surveys by selected TVET providers, and administration of TVET manager training program and institution-based short-term technical and vocational skills training courses for TVET teachers.

[e] Physical contingencies computed at 5% for base investment costs.

[f] Price contingencies computed on average at 2.19% on foreign exchange costs and 2.79% on local currency costs. Includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.

[g] Interest during implementation for ADB loan computed at the interest rate of 2% to be covered under loan proceeds.

## D. Detailed Cost Estimates by Outputs/Components

($ million)

| Item | | Total Cost[a] | Component 1 Amount | Component 1 % of Cost Category | Component 2 Amount | Component 2 % of Cost Category | Component 3 Amount | Component 3 % of Cost Category | Component 4 Amount | Component 4 % of Cost Category | Component 5 Amount | Component 5 % of Cost Category |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A.** | **Investment Costs**[b] | | | | | | | | | | | |
| 1 | Civil works | 2.30 | 0.30 | 13.0 | 2.00 | 87.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 |
| 2 | Equipment | 18.11 | 2.59 | 14.3 | 9.72 | 53.7 | 0.00 | 0.0 | 5.80 | 32.0 | 0.00 | 0.0 |
| 2a | Training and testing equipment | 12.26 | 2.54 | 20.7 | 9.72 | 79.3 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 |
| 2b | Technology laboratory equipment | 5.70 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 5.70 | 100.0 | 0.00 | 0.0 |
| 2c | Other equipment | 0.15 | 0.05 | 34.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.10 | 66.0 | 0.00 | 0.0 |
| 3 | Printing and materials | 0.63 | 0.00 | 0.0 | 0.26 | 41.6 | 0.13 | 20.8 | 0.24 | 37.6 | 0.00 | 0.0 |
| 4 | Workshops | 0.33 | 0.09 | 27.1 | 0.07 | 20.9 | 0.05 | 14.2 | 0.12 | 37.8 | 0.00 | 0.0 |
| 5 | Training | 0.59 | 0.10 | 17.6 | 0.17 | 24.9 | 0.05 | 8.7 | 0.26 | 44.2 | 0.00 | 0.0 |
| 6 | Consulting services | 0.95 | 0.30 | 31.2 | 0.24 | 24.7 | 0.21 | 22.3 | 0.21 | 21.7 | 0.00 | 0.0 |
| 7 | Project management[c] | 1.30 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 1.30 | 100.0 |
| | **Subtotal (A)** | **24.21** | **3.38** | **14.0** | **12.46** | **51.5** | **0.44** | **1.8%** | **6.63** | **27.4** | **1.30** | **5.4** |
| **B.** | **Recurrent Costs** | | | | | | | | | | | |
| 1 | Administrative costs[d] | 0.05 | 0.02 | 40.9 | 0.03 | 53.4 | 0.00 | 5.7 | 0.00 | 0.0 | 0.00 | 0.0 |
| 2 | Salaries and allowances – in-kind | 0.69 | 0.00 | 0.0 | 0.62 | 89.2 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 |
| 3 | Civil works operation and Maintenance – in-kind | 0.02 | 0.00 | 13.0 | 0.02 | 87.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 |
| 4 | Equipment operation and maintenance – in-kind | 0.21 | 0.02 | 7.3 | 0.10 | 48.8 | 0.00 | 0.0 | 0.09 | 43.9 | 0.00 | 0.0 |
| 5 | Project implementation unit operation and maintenance – in-kind | 0.07 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.07 | 100.0 |
| | **Subtotal (B)** | **1.04** | **0.04** | **3.8** | **0.76** | **73.4** | **0.00** | **0.3** | **0.16** | **15.8** | **0.07** | **6.7** |
| | **Total Base Cost** | **25.25** | **3.42** | **13.5** | **13.22** | **52.4** | **0.44** | **1.8** | **6.79** | **26.9** | **1.37** | **5.4** |
| **C.** | **Contingencies** | | | | | | | | | | | |
| 1 | Physical[e] | 1.21 | 0.17 | 14.0 | 0.62 | 51.5 | 0.02 | 1.8 | 0.33 | 27.4 | 0.07 | 5.4 |
| 2 | Price[f] | 1.39 | 0.19 | 14.0 | 0.72 | 52.0 | 0.02 | 1.3 | 0.41 | 29.5 | 0.04 | 3.0 |
| | **Subtotal (C)** | **2.60** | **0.36** | **14.0** | **1.34** | **51.8** | **0.04** | **1.6** | **0.74** | **28.5** | **0.11** | **4.1** |
| **D.** | **Financing Charges During Implementation** | | | | | | | | | | | |
| 1 | Interest during implementation[g] | 0.74 | 0.10 | 14.0 | 0.38 | 51.6 | 0.01 | 1.8 | 0.20 | 27.5 | 0.04 | 5.1 |
| 2 | Commitment charges | 0.00 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 0.0 | 0.00 | 16.2 | 0.00 | 0.0 |
| | **Subtotal (D)** | **0.74** | **0.10** | **14.0** | **0.38** | **51.6** | **0.01** | **1.8** | **0.20** | **27.5** | **0.04** | **5.1** |
| **Total Project Cost (A+B+C+D)** | | **28.59** | **3.88** | **13.6** | **14.95** | **52.3** | **0.50** | **1.7** | **7.74** | **27.1** | **1.52** | **5.3** |

Note: Numbers may not sum precisely due to rounding.

[a] Includes taxes and duties of $0.87 million to be financed from government resources ($0.07 million, tax exemptions) and ADB loan resources ($0.80 million). The financing of taxes and duties is necessary to avoid delays in procurement. The amount of taxes and duties is determined on the grounds that (i) the amount will not represent an excessive share of the project investment plan, (ii) the taxes and duties apply only to ADB-financed expenditures, and (iii) the financing of taxes and duties is relevant to the success of the project.

[b] In mid-2014 prices.

[c] Includes PIU staff salaries (PIU staff will not be civil servants receiving salaries from the government); project implementation start-up specialist; M&E specialist; PIU vehicle; furniture and ICT equipment; training on procurement, disbursement, and financial management; PIU operational costs; and annual audit costs ($25,000).
[d] Includes development of test items and administration of exams at assessment and certification centers, site visits and inspections to selected TVET providers, administration of tracer studies and employer satisfaction surveys by selected TVET providers, and administration of TVET manager training program and institution-based short-term technical and vocational skills training courses for TVET teachers.
[e] Physical contingencies computed at 5% for base investment costs.
[f] Price contingencies computed on average at 2.19% on foreign exchange costs and 2.79% on local currency costs. Includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.
[g] Interest during implementation for ADB loan computed at the interest rate of 2% to be covered under loan proceeds.

## E. Detailed Cost Estimates by Year

| | Item | Total Cost[a] | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 |
|---|---|---|---|---|---|---|---|
| | | ($ million) | | | | | |
| **A.** | **Investment Costs[b]** | | | | | | |
| | 1 Civil works | 2.30 | 0.00 | 2.30 | 0.00 | 0.00 | 0.00 |
| | 2 Equipment | 18.11 | 0.15 | 6.26 | 11.70 | 0.00 | 0.00 |
| | 2a Training and testing equipment | 12.26 | | 4.91 | 7.35 | | |
| | 2b Technology laboratory equipment | 5.70 | | 1.35 | 4.35 | | |
| | 2c Other equipment | 0.15 | 0.15 | | | | |
| | 3 Printing and materials | 0.63 | 0.03 | 0.34 | 0.26 | 0.00 | 0.00 |
| | 4 Workshops | 0.33 | 0.29 | 0.03 | 0.01 | 0.00 | 0.00 |
| | 5 Training | 0.59 | 0.06 | 0.37 | 0.12 | 0.03 | 0.01 |
| | 6 Consulting services | 0.95 | 0.65 | 0.31 | 0.00 | 0.00 | 0.00 |
| | 7 Project management[c] | 1.30 | 0.33 | 0.36 | 0.31 | 0.22 | 0.09 |
| | **Subtotal (A)** | **24.21** | **1.50** | **9.96** | **12.40** | **0.25** | **0.09** |
| **B.** | **Recurrent Costs** | | | | | | |
| | 1 Administrative costs[d] | 0.05 | 0.00 | 0.03 | 0.01 | 0.01 | |
| | 2 Salaries and allowances – in-kind | 0.69 | 0.00 | 0.19 | 0.21 | 0.29 | 0.00 |
| | 3 Civil works operation and maintenance – in-kind | 0.02 | 0.00 | 0.00 | 0.01 | 0.01 | 0.01 |
| | 4 Equipment operation and maintenance – in-kind | 0.21 | 0.00 | 0.00 | 0.07 | 0.07 | 0.07 |
| | 5 Project management operation and maintenance – in-kind | 0.07 | 0.01 | 0.02 | 0.02 | 0.02 | 0.01 |
| | **Subtotal (B)** | **1.04** | **0.02** | **0.24** | **0.31** | **0.39** | **0.09** |
| | **Total Base Cost** | **25.25** | **1.51** | **10.20** | **12.71** | **0.65** | **0.18** |
| **C.** | **Contingencies** | | | | | | |
| | 1 Physical[e] | 1.21 | 0.07 | 0.50 | 0.62 | 0.01 | 0.00 |
| | 2 Price[f] | 1.39 | 0.02 | 0.39 | 0.82 | 0.06 | 0.09 |
| | **Subtotal (C)** | **2.60** | **0.10** | **0.89** | **1.44** | **0.07** | **0.10** |
| **D.** | **Financing Charges During Implementation** | | | | | | |
| | 1 Interest during implementation[g] | 0.74 | 0.01 | 0.13 | 0.33 | 0.26 | 0.01 |
| | 2 Civil works operation and maintenance | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| | **Subtotal (D)** | **0.74** | **0.01** | **0.13** | **0.33** | **0.26** | **0.01** |
| | **Total Project Cost (A+B+C+D)** | **28.59** | **1.63** | **11.22** | **14.47** | **0.98** | **0.29** |
| | **% Total Project Cost** | **100%** | **5.70%** | **39.24%** | **50.61%** | **3.44%** | **1.01%** |

Note: Numbers may not sum precisely due to rounding.

[a] Includes taxes and duties of $0.87 million to be financed from government resources ($0.07 million, tax exemptions) and ADB loan resources ($0.80 million). The financing of taxes and duties is necessary to avoid delays in procurement. The amount of taxes and duties is determined on the grounds that (i) the amount will not represent an excessive share of the project investment plan, (ii) the taxes and duties apply only to ADB-financed expenditures, and (iii) the financing of taxes and duties is relevant to the success of the project.

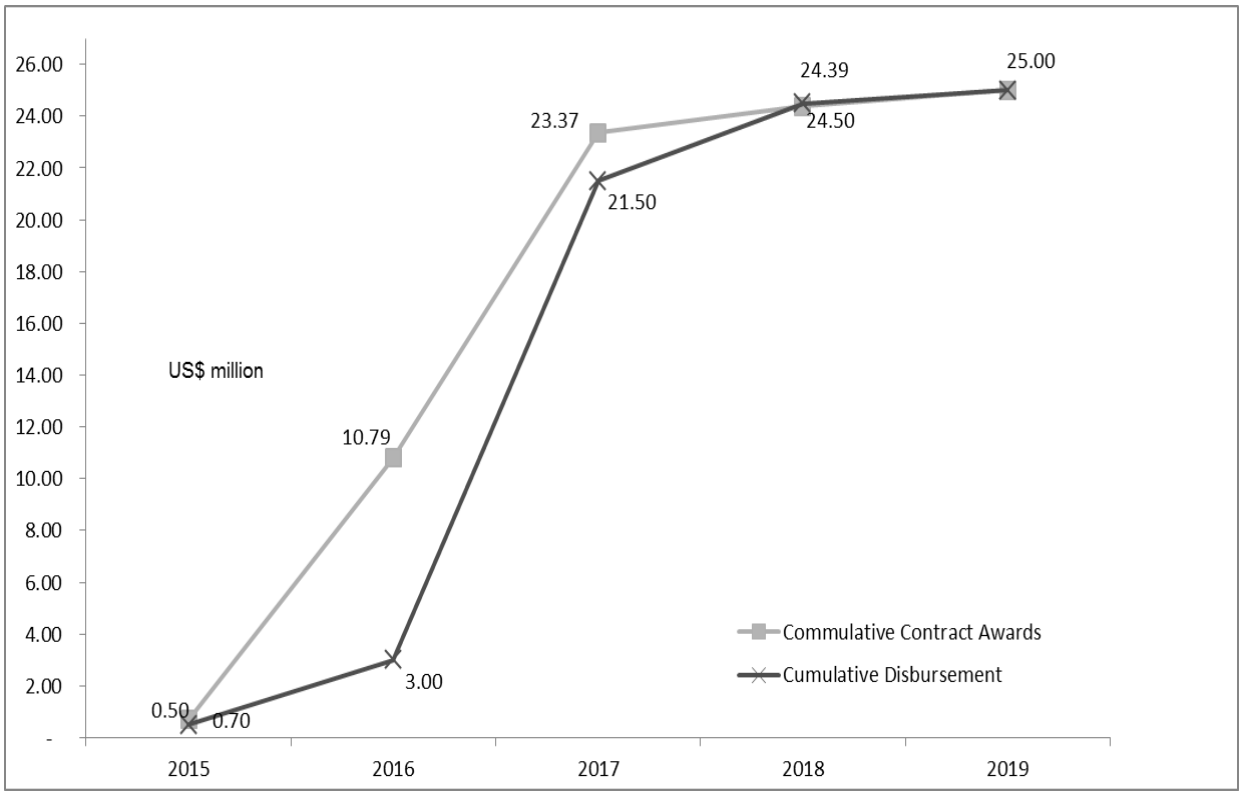
[b] In mid-2014 prices.

[c] Includes PIU staff salaries (PIU staff will not be civil servants receiving salaries from the government); project implementation start-up specialist; M&E specialist; PIU vehicle; furniture and ICT equipment; training on procurement, disbursement, and financial management; PIU operational costs; and annual audit costs ($25,000).

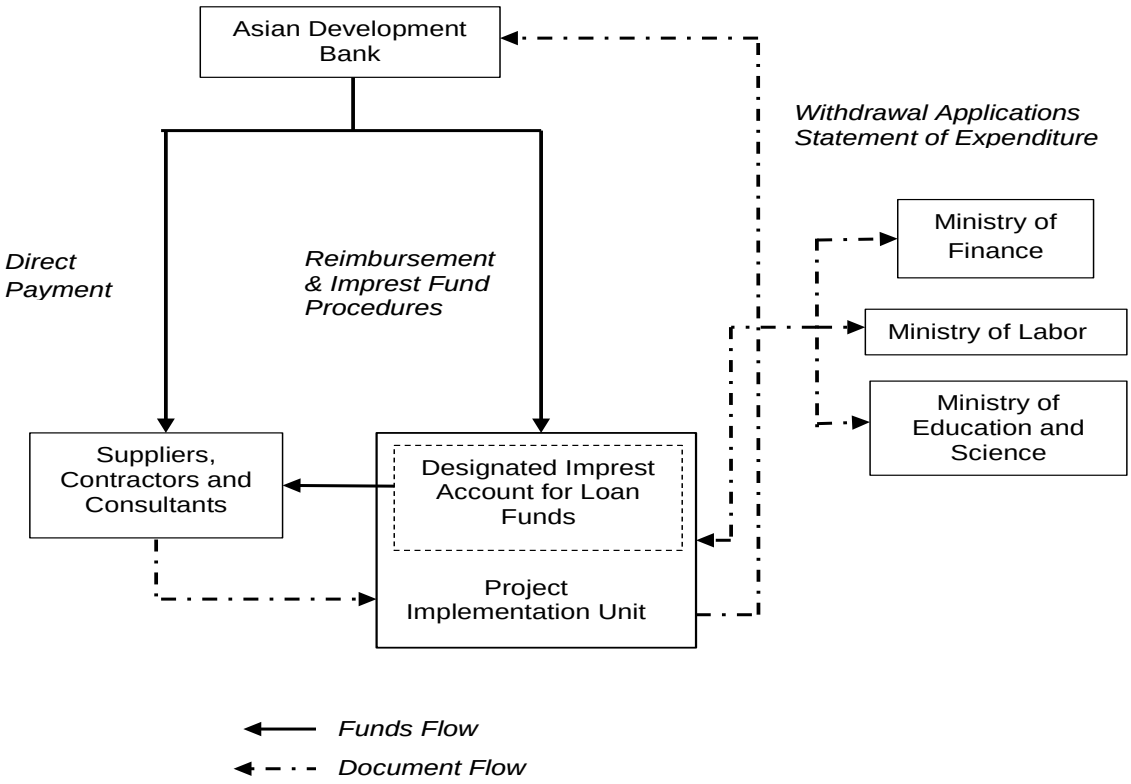
[d] Includes development of test items and administration of exams at assessment and certification centers, site visits and inspections to selected TVET providers, administration of tracer studies and employer satisfaction surveys by selected TVET providers, and administration of TVET manager training program and institution-based short-term technical and vocational skills training courses for TVET teachers.
[e] Physical contingencies computed at 5% for base investment costs.
[f] Price contingencies computed on average at 2.19% on foreign exchange costs and 2.79% on local currency costs. Includes provision for potential exchange rate fluctuation under the assumption of a purchasing power parity exchange rate.
[g] Interest during implementation for ADB loan computed at the interest rate of 2% to be covered under loan proceeds.

## F. Contract Awards and Disbursement S-curve

| | | ($ million) | | | |
|---|---|---|---|---|---|
| | **2015** | **2016** | **2017** | **2018** | **2019** |
| Annual Contract Awards | 0.70 | 10.09 | 12.58 | 1.02 | 0.61 |
| Cumulative Contract Awards | 0.70 | 10.79 | 23.37 | 24.39 | 25.00 |
| Annual Disbursement | 0.50 | 2.50 | 18.50 | 3.00 | 0.50 |
| Cumulative Disbursement | 0.50 | 3.00 | 21.50 | 24.50 | 25.00 |



## G. Fund Flow Diagram



# V. FINANCIAL MANAGEMENT

## A. Financial Management Assessment

34. Financial management assessments have been conducted for the Ministry of Labor (MOL) and the Ministry of Education and Science (MEDS) in accordance with ADB's *Guidelines for the Financial Management and Analysis of Projects*[22] and *A Methodology Note on Financial Due Diligence*[23]. The assessments confirmed that both the MOL and the MEDS have adequate accounting professionals and computerized financial accounting and reporting systems and procedures which control accounting, financial and physical progresses related to their current project activities. They have clearly defined responsibilities with accountability assigned to different units at different levels of authority. The assessments concluded that the current financial management systems of the executing and implementing agencies meet government requirements in terms of staffing, accounting, and internal control. An accountant/financial management specialist, a project manager, and a project coordinator responsible for the component to be implemented by the MEDS, will be recruited to the project implementation unit (PIU) to strengthen the capacity of the executing and implementing agencies to implement the project in compliance with the policy, operation, and procedural requirements of ADB.

35. Financial management internal control and risk assessments have also been conducted for the MOL and the MEDS in accordance with ADB's *Guidelines for the Financial Management and Analysis of Projects*. The overall inherent risk was assessed as substantial due to country-specific risks related to weaknesses in budget planning and execution at sectoral and local levels and key internal controls surrounding the government financial management information system (GFMIS), entity-specific risks associated with institutional and organizational aspects, and project-specific risk with regard to the number of stakeholders and procurement packages involved in the project. The overall control risk was assessed as moderate due to limited experience of the MOL and MEDS staff in ADB projects, some weaknesses in the accounting policies and procedures, reporting and monitoring mechanisms, the information systems and procurement at the MOL and the MEDS. The risk will be mitigated by the establishment of a project implementation unit (PIU) staffed by qualified professionals who will assume day-to-day management of the project, with adequate integrated financial management information system software installed, and assisted by an experienced international project implementation start-up specialist in initial stages of project implementation. Details of the assessments are presented in the financial management assessment included as Appendix 1 of the PAM.

**Summary of Financial Management Internal Control and Risk Assessment**

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| 1. Country-Specific Risks | M | There is a disconnect between budget preparation and execution at sectoral and local levels, and key internal controls around budgetary, system integrity, payment security, and system management surrounding the GFMIS require improvements. | The MOL and MEDS will be assisted by the PIU in preparing annual budgets and action plans of the project in accordance with the design and monitoring framework. An integrated financial management software acceptable to ADB will be installed at the PIU to manage the project fund. |
| 2. Entity- | S | Although the MOL and MEDS use | The PIU will be established by the MOL to |

[22] ADB. 2005. *Financial Management and Analysis of Projects*. Manila. Available at: http://www.adb.org/documents/financial-management-and-analysis-projects.

[23] ADB. 2009. *Financial Due Diligence: A Methodology Note*. Manila. Available at: http://www.adb.org/documents/financial-due-diligence-methodology-note

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| Specific Risks | | the GFMIS and have adequate accounting professionals, donor funds have generally been managed outside the government systems (e.g. project management/ implementation units) and the MOL and MEDS staff have limited experience in directly handling donor funds. | carry out day-to-day activities of the project including financial management. The PIU will be staffed by qualified and experienced professionals including: a project manager overseeing the overall project management, a project coordinator responsible for activities implemented by the MEDS, an accountant/financial management specialist, a procurement specialist, a M&E specialist, and four technical specialists, a project assistant and a driver. The PIU will further be assisted by an international project implementation start-up specialist who will prepare a project management manual covering financial management, procurement and recruitment, disbursement, monitoring and reporting, train and coach the PIU staff, and provide training for the MOL and MEDS staff in project management. |
| 3. Project Specific Risks | S | The project will involve two ministries (MOL and MEDS) and a number of panels, committees and working groups consisted of employers, industry and professional associations, universities, and research institutes, which requires constant communication, consultation and coordination. The project will support TVET providers and secondary schools across the country, some of which are located in remote and disadvantaged areas. There will be at least 10 ICB packages of equipment. The MOL and MEDS have limited experience in ICB under donor funded projects. | In addition to the PIU staff and the project implementation start-up specialist, consultants will be engaged through firms and on an individual basis to facilitate communication, consultation and coordination among the key stakeholders and conduct visits to TVET providers and schools. In order to assist in procurement of equipment, two equipment specialists will be engaged on an individual basis. |
| **Overall Inherent Risk** | S | | |
| **Control Risk** | | | |
| 1. Implementing Entity | M | Whereas the MEDS has some experience, the MOL lacks experience in ADB's disbursement procedures and requirements. Financial management and reporting duties of the MOL and the MEDS agencies need to be clearly defined. | The MOL, MEDS and PIU staff will be trained in ADB's disbursement procedures and requirements. The PIU established by the MOL will maintain the imprest account, and prepare and submit withdrawal applications, and supporting documents, quarterly and annual reports, annual audit reports and financial statements on behalf of the MOL and MEDS. The project management manual prepared by the project implementation start-up specialist will clearly define financial management and reporting duties of the MOL and MEDS. |
| 2. Funds Flow | N | The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* and there is little risk | A combination of direct payment to contractors by ADB, reimbursement and imprest fund procedures will be used for disbursement of the loan proceeds. An |

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| | | foreseen. | imprest account for the project will be established at a commercial bank acceptable to ADB and will be maintained by the PIU. The government will contribute recurrent costs to the project which will need to be included in the MOL and the MEDS's own budgets in coordination with the MOF. |
| 3. Staffing | M | The MOL and MEDS have adequate accounting professionals but their experience in donor funded projects is limited, given that donor funds have been managed outside the government systems. | The MOL and MEDS staff will be trained in ADB's disbursement and financial management procedures and requirements. Day-to-day project management activities, including the preparation of withdrawal applications, supporting documents, financial statements, will be conducted by the PIU which will be staffed by qualified and experienced professionals, such as a project manager, a project coordinator, an accountant/financial management specialist, a procurement specialist, a M&E specialist, and four technical specialists. |
| 4. Accounting Policies and Procedures | M | The government's accounting system generally allows proper recording of project financial transactions and the Chart of Accounts is adequate to properly account for project activities and expenditure categories. In practice, however, whereas budget documents include some details, the existing accounting system is not used to match physical and financial progress. Excel spreadsheets have been used outside the system for reporting physical and financial progress. The available financial management manuals may not cover all aspects required by ADB. | An integrated financial management software will be installed and used by the PIU to manage the project fund. The MOL and the MEDS will be assisted in preparing annual budgets and action plans, quarterly and annual reports of the project. The project implementation start-up specialist will review the available financial management manuals and ensure that aspects not covered by those manuals will be fully addressed in the project management manual. The MOL and MEDS staff will be trained in ADB's disbursement and financial management procedures and requirements. |
| 5. Internal Audit | N | Internal audits of the project will be included in the work program of the MOL and MEDS's Department of M&E and Internal Audits. Both MOL and MEDS have limited experience in internal audits. | The project implementation start-up specialist will review internal audit functions of the MOL and MEDS and recommend an action plan including training and development of internal audit checklists. |
| 6. External Audit | N | External audits for ADB projects are arranged by the National Audit Office. There have been some issues with the quality of external audits. | An external auditor acceptable to ADB will be arranged by the National Audit Office. ADB has been working with the National Audit Office to improve the quality of external audits. |
| 7. Reporting and Monitoring | M | The government's accounting system does not take into account progress in physical execution in relation to financial execution and supplementary reports are prepared outside of the system. | An integrated financial management system will be installed at the PIU and will be linked to the project performance management system. On behalf of the MOL and MEDS, the PIU will prepare quarterly and annual progress reports on financial and physical progress in project implementation. |
| 8. Information | M | The GFMIS was introduced across | An integrated financial management |

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| Systems | | ministries in 2005. The GFMIS automatically generates financial reports. However, the capacity of the MOL and MEDS staff for appropriately using the GFMIS needs to be strengthened. In addition, key internal controls surrounding the GFMIS need to be improved. | information system software acceptable to ADB will be installed at the PIU. The PIU staff will be trained in using the system. Separate books and records for all expenditures incurred on the project will be maintained by the PIU through the system. |
| 9. Procurement | M | The system for collecting procurement information and integrating it with financial information is incomplete. There is no quality control for procurement processes. | The procurement plan of the project will provide a basis for preparing annual budgets and action plans. Information on procurement activities will be included in quarterly and annual reports prepared by the PIU along with information on progress in financial and physical execution. All procurement activities under the project will be conducted in accordance with ADB's procurement guidelines and policies under ADB's guidance. The MOL and MEDS staff will be trained in ADB's procurement guidelines and policies. |
| **Overall Control Risk** | M | | |

* H = High, S = Substantial, M = Moderate, N = Negligible or Low.
ADB = Asian Development Bank, GFMIS = Government Financial Management Information System, ICB = international competitive bidding, MEDS = Ministry of Education and Science, MOF = Ministry of Finance, MOL = Ministry of Labor, PIU = project implementation unit.

### B. Disbursement

36. The Loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time),[24] and detailed arrangements agreed upon between the Government and ADB.

37. To facilitate project implementation through timely release of loan proceeds, the executing agency, through the project implementation unit (PIU), will establish an imprest account promptly after loan effectiveness at a commercial bank acceptable to ADB. The bank charges incurred in the operation of the imprest account may be financed from the loan proceeds. The maximum ceiling of the imprest account will not exceed 10% of the Asian Development Fund loan amount. The imprest account is to be used exclusively for the ADB's share of eligible expenditures. The currency of the imprest account will be in US dollars. The PIU, who established the imprest account in its name, is accountable and responsible for proper use of advances to the imprest account. The initial and additional advances to the imprest account may be requested based on 6 months estimated expenditures to be financed through the imprest account. The imprest account will be established, managed, and liquidated in accordance with ADB's *Loan Disbursement Handbook* and detailed arrangements agreed by the Government and ADB. ADB's *Loan Disbursement Handbook* describes which supporting documents should be submitted to ADB and which should be retained by the government for liquidation and replenishment of an imprest account.

[24] Available at http://www.adb.org/documents/loan-disbursement-handbook

38. The statement-of-expenditure (SOE) procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the imprest account. The ceiling of the SOE procedure is the equivalent of $50,000 per individual payment. 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.[25] 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.

39. For efficiency, the minimum value per withdrawal application is US$100,000 equivalent, unless otherwise approved by ADB. Individual payments below this amount should generally be paid from the imprest account, or by the executing agency and subsequently claimed to ADB through reimbursement. ADB reserves the right not to accept withdrawal applications below the minimum amount.

### C. Accounting

40. The MOL and the MEDS through the PIU will maintain separate books and records by funding sources for all expenditures incurred on the project. Through the PIU the MOL will prepare consolidated project financial statements in accordance with the government's accounting laws and regulations which are consistent with international accounting principles and practices.

### D. Auditing

41. The MOL through the PIU will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and the Government's audit regulations by an independent auditor acceptable to ADB which will be arranged by the National Audit Office. The audited project financial statements will be submitted in the English language to ADB within 6 months of the end of the fiscal year by the MOL through the PIU. The annual audit report for the project accounts will include an audit management letter and audit opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan proceeds were used only for the purposes of the project or not; (iii) the level of compliance for each financial covenant contained in the loan agreement for the project; (iv) the use of the imprest fund procedures; and (v) the use of the statement of expenditure procedure certifying the eligibility of those expenditures claimed under SOE procedures, and proper use of the SOE and imprest procedures in accordance with ADB's *Loan Disbursement Handbook* and the project documents.

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

43. The government, the MOL, and the MEDS have been made aware of ADB's policy on delayed submission, and the requirements for satisfactory and acceptable quality of the audited project financial statements.[26] ADB reserves the right to require a change in the auditor (in a

[25] Checklist for SOE procedures and formats are available in Appendix 9B of ADB's *Loan Disbursement Handbook*.

[26] ADB Policy on delayed submission of audited project financial statements:

- When audited project financial statements are not received by the due date, ADB will write to the executing agency advising that (i) the audit documents are overdue; and (ii) if they are not received within the next six

manner consistent with the constitution of the borrower), or for additional support to be provided 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 verity the project's financial accounts to confirm that the share of ADB's financing is used in accordance with ADB's policies and procedures.

44. Public disclosure of the project financial statements, including the audit report on the project financial statements, will be guided by ADB's Public Communications Policy (2011).[27] After review, ADB will disclose the project financial statements for the project and the opinion of the auditors on the financial statements within 30 days of the date of their receipt by posting them on ADB's website. The Audit Management Letter will not be disclosed.

months, requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters will not be processed.

- When audited project financial statements have not been received within 6 months after the due date, ADB will withhold processing of requests for new contract awards and disbursement such as new replenishment of imprest accounts, processing of new reimbursement, and issuance of new commitment letters. ADB will (i) inform the executing agency of ADB's actions; and (ii) advise that the loan may be suspended if the audit documents are not received within the next six months.

[27] Available from http://www.adb.org/site/disclosure/public-communications-policy

# VI. PROCUREMENT AND CONSULTING SERVICES

## A. Advance Contracting and Retroactive Financing

45. All advance contracting and retroactive financing will be undertaken in conformity with ADB's Procurement Guidelines (March 2013, as amended from time to time)[28] and ADB's Guidelines on the Use of Consultants (March 2013, as amended from time to time).[29] The issuance of invitations to bid under advance contracting and retroactive financing will be subject to ADB approval. The borrower, the MOL, and the MEDS have been advised that approval of advance contracting and retroactive financing does not commit ADB to finance the project.

46. There will be three advance contracts for the following consulting services: (i) a consulting firm to support competency-based training and assessment (CBT&A) development which will be recruited through the quality- and cost- based selection (QCBS); (ii) a consulting firm to support the upgrading of selected TVET providers and assessment and certification centers which will be recruited through the consultants' qualifications selection (CQS); and (iii) a project implementation start-up specialist (international) to be recruited through the individual consultants selection (ICS). Steps for advance contracting of the consulting firms will include finalization of terms of reference, preparation of an invitation for expressions of interest (including amplified and detailed expressions of interest format under CQS), advertising, short-listing of at least three consulting firms, preparation of a request for proposal, issuing of the request for proposal, evaluation of technical and financial proposals, and contract negotiations.

47. There will be no retroactive financing for this project.

## B. Procurement of Goods, Works and Consulting Services

48. All procurement of goods and works will be undertaken in accordance with ADB's Procurement Guidelines. International competitive bidding (ICB) will be applied to goods contracts estimated to cost $500,000 and more, and works contracts estimated to cost $1 million and more. Goods contracts worth less than $500,000 and works contracts worth less than $1 million will follow national competitive bidding (NCB). Shopping will be used for contracts for works and goods valued less than $100,000. NCB procurement will be carried out in accordance with the Mongolia Procurement Law, subject to modifications agreed with ADB. Before the start of any procurement ADB and the Government will review the public procurement laws of the Government to ensure consistency with ADB's Procurement Guidelines. An 18-month procurement plan indicating threshold and review procedures, goods, works, and consulting services contract packages and national competitive bidding guidelines is in Section C.

49. All consultants will be recruited according to ADB's Guidelines on the Use of Consultants. The terms of reference for all consulting services are detailed in Section D. One consulting firm (CBT&A development) for estimated 38 person-months (international, 8 person-months, national, 30 person-months) of consulting services will be engaged through the QCBS using the quality and cost ratio of 90:10 and the simplified technical proposal procedures. The 90:10 ratio can be justified on the grounds that the assignments are highly complex and a greater priority for quality is required. Two consulting firms (TVET management and technical

[28] Available at: http://www.adb.org/documents/procurement-guidelines
[29] Available at: http://www.adb.org/documents/guidelines-use-consultants-asian-development-bank-and-its-borrowers

and vocational skills training, TVET facilities upgrading) for estimated 57 person-months (international, 4 person-months; national, 53 person-months) of consulting services will be engaged through the CQS. The use of CQS can be justified on the grounds that (i) highly specialized expertise is required; (ii) recruitment time is critical and the assignment is short-term; (iii) few consultants are qualified; and (iv) preparing and evaluating competitive proposals is unjustified. In addition, 4 international consultants (12 person-months) and 10 national consultants (43 person-months) will be recruited through the ICS to provide expertise in public communication, gender, equipment, career guidance, senior secondary education, various technology subjects, project management and M&E. The following justifies the use of the ICS: (i) collective responsibility is not a requirement; additional outside (home office) professional support is not required; and (iii) individual experience and qualifications are the main requirements.

50. All procurement under the project will be carried out by the MOL and the MEDS and coordinated by the PIU. The procurement capacity assessment report and recommendations for the MOL and the MEDS are included as Appendix 2 of the PAM.

### C. Procurement Plan

**Basic Data**

| | |
|---|---|
| **Project Name**: Skills for Employment | |
| **Project Number:** 45010-002 | **Approval Number:** |
| **Country:** Mongolia | **Executing Agency**: Ministry of Labor |
| **Project Financing Amount:** US$ 28,590,000<br>**ADB Financing:** US$ 25,000,000<br>**Cofinancing (ADB Administered):**<br>**Non-ADB Financing:** US$ 3,590,000 | **Implementing Agencies**:<br>Ministry of Labor and Ministry of Education andScience |
| **Date of First Procurement Plan:** 29 September 2014 | **Date of this Procurement Plan**: 29 September 2014 |

### A. Methods, Thresholds, Review and 18-Month Procurement Plan

#### 1. Procurement and Consulting Methods and Thresholds

51. Except as the ADB may otherwise agree, the following process thresholds shall apply to procurement of goods and works.

| **Procurement of Goods and Works** | | |
|---|---|---|
| **Method** | **Threshold** | **Comments** |
| ICB for Goods | US$ 500,000 and Above | |
| NCB for Goods | Between US$ 100,001 and US$ 499,999 | The first NCB for each IA is subject to prior review, thereafter post review. |
| Shopping for Goods | Up to US$ 100,000 | |
| ICB for Works | US$ 1,000,000 and Above | |
| NCB for Works | Between US$ 100,001 and US$ 999,999 | The first NCB is subject to prior review, thereafter post review. |
| Shopping for Works | Up to US$ 100,000 | |

ICB = International Competitive Bidding, IA = implementing agencies, National Competitive Bidding.

| **Consulting Services** | |
|---|---|
| **Method** | **Comments** |
| Consultant's Qualification Selection for Consulting Firm | |
| Quality- and Cost-Based Selection for Consulting Firm | |
| Individual Consultants Selection for Individual Consultant | |

### 2. Goods and Works Contracts Estimated to Cost $1 Million or More

52. The following table lists goods and works contracts for which the procurement activity is either ongoing or expected to commence within the next 18 months.

| Package Number | General Description | Estimated Value | Procurement Method | Review (Prior/Post) | Bidding Procedure | Advertisement Date (quarter/year) | Comments |
|---|---|---|---|---|---|---|---|
| GS01 | Equipment and tools (road construction occupation) | 3,100,000.00 | ICB | Prior | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS02 | Equipment and tools (construction laboratory occupation) | 2,560,000.00 | ICB | Prior | 1S1E | Q4 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS03 | Equipment and tools (crop production occupation) | 2,600,000.00 | ICB | Prior | 1S1E | Q4 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS04 | Equipment and tools (raw materials processing occupation) | 1,650,000.00 | ICB | Prior | 1S1E | Q1 / 2016 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS05 | Equipment and tools for technology laboratories (elective course 1) | 1,350,000.00 | ICB | Prior | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |

| Package Number | General Description | Estimated Value | Procurement Method | Review (Prior/Post) | Bidding Procedure | Advertisement Date (quarter/year) | Comments |
|---|---|---|---|---|---|---|---|
| GS06 | Equipment and tools for technology laboratories (elective course 2 & 3) | 2,700,000.00 | ICB | Prior | 1S1E | Q4 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS07 | Equipment and tools for technology laboratories (elective course 4) | 1,650,000.00 | ICB | Prior | 1S1E | Q1 / 2016 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |

### 3. Consulting Services Contracts Estimated to Cost $100,000 or More

53. The following table lists consulting services contracts for which the recruitment activity is either ongoing or expected to commence within the next 18 months.

| Package Number | General Description | Estimated Value | Recruitment Method | Review (Prior/Post) | Advertisement Date (quarter/year) | Type of Proposal | Comments |
|---|---|---|---|---|---|---|---|
| CS01 | Consulting firm 1 (CBT&A development) | 318,500.00 | QCBS | Prior | Q4 / 2014 | STP | Assignment: International<br>Quality-Cost Ratio: 90:10 |
| CS02 | Consulting firm 2 (TVET management and technical and vocational skills training) | 212,150.00 | CQS | Prior | Q2 / 2015 | BTP | Assignment: International |
| CS03 | Consulting firm 3 (TVET facilities upgrading) | 104,500.00 | CQS | Prior | Q4 / 2014 | BTP | Assignment: National |
| CS04 | Project implementation start-up specialist | 141,000.00 | ICS | Prior | Q1 / 2015 | | Assignment: International<br>Expertise: project implementation |

### 4. Goods and Works Contracts Estimated to Cost Less than $1 Million and Consulting Services Contracts Less than $100,000 (Smaller Value Contracts)

54. The following table groups smaller-value goods, works and consulting services contracts for which the activity is either ongoing or expected to commence within the next 18 months.

| Goods and Works | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Package Number** | **General Description** | **Estimated Value** | **Number of Contracts** | **Procurement Method** | **Review** (Prior/Post) | **Bidding Procedure** | **Advertisement Date** (quarter/year) | **Comments** |
| CW01 | Civil works for assessment and certification centers | 300,000.00 | 1 | NCB | Post | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Small Works |
| CW02 | Civil works for selected TVET providers (UB and Gobi Province) | 400,000.00 | 1 | NCB | Prior | 1S1E | Q2 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Small Works<br>Comments: First NCB for Works |
| CW03 | Civil works for selected TVET providers (Western Province) | 400,000.00 | 1 | NCB | Post | 1S1E | Q2 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Small Works |
| CW04 | Civil works for selected TVET providers (Khangai Province) | 400,000.00 | 1 | NCB | Post | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Small Works |
| CW05 | Civil works for selected TVET providers (Central Province) | 400,000.00 | 1 | NCB | Post | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Small Works |
| CW06 | Civil works for selected TVET providers (Eastern Province) | 400,000.00 | 1 | NCB | Post | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Small Works |

| Package Number | General Description | Estimated Value | Number of Contracts | Procurement Method | Review (Prior/Post) | Bidding Procedure | Advertisement Date (quarter/year) | Comments |
|---|---|---|---|---|---|---|---|---|
| GS08 | Textbooks and teaching-learning materials for TVET students and teachers | 380,000.00 | 1 | NCB | Prior | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Goods<br>Comments: First NCB for Goods for MOL |
| GS09 | Equipment and tools (raw materials processing occupation) | 600,000.00 | 1 | ICB | Prior | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS10 | Equipment and tools (auto road transport occupation) | 540,000.00 | 1 | ICB | Prior | 1S1E | Q4 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS11 | Equipment and tools (building construction occupation 1&2) | 855,000.00 | 1 | ICB | Prior | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Domestic Preference Applicable: N<br>Bidding Document: Goods |
| GS12 | Equipment and tools (animal husbandry occupation) | 260,000.00 | 1 | NCB | Post | 1S1E | Q4 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Goods |
| GS13 | Textbooks and teaching-learning materials for technology students and teachers | 180,000.00 | 1 | NCB | Post | 1S1E | Q3 / 2015 | Prequalification of Bidders: N<br>Bidding Document: Goods<br>Comments: First NCB for Goods for MEDS |

| Package Number | General Description | Estimated Value | Number of Contracts | Procurement Method | Review (Prior/Post) | Bidding Procedure | Advertisement Date (quarter/year) | Comments |
|---|---|---|---|---|---|---|---|---|
| GS14 | Equipment and tools (food processing occupation) | 90,000.00 | 1 | Shopping | Post | | Q4 / 2015 | Prequalification of Bidders: N |
| GS15 | Off-the-shelf test bank software | 1,500.00 | 1 | Shopping | Post | | Q4 / 2015 | Prequalification of Bidders: N |
| GS16 | PIU vehicle | 61,000.00 | 1 | Shopping | Post | | Q2 / 2015 | Prequalification of Bidders: N |
| GS17 | PIU furniture | 5,500.00 | 1 | Shopping | Post | | Q2 / 2015 | Prequalification of Bidders: N |
| GS18 | PIU ICT equipment | 12,000.00 | 1 | Shopping | Post | | Q2 / 2015 | Prequalification of Bidders: N |
| GS19 | Software for application and certification management | 50,000.00 | 1 | Shopping | Post | | Q4 / 2015 | Prequalification of Bidders: N |
| GS20 | Online career guidance modules, aptitude tests and other self-exploration tools | 50,000.00 | 1 | Shopping | Post | | Q4 / 2015 | Prequalification of Bidders: N |
| GS21 | Online teacher training course in career guidance | 50,000.00 | 1 | Shopping | Post | | Q3 / 2015 | Prequalification of Bidders: N |
| GS22 | Printing of career guidance modules and materials, assessment tools, and teachers' guides | 30,000.00 | 1 | Shopping | Post | | Q1 / 2016 | Prequalification of Bidders: N |
| GS23 | Printing of teachers' training modules and materials | 25,000.00 | 1 | Shopping | Post | | Q4 / 2015 | Prequalification of Bidders: N |
| GS24 | Printing of TVET manager and teachers' training modules and materials | 10,000.00 | 1 | Shopping | Post | | Q3 / 2015 | Prequalification of Bidders: N |

| Consulting Services | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Package Number** | **General Description** | **Estimated Value** | **Number of Contracts** | **Recruitment Method** | **Review** (Prior/Post) | **Advertisement Date** (quarter/year) | **Type of Proposal** | **Comments** |
| CS05 | Communication specialist | 9,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Communication |
| CS06 | Gender Specialist | 9,600.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Gender |
| CS07 | Equipment specialist | 79,750.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: International<br><br>Expertise: Equipment |
| CS08 | Equipment specialist | 15,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Equipment |
| CS09 | Career guidance specialist | 60,625.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: International<br><br>Expertise: Career guidance |
| CS10 | Career guidance specialist | 18,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Career guidance |
| CS11 | Senior secondary education specialist | 60,625.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: International<br><br>Expertise: Senior secondary education |
| CS12 | Senior secondary education specialist | 15,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Senior secondary education |
| CS13 | Agricultural technology subject specialist | 12,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Agricultural technology |

| Package Number | General Description | Estimated Value | Number of Contracts | Recruitment Method | Review (Prior/Post) | Advertisement Date (quarter/year) | Type of Proposal | Comments |
|---|---|---|---|---|---|---|---|---|
| CS14 | Construction technology subject specialist | 12,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Construction technology |
| CS15 | Mechanical technology subject specialist | 12,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Mechanical technology |
| CS16 | Electrical technology subject specialist | 12,300.00 | 1 | ICS | Prior | Q2 / 2015 | | Assignment: National<br><br>Expertise: Electrical technology |

## B. Indicative List of Packages Required Under the Project

55. The following table provides an indicative list of goods, works and consulting services contracts over the life of the project, other than those mentioned in previous sections (i.e., those expected beyond the current period).

| Goods and Works | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Package Number** | **General Description** | **Estimated Value (cumulative)** | **Estimated Number of Contracts** | **Procurement Method** | **Review** (Prior/Post) | **Bidding Procedure** | **Comments** |
| None | | | | | | | |

| Consulting Services | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Package Number** | **General Description** | **Estimated Value (cumulative)** | **Estimated Number of Contracts** | **Recruitment Method** | **Review** (Prior/Post) | **Type of Proposal** | **Comments** |
| CS17 | M&E specialist | 23,295.00 | 1 | ICS | Prior | | Assignment: National<br>Expertise: M&E |

## C. National Competitive Bidding

56. The procedures to be followed for national competitive bidding shall be those set forth in the Public Procurement Law of Mongolia of 1 December 2005, effective 1 February 2006, as amended on 6 February 2007 and 16 July 2009 (hereinafter referred to as PPLM), with the clarifications and modifications described in the following paragraphs required for compliance with the provisions of ADB's Procurement Guidelines.

(i) The Standard Bidding Documents of Mongolia for Goods and Works that have been approved by ADB as acceptable for ADB-financed projects, together with ADB's clarifications and modifications thereto, shall be used.

(ii) Government-owned enterprises in Mongolia shall be eligible for projects only if they can establish that they: (i) are legally and financially autonomous; (ii) operate under the principles of commercial law; and (iii) are not dependent agencies of the Executing Agency and/or the Implementing Agency.

(iii) If a bid security is required, the bid security shall be in any of the following forms at the bidder's option: (i) a bank guarantee; or (ii) a cashier's or certified check.

(iv) Bidders must be nationals of member countries of ADB, and offered Goods and Works must be produced in and supplied from member countries of ADB. Bidders or potential bidders shall not be required to register with the taxation and other registration authorities of the government as a condition or requirement of bidding or award, leaving these requirements for after award and before signing of contract.

(v) Foreign bidders from eligible countries of ADB shall be allowed to participate in bidding under the same conditions as local bidders and without any domestic preference.

(vi) Prequalification shall not be required, except in the case of large or complex works, and with prior written concurrence of ADB.

(vii) Qualification criteria shall be clearly specified in the bidding documents, and all criteria so specified shall be used to determine whether a bidder is qualified. The evaluation of a bidder's qualifications shall only take into account the bidder's capacity and resources to perform the contract, in particular its experience and past performance on similar contracts, capabilities with respect to personnel, equipment and construction or manufacturing facilities, and financial position. The evaluation of the bidder's qualifications shall be conducted separately from the technical and commercial evaluation of the bid.

(viii) Evaluation and qualification criteria, and submission requirements, to be used in each bidding activity shall be clearly specified in the bidding documents. The evaluation of bids shall be done in strict adherence to the criteria specified in the bidding documents.

(ix) The invitation to bid and the bidding documents shall be prepared in the Mongolian language. If another language will be used, then such other language shall be English.

(x) Bidders shall be requested to extend the validity of their bids only under exceptional circumstances and the Executing or Implementing Agency, as the case may be, shall communicate such request for extension to all bidders before the date of expiry of their bids. When the procurement is subject to ADB's prior review, the Executing or Implementing Agency, as the case may be, shall obtain in a timely manner the prior written concurrence of ADB for the extension of the bid validity period.

(xi) All bids shall not be rejected or new bids invited without ADB's prior written concurrence. No bid shall be rejected merely on the basis of a comparison with

the estimated cost or budget ceiling without ADB's prior written concurrence (with specific reference to Article 30 of the PPLM).

(xii) Negotiations with bidders shall not be undertaken before award of contract, except as provided in Paragraph 2.63 of ADB's Procurement Guidelines (with specific reference to Article 30.2 of the PPLM). A bidder shall not be required, as a condition for award, to undertake obligations not specified in the bidding documents or otherwise to modify its bid as originally submitted.

(xiii) Bidding documents and contracts under national competitive bidding procedures financed by ADB shall include a provision requiring suppliers, contractors and consultants to permit ADB to inspect their accounts and records relating to the bid submission and the performance of the contract by the supplier, contractor and/or consultant, as the case may be, and to have them audited by auditors appointed by ADB, if so required by ADB.

(xiv) At the same time that notification on award of contract is given to the successful bidder, the results of the bid evaluation shall be posted on a well-known freely accessible website (namely Mongolia's Ministry of Finance e-procurement website: www.e-procurement.mn) identifying the bid and lot numbers and providing information on the: (i) name of each bidder that submitted a bid; (ii) bid prices as read out at bid opening; (iii) names of bidders whose bids were rejected and the reasons for their rejection; and (iv) name of the winning bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. The Executing Agency or Implementing Agency, as the case may be, shall respond in writing to unsuccessful bidders who seek explanations on the grounds on which their bids were not selected.

## D. Consultants' Outline Terms of Reference

57. The summary of consulting services for which terms of reference are outlined is shown below.

**Overall Summary of Consulting Services**

| Name of Position | International Person-months | National Person-months |
|---|---|---|
| **Consultants engaged through consulting firm 1 (CBT&A development)** | | |
| Occupational standards, assessment and certification specialist | 5 | 10 |
| Competency-based training curriculum development specialist | 3 | 8 |
| Industry partnership specialist | | 6 |
| Graduate tracer studies specialist | | 6 |
| **Subtotal consulting firm 1** | **8** | **30** |
| **Consultants engaged through consulting firm 2 (TVET management and technical and vocational skills training)** | | |
| Technical and vocational skills training specialist | 4 | |
| Pedagogy and assessment training specialist | | 3 |
| Technical and vocational skills training specialist (agriculture) | | 6 |
| Technical and vocational skills training specialist (construction) | | 6 |
| Technical and vocational skills training specialist (road and transportation | | 6 |
| TVET teacher training and retention policy specialist | | 3 |
| TVET management training specialist | | 6 |
| **Subtotal consulting firm 2** | **4** | **30** |
| **Consultants engaged through consulting firm 3 (TVET facilities upgrading)** | | |
| Expert in civil engineering and architecture | | 8 |
| Civil engineer | | 12 |

| Name of Position | International Person-months | National Person-months |
|---|---|---|
| Environment specialist | | 3 |
| **Subtotal consulting firm 3** | | **23** |
| **Consultants engaged on an individual basis** | | |
| Communication specialist | | 3 |
| Gender specialist | | 3 |
| Equipment specialist | 3 | 5 |
| Career guidance specialist | 2 | 6 |
| Senior secondary education specialist | 2 | 5 |
| Agricultural technology subject specialist | | 4 |
| Construction technology subject specialist | | 4 |
| Electrical technology subject specialist | | 4 |
| Mechanical technology subject specialist | | 4 |
| Project implementation start-up specialist | 5 | |
| M&E specialist | | 5 |
| **Subtotal individual consultants** | **12** | **43** |

CBT&A = competency-based training and assessment, M&E = monitoring and evaluation, TVET = technical and vocational education and training.

### 1. Consultants Engaged Through Firms

#### a) Consulting Firm 1 (CBT&A development)

58. A total of 8 person-months of international and 30 person-months of national consulting services will be engaged through a firm to support the establishment of industry-driven TVET system in the three priority sectors. The firm will be recruited through the QCBS using the quality and cost ratio of 90:10 and the simplified technical proposal procedures. The 90:10 ratio can be justified on the grounds that the assignments are highly complex and a greater priority for quality is required. The following experts will be provided by the firm:

59. **Occupational standards, assessment and certification specialists** (international/team leader, 5 person-months; national, 10 person-months). The international occupational standards, assessment and certification specialist should have a graduate degree in instructional design, training and other relevant disciplines, and at least five years of experience in facilitating Developing a Curriculum (DACUM) occupation profile development workshops and workshops to develop the occupational standards for each task or competency identified on the DACUM chart. The specialists should possess a sound understanding of methodology used in various countries to prepare occupational standards such as Australia and European countries, and to develop and administer skill performance tests and theoretical tests for applicants based on these standards. The national occupational standards, assessment and certification specialist should have a graduate degree in education, curriculum design and development, and/or other relevant disciplines, and at least five years of experience in designing and developing curriculum. Experience with competency-based training and assessment would be a plus. The specialists will work with the Ministry of Labor (MOL), professional and industry associations, sector subcouncils on vocational education and training, and various companies and enterprises in the three priority sectors. Specifically, the specialists will:

(i) As the team leader (international specialist), develop a work plan and guide and coordinate the work of different specialists in the team; ensure the quality of outputs.

(ii) Review existing competency-based training modules and materials for the key occupations in other countries, such as Australia and European countries, and assess whether they are applicable to the Mongolian context; if applicable, develop methodology/procedures to adapt them to the Mongolian context by using

DACUM occupational profile charts and making sure that competency units can be linked to specific tasks on the occupational charts.

(iii) Prepare and deliver a training program to train DACUM facilitators and mentor the newly-trained facilitators in the follow-up period.

(iv) Meet with industry and professional associations, and various enterprises employing workers in the key occupations to explain the DACUM and occupational standards development processes and the role that they must play to create an industry-driven TVET system.

(v) Prepare a plan, in cooperation with industry and professional associations, to develop DACUM occupational profile charts for the key occupations using expert workers selected by employers.

(vi) Guide the panels of experts in the process of developing DACUM for each key occupation.

(vii) Guide enterprises and industry and professional associations in the process of verifying DACUM chart for each key occupation.

(viii) Prepare a plan, in cooperation with industry and professional associations, and sector councils, to develop occupational standards for each key occupation using expert workers and at least two supervisors selected by employers and to revise competency units in existing training modules in other countries based on the validated DACUM charts.

(ix) Guide the process of developing performance standards/criteria and other required information for each task on DACUM chart and revising competency units in existing training modules based on DACUM chart.

(x) Ensure inclusion in the package of occupational standards for each key occupation of: soft skills, work ethics and responsible behavior; self-learning (self-directed learning) skills; and green skills, if appropriate.

(xi) Guide Standards Development Committees in the process of validating, publishing, and distributing occupational standards document to TVET providers, industry and professional associations, enterprises, and trainees and workers in the key occupations.

(xii) Together with the industry partnership specialist, recommend the roles of sector subcouncils in reviewing, approving and registering occupational standards documents and establish procedures for reviewing, approving and registering occupational standards documents; guide sector subcouncils in the process of reviewing, approving and registering occupational standards documents.

(xiii) Monitor the overall processes of developing occupational standards and revising competency units in existing training modules and make interventions as needed to keep the development and validation of standards and the revision of competency units on track and on schedule.

(xiv) Give presentations to stakeholders on the various ways that occupational standards documents can be utilized by TVET providers, competency-based training materials development specialists, ministries and other government agencies, enterprises, assessment and certification centers, and workers/trainees.

(xv) Guide the process of developing and validating quality standards for TVET programs and courses for the key occupations; recommend templates for self-assessment tools and quality improvement plans, and guidelines for preparing self-assessment reports and quality improvement plans based on the validated TVET program and course quality standards; ensure that gender disaggregated data and information are incorporated in the templates and guidelines.

(xvi) Assist the PIU in conducting training for pre-selected TVET providers in the preparation of self-assessment reports and quality improvement plans.

(xvii) Develop a master implementation plan for assessment and certification centers in the three priority sectors that are acceptable to and recognized by the industries and will establish national registries of certified skilled workers in various occupations in the respective sectors.
(xviii) Recommend cost recovery mechanisms for three assessment and certification centers in the priority sectors.
(xix) Guide the process of developing and validating certification guidelines and policies for the key occupations.
(xx) Provide guidance on how the assessment and certification centers should be accredited, established and administered, including training and accreditation of center directors, assessors, test developers, and their accreditation guidelines according to regulations approved by the MOL.
(xxi) Run workshops on how to prepare skill performance tests and theoretical tests that could be used to assess competence and knowledge of trainees and workers at the assessment and certification centers.
(xxii) Prepare a draft articulation strategy to ensure national certificates awarded by the assessment and certification centers are linked to National Qualifications Framework (NQF).

60. **Competency-based training materials development specialists** (international, 3 person-months; national, 8 person-months). The international competency-based training materials development specialist should have a graduate degree in instructional design, training and other relevant disciplines, and at least 7 years of experience in preparing CBT modules and materials based on validated tasks and competencies identified on the DACUM occupation profile chart. The specialist must be familiar with the procedures for designing and setting up a CB modular training course and capable of instructing teachers on how to facilitate student learning in such a system. The specialist should have experience with developing occupational standards and utilizing the information contained in occupational standards documents to prepare training modules and materials. Experience with teaching in apprenticeship or technical and vocational training program would be desirable. The national competency-based training materials development specialist should have a graduate degree in education, curriculum design and development, and/or other relevant discipline, and at least 5 years of experience in developing education and training materials. Experience with CBT and assessment would be a plus. The specialist will work with the MOL and materials development specialists identified from TVET providers in the three priority sectors. Specifically, the specialists will:

(i) Review existing CBC developed in Mongolia and how CBC have been implemented in selected TVET providers, and identify problems and challenges that need to be addressed in the project.
(ii) Develop a master implementation plan, in cooperation with MOL and selected TVET providers, to introduce CBT modules and materials for the key occupations.
(iii) Plan and run workshops for materials development specialists identified from TVET providers, on how to use the DACUM occupation profile chart and the information contained in the occupational standards document to develop CBT modules and materials for each key occupation; how to design the flowchart (logigram) of the training sequence; how to use the DACUM occupation profile and the occupational standards document to adapt Australian training packages to the Mongolian context;
(iv) Guide materials development specialists for the key occupations in producing a set of training materials for tasks/competencies of the occupations which are grouped into three categories: general competencies, basic trade competencies,

and specialized trade competencies; and guide materials development specialists, if appropriate, in adapting Australian training packages to the Mongolian context.

(v) Monitor the production of CBT modules and materials and the adaptation of Australian training packages to the Mongolian context by the materials development specialists to ensure that all modules and materials are developed to expected standards.

(vi) Prepare modules for TVET teachers on techniques for preparing training materials and assessing competencies of students according to the DACUM occupation profile and the occupational standards document for the key occupations, and facilitating student learning and managing the learning environment in a CBT system.

(vii) Ensure that the CBT modules and materials and the adapted Australian training packages for the key occupations will be implemented effectively through provision of support training materials and training equipment and by adequately trained and certified TVET teachers that are capable of instructing trainees in a self-paced, CB learning program/course.

(viii) Guide and monitor the process of introducing the CBT modules and materials or the adapted Australian training packages for the key occupations into selected TVET providers.

(ix) Together with the Graduate Tracer Studies Specialist, conduct an employer satisfaction survey for the first batch of students and graduates completing CB modular training programs and courses for the key occupations to determine if the workers were adequately prepared for the job tasks.

61. **Industry partnership specialist** (national, 6pm). The industry partnership specialist will have a graduate degree in business administration, economics, public policy and other relevant disciplines and at least 10 years of experience in developing partnerships between TVET providers or higher education institutions and industry. The specialist will work with the MOL, sector subcouncils on vocational education and training, selected TVET providers, and industry and professional associations to review and recommend appropriate legal and institutional frameworks for TVET provider-industry partnerships. Specifically, the specialist will:

(i) Review the existing laws and policies on sector subcouncils on vocational education and training and recommend measures to establish and make sector subcouncils functional, especially in the three priority sectors.

(ii) Review the existing laws, policies and systems related to training levy funds and recommend measures to establish and implement national or sectoral training levy funds in the three priority sectors.

(iii) Together with the occupational standards, assessment and certification specialists, recommend the roles of sector subcouncils on vocational education and training in reviewing, approving and registering occupational standards documents and establish procedures for reviewing, approving and registering occupational standards documents; and guide sector subouncils in the process of reviewing, approving and registering occupational standards documents.

(iv) Identify and recommend other potential roles of sector subcouncils on vocational education and training, for instance, in reviewing and endorsing the procedures and criteria for identifying and selecting technical and vocational skills master trainers and industry supervisors/mentors in the key occupations and the lists of master trainers and industry supervisors/mentors, and others.

62. **Graduate tracer studies specialist** (national, 6 person-months). The graduate tracer studies specialist will have a graduate degree in education, training, and social sciences, and at least 10 years of experience in designing and conducting surveys, processing and analyzing survey data. Knowledge and experience with designing, conducting, and analyzing graduate tracer studies and employer satisfaction surveys will be a plus. The specialist will work with the MOL and its agencies to strengthen capacity of selected TVET providers for the conduct and analysis of graduate tracer studies and employer satisfaction surveys. Specifically, the specialist will:

(i) Review the methodology, tools, procedures and databases used for the existing graduate tracer studies in higher education and TVET.
(ii) Develop or adapt methodology, tools, procedures, and database for graduate tracer studies and employer satisfaction surveys for the use of selected TVET providers; and ensure sex disaggregated data are incorporated in the methodology, tools, procedures and database for graduate tracer studies and employer satisfaction surveys.
(iii) Prepare training plan and materials, and conduct training workshops for selected TVET providers on the planning, conduct, analysis and use of graduate tracer studies, and employer satisfaction surveys.
(iv) Guide selected TVET providers in conducting and analyzing graduate tracer studies and employer satisfaction surveys, developing, and maintaining databases.
(v) Together with the occupational standards, assessment, and certification specialists, conduct an employer satisfaction survey for the first batch of students and graduates completing CB modular training programs and courses for the key occupations to determine if the workers were adequately prepared for the job tasks.
(vi) Advise the MOL and selected TVET providers on how to use the results of graduate tracer studies and employer satisfaction surveys to review TVET programs and courses for the key occupations.
(vii) Prepare monitoring reports of graduate tracer studies and employer satisfaction surveys conducted by selected TVET providers.
(viii) Prepare sections on the planning, conduct, analysis and use of graduate tracer studies and employer satisfaction surveys in the handbook for TVET managers.

**b) Consulting Firm 2 (TVET Management and Technical and Vocational Skills Training)**

63. A total of four international and 30 national consulting services will be engaged through a firm to support the establishment of training systems for TVET managers and teachers in the three priority sectors. The firm will be recruited through the CQS. The following experts will be provided by the firm:

64. **Technical and vocational skills training specialist** (team leader, international, 4 person-months). The technical and vocational skills training specialist will have a graduate degree in instructional design, training and other relevant disciplines, and at least 10 years of experience in designing and implementing technical/vocational skills training for TVET teachers. The specialist will work with industry and professional associations, employers, the Ministry of Labor (MOL) and TVET providers in developing and delivering technical and vocational skills training programs for TVET teachers. In addition, as the team leader, the specialist will work with TVET management training specialist, the Academy of Management, the MOL, and other

relevant stakeholders to develop and deliver training programs for TVET managers and prepare a handbook for TVET managers. Specifically, the specialist will:

(i) As the team leader, develop a work plan, and guide and coordinate the work of different specialists in the team; ensure the quality of outputs.

(ii) Develop an overall strategy of industry-based training models for TVET teachers to be endorsed by industry and professional associations, and employers.

(iii) Develop guidelines for industry placement for TVET teachers and internships for students; and ensure that gender related instructions are included in the guidelines.

(iv) Develop procedures and criteria for identifying and selecting industry supervisors/mentors for TVET teachers and interns.

(v) Guide the pedagogy and assessment training specialist in preparing training modules and materials for industry supervisors/mentors to facilitate industry-based training for TVET teachers and interns.

(vi) Develop methods and procedures for collecting and providing information on TVET teacher industry placement and student internship places for industry-based training in the key occupations.

(vii) Revise the procedures for selecting and accrediting TVET providers, professional and industry associations, and other institutions with adequate training capacity which will offer short-term technical/vocational skills training courses for TVET teachers in the key occupations to upgrade their knowledge and skills.

(viii) Assist the MOL and the PIU in selecting and accrediting institutions which will offer short-term technical/vocational skills training courses for TVET teachers in the key occupations.

(ix) Develop procedures and criteria for identifying and selecting technical and vocational skills master trainers in the key occupations; ensure to specify steps to identify female technical and vocational skills master trainers.

(x) Develop an overall structure of the training programs to train technical and vocational skills master trainers for the key occupations, with the occupational standards documents for the key occupations as a reference.

(xi) Guide the technical and vocational skills training specialists in preparing training modules and materials for the training programs for technical and vocational skills master trainers for the key occupations in the respective sectors.

(xii) Ensure that IT skills, technical English skills, O&M of equipment and machinery, technical and vocational skills training pedagogy and assessment methods are incorporated in the overall structure of the training program and technical and vocational skills training modules and materials for the key occupations.

(xiii) Guide the pedagogy and assessment training specialist in preparing training modules and materials on technical and vocational skills training pedagogy and assessment methods for the training program to train technical and vocational skills master trainers for the key occupations.

(xiv) Guide the pedagogy and assessment training specialist and technical and vocational skills training specialists in training technical and vocational skills master trainers on the preparation of training modules and materials for institution-based short-term technical and vocational skills training courses for TVET teachers in the key occupations.

(xv) Develop guidelines on the development of technical and vocational skills teacher training plans for the inclusion in the handbook for TVET managers and conduct workshops for selected TVET providers; ensure that gender targets are included in the technical and vocational sills teacher training plans.

(xvi) Conduct workshops in collaboration with industry and professional associations, employers, local governments, and selected TVET providers on the development of human resources development plans for the key occupations in the three priority sectors including training of TVET teachers and industry supervisors/mentors.
(xvii) With the TVET teacher training and retention policy specialist, recommend incorporation of industry-based training models in TVET Teacher Qualifications Framework.
(xviii) Together with the TVET management training specialist, develop and validate training modules and materials, and a handbook for TVET managers, and provide training and coaching for master trainers of the Academy of Management.
(xix) Prepare progress reports of technical and vocational skills training activities.

65. **Pedagogy and assessment training specialist** (national, 3 person-months). The pedagogy and assessment training specialist will have a graduate degree in instructional design, training, education, and other relevant disciplines, and at least 10 years of experience in developing and implementing technical and vocational skills training pedagogy and assessment methods. The specialist will work with the MOL, the regional methodology centers, and industry and professional associations in developing TVET teacher training on technical and vocational skills training pedagogy and assessment methods for the key occupations. Specifically, the specialist will:

(i) Assess training needs of TVET teachers in technical and vocational skills training pedagogy and assessment methods.
(ii) Prepare training modules and materials on technical and vocational skills training pedagogy and assessment methods for the 'train-the-trainer program' to train technical and vocational skills master trainers for the key occupations.
(iii) Train technical and vocational skills master trainers in the preparation of training modules and materials for institution-based short-term technical and vocational skills training courses for TVET teachers in the key occupations.
(iv) Assess training needs of industry supervisors and mentors who will facilitate training of TVET teachers and interns in enterprises.
(v) Prepare training modules and materials for industry supervisor/mentors.
(vi) Prepare monitoring reports of the implementation of training modules and materials on technical and vocational skills training pedagogy and assessment methods for technical and vocational skills master trainers and industry-based supervisors/mentors.

66. **Technical and vocational skills training specialists** (3 national, 6 person-months each for the three priority sectors). The technical and vocational skills training specialists (agriculture, construction, road and transportation) will have a graduate degree in engineering, technology and other relevant disciplines and at least 10 years of industry experience in the respective sectors. The specialists will work with the MOL, professional and industry associations, employers, and accredited TVET providers to develop and deliver technical and vocational skills training for TVET teachers in the three priority sectors. Specifically, the specialist will:

(i) Assess technical and vocational skills training needs of TVET teachers for the key occupations in the respective sectors with the occupational standards documents as a reference.
(ii) Assess training needs of selected technical and vocational skills master trainers in the key occupations.
(iii) Prepare training modules and materials for the training programs for technical and vocational skills master trainers for the key occupations in the respective sectors.

(iv) Conduct the training programs for technical and vocational skills master trainers of accredited TVET providers, industry and professional associations, and other institutions with adequate training capacity which will offer short-term technical and vocational skills training courses for TVET teachers in the key occupations; ensure that female master trainers are trained.

(v) Train technical and vocational skills master trainers in the preparation of training modules and materials for institution-based short-term technical and vocational skills training courses for TVET teachers in the key occupations.

(vi) Coach technical and vocational skills master trainers in delivering technical and vocational skills training courses for TVET teachers in the key occupations.

(vii) Prepare monitoring reports of the training programs for the key occupations in the respective sectors and the delivery of short-term technical and vocational skills training courses or TVET teachers by the accredited technical and vocational skills training institutions.

67. **TVET teacher training and retention policy specialist** (national, 3 person-months). The TVET teacher training and retention policy specialist will have a graduate degree in human resource management, education and training policy and management, and other relevant disciplines and at least 10 years of experience in human resource management in the public sector, preferably in education or TVET. The specialist will work with the MOL to review laws and policies related to TVET teachers and recommend changes to the existing laws and policies or draft relevant laws and policies. Specifically, the specialist will:

(i) Collect and review data on TVET teachers, including turnover and attrition rates, and recommend a structure of human resource database in TVET sector.

(ii) Review the existing laws and policies related to TVET teachers, including training, remuneration and benefits of TVET teachers.

(iii) Recommend incentive mechanisms for TVET teacher training and retention especially after training.

(iv) Review TVET teacher qualifications framework and recommend revisions to the framework as well as measures to implement the revised framework.

(v) Develop a plan for implementing the TVET teacher qualifications framework.

68. **TVET management training specialist** (national, 6 person-months). The TVET management training specialist will have a graduate degree in education, management, business administration and other relevant disciplines and at least 10 years of experience in conducting training for management staff. Knowledge and experience with TVET will be a plus. The specialist will work with the MOL, the Academy of Management, industry and professional associations, employers, and selected TVET providers in developing training modules for TVET managers and training master trainers of the Academy of Management in delivering training programs for TVET managers. Specifically, the specialist will:

(i) Assess training needs of managers of selected TVET providers in industry-driven TVET management; assess managers' awareness of gender issues in industry-driven TVET system.

(ii) In consultation with the MOL, the Academy of Management, industry and professional associations, employers and selected TVET providers, develop and validate training modules and materials on (a) creating partnerships with industry, (b) developing joint TVET provider-industry programs, (c) identifying and implementing income generating projects/programs, (d) marketing TVET services, (e) performance management/leadership, and (f) others; ensure that gender issues related to industry-driven TVET system are properly addressed.

(iii) Develop self-assessment tools and guidelines for TVET managers including peer-review techniques for assessing the performance of the institution and staff.
(iv) Prepare a training plan for master trainers of the Academy of Management.
(v) Provide training for master trainers of the Academy of Management in management training modules and materials.
(vi) Coach master trainers of the Academy of Management in delivering TVET management training programs.
(vii) Prepare monitoring reports of TVET management training programs at the Academy of Management.
(viii) Prepare a handbook for managers on (a) industry engagement and partnership management, (b) income generating strategies, (c) financial management, (d) staff management, and (e) marketing of TVET courses and programs; and incorporate inputs of different specialists related to graduate tracer studies, the self-assessment report and the quality improvement plan (QIP), TVET teacher technical and vocational skills training plan, and career guidance for students in the handbook; ensure that gender issues related to industry-driven TVET system are properly addressed.

**c) Consulting firm 3 (TVET facilities upgrading)**

69. A total of 23 person-month (national) consulting services will be engaged through a firm to support the upgrading of selected TVET providers and assessment and certification centers. The firm will be recruited through the CQS. The following experts will be provided by the firm:

70. **Expert in civil engineering and architecture** (team leader; national, 8 person-months). The expert in civil engineering and architecture will have a graduate degree in structural engineering or architecture, and at least 10 years of experience in preparing design drawings and supervising building construction and rehabilitation works according to the design drawings. The engineer will assist the PIU, selected TVET providers and assessment and certification centers, and the MOL in preparing design drawings for rehabilitation/refurbishment of training and testing facilities at selected TVET providers and assessment and certification centers and supervising the work of civil works contractors. Specifically, the expert will:

(i) As the team leader, develop a work plan and guide and coordinate the work of different specialists in the team; ensure the quality of outputs.
(ii) Prepare design drawings for rehabilitation/refurbishment of training and testing facilities at selected TVET providers and assessment and certification centers based on their quality improvement plans (QIPs) and through site visits.
(iii) Assist the PIU in preparing bidding documents for civil works; work with the Environment Specialist to ensure that the clauses defined in Appendix B of the simplified environmental assessment and review framework (S-EARF) and all the other requirements in the S-EARF are incorporated in bidding documents.
(iv) Support the PIU and the bid evaluation committee in bid evaluation processes for civil works.
(v) Prepare a construction supervision plan for selected TVET providers and assessment and certification centers where civil works will be carried out.
(vi) Conduct at least two construction supervision missions to each TVET provider and assessment and certification center where civil works are being carried out (at the beginning of civil works and at completion stage) and supervise progress in civil works based on the work schedule submitted by the civil works contractors and according to the design drawings; prepare civil works progress monitoring reports in accordance with the reporting plan.

(vii) In coordination with the state inspection agency, carry out construction completion audits at the end of rehabilitation/refurbishment works to confirm that the works have been done according to the design drawings and prepare construction completion audit reports for certification by the agency.

71. **Civil engineers** (two national, 6 person-months each). The civil engineers will have a graduate degree in civil engineering, and at least 8 years of experience in supervising surface engineering works according to the design drawings. The engineers will assist the PIU, selected TVET providers, assessment and certification centers, and the MOL in supervising the work of contractors for rehabilitation/refurbishment of training and testing facilities at selected TVET providers and assessment and certification centers. Specifically, the engineers will:

(i) Conduct at least two site visits to each TVET provider where civil works are being carried out (at the beginning of civil works and at completion stage) and supervise progress in civil works based on the work schedule submitted by the civil works contractors and according to the design drawings.
(ii) Prepare civil works progress monitoring reports.
(iii) Assist the PIU in managing the civil works contractors and handling delays and non-compliance with design drawings.
(iv) In coordination with the state inspection agency, carry out construction completion audits at the end of the rehabilitation works to confirm that the works have been done according to the design drawings and prepare construction completion audit reports for certification by the agency.

72. **Environment specialist** (national, 3 person-months). The environment specialist will have a minimum of a master's degree in environmental sciences or engineering, and have 10 years of experience in coordinating the implementation of project environmental management plans, preferably in projects financed by international financial institutions. The specialist will assist the MOL and the PIU in coordinating the implementation of the S-EARF. Specifically, the specialist will:

(i) Assist the MOL and the PIU in finalizing the QIP template, including eligibility criteria checklist which should be aligned with those defined in Table 2 of the S-EARF.
(ii) Support the PIU and Regional Methodology Centers (RMCs) to provide training for pre-selected TVET providers and assessment and certification centers on the preparation of QIPs to comply with the S-EARF and generic EMP requirements.
(iii) Review compliance of QIPs prepared by pre-selected TVET providers and assessment and certification centers with eligibility criteria defined in Table 2 of the S-EARF.
(iv) Confirm that civil works do not cause any involuntary resettlement impacts.
(v) Assist the PIU in preparing bidding documents; ensure that the S-EARF including the clauses defined in its Appendix B and the generic EMP (Appendix C) are incorporated in technical specifications which form part of bidding documents; and support the PIU and the bid evaluation committee in bid evaluation processes (compliance with the environment-related specifications to be documented in bid evaluation reports).
(vi) Review and clear, on behalf of the MOL and the PIU, site-EMPs prepared by civil works contractors.
(vii) Support and advise the MOL and the PIU in assessing QIP environmental readiness prior to implementation based on the readiness indicators defined in Step 2.3 of the S-EARF.

(viii) Conduct at least two site visits to each selected TVET provider and assessment and certification center where civil works are being carried out (at the beginning of civil works, and at completion stage).
(ix) Prepare semi-annual progress reports of the S-EARF implementation (including compliance of contractors with obligations, inspection activities and findings, problems encountered during construction and operations, and the relevant corrective actions undertaken).
(x) Assist the selected TVET providers, assessment and certification centers, and contractors in conducting consultations with relevant stakeholders as required, informing them of imminent construction works, and updating them on the latest project development activities.
(xi) Carry out construction completion audits to confirm the regularity and safety of each training and testing facility, equipment unit or system, with the involvement of relevant government agencies.
(xii) Prepare a S-EARF implementation completion report (in English and Mongolian), no later than three months after completion of all civil works supported under the project.

2. **Consultants Engaged on an Individual Basis**

73. **Communication specialist** (national, 3 person-months). The communication specialist will have a graduate degree in communication, political science, and social sciences, and at least 10 years of experience in conducting stakeholder analysis and preparing and implementing communication strategies and plans. Knowledge and experience of issues related to youth unemployment, technical and vocational education and training (TVET), active labor market policies, and grievance redress will be a plus. The specialist will work with the MOL, the Ministry of Education and Science (MEDS) and the PIU to develop and implement communication strategies and plans. Specifically, the specialist will:

(i) Identify stakeholders in TVET and conduct stakeholder analysis in preparation of a communication strategy and plan to market benefits of industry-driven TVET system.
(ii) Prepare a communication strategy to (a) sensitize industry and professional associations, and employers to competency-based training and assessment, and occupational standards; (b) market benefits of TVET and improve public image of TVET; (c) reduce gender stereotyping of occupations, especially in agriculture, construction, and transportation and storage sectors; (d) market TVET programs and courses for the key occupations supported under the project; and (e) sensitize the public to reform policies in the TVET sector.
(iii) Prepare a plan for communication activities targeted at different stakeholders in industry-driven TVET system.
(iv) Assist the MOL in implementing the communication strategy and plan.
(v) Identify stakeholders in career information and guidance for junior secondary students and conduct stakeholder analysis in preparation of a communication strategy and plan to sensitize different stakeholders to the importance of career information and guidance.
(vi) Prepare a communication strategy to (a) sensitize the public to the importance of career information and guidance for junior secondary students; (b) improve coordination and collaboration between different stakeholders in career information and guidance for junior secondary schools; (c) enhance participation of local employers, enterprises, and communities in career information and guidance activities; and (d) address gender issues related to career development.

(vii) Develop a plan for communication activities targeted at different stakeholders in career information and guidance.
(viii) Prepare a communication strategy to (a) sensitize the public to the objectives and processes of senior secondary education reforms; (b) inform students, parents and teachers of different options for senior secondary education created under the reforms; and (c) improve coordination and collaboration between different stakeholders in senior secondary education reforms.
(ix) Develop a plan for communication activities targeted at different stakeholders in senior secondary education reforms.
(x) Assist the MEDS in implementing the communication strategies and plans.
(xi) Prepare a monitoring report template for communication activities.
(xii) Review legal frameworks and institutional arrangements for grievance redress and design a project-specific grievance redress mechanism and administrative tools.
(xiii) Develop communication strategies and plans for the project and assist the PIU in implementing them.

74. **Gender specialist** (national, 3pm). The gender specialist will have a graduate degree in social science, gender studies and other relevant disciplines, and at least 7 years of experience in social development and gender analysis. The specialist will be engaged intermittently for the whole duration of project implementation and work with the MOL, the MEDS, the PIU, and other consultants involved in the implementation and monitoring of the gender action plan (GAP). Specifically, the specialist will:

(i) Ensure that actions and activities specified in the GAP are implemented, monitored and reported and comply ADB's relevant policies.
(ii) Collect sex-disaggregated data to monitor progress in achieving targets of the GAP and to be incorporated with the project performance management system.
(iii) Conduct training for MOL, MEDS, and PIU staff on the project related gender issues.
(iv) Support the public communication specialist, the occupational standards, assessment and certification specialists, the technical and vocational skills training specialists, the graduate tracer studies specialist, the TVET management training specialist, and the career guidance specialists to carry out actions and activities specified in the GAP.
(v) Prepare quarterly report templates in English and Mongolian, which will be incorporated with the project quarterly and annual report templates.
(vi) Prepare quarterly reports at least for the first year of project implementation and train PIU staff in preparing reports.

75. **Equipment specialists** (international, 3 person-months; national, 5 person-months). The international equipment specialist will have a graduate degree in engineering, technology or other relevant disciplines, and at least 7 years of experience in procuring equipment used in agriculture, construction, road and transportation, and mechanical and electrical technology industries. The international specialist should have knowledge and experience of ADB's Procurement Guidelines (2013, as amended from time to time). The national equipment specialist will have a graduate degree in engineering, technology or other relevant disciplines and at least 5 years of experience in procuring equipment used in the above industries. The specialist will work with industry and professional associations, selected TVET providers and assessment and certification centers, independent senor secondary schools, the MOL, the MEDS, and the PIU, to prepare technical specifications for training and testing equipment for the key occupations in the three priority sectors and equipment and tools for technology laboratories of independent senior secondary schools. Specifically, the specialist will:

(i) Conduct visits to selected TVET providers and assessment and certification centers to assess the condition of training and testing equipment and verify their qualify improvement plans (QIPs) of selected TVET providers and assessment and certification centers.
(ii) Based on the QIPs of selected TVET providers and assessment and certification centers and visits to enterprises in the three priority sectors, prepare technical specifications of training and testing equipment.
(iii) Based on policy and curriculum documents for senior secondary technology subjects and visits to enterprises in agriculture, construction, mechanical and electrical technology industries, prepare technical specifications of equipment and tools for technology laboratories of independent senior secondary schools.
(iv) Assist the PIU in preparing procurement packages and bidding documents of training and testing equipment for the key occupations, and equipment and tools for technology laboratories of independent senior secondary schools; ensure that equipment maintenance plans, user training, and equipment maintenance and repair services at least for the duration of the project form part of procurement packages.
(v) Support the PIU and the bid evaluation committee in bid evaluation processes.
(vi) Assist the PIU, selected TVET providers, assessment and certification centers, and independent senior secondary schools in supervising the delivery of equipment and ensuring the suppliers' compliance with technical specifications.
(vii) Conduct site visits to selected TVET providers, assessment and certification centers, and independent senior secondary schools to inspect equipment delivered by the suppliers.
(viii) Advise selected TVET providers, assessment and certification centers, and independent senior secondary schools on how to securely keep equipment and tools to avoid theft and misuse.
(ix) Monitor the process of procuring training and testing equipment for TVET providers and assessment and certification centers, and technology laboratory equipment and tools and keep it on track and on schedule.

76. **Career guidance specialists** (international, 2 person-months; national 6 person-months). The international career guidance specialist will have a graduate degree in education, psychology, counseling, and other relevant disciplines, and at least 7 years of experience in career guidance and counseling for students, preferably in secondary education. The international specialist should have knowledge and experience of gender issues related to career guidance and counselling. The national career guidance specialist will have a graduate degree in education, psychology, counselling and other relevant disciplines and at least 5 years of experience in career guidance and counselling for students. The specialist will work with the MEDS, employers, industry and professional associations, pre-service and in-service teacher training institutions, Institute of Education, and National Evaluation Center to facilitate working groups to produce a comprehensive set of training modules for career guidance which will be integrated with eighth and ninth grade civic education subject. The specialist will also work with the MOL, selected TVET providers, local governments, employers, and industry and professional associations to provide career information and guidance for students of selected TVET providers. Specifically, the specialist will:

(i) Facilitate workshops to develop and validate lifelong career development competencies recommended for eighth and ninth grade students; ensure that gender related issues in career development are properly identified.
(ii) Guide working groups to develop, review, pilot, and revise career guidance modules, materials, assessment tools, aptitude tests and self-exploration tools for

eighth and ninth grade students, and teachers' guides to integrate career guidance in eighth and ninth grade civic education; ensure that separate career information and guidance for female and male students, if necessary, are incorporated in the modules, materials and tools.

(iii) Guide working groups to develop, review, pilot and revise teacher training modules and materials on career guidance for eighth and ninth grade teachers.

(iv) Facilitate workshops to develop and validate teachers' competency to provide career guidance for eighth and ninth grade students; and ensure that competency related to gender-sensitive career guidance is identified.

(v) Guide working groups to develop, review, pilot and revise teacher training modules and materials and online training courses on career guidance; ensure that units on gender issues related to career development are included in the modules, materials and course.

(vi) Facilitate training workshops for teacher educators of pre-service teacher training institutes who will train eighth and ninth grade teachers in career guidance.

(vii) Recommend ways to integrate training modules and materials on career guidance into pre-service teacher education curriculum.

(viii) Monitor the processes of training eighth and ninth grade teachers in career guidance and implementing career guidance for all junior secondary schools and prepare progress reports; ensure that sex-disaggregated data are collected for planning and monitoring.

(ix) Guide the adaptation of eighth and ninth grade career guidance modules and materials for TVET students.

(x) Facilitate training for teachers of selected TVET providers on career guidance; and

(xi) Monitor the process of training teachers of selected TVET providers and implementing career guidance at selected TVET providers and prepare progress reports.

77. **Senior secondary education specialists** (international, 2 person-months; national, 5 person-months). The international senior secondary education specialist should have a graduate degree in education, education and training administration, and other relevant disciplines and at least 7 years of experience in formulating and implementing policies, preferably on senior and post-secondary education. The national senior secondary education specialist should have a graduate degree in education, education and training administration, and other relevant disciplines and at least 7 years of experience in researching and advising the government on education policies. The specialist will work with the MEDS, the Institute of Education, the National Evaluation Center, pre-service teacher education institutions, the Teacher Development Palace, higher education institutions and other relevant stakeholders as well as the MOL and TVET providers to develop and implement the model of independent senior secondary schools which offer specialized occupation-oriented elective courses whose credits can be transferred to higher education and TVET institutions. Specifically, the specialist will:

(i) Review concept papers and other policy documents on the independent senior secondary school model;

(ii) Guide working groups to develop, review and validate guidelines for independent senior secondary schools which offer specialized occupation-oriented elective courses, covering quality assurance mechanisms, entrance exam/evaluation/assessment methods and tools, and documents detailing institutional arrangements for establishing a credit transfer system between independent senior secondary schools, higher education and TVET institutions within the national qualifications framework;

(iii) Facilitate workshops to develop and validate a training plan for school principals on the guidelines for independent senior secondary schools which offer occupation-oriented technology elective courses;
(iv) Guide working groups to develop, review and validate curriculum framework for occupation-oriented technology elective courses to be offered by independent senior secondary schools, including textbooks, teaching-learning materials, equipment and tools, and partnerships with industries and employers;
(v) Together with the Technology Subject Specialists, guide working groups to develop, review and validate curricula for agricultural, construction, electrical and mechanical technology elective courses, lists of textbooks and teaching-learning materials, equipment and tools, and suggested partnership programs with industries and employers;
(vi) Guide working groups to develop, review and validate en evaluation/assessment framework for occupation-oriented technology elective courses, including entrance exams, formative assessments, and summative evaluations;
(vii) Together with the technology subject specialists, guide working groups to develop, review and validate entrance exam/assessment/evaluation methods for agricultural, construction, electrical and mechanical technology elective courses;
(viii) Facilitate workshops to develop and validate an overall training strategy for technology subject teachers;
(ix) Together with the technology subject specialists, guide working groups to develop and validate training plans for technology teachers who teach agricultural, construction, electrical, and mechanical technology elective courses;
(x) Assist the MEDS in identifying/establishing an institution which ensures institutional and course quality of independent senior secondary schools to implement the credit transfer system with higher education institutions and develop a training plan for assessors of institutional and course quality;
(xi) Guide working groups to develop, review and validate credit transfer arrangements between independent senior secondary schools and TVET providers and to assist the MOL and the MEDS in developing policy documents and institutional arrangements; and
(xii) Monitor the processes of developing guidelines, frameworks and plans and implementing the model of independent senior secondary schools which offer occupation-oriented technology elective courses and prepare progress reports.

78. **Technology subject specialists** (4 national, 4 person-months each for agricultural technology, construction technology, electrical technology, and mechanical technology). The specialist should have a graduate degree in agriculture, engineering, technology and other relevant disciplines and substantial experience in developing curriculum, textbooks, and teaching-learning materials. Experience in developing partnership programs with industries and employers is a plus. The specialist will work with the MEDS, the Institute of Education, the National Evaluation Center, higher education institutions, pre-service teacher education institutions, the Teacher Development Palace and other relevant stakeholders to develop curricula, textbooks, teaching-learning materials, entrance exam/assessment/evaluation methods and tools for occupation-oriented technology elective courses. Specifically, the specialist will:

(i) Review technology subject curricula, textbooks, teaching-learning materials, equipment and tools used in senior secondary schools, higher education and TVET institutions in their respective fields (agricultural technology, construction technology, electrical technology, and mechanical technology).
(ii) Together with the senior secondary education specialists, guide working groups to participate in the development and validation of a methodology/process to

develop, review and validate curricula for agricultural, construction, electrical and mechanical technology elective courses, lists of textbooks and teaching-learning materials, equipment and tools, and suggested partnership programs with industries and employers in accordance with the overall curriculum framework for occupation-oriented technology elective courses.

(iii) Together with the senior secondary education specialists, guide working groups to develop, review and validate entrance exam/assessment/evaluation methods for agricultural, construction, electrical and mechanical technology elective courses in accordance with the overall evaluation/assessment framework for occupation-oriented technology elective courses.

(iv) Together with the senior secondary education specialists, guide working groups develop and validate training plans for technology teachers who teach agricultural, construction, electrical, and mechanical technology elective courses in accordance with the overall training strategy.

(v) Guide working groups to develop, review, and validate training modules and materials for technology subject teachers who teach agricultural, construction, electrical, and mechanical technology elective courses.

(vi) Monitor the processes of developing curricula, lists of textbooks, teaching-learning materials, equipment and tools, entrance exam/assessment/evaluation methods and tools, training plans, modules and materials for technology subject teachers and prepare progress reports.

79. **Project implementation start-up specialist** (international, 5 person-months). The project implementation start-up specialist will have a graduate degree in business administration, project management, and other relevant disciplines and at least 10 years of experience in implementing projects funded by international financial institutions, preferably, ADB. The specialist will work with the PIU, the MOL, and the MEDS to support the establishment of project management system. The duration of the assignment will be about 12 months. Through two to three long-term missions to Mongolia, the specialist will:

(i) Review project management manuals of the PIU for projects funded by international financial institutions, in particular, ADB.

(ii) Prepare a project management manual for the project, taking into account the national laws and regulations, ADB's guidelines, policies and requirements, and covering disbursement, financial management, procurement, monitoring, and reporting.

(iii) Establish a system for quarterly monitor and verify the application of the knowledge gained through training.

(iv) Train PIU staff, and officials of the executing and implementing agency in key project management functions, including procurement, financial management, disbursement, monitoring and reporting.

(v) Review internal audit functions of the executing and implementing agency, and recommend an action plan including training and development of internal audit checklists.

(vi) Prepare quarterly and annual report templates and establish project performance management system at PIU, and prepare sample reports for the first and second quarters of the project implementation.

(vii) Assist PIU staff, and officials of the executing and implementing agency in preparing procurement, recruitment and disbursement related documents for ADB review.

(viii) Coach PIU staff in day-to-day project management.

80. **Monitoring and evaluation specialist** (national, 5 person-months). The M&E specialist will a graduate degree in public policy, social sciences and other relevant disciplines and at least 7 years of experience in conducing M&E under projects funded by international financial institutions, preferably, ADB. The specialist will work with the PIU, the MOL, and the MEDS to conduct M&E of project activities and assist the PIU, the MOL and the MEDS in preparing a project completion report. Specifically, the specialist will:

(i) Review the project documents, quarterly and annual progress reports, consultants and contractors' reports and other relevant documents to get the whole picture of project activities since the beginning.

(ii) Prepare methodology and tools to collect data and information to conduct M&E of project activities in view of preparing a project completion report.

(iii) Draft a project completion report on behalf of the MOL and the MEDS which includes (a) evaluation of performance in terms of achievements of the project's performance targets, (b) performance of contractors and consultants funded under the project, (c) analysis of problems encountered during project implementation, (d) preliminary assessment of the sustainability of project activities, (e) lessons learned, and (f) recommendations for the MOL, the MEDS and ADB.

(iv) Undertake evaluation of specific project activities at the request of the MOL, the MEDS, and ADB.

# VII. SAFEGUARDS

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

## A. Environment

82. The project is classified as category C for environment. A simplified environmental assessment and review framework (S-EARF) including a generic environmental management plan (generic EMP) was prepared in compliance with ADB's Safeguard Policy Statement (2009) and the Government of Mongolia's regulatory framework. The S-EARF and its generic EMP are included in Appendix 3 of the PAM. The S-EARF defines the procedure to be followed by the MOL, the PIU, the Regional Methodology Centers, selected TVET providers, assessment and certification centers, the consulting firm for TVET facilities upgrading (expert in civil engineering and architecture, civil engineers, and environment specialist), and civil works contractors for the avoidance or mitigation of adverse environmental effects that may arise out of repair and refurbishment of facilities of selected TVET providers and assessment and certification centers, from their eligibility assessment and selection by the MOL to the rehabilitation of facilities by civil works contractors. The generic EMP defines all potential impacts of repair and refurbishment works and the mitigation and protection measures, monitoring requirements, and institutional responsibilities to ensure proper environmental management throughout the pre-upgrading, upgrading and operation processes of facilities.

83. The Government of Mongolia, through the MOL, will be responsible for ensuring selected TVET providers and assessment and certification centers to be upgraded and operated in accordance with (i) the national environmental, health and safety laws, regulations, procedures, and guidelines; and (ii) the S-EARF and its generic EMP. The PIU, with the support of the consulting firm for TVET facilities upgrading, will be responsible for overseeing the implementation of the S-EARF and its generic EMP, including preparation of bidding documents, supervision of civil works contractors, monitoring and reporting of the S-EARF implementation.

## B. Indigenous Peoples

84. The project is classified as category C for indigenous peoples. The assessment determined that no negative impact will exist for indigenous peoples. Therefore, no indigenous peoples plan or indigenous peoples planning framework is required. When TVET providers are selected, due diligence will be conducted to confirm that there is no negative impact on indigenous peoples.

## C. Involuntary Resettlement

85. The project is classified as category C for involuntary resettlement. The project involves minor civil works which will be carried out on existing government land and no land acquisition and resettlement impacts are anticipated. When TVET providers are selected, due diligence will be conducted to confirm that there is no resettlement impact. In case of unanticipated resettlement impacts during project implementation, land acquisition and resettlement activities will be conducted in accordance with ADB's Safeguard Policy Statement (2009). A resettlement plan will need to be prepared and submitted to ADB for approval prior to commencement of civil works.

# VIII. GENDER AND SOCIAL DIMENSIONS

86. A social, poverty and gender analysis was undertaken in accordance with the Asian Development Bank (ADB) guidelines. The analysis assisted in developing the design and implementation measures of the project.

## A. Poverty and Social Issues

87. Although Mongolia's poverty headcount ratio at national poverty line has been steadily in decline in recent years (from 38.7% in 2010 to 27.4% in 2012[30]), the overall decline disguises persistent inequalities in wealth distribution. For instance, the poverty headcount ratio has been significantly higher in rural areas than in urban areas (e.g., 35.5% in rural areas and 23.2% in urban areas in 2012). Some of major factors contributing to poverty are unemployment and low productivity and unstable employment. While the unemployment rate has been declining since 2009 after the crisis hit the country's economy, it stood at 8.2% at the national level in 2012 with higher rates for urban areas (9.7%) and youths aged 20 to 24 (18.3% for women, 16.1% for men). The incidence of unemployment in urban areas, in particular, Ulaanbaatar, was considered much higher than the official figure (7.1%) as there was supposedly a large number of unregistered unemployment which was likely to be found among migrants. Even though the unemployment rate for rural areas was relatively lower (6.5%), considering that the majority of employment was in low productivity animal husbandry which is highly seasonal, the quality of employment, including underemployment, remains an issue.

88. The project will contribute to enhancing the chance of sustainable and productive employment, especially in the agriculture, construction, road and transportation sectors whose share of employment currently accounts for more than 45%, and thereby reducing poverty. The project will directly benefit young students enrolled in selected TVET providers who generally come from poorer families and are academically less successful, and adult students who are unemployed or look for better employment opportunities. TVET is an affordable option for many. Public TVET providers charge no tuition fee and offer most dormitories and teaching-learning materials for free. Moreover, the government provides monthly stipends for young TVET students under 24 years old who study there for the first time. The project will prioritize TVET providers in remote and disadvantaged areas if they meet basic requirements to offer TVET programs and courses for the key occupations and present self-assessment reports and quality improvement plans which fulfill selection criteria. About 15,500 students will complete CBT programs (3,500) and courses (12,000) for the key occupations which meet standards set in collaboration with industry and professional associations, and employers and, therefore, are expected to have better opportunities for employment. The project will reach eighth and ninth grade students in all junior secondary schools (99,920 in the academic year 2012/2013) with career information and guidance in order to help them make an informed choice between TVET programs, and between TVET and senior secondary education, and to better prepare them for the world of work. Better preparation in earlier grades is essential to counteract the high unemployment rate for youths.

## B. Gender Impact

89. The project is designed to be gender equity theme as the project will directly address gender equality and/or women's empowerment by narrowing gender disparities through access to TVET. TVET generally enrolls fewer female (45.6%) than male students, whereas senior

[30] World Development Indicators. The World Bank.

secondary and tertiary education has been enrolling more female (e.g., 54.1% at senior secondary level and 58.3% at tertiary level in SY2012/13) than male students. The main reason is that female students generally do not choose occupations needed by employers in those sectors (female enrollments in TVET in the three sectors constituted 27.3% in agriculture, 5.1% in construction, 11.9% in road and transportation in SY2011/12, while women in employment accounted for 46.8% in agriculture, 21.1% in construction, and 19.8% in transportation and storage in 2012). The unemployment rate for young women aged 20 to 24 has been higher (e.g., 18.3% in 2012) than that for young men (16.1%). The gap gets narrower as they grow older. The project will address the labor market entry problem for female students in TVET and secondary education by providing gender sensitive career guidance in eighth and ninth grades. A gender action plan (see Table on the next page) has been developed for the project to make sure that gender disparities are addressed. The plan ensures the collection of sex-disaggregated data for planning and decision support and M&E; gender sensitivity for public communication and consultations; the participation of female management staff and teachers in training; the identification and training of female master trainers; the participation of female students in internship; the development of gender sensitive career guidance modules; and training of eighth and ninth grade teachers in gender sensitive career guidance.

90. The MOL through the PIU will oversee the implementation of the gender action plan. The agencies responsible and the resources needed to implement the gender action plan (GAP) are detailed in the plan. The PIU, assisted by the gender specialist, will be responsible for overall implementation and monitoring of GAP. Consultants' outline terms of reference include tasks identified in the gender action plan. Various stakeholders will participate in the implementation of the gender action plan through workshops and training. The gender actions and indicators specified in the GAP will be monitored in the project performance management system and reported in the PIU reports, and will be reviewed during ADB review missions.

## GENDER ACTION PLAN

| Outputs | Gender Objectives | Activities | Indicators/Targets | Responsible Agency(s) | Budget |
|---|---|---|---|---|---|
| **Output 1**<br>Industry-driven TVET system established in the three priority sectors | Reduce gender stereotyping of occupations in the three priority sectors | Ensure gender sensitivity for public communication and consultations | Gender sensitive communication strategy and plan developed<br><br>Number of workshops conducted by using gender sensitive communication strategy and plan | Communication specialist<br><br>PIU | Remuneration for public communication specialist (national, 3 person-months)<br><br>Included in the budget for workshops |
| **Output 2**<br>Selected TVET providers upgraded to implement CBT&A in the three priority sectors | Ensure the participation of female management staff and teachers in training<br><br>Ensure the participation of female students in internship | Include in self-assessment report and quality improvement plan templates sex-disaggregated data (student enrollments, teachers, and managers)<br><br>Require gender targets in technical and vocational skills teachers training plans prepared by selected TVET providers<br><br>Include gender related instructions in guidelines for internship<br><br>Design methodology and tools for graduate tracer studies and employer satisfaction surveys to collect and analyze sex-disaggregated data | 30 managers of the selected TVET providers trained in industry-driven TVET management by 2018, of which about 33% are female managers<br><br>170 teachers trained in technical and vocational skills for the key occupations by 2019, of which 35% are female teachers<br><br>50 teachers trained in technical and vocational skills for the key occupations through industry placement by 2019, of which 30% are female teachers<br><br>350 students completed internship by 2019, of which 29% are female students<br><br>15,500 students have completed CBT programs and courses, of which about 18% are female students | Occupational standards, assessment and certification specialists<br><br>Standards development committees<br><br>PIU<br><br>Selected TVET providers<br><br>Technical and vocational skills training specialist<br><br>Graduate tracer studies specialist | Remuneration for occupational standards, assessment and certification specialists (international, 5 person-months; national, 10 person-months)<br><br>Included in budget for workshops<br><br>Remuneration for technical and vocational skills training specialist (international, 4 person-months)<br><br>Remuneration for graduate tracer studies specialist (national, 6 person-months) |
| **Output 3**<br>Training systems for TVET managers and teachers | Adequately address gender issues related to industry-driven | Identify gender issues related to industry-driven TVET system and include measures to address the issues in training modules and | Training modules and handbook for TVET managers developed with measures to address gender issues related to industry-driven | TVET management training specialist | Remuneration for TVET training specialist (national, 6 person-months) |
| **Outputs** | **Gender** | **Activities** | **Indicators/Targets** | **Responsible** | **Budget** |

| | Objectives | | | Agency(s) | |
|---|---|---|---|---|---|
| established in the three priority sectors | TVET system<br>Ensure the involvement of female trainers in the delivery of training programs | handbook for TVET managers<br>Include actions to identify and select female master trainers in the procedures for identifying and selecting master technical/vocational skills trainers | TVET system<br>30 master technical and vocational skills trainers identified and trained, of which about 17% are female | Technical and vocational skills training specialists<br><br>PIU | Remuneration for technical and vocational skills training specialists (international, 4 person-months; 3 national, 6 person-months each)<br><br>Included in the budget for workshops |
| **Output 4**<br>Secondary education career guidance and schools that specialize in technology supported | Ensure gender sensitivity in career guidance<br><br>Ensure the participation of female teachers, and non-teaching and management staff in training | Identify gender issues related to career development and include, if necessary, separate career information and guidance for female and male students in career guidance modules and materials<br><br>Include units on gender issues related to career development in career guidance training modules and materials for eighth and ninth grade teachers<br><br>Collect sex-disaggregated data on eighth and ninth grade teachers for planning and monitoring training in career guidance | Gender-sensitive career guidance modules and materials developed<br><br>90% of eighth and ninth grade teachers trained in gender sensitive career guidance, of which 70% are female teachers | Career guidance specialists<br><br>PIU<br><br>Junior secondary schools | Remuneration for career guidance specialists (international, 2 person-months; national, 6 person-months)<br><br>Included in the budget for project management |
| **Output 5**<br>Effective project management system established | Ensure implementation, monitoring and quarterly reporting of the gender action plan | Collect and analyze sex-disaggregated data for planning, monitoring and reporting | PIU reports including analysis of progress in gender-related indicators | Gender specialist<br><br>PIU | Remuneration for gender specialist (national, 3 person-months)<br><br>Included in the budget for project management |

CBT = competency-based training, CBT&A = competency-based training and assessment, PIU = project implementation unit, TVET = technical and vocational education and training.

# IX. PERFORMANCE MONITORING, EVALUATION, REPORTING AND COMMUNICATION

## A. Project Design and Monitoring Framework

| Design Summary | Performance Targets and Indicators with Baselines | Data Sources and Reporting Mechanisms | Assumptions and Risks |
|---|---|---|---|
| **Impact**<br>Increased employment in the three priority sectors | **By 2020**<br>Number of workers in the three priority sectors increased by 4.0% (2012 baseline: 485,300)<br><br>Employment rates of graduates from TVET programs and courses in the three priority sectors increased to 60.0% (2012 baseline: 55.6%)[a] | Labor force surveys<br><br>MOL statistics; TVET graduate tracer studies | **Assumption**<br>Government continues to support key development policies<br><br>**Risk**<br>Volatile labor market demands |
| **Outcome**<br>Enhanced responsiveness of the TVET system to labor market demand in the three priority sectors | **By 2019**<br>15,500 students have obtained completion certificates of CBT programs and courses for the key occupations in the priority sectors developed in collaboration with employers, and industry and professional associations, of which 2,800 (18.1%) are female students (2012 baseline: 14.8%)[b]<br><br>3,000 students certified in the key occupations at the assessment and certification centers<br><br>Eighth and ninth grade students in all schools have gender sensitive career guidance integrated with civic education curriculum | MOL reports; reports of the selected TVET providers<br><br>MOL reports; reports of assessment and certification centers<br><br>MEDS reports; M&E reports | **Assumption**<br>Enrollment in TVET programs and courses remains at the current level<br><br>**Risk**<br>Political risks, including a change in leadership, affect project implementation |
| **Outputs**<br>1. Industry-driven TVET system established in the three priority sectors | **By 2017**<br>Standards for 15 key occupations validated with employers and industry and professional associations in the three priority sectors<br><br>Assessment and certification centers established in collaboration with employers and industry and professional associations in the three priority sectors | MOL reports; standards submitted to sector subcouncils for approval<br><br>MOL reports; reports of assessment and certification centers | **Risks**<br>Employers and industry and professional associations, and employers unable to reach consensus on standards for key occupations<br><br>Change in political leadership may affect priorities of MOL and institutional arrangements for assessment and certification |
| 2. Selected TVET providers upgraded to implement | 20 selected TVET providers with upgraded equipment and facilities offering CBT programs and courses for the key occupations in the priority | MOL reports; reports of the selected TVET providers; M&E reports | **Risks**<br>Insufficient number of students enroll in programs and courses |

| | | | |
|---|---|---|---|
| CBT&A in the three priority sectors | sectors by 2017<br>30 managers of the selected TVET providers trained in industry-driven TVET management by 2018, of which 10 are female managers<br>170 teachers of the selected TVET providers trained in TVS for the key occupations by 2019, of which 60 are female teachers<br>50 teachers of the selected TVET providers trained in TVS for the key occupations through industry placement by 2019, of which 15 are female teachers<br>350 students completed internship for key occupations in the priority sectors by 2019, of which 100 are female students | MOL reports; reports of the Academy of Management<br>MOL reports; reports of the selected TVET providers; M&E reports<br>MOL reports; reports of the selected TVET providers; M&E reports<br>MOL reports; reports of the selected TVET providers; M&E reports | for key occupations<br>Change in management of TVET providers may affect level of commitment to quality improvement<br>Teachers may leave their posts for better-paying jobs after training<br>Employers unwilling to accept teacher placement and interns |
| 3. Training systems for TVET managers and teachers established in the three priority sectors | **By 2016**<br>Training program for managers on industry-driven TVET management developed and delivered at the Academy of Management<br>30 master technical and vocational skills trainers identified and trained, of which about 5 are female<br>TVS training programs for teachers developed and delivered for the key occupations at accredited training institutes in the priority sectors | MOL reports; reports of the Academy of Management<br>MOL reports; M&E reports<br>MOL reports; reports of TVS training providers for teachers | **Risk**<br>Change in political leadership may affect institutional arrangements for TVET manager and teacher training |
| 4. Secondary education career guidance and schools that specialize in technology supported | **By 2019**<br>Eighth and ninth grade civic education curriculum that integrates gender sensitive career guidance modules and materials implemented in all schools<br>90% of eighth and ninth grade teachers trained in gender sensitive career guidance, of which 70% are female teachers<br>30 independent senior secondary schools offered occupation-oriented technology elective courses | MEDS reports; M&E reports<br>MEDS reports; M&E reports<br>M&E reports; M&E reports | **Risks**<br>Potentially heavy workload for teachers in secondary schools<br>Lack of coordination among key stakeholders and with other initiatives may jeopardize the implementation of independent senior secondary schools |
| 5. Effective project management system established | Project performance management system established; baseline data collected (disaggregated by gender, income group, area, TVET provider or school, and occupation); and quarterly and annual reports generated | Quarterly and annual reports | **Risk**<br>Change in political leadership may affect key staff involved in project implementation |

| | | | |
|---|---|---|---|
| | Progress in achieving gender action plan targets monitored and reported | Quarterly and annual reports | |

| **Activities with Milestones** | **Inputs** |
|---|---|
| **1. Industry-driven TVET system established in the three priority sectors**<br>1.1 Develop occupational profile charts and standards documents and validate for 15 key occupations in the priority sectors (2015)<br>1.2 Review the role of sector sub-councils in developing, approving and registering standards, and assessment and certification (2015)<br>1.3 Develop and validate CBT materials, and assessment criteria and methods for 15 key occupations in the priority sectors (2015–2016)<br>1.4 Identify and accredit institutions that will become assessment and certification centers for the three priority sectors (2015–2016)<br>1.5 Identify, train, and accredit directors, assessors, and test developers of three assessment and certification centers (2015–2016)<br>1.6 Develop and validate assessment instruments, tools, and procedures; and certification policies and guidelines for 15 key occupations in the priority sectors (2015–2016)<br>**2. Selected TVET providers upgraded to implement CBT&A in the three priority sectors**<br>2.1 Finalize the list of selected TVET providers to upgrade based on self-assessment reports, quality improvement plans, and environmental assessment and review framework; and procure equipment and minor civil works (2015–2016)<br>2.2 Implement CBT programs and courses for the key occupations at selected TVET providers (2016–2019)<br>2.3 Prepare and validate human resource development plans in the three priority sectors (2015–2016)<br>2.4 Develop and validate guidelines for industry placement for TVET teachers and internships for students (2015–2016)<br>2.5 Train industry supervisors and mentors for industry placement for TVET teachers and internships for students (2016–2019)<br>2.6 Train selected TVET providers in conducting graduate tracer studies and employer satisfaction surveys (2015–2017)<br>**3. Training systems for TVET managers and teachers established in the three priority sectors**<br>3.1 Develop and validate training modules and materials for managers on industry-driven TVET management and train master trainers of the Academy of Management (2015)<br>3.2 Develop, validate and conduct training programs for master TVS trainers for the key occupations (2015–2016)<br>**4. Career guidance and technology-specialized schools supported in secondary education**<br>4.1 Develop, pilot, and validate career guidance modules and materials, assessment and evaluation tools, aptitude tests and self-exploration tools, and teachers' guides (2015–2016)<br>4.2 Develop, pilot and validate teacher career guidance training modules and materials, and online teacher training course on career guidance (2015–2016)<br>4.3 Train teacher educators at pre-service teacher training institutes to deliver training on career guidance for eighth and ninth grade teachers (2016)<br>4.4 Develop and validate guidelines for independent senior secondary | **Loan**<br>**ADB: $25 million**<br>**Government:$3.59 million** |

| | |
|---|---|
| schools, quality assurance mechanisms, evaluation and assessment methods and tools, and documents detailing institutional arrangements for establishing a credit transfer system for independent senior secondary schools (2015)<br>4.5 Train technology teachers in curriculum; teaching-learning materials, equipment ,and tools; and evaluation and assessment methods and tools (2015–2016)<br>**5. Effective project management system established**<br>5.1 Establish a PIU and train staff in disbursement, procurement, financial management, environmental management, M&E, and reporting (2015)<br>5.2 Train staff of the executing and implementing agencies in project management (2016–2018) | |

CBT = competency-based training, CBT&A = competency-based training and assessment, M&E = monitoring and evaluation, MEDS = Ministry of Education and Science, MOL = Ministry of Labor, PIU = project implementation unit, PPMS = project performance management system, TVET = technical and vocational education and training.

[a] The baseline employment rate in 2012 was 55.6% for graduates from all TVET programs and courses.

[b] The baseline is the percentage of female enrollments in programs and courses in the three priority sectors in SY2011/2012 as sex disaggregated data on graduates from programs and courses in the three priority sectors are not available.

Source: Asian Development Bank.

## B. Monitoring

91. **Project performance monitoring.** Promptly after loan effectiveness, the PIU, with the support of the project implementation start-up specialist, will establish a comprehensive project performance management system by specifying quarterly and annual performance targets and indicators, data sources and reporting mechanisms, collecting baseline data disaggregated by gender, by income group, by area, by TVET provider/school, and by occupation, and planning M&E activities, in order to generate quarterly and annual reports. The basis for performance monitoring will be the DMF which identifies the key performance targets and indicators of the project. The impact level performance indicators will be monitored through statistics of the MOL and graduate tracer studies conducted by TVET providers.

92. **Compliance monitoring**. The compliance status of loan covenants will be reported and assessed through the quarterly progress reports and verified by ADB review missions.

93. **Safeguards monitoring**. Since no resettlement impacts or negative impacts on indigenous peoples are anticipated, there is no need for monitoring and reporting. However, due diligence will be conducted to confirm this when 20 TVET providers are selected and results are reported to ADB. Environmental, health and safety impacts of the project will be monitored in accordance with the S-EARF and its generic EMP which specify monitoring procedures, tools and indicators. Each civil works site will be inspected by the consulting firm for TVET facilities upgrading (expert in civil engineering and architecture, civil engineers, and environment specialist) against the inspection checklist included in the S-EARF. Progress in the implementation of site-EMP will be reported by civil works contractors. The overall implementation of the S-EARF, the generic EMP and site-EMPs will be monitored and reported by the PIU with the support of the consulting firm for TVET facilities upgrading.

94. **Gender and social dimensions monitoring**. The PIU, assisted by the gender specialist and the M&E specialist, will monitor and report quarterly on the actions and the indicators specified in the gender action plan and the DMF. These actions and indicators will be included in the project performance management system. Compliance with core labor standards will also be monitored during the project implementation.

## C. Evaluation

95. ADB and the government will jointly undertake reviews of the project at least once a year. The reviews will assess progress in each component, identify issues and constraints, and determine necessary remedial actions and adjustments. A midterm review will be conducted during the second year of implementation. The midterm review will (i) review the scope, design, and implementation arrangements and identify adjustments required; (ii) assess the progress of project implementation against performance indicators; and (iii) recommend changes in the design or implementation arrangements, if necessary. Within 6 months of physical completion of the Project, the MOL will submit a project completion report to ADB.[31]

## D. Reporting

96. The MOL through the PIU 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 component/output as measured against the performance targets/indicators, (b) key implementation issues and solutions; (c) updated procurement plan and (d) updated implementation plan for the next 12 months; and (iii) a project completion report within 6 months of physical completion of the Project.

## E. Stakeholder Communication Strategy

97. Various stakeholders have been consulted in the process of developing the design and implementation measures of the project. Key stakeholders who are essential to achieve the project outcomes and outputs, and to reduce major risks include (i) government agencies responsible for the design and implementation of the project; (ii) students enrolled in TVET; (iii) TVET providers; (iv) industry and professional associations, and employers in the three priority sectors which will be involved in the establishment of industry-driven TVET system, partnerships with TVET providers and the development of training systems for TVET managers and teachers; (v) eighth and ninth grade students; and (vi) eighth and ninth grade teachers. Through workshops, training, career guidance and teaching and learning materials, information on new concepts and activities introduced under the project will be communicated as well as their purposes, benefits and impacts.

98. The communication specialist engaged under the project will develop detailed communication strategies and plans which aim to (i) sensitize industry/professional associations and employers to competency-based training and assessment, occupational standards; (ii) market benefits of TVET and improve public image of TVET; (iii) reduce gender stereotyping of occupations, especially in agriculture, construction, and road and transportation sectors; (iv) market TVET programs and courses for the key occupations supported under the project; (v) sensitize the public to reform policies in the TVET sector; (vi) sensitize the public to the importance of career information and guidance for junior secondary students; (vii) improve coordination and collaboration between different stakeholders in career information and guidance for junior secondary schools; (viii) enhance participation of local employers, enterprises, and communities in career information and guidance activities; (ix) address gender issues related to career development; (x) sensitize the public to the objectives and processes of senior secondary education reforms; (xi) inform students, parents and teachers of different options for senior secondary education created under the reforms; and (xii) improve

[31] Project completion report format is available at: http://www.adb.org/Consulting/consultants-toolkits/PCR-Public-Sector-Landscape.rar

coordination and collaboration between different stakeholders in senior secondary education reforms. The specialist will also design a project-specific grievance redress mechanism and administrative tools.

## X. ANTICORRUPTION POLICY

99. ADB reserves the right to investigate, directly or through its agents, any violations of the Anticorruption Policy relating to the Project.[32] 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/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.[33]

100. To support these efforts, relevant provisions are included in the loan agreement and the bidding documents for the Project.

[32] Available at: http://www.adb.org/sectors/governance/anticorruption
[33] ADB's Integrity Office web site is available at: http://www.adb.org/site/integrity/main

## XI. ACCOUNTABILITY MECHANISM

101. 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 a good faith effort 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.[34]

[34] For further information see: http://www.adb.org/site/accountability-mechanism/main

## XII. RECORD OF PAM CHANGES

102. All revisions/updates during course of implementation should retained in this Section to provide a chronological history of changes to implemented arrangements recorded in the PAM.

## FINANCIAL MANAGEMENT ASSESSMENT

## EXECUTIVE SUMMARY

1. Financial management assessments (FMA) have been conducted for the Ministry of Labor (MOL) and Ministry of Education and Science (MEDS) in accordance with the ADB's *Guidelines for the Financial Management and Analysis of Projects* and *A Methodology Note on Financial Due Diligence*. The FMA considered the MOL in its role as the Executing Agency (EA) and the Implementing Agency (IA) for components 1-3 and 5, and the MEDS as the IA for component 4. The FMA confirmed that both the MOL and the MEDS have adequate accounting professionals and computerized financial accounting and reporting systems and procedures which control accounting, financial and physical progresses related to their current project activities. They have clearly defined responsibilities with accountability assigned to different units at different levels of authority. They concluded that the current financial management systems of the executing and implementing agencies meet government requirements in terms of staffing, accounting, and internal control.

2. Financial management internal control and risk assessments have also been conducted for the MOL and the MEDS in accordance with ADB's *Guidelines for the Financial Management and Analysis of Projects*. The overall inherent risk was assessed as substantial due to country-specific risks related to weaknesses in budget planning and execution at sectoral and local levels and key internal controls surrounding the government financial management information system (GFMIS), entity-specific risks associated with institutional and organizational aspects, and project-specific risk with regard to the number of stakeholders and procurement packages involved in the project. The overall control risk was assessed as moderate due to limited experience of the MOL and MEDS staff in ADB projects, some weaknesses in the accounting policies and procedures, reporting and monitoring mechanisms, the information systems and procurement at the MOL and the MEDS. The risk will be mitigated by the establishment of a project implementation unit (PIU) staffed by qualified professionals who will assume day-to-day management of the project, with adequate integrated financial management information system software installed, and assisted by an experienced international project implementation start-up specialist in initial stages of project implementation.

### A. Country-level Issues

3. Country-level issues that would potentially impact project financial management include weaknesses in budget planning and execution at the sectoral and local levels and key internal controls surrounding GFMIS. The country's public financial management (PFM) system was assessed in *A Public Expenditure and Financial Management* Review (PEFMR) published by the World Bank in 2009. The PEFMR concludes that although budget planning is based on a robust legislative framework, the planning process could be improved by integrating sectoral priorities, local preferences, and official development assistance (ODA). The Budget Law amended in 2011 incorporates some PEFMR's recommendations on key government policy documents that should guide the budget planning process, including (i) the Medium-term Fiscal Framework Statement; (ii) the Government Action Program (GAP); (iii) the State General Guidelines for Socio-Economic Development that translate the GAP into annual and rolling action plan. However, the PEFMR's recommendation on a medium-term budget framework which sets the corresponding medium term budget and expenditure frameworks for sector ministries, including donor-funded projects, has not been incorporated in the amended Budget Law, leaving the major weaknesses in budget planning and execution at sectoral and local levels unaddressed. The PEFMR also identifies key internal control functions of the GFMIS that

need to be strengthened, namely, controls about budgetary, system integrity, payment security, and system management. The improvements remain yet to be seen.

## B. Risk Analysis

4. The financial management internal control and risk assessment approach is largely based on International Standard on Auditing 400 *Risk Assessment and Internal Control*. The overall inherent risk was assessed as substantial due to country-specific risks related to weaknesses in budget planning and execution at sectoral and local levels and key internal controls surrounding the GFMIS, entity-specific risks related to institutional and organizational aspects, and project-specific risk with regard to the number of stakeholders and procurement packages involved in the project.[35] The overall control risk was assessed as moderate due to limited experience of the MOL and MEDS staff in ADB projects, some weaknesses in the accounting policies and procedures, reporting and monitoring mechanisms, the information systems and procurement at the MOL and the MEDS.[36] Strengths and weaknesses of the project financial management system were reviewed and risk mitigation measures were identified, as shown in the table below.

**Summary of Financial Management Internal Control and Risk Assessment**

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| 1. Country-Specific Risks | M | There is a disconnect between budget preparation and execution at sectoral and local levels, and key internal controls around budgetary, system integrity, payment security, and system management surrounding the GFMIS require improvements. | The MOL and MEDS will be assisted by the PIU in preparing annual budgets and action plans of the project in accordance with the design and monitoring framework. An integrated financial management software acceptable to ADB will be installed at the PIU to manage the project fund. |
| 2. Entity-Specific Risks | S | Although the MOL and MEDS use the GFMIS and have adequate accounting professionals, donor funds have generally been managed outside the government systems (e.g. project management/implementation units) and the MOL and MEDS staff have limited experience in directly handling donor funds. | The PIU will be established by the MOL to carry out day-to-day activities of the project including financial management. The PIU will be staffed by qualified and experienced professionals including: a project manager overseeing the overall project management, a project coordinator responsible for activities implemented by the MEDS, an accountant/financial management specialist, a procurement specialist, a M&E specialist, and four technical specialists, a project assistant and a driver. The PIU will further be assisted by an international project implementation start-up specialist who will prepare a project management manual covering financial management, procurement and recruitment, disbursement, monitoring and reporting, train and coach the PIU staff, and |

[35] Inherent risk is the susceptibility of the financial management system to factors arising from the environment in which it operates, such as country rules and regulations and entity working environment (assuming absence of any counter checks, or internal controls).

[36] Control risk is the risk that the accounting and internal control framework is inadequate to ensure funds are used economically and efficiently and for the purpose intended, and that the use of funds is properly reported.

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| | | | provide training for the MOL and MEDS staff in project management. |
| 3. Project Specific Risks | S | The project will involve two ministries (MOL and MEDS) and a number of panels, committees and working groups consisted of professional/industry associations and employers, universities and research institutes, which requires constant communication, consultation and coordination. The project will support TVET providers and secondary schools across the country, some of which are located in remote and disadvantaged areas. There will be at least 10 ICB packages of equipment. The MOL and MEDS have limited experience in ICB under donor funded projects. | In addition to the PIU staff and the project implementation start-up specialist, consultants will be engaged through firms and on an individual basis to facilitate communication, consultation and coordination among the key stakeholders and conduct visits to TVET providers and schools. In order to assist in procurement of equipment, two equipment specialists will be engaged on an individual basis. |
| **Overall Inherent Risk** | S | | |
| **Control Risk** | | | |
| 1. Implementing Entity | M | Whereas the MEDS has some experience, the MOL lacks experience in ADB's disbursement procedures and requirements. Financial management and reporting duties of the MOL and the MEDS agencies need to be clearly defined. | The MOL, MEDS and PIU staff will be trained in ADB's disbursement procedures and requirements. The PIU established by the MOL will maintain the imprest account, and prepare and submit withdrawal applications, and supporting documents, quarterly and annual reports, annual audit reports and financial statements on behalf of the MOL and MEDS. The project management manual prepared by the project implementation start-up specialist will clearly define financial management and reporting duties of the MOL and MEDS. |
| 2. Funds Flow | N | The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* and there is little risk foreseen. | A combination of direct payment to contractors by ADB, reimbursement and imprest fund procedures will be used for disbursement of the loan proceeds. An imprest account for the project will be established at a commercial bank acceptable to ADB and will be maintained by the PIU. The government will contribute recurrent costs to the project which will need to be included in the MOL and the MEDS's own budgets in coordination with the MOF. |
| 3. Staffing | M | The MOL and MEDS have adequate accounting professionals but their experience in donor funded projects is limited, given that donor funds have been managed outside the government systems. | The MOL and MEDS staff will be trained in ADB's disbursement and financial management procedures and requirements. Day-to-day project management activities, including the preparation of withdrawal applications, supporting documents, financial |

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| | | | statements, will be conducted by the PIU which will be staffed by qualified and experienced professionals, such as a project manager, a project coordinator, an accountant/financial management specialist, a procurement specialist, a M&E specialist, and four technical specialists. |
| 4. Accounting Policies and Procedures | M | The government's accounting system generally allows for the proper recording of project financial transactions and the Chart of Accounts is adequate to properly account for project activities and expenditure categories. In practice, however, whereas budget documents include some details, the existing accounting system is not used to match physical and financial progress. Excel spreadsheets have been used outside the system for reporting physical and financial progress. The available financial management manuals may not cover all aspects required by ADB. | An integrated financial management software will be installed and used by the PIU to manage the project fund. The MOL and the MEDS will be assisted in preparing annual budgets and action plans, quarterly and annual reports of the project. The project implementation start-up specialist will review the available financial management manuals and ensure that aspects not covered by those manuals will be fully addressed in the project management manual. The MOL and MEDS staff will be trained in ADB's disbursement and financial management procedures and requirements. |
| 5. Internal Audit | N | Internal audits of the project will be included in the work program of the MOL and MEDS's Department of M&E and Internal Audits. Both MOL and MEDS have limited experience in internal audits. | The project implementation start-up specialist will review internal audit functions of the MOL and MEDS and recommend an action plan including training and development of internal audit checklists. |
| 6. External Audit | N | External audits for ADB projects are arranged by the National Audit Office. There have been some issues with the quality of external audits. | An external auditor acceptable to ADB will be arranged by the National Audit Office. ADB has been working with the National Audit Office to improve the quality of external audits. |
| 7. Reporting and Monitoring | M | The government's accounting system does not take into account progress in physical execution in relation to financial execution and supplementary reports are prepared outside of the system. | An integrated financial management system will be installed at the PIU and will be linked to the project performance management system. On behalf of the MOL and MEDS, the PIU will prepare quarterly and annual progress reports on financial and physical progress in project implementation. |
| 8. Information Systems | M | The GFMIS was introduced across ministries in 2005. The GFMIS automatically generates financial reports. However, the capacity of the MOL and MEDS staff for appropriately using the GFMIS needs to be strengthened. In addition, key internal controls surrounding the GFMIS need to be improved. | An integrated financial management information system software acceptable to ADB will be installed at the PIU. The PIU staff will be trained in using the system. Separate books and records for all expenditures incurred on the project will be maintained by the PIU through the system. |
| 9. Procurement | M | The system for collecting | The procurement plan of the project will |

| Risk Type | Risk Assessment | Risk Description | Risk Mitigation Measures |
|---|---|---|---|
| | | procurement information and integrating it with financial information is incomplete. There is no quality control for procurement processes. | provide a basis for preparing annual budgets and action plans. Information on procurement activities will be included in quarterly and annual reports prepared by the PIU along with information on progress in financial and physical execution. All procurement activities under the project will be conducted in accordance with ADB's procurement guidelines and policies under ADB's guidance. The MOL and MEDS staff will be trained in ADB's procurement guidelines and policies. |
| **Overall Control Risk** | M | | |

ADB = Asian Development Bank, GFMIS = Government Financial Management Information System, ICB = international competitive bidding, MEDS= Ministry of Education and Science, MOF = Ministry of Finance, MOL = Ministry of Labor, PIU = project implementation unit.
* H = High, S = Substantial, M = Moderate, N = Negligible or Low.

## C. Project Financial Management System: Strengths and Weaknesses

### 1. Strengths

5. The financial management systems used by the MOL and MEDS are backed by a sound legislative framework, the Budget Law amended in 2011. The GFMIS was introduced across ministries in 2005, including the MEDS. The MOL, established in 2012, also uses the GFMIS. Both the MOL and the MEDS have adequate accounting professionals experienced in using the government's accounting system which generally allows proper recording of project financial transactions. They have Departments of M&E and Internal Audits which can include the project in their work programs. The MEDS has experience in ADB projects and the associated ADB's procedures, guidelines and policies. The establishment of a PIU staffed by qualified and experienced professionals, with adequate integrated financial management information system software installed, to assume day-to-day management of the project will substantially mitigate the risks related to the weaknesses in the MOL and the MEDS's financial management systems as well as the MOL's lack of experience in ADB projects.

### 2. Weaknesses

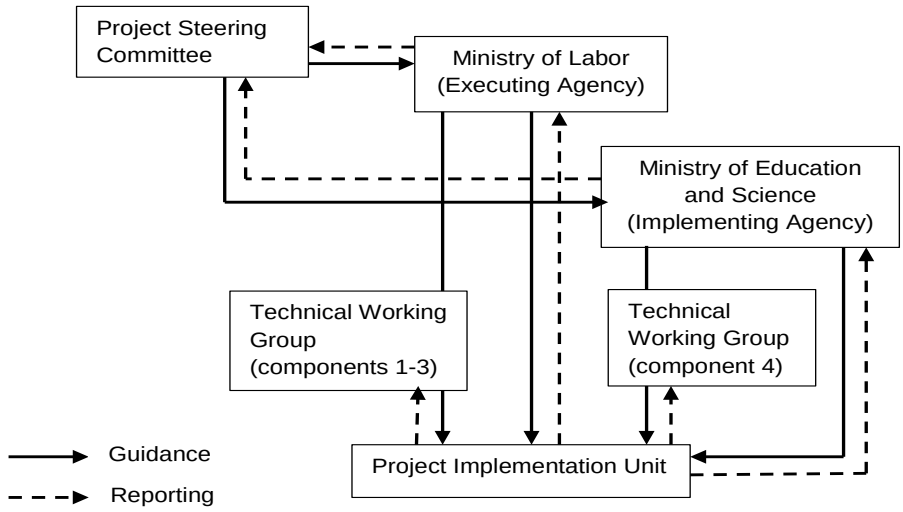
6. The complexity of the project is relatively high, involving two ministries (MOL and MEDS) and a number of panels, committees, and working groups consisted of industry/professional associations, employers, universities and research institutes, communication, consultation and coordination among whom will be conducted through a number of training and workshops funded under the project. An imprest account will be established for the project, for which financial management and reporting duties of the MOL and MEDS need to be clearly defined. The MOL has no experience in ADB projects, which represents a risk in disbursements, financial management and procurement, although the PIU will coordinate and implement project activities including the maintenance of the imprest account, procurement, recruitment, disbursement, contract administration, monitoring and reporting. There have been some issues with the quality of external audits arranged by the National Audit Office for ADB projects.

### 3. Significant Weakness Resolution

7. The above weaknesses will be mitigated by the following measures:
   (i) The MOL will install an integrated financial management software acceptable to ADB at the PIU to manage the project fund before loan effectiveness.
   (ii) The MOL, through the PIU, will engage an international project implementation start-up specialist to support the MOL, MEDS, and PIU in initial stages of project implementation immediately after loan effectiveness.
   (iii) The project implementation start-up specialist will prepare a project management manual covering financial management, procurement and recruitment, disbursement, monitoring and reporting after one month of mobilization.
   (iv) The project implementation start-up specialist will train the MOL, MEDS, and PIU staff in ADB's financial management procedures, procurement and recruitment, disbursement, monitoring and reporting procedures throughout the initial 5 months after loan effectiveness.
   (v) The project implementation start-up specialist will establish a system for quarterly monitor and verify the application of the knowledge gained through training immediately after mobilization.

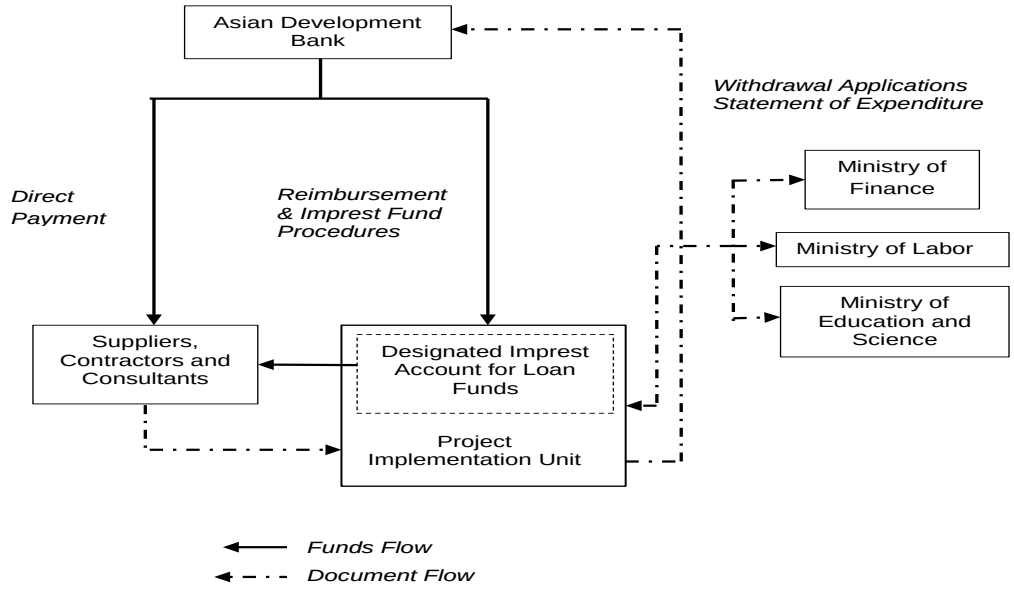
## D. Implementing Entity

8. The project will involve two ministries, the MOL as the executing agency and the MEDS as the implementing agency, which may blur the financial management and reporting duties. The project steering committee will be consisted of three government ministries (MOL, MEDS, and Ministry of Finance) and representatives of employers, industry and professional associations which may potentially make the processes of approving annual budgets and plans of the project cumbersome.




## E. Fund Flow Mechanisms

9. A combination of direct payment to contractors by ADB, reimbursement and imprest fund procedures will be used for disbursement of the loan proceeds. An imprest account will be established at a commercial bank acceptable to ADB and maintained by the PIU.




## F. Personnel

10. The MOL and MEDS have agreed that financial management for the project will be managed by the PIU with dedicated procurement and financial management personnel. The PIU will be staffed by qualified and experienced professionals and include the following positions: a project manager; a project coordinator responsible for component 4; a procurement specialist; an accountant/financial management specialist; a CBT&A specialist; a training specialist; an M&E specialist; an education specialist (senior secondary technology subject); an education specialist (career guidance); a project assistant; and a driver. On behalf of the MOL and the MEDS, the PIU will assume the day-to-day management of the project; coordinate and implement project activities, including procurement, recruitment, disbursement, contract administration, monitoring, and reporting; prepare bidding documents, terms of reference, reports, and other supporting documents and submit them for review and approval; maintain the imprest account of the project; and prepare and submit withdrawal applications and supporting documents, quarterly and annual reports, annual audit reports and financial statements. The PIU will be under the supervision of the MOL.

11. Ideally, staff recruited to the PIU will be experienced in ADB procedures. However, if this is not possible, arrangements will be made by the ADB for the PIU staff to ensure that training in agreed financial management procedures is provided as soon as the project loan becomes effective.

## G. Accounting Policies and Procedures

12. The government, through the PIU, will set up and maintain separate project accounts and records by funding source for all expenditures incurred on the project, following accounting principles and practices prescribed by the Government of Mongolia Accounting Law. The law requires financial statements to be prepared following internationally recognized accounting standards. An integrated financial management software will be installed and used by the PIU to manage the project fund. The project implementation start-up specialist will review the available

financial management manuals and ensure that aspects not covered by those manuals will be fully addressed in the project management manual.

## H. Internal Audit

13. The Ministry of Finance introduced an internal audit according to the Government rule No.311 (2011) and No.98 (2012) in all ministries. The MOL and the MEDS have Departments of M&E and Internal Audits. The project will be included in the work programs of the Departments. The project implementation start-up specialist will review internal audit functions of the MOL and MEDS and recommend an action plan to strengthen the functions.

## I. External Audit

14. Government entities are audited annually by the National Audit Office. The National Audit Office prepares timely annual audit reports and there have been no substantial audit comments for the MOL and the MEDS.

15. The MOL through the PIU will cause the detailed consolidated project financial statements to be audited in accordance with International Standards on Auditing and the Government's audit regulations by an independent auditor acceptable to ADB which will be arranged by the National Audit Office. The audited project financial statements will be submitted in the English language to ADB within six months of the end of the fiscal year by the MOL through the PIU. The annual audit report for the project accounts will include an audit management letter and audit opinions which cover (i) whether the project financial statements present a true and fair view or are presented fairly, in all material respects, in accordance with the applicable financial reporting framework; (ii) whether loan proceeds were used only for the purposes of the project or not; (iii) the level of compliance for each financial covenant contained in the loan agreement for the project; (iv) the use of the imprest fund procedures; and (v) the use of the statement of expenditure procedure certifying the eligibility of those expenditures claimed under SOE procedures, and proper use of the SOE and imprest procedures in accordance with ADB's *Loan Disbursement Handbook* and the project documents.

## J. Financial Reporting and Monitoring

16. Compliance with financial reporting and auditing requirements will be monitored by review missions and during normal project supervision, and followed up regularly with all concerned, including the external auditor. The integrated financial management information system software installed at the PIU will automatically generate financial reports. The system will be linked to the project performance management system so that progress in financial and physical execution can be simultaneously monitored. The PIU will prepare quarterly and annual progress reports on financial and physical progress in project implementation.

## K. Information Systems

17. An integrated financial management information system software acceptable to ADB will be installed at the PIU. The PIU staff will be trained in using the system. Separate books and records for all expenditures incurred on the project will be maintained by the PIU through the system.

## L. Procurement Arrangements

18. All procurement of goods will be undertaken in accordance with ADB's Procurement Guidelines (2013, as amended from time to time). The MOL and the MEDS, with the support of the PIU, will carry out all procurement under the project. Training will be provided for the MOL, MEDS and PIU staff in ADB's procurement guidelines and policies. The project implementation start-up specialist engaged in initial stages of project implementation will also train and coach the PIU staff in conducting procurement activities.

19. The procurement plan of the project will provide a basis for preparing annual budgets and plans of the project. Information on procurement activities will be included in quarterly and annual reports prepared by the PIU along with information on financial and physical execution.

## M. Disbursement Arrangements

20. The loan proceeds will be disbursed in accordance with ADB's *Loan Disbursement Handbook* (2012, as amended from time to time). To facilitate project implementation through timely release of loan proceeds, the Executing Agency (EA), through the project implementation unit (PIU), will establish an imprest account promptly after loan effectiveness at a commercial bank acceptable to ADB. The bank charges incurred in the operation of the imprest account may be financed from the loan proceeds. The maximum ceiling of the imprest account will not exceed 10% of the Asian Development Fund loan amount. The imprest account is to be used exclusively for the ADB's share of eligible expenditures. The currency of the imprest account will be USD. The PIU, who established the imprest account in its name, is accountable and responsible for proper use of advances to the imprest account. The initial and additional advances to the imprest account may be requested based on 6 months estimated expenditures to be financed through the imprest account. The imprest account will be established, managed, and liquidated in accordance with ADB's *Loan Disbursement Handbook* and detailed arrangements agreed by the Government and ADB. ADB's *Loan Disbursement Handbook* describes which supporting documents should be submitted to ADB and which should be retained by the government for liquidation and replenishment of an imprest account.

21. The statement-of-expenditure (SOE) procedure may be used for reimbursement of eligible expenditures or liquidation of advances to the imprest account. The ceiling of the SOE procedure is the equivalent of $50,000 per individual payment. 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.[37] 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.

## N. Action Plan

22. The following actions will be taken to resolve the weaknesses identified above:

(i) The MOL will install an integrated financial management software acceptable to ADB at the PIU to manage the project fund before loan effectiveness;

(ii) The MOL, through the PIU, will engage an international project implementation start-up specialist to support the MOL, MEDS and PIU in initial stages of project implementation immediately after loan effectiveness;

[37] Checklist for SOE procedures and formats are available in Appendix 9B of ADB's *Loan Disbursement Handbook*.

(iii) The project implementation start-up specialist will prepare a project management manual covering financial management, procurement and recruitment, disbursement, monitoring and reporting after one month of mobilization;
(iv) The project implementation start-up specialist will train the MOL, MEDS and PIU staff in ADB's financial management procedures, procurement and recruitment, disbursement, monitoring and reporting procedures throughout the initial five months after loan effectiveness;
(v) The project implementation start-up specialist will establish a system for quarterly monitor and verify the application of the knowledge gained through training immediately after mobilization.

## O. Financial Covenants

23. The government shall ensure that adequate counterpart funds are made available to the project on a timely basis to enable the EA and IA to discharge their respective responsibilities under the project and to cover any shortfall in funds for the completion of the project. In particular, the government shall, through the EA and IA, ensure that adequate counterpart funds are made available to finance each category and item of recurrent costs of the project, as described in the PAM.

## P. Supervision Plan

24. ADB and the government will jointly undertake reviews of the project at least once a year. The reviews will assess progress in each component, identify issues and constraints, and determine necessary remedial actions and adjustments. A midterm review will be conducted during the second year of implementation. The midterm review will (i) review the scope, design, and implementation arrangements and identify adjustments required; (ii) assess the progress of project implementation against performance indicators; and (iii) recommend changes in the design or implementation arrangements, if necessary. Within 6 months of physical completion of the project, the MOL will submit a project completion report to ADB.

# PROCUREMENT CAPACITY ASSESSMENT REPORT AND RECOMMENDATIONS

## A. Ministry of Labor

| | |
|---|---|
| **Proposed Project Name:**<br>MON: Skills for Employment | **Proposed Amount:** US$ 25 million |
| **Executing Agency**<br>Ministry of Labor (MOL) | **Source of Funding:** ADF |
| **Assessor**: | **Date**: 29 October 2013 |

**Expected Procurement**

(Describe the type(s) and complexity of procurement envisaged under the proposed project, for example: "*The procurement primarily consists of national competitive bidding for straightforward road construction. This will be supported by the procurement of consulting services (implementation consultants).*" There is no need to list all the contract packages.)

Procurement envisaged under the project for the MOL primarily consists of international competitive bidding for training equipment for TVET providers, national competitive bidding for minor civil works to rehabilitate/refurbish training facilities of TVET providers and testing facilities of assessment and certification centers, textbooks and teaching-learning materials for TVET teachers and students. Procurement of equipment will be supported by equipment specialists engaged on an individual basis, while procurement of minor civil works will be assisted by a consulting firm for TVET facilities upgrading. In addition, there will be one consulting firm to be recruited through the quality- and cost-based selection method, two consulting firms through the consultants' qualifications selection method, and national and international consultants through the individual consultants selection method.

Goods, civil works and services shall be procured centrally, with the support of the PIU, by the MOL which will establish bid evaluation/consultant selection committees. The PIU will be supported by a project implementation start-up specialist in initial stages of project implementation.

**General Procurement Environment Assessment**

Risk Assessment:

Provide the overall risk rating, as well as the risk rating for each criterion.

The general procurement environment risk rating is "**Average**".

**A. LEGAL AND REGULATORY FRAMEWORK**

The Public Procurement Law of Mongolia enacted on 01 February 2006, provides the policies and procedures governing the procurement of goods, works and consulting services carried out by various government agencies. This law, however, mandates implementation in conjunction with other laws such as the Constitution of Mongolia, the Civil Code, and other legislative acts issued in conformity with this law. This law, besides not being a standalone piece of legislation, also lacks implementing rules and regulations (IRR) that provide details to support its execution. Although the law provides for an open procurement as the default method of tendering, the prescribed methods for tendering are limited. The application of 10% margin of preference for goods of national origin and 7.5% for civil works and services for local firms may discourage participation of foreign bidders who do not have joint-venture business partnership arrangements with local companies or suppliers. The current threshold contract value for civil contracts has been increased substantially from MNT1,000,000,001 (US$606,061) to MNT10,000,000,001 (US$6,060,606) but under the law, the procuring agency still has the prerogative to allow nor not to allow foreign contractors from participating in the bidding for civil works contracts even if the estimated contract value is more than this threshold amount. The phrase "may not include" in Section 9.2 of the law is vague which can lead to misinterpretation and the phrase "shall not include" should have been used to make it mandatory for all qualified suppliers to be allowed to participate in the bid if the estimated contract amount is more than the current threshold value. The overall rating for Mongolia's legal and regulatory framework is "**Average**".

**B. INSTITUTIONL FRAMEWORK**

The Procurement Policy and Coordination Department at the Ministry of Finance (MOF) oversees public procurement but it lacks the necessary regulatory powers to fully supervise public procurement. Its main tasks are only to provide policies and administration of public procurement. The 3-day training program on public procurement conducted by the MOF is too short for participants to be fully trained on all aspects of the procurement process including familiarization and understanding of the provisions of the Procurement Law of Mongolia, including the whole tendering process itself. Upgrading programs for improving the capacity of public procurement staff are also not being

conducted and an accreditation system to professionalize procurement expertise is also not in place. Annual planning for public procurement, however, is well organized and Procurement Plans of various government agencies for the financial year have to be first approved by the Parliament and corresponding budgets allotted. This substantially minimizes potential problems that are encountered in funding procurement actions carried out by the agencies during the financial year. To foster transparency in public procurement, the MOF maintains a website "e-procurement.mn" where all information on public procurement can be accessed. The risk associated with the procurement institutional framework was found out to be "Low".

**C. PROCUREMENT MARKET AND OPERATIONS**

Although the mechanisms for encouraging dialogue and partnerships between the government and the private sector are not covered in the Procurement Law, the Procurement Policy and Coordination Department (PPCD) of the MOF also provides contractors with professional methodology, necessary rules and instructions, and keep control over private entities' activities and the enforcement of related laws, regulations and rules. PPCD's effectiveness, however, in achieving its goal to build the capacity of the private sector to participate effectively in public procurement is still weak and needs improvements. A number of private professional/employers' associations notably the Mongolian Road Association is well organized and its members are recipients of most government civil works and road construction and rehabilitation contracts. For settling disputes or complaints, the Procurement Law prescribes three procedures but these are all within the control of the government agencies and the courts. The risk associated with procurement market and operations is considered to be "Average".

**D. INTEGRITY OF THE PROCUREMENT SYSTEM**

There is no systematic procurement process audit being conducted. It is only limited to financial audits. However, fraud and corruption in procurement are regarded as criminal act under the Civil Law and those found guilty are meted with the corresponding punishment which will include imprisonment and in some cases, debarment from holding any public office. On the other hand, there is no legal/regulatory framework in which a bidder can sue the government for non-compliance of contractual obligations. The basis for debarring bidders from participating in public contracts under bids appears to be very trivial. The risk rating for the integrity of the procurement system is considered "High".

Summary of Findings:

Summarize the findings and results of the General Procurement Environment Assessment (Appendix 1), highlighting strengths and weaknesses. Discuss any aspects of the national procurement environment that impacts upon the project, such as requirements for ADB funded procurement to be supported by budgetary appropriations. Also mention any national practices that run contrary to ADB's procurement policies and, as such, will not apply to procurements funded by ADB. Of equal importance, note procurement best practices, such as wide dissemination of information through the internet, etc.

The current Public Procurement Law (2006) provides the policies and procedures governing public procurement of goods, works and consulting services in Mongolia. To foster transparency, the law has adopted good procurement practices by mandating that all public procurements should be conducted through open public bidding and by allowing all qualified bidders both national and foreign to participate in bidding for public contracts. The law stipulates that bid security will be required only if the value of the contract is more than the threshold value and for civil works, the threshold value has substantially increased to MNT10,000,000,001 (US$6,060,606) from MNT1,000,000,001 (US$60606,061) which means that a bidder for civil works contract with estimated value of MNT10,000,000,000 or less will not be required to submit bid security guarantee for its bid. In addition, the required bid security to be provided by bidders for civil works and for goods and services equivalent to 1-2% of the estimated contract value is also too low. The time stipulated in the law for opening of tenders within 1 hour after closing time is too long.

Public procurements are carried out based on an approved Procurement Plan supported by an annual budgetary appropriation. Similarly, ADB-funded procurement has to be supported by an annual budgetary appropriation from the Government. Clarifications and modifications are needed for compliance with the provisions of the Procurement Guidelines. These include:

- Bidding shall not be restricted to pre-registered firms and such registration shall not be a condition for participation in the bidding process.
- Eligible bidders (both national and foreign) shall be allowed to participate regardless of the contract value.
- A bidder declared the lowest evaluated responsive bidder shall not be required to form a joint venture or to sub-contract part of the supply of goods or works as a condition of award of the contract.
- Bidding of ICB contracts estimated at $ 500,000 or more for goods and related services or $1 million or more for civil works shall be advertised concurrently with the general procurement notices on ADB's website.
- Where required, bid security shall be in the form of a bank guarantee from a reputable bank and the amount should be based either on a percentage of the bid price or a fixed amount to be set by the agency but the amount should be more than 1-2% of the agency's estimated contract value.
- Bids shall be opened in public, immediately after the deadline for submission of bids and not within 1 hour

after bid submission closing time
- The contract shall be awarded to the technically responsive bid that offers the lowest evaluated price.
- Bids shall not be rejected and new bids solicited without the ADB's prior concurrence.
- When the number of responsive bids is less than three (3), re-bidding shall not be carried out without the ADB's prior concurrence.
- Bidders must be nationals of member countries of ADB, and offered goods and services must be produced in and supplied from member countries of ADB.
- Firms bidding for a contract must be incorporated in an ADB member country.

## General Agency Resource Assessment

**A – ORGANIZATIONAL AND STAFF CAPACITY**

Risk Assessment

Provide the risk rating for this criterion.

Risk rating is "High"

Summary of Findings:

(Describe in general terms the human and physical resources that will be available to the EA/IA for project implementation, noting shortfalls in these resources. Highlight the strengths and weaknesses, including any best practice.)

The Procurement Unit at the Ministry of Labor has undertaken procurement for workshop and office equipment, tools, computers, furniture and instructional materials using public funds but never had practical experience in procuring consulting services. To date, MOL has not implemented any foreign funded projects and its experience in tendering is limited only to national competitive bidding process. One(1) Procurement Officer designated to handle procurement for MOL also performs other tasks other than procurement including serving as the Secretarial Staff for the various bid evaluation committees. The Procurement Officer is a holder of A3 Procurement Certificate issued by MOF and has a good command of the English language.

The Procurement Unit at MOL is extremely understaffed and also not familiar with the procurement procedures for externally funded projects. Given the volume of procurement works under the project, it will be desirable to appoint staff whose tasks will be fully devoted to handling procurement. Procuring goods and civil works will be key components of the project and most of the procurement for equipment will be through ICB and civil works through NCB. The Procurement Unit of MOL must be fully trained and supported to develop its capacity to carry out both international and national competitive bidding procedures. Similar training will likewise apply to the members of the bid evaluation committees to be organized for the project that will manage the whole bidding process, particularly on bid document preparation, bid evaluation and preparing the bid evaluation report.

## Information Management

Risk Assessment:

Provide the risk rating for this criterion.

Risk rating is "Low"

Summary of Findings:

(As a minimum, ADB requires that the signed original contract and the evaluation report should be retained for at least two years after project completion. In addition to these two documents, a copy of the original invitation document, winning bid or proposal, and contract administration papers should also be available for inspection. Highlight the strengths and weaknesses, including any best practice.)

For all public procurements, the original copy of bid documents, invitation for tender, records of the bidding process,

bid evaluation reports, communications related to the bidding process, original contracts, winning bids or proposals, and contract administration papers are compiled, coded and stored securely in hard copies for each bid. Copies of these documents are not generally circulated for public use but are kept indefinitely for audit purposes and for police investigation work. Only the Procurement Officer has direct access to these documents.

While it is best practice to keep in a secured place all procurement documents pertaining to a certain bid for a longer time or indefinitely, the restrictions imposed on public access to these documents need to be reviewed at least on a case-to-case basis to foster transparency in procurement.

## Procurement Practices

***Procurement of Goods and Works***

Risk Assessment:

Provide the risk rating for this criterion.

Risk rating is "**High**"

Summary of Findings:

If there is no procurement of this type envisaged state "not applicable". Otherwise, discuss the practices, processes and any concern, in light of the proposed procurement. Highlight the strengths and weaknesses, including any best practice.

MOL has no experience in procurement involving externally funded projects. Due to the complexity involved in procuring equipment and civil works and the attendant difficulties associated with the preparation of various equipment lists and specifications, civil works plans, technical drawings and BOQ for preparing bidding documents, tendering and bid evaluation process and overall management of the contracts, delays in procurement and installation of equipment, and possible delays in the implementation of civil works may pose immense challenge for the PIU to overcome. Delays particularly in procurement will directly impact not only on achieving performance targets of the project but also on Implementing Agency's (IA's) capacity to manage and implement the project. The current multi-job responsibilities of the procurement officer will definitely interfere with the day-to-day procurement functions of the PIU.

Although bid evaluation committees are responsible for preparing, reviewing and approving evaluation reports and recommending for contract award, in actual practice, it is the Secretariat of the Procurement Committee (in this case it is the Procurement Unit) that prepares the draft of the evaluation report which is then presented to the Procurement Committee for review and approval. Due to the inherent difficulty encountered in tendering and in preparing bid evaluation report to meet ADB requirements, the staff undertaking bid evaluation may be given advance training on the revised ADB's Procurement Guidelines and tendering procedures including the preparation of bid evaluation reports. During project implementation, PIU should be supplemented with consultants who will provide assistance on the preparation of equipment list, specifications and packaging, preparing civil works plans and BOQs , bidding process, bid evaluation, site management and monitoring of civil works contracts, including delivery, installation and commissioning of equipment and training of teachers on the use and routine maintenance of training equipment. Standards Development Committees composed of expert workers should be organized to assist the bid evaluation committees and the PIU on technical matters associated with the bidding for equipment and civil works, including monitoring of rehabilitation/refurbishment works for selected TVET providers.

*Consulting Services*

Risk Assessment:

Provide the risk rating for this criterion.

Risk rating is " **High**"

Summary of Findings:

(If there is no procurement of this type envisaged state "not applicable". Otherwise, give appropriate attention to consulting services assignments as they frequently fall on a project's critical path – such as design or implementation support. The complexity of the type of services and the institutional capacity to select and manage the types of services being procured should be borne in mind when assessing this element. For example, standard auditing services will require far less skills and knowledge to evaluate and manage than services relating to strategic reform.

Highlight the strengths and weaknesses, including any best practice.)

MOL never had the experience procuring consulting services using public funds nor procuring consulting services for externally funded projects. The Procurement Law provides general guidelines for procuring consulting services. Some of the guidelines in this law, however, are not compatible with ADB's Guidelines on the Use of Consultants. For example, under Chapter 4: Procurement of Consulting Services of the Procurement Law, firms that are invited to submit bids for consulting services are only those firms which were selected from the Government's list of pre-registered firms. ADB's default method is that bidding shall not be restricted to pre-registered firms and such registration shall not be a condition for participation in the bidding process.

During implementation of the project, one of the activities that the PIU should give priority consideration should be on procuring consulting services for fielding specialists to assist in project implementation. This is particularly necessary to avoid potential problems encountered during project start-up activities and for implementing subsequent core activities for achieving project targets and outputs.

## Effectiveness

Risk Assessment:

Provide the risk rating for this criterion.

Risk assessment rating for effectiveness is "Average".

Summary of Findings:

(Describe in general terms the institutional arrangements and practices that will either contribute or hamper the overall effectiveness of the EA/IA's procurement transactions and contracts. Highlight the strengths and weaknesses, including any best practice.)

Contractual performance is not fully monitored and reported for all contracts, including contractual payment obligations. This oversight could be attributed to the fact that these functions are not clearly stipulated as part of the tasks of the procurement unit. The Procurement Law provides for complaint resolution mechanism but the system operates within the Government's system itself and the courts. There is no complaint or dispute resolution mechanism outside of the Government system, for example, through an independent body similar to the ICC International Court of Arbitration which is not stipulated in the law.

## Accountability Measures

Risk Assessment:

Provide the risk rating for this criterion.

The risk rating for accountability measures is "Low".

Summary of Findings:

(The borrower and EA/IA process control and oversight mechanisms do not impact directly on ADB's procurement policies (and are often dictated by the borrower's financial accountability laws). Care must be exercised when commenting on this aspect, remembering that the EA/IA and borrower must adhere to its own systems of control and oversight – ADB's "no objection" process will normally be irrelevant in terms of defining a Government employees' liabilities under national laws. However a burdensome, overly complicated or opaque system may lead to delays in implementation. Process choke points should be identified with a view to agreeing on performance standards that can be built into the planning and implementation of the project. Highlight the strengths and weaknesses, including any best practice.)

The Procurement Law of Mongolia requires those involved in public procurement to observe proper ethics and to avoid any potential conflict of interest in the performance of their procurement tasks. Anybody found to have breached the procedures prescribed in the Procurement Law can be considered to have committed a criminal offense or can be fined varying amount of penalties as defined in the law.

The critical role of the bid evaluation/consultant selection committees in the tendering process need not be overemphasized. The level of competence and integrity of the bid evaluation/consultant selection committees are important factors to be considered in evaluating their performance. It is, therefore, very necessary that when organizing the various Procurement Committees, their terms of reference, qualification and experience of members relevant to procurement, including specific rules to be observed and followed during the tendering process are prepared, well defined and approved by the competent authorities. The rules should include criminal or administrative

sanctions to be imposed on members who will be found guilty of breaching the rules. Most of these rules might not be covered yet by existing statutes. As most if not all of the members of the bid evaluation/consultant selection committees and the Procurement Staff of the PIU may not be familiar with the revised ADB's Procurement Guidelines and the tendering process, it will be highly desirable that they are provided the necessary training or orientation on these new procedures during the early stage of project implementation.

**Summary Assessment**

MOL has never implemented externally funded projects or an ADB funded project. It has no practical experience in procuring consulting services even using public funds. Its experience is mainly on procurement for goods and civil works using public funds Support of implementation consultants is still needed. The Procurement Unit of MOL or the PIU staff to be assigned to handle procurement for the project should be trained on the revised ADB's Procurement Guidelines, ADB's Guidelines on the Use of Consultants and the whole tendering process to familiarize them on the new procedures to follow for implementing procurement for ADB funded projects. Personnel for PIU responsible for procurement should be appointed on a full-time basis. Given the long process involved in the preparation of detailed list and specifications of equipment, tools and furniture; civil works plans and BOQ; and preparation of tender documents, it is strongly recommended that activities for the preparation of quality improvement plans (QIPs) by the pre-selected TVET providers should be given priority consideration during the early stage of project implementation so that equipment and civil works proposals are immediately identified for launching the tendering process for goods and works for the project.

**Specific Recommendations, Project Implementation**

| **Risks** | **Recommended Action** | **Responsibility and comment** |
|---|---|---|
| *Describe the risks, such as inadequate facilities, inadequate or unacceptable national procurement practice, etc.* | *Detail the proposed solution, such as recruitment of additional staff, the non-applicability of a national practice, etc.* | *Detail the organization responsible for undertaking the action and thefunding source (if applicable), and state whether the action carries any conditionality.* |
| • One (1) Procurement Officer is also assigned other tasks and cannot fully devote time for procurement. Lack of staff for undertaking activities related to procurement will lead to delays in project procurement activities.<br>• Delays in the preparation of quality improvement plans (QIPs) by the pre-selected TVET providers will also lead to delays in procurement. | • Recruit procurement staff for PIU preferably with experience in implementing procurement for ADB funded projects.<br>• Conduct workshop for pre-selected TVET providers for preparation of QIPs as soon as possible after commencement of project implementation.<br>• Organize Evaluation Committee and Standards Development Committees to attend workshop on preparation of QIPs. | • MOL<br>• MOL/PIU<br>• MOL/PIU |
| **Capacity Constraint** | **Recommended Action** | **Responsibility and comment** |
| *Describe any capacity constraint.* | *Propose the appropriate capacity building measure needed by the EA/IA staff.* | *Indicate when the capacity building measure should be undertaken.* |
| • Non-familiarity with the preparation of Bidding Documents for Goods, Civil Works, RFPs, bid evaluation and preparation of bid evaluation report s and evaluation of | • Training of PIU staff and bid evaluation/consultant selectioncommittees on applicable procurement regulations and ADB Guidelines | • MOL, ADB<br>• Compliance needed to avoid procurement delays and misprocurement |

| | | |
|---|---|---|
| proposals for consulting services<br>• ICB & NCB Procedures for procuring goods and civil works<br>• QCBS Procedures for procuring consulting services | • EA to be trained on procedures for ICB & NCB for goods and civil works<br>• EA to be trained on procedures for QCBS for consulting services | |
| • Lack of capacity to prepare detailed list and technical specifications of equipment and tools for key occupations (e.g. construction, road and transportation, and agriculture technologies); preparation of civil works plans and BOQs; preparation of bidding documents for goods and works; preparation of bid evaluation reports; preparation of terms of reference, request for proposals – to minimize implementation delays | • Brief EA/IA staff on revised consulting services and procurement guidelines during fact-finding mission<br>• Engage specialists to assist with training, procurement planning (upgrading of procurement plan) in support of EA/IA | • Fact-finding mission |

| **General Recommendations, EA/IA** | | |
|---|---|---|
| **Risks/Capacity Constraint** | **Recommended Action** | **Responsibility and comment** |
| • Budget appropriation to finance ADB-funded procurement is not approved and released on time by the Government<br>• Procurement Plan for the project approved by the Government does not match the realities that are actually happening in the field during project implementation.<br>• Unnecessary interference of higher authorities in project procurement | • EA/IA to ensure budget appropriations are approved and released on time<br>• Procurement Plan should be regularly reviewed to ensure it reflects changes in implementing procurement actions<br>• Bid evaluation/consultant selection committees should be autonomous and free from external interference which should be stipulated in their TOR.<br>• Each bid evaluation/consultant selection committee should have at least 1 member drawn from Industry/Employers Associations In 3 priority sectors (construction, road and transportation, and agriculture) to provide oversight for all procurement actions. | • MOL to prepare budget appropriation proposals on time for submission to the concerned authorities for approval<br>• MOL<br>• MOL should organize bid evaluation/consultant selection committees<br>• MOL |

| **General Recommendations, Procurement Environment** | | |
|---|---|---|
| **Risk/Capacity Constraint** | **Recommended Action** | **Responsibility and Comment** |
| • Lack of professionally trained and experienced procurement personnel will continue to hamper | • Establish a licensure system of examination to be supported by a program, course or an elective subject on procurement at the | • Licensure Board to be established (if not existing yet) to be regulated or supervised by a Professional Regulation Commission or similar |

| | | |
|---|---|---|
| Government's capacity to efficiently and successfully implement procurement | university level of education for engineering, law or economics | body, the board to be composed of members from professional associations. Currently, professional licensing system in Mongolia is still fragmented, limited to a few number of professions and is being done at the ministry level. |

## B. Ministry of Education and Science

| | |
|---|---|
| **Proposed Project Name:**<br>MON: Skills for Employment | **Proposed Amount:** US$ 25 million |
| **Executing Agency**<br>Ministry of Education and Science (MEDS) | **Source of Funding:** ADF |
| **Assessor**: | **Date:** 29 October 2013 |

### Expected Procurement

(Describe the type(s) and complexity of procurement envisaged under the proposed project, for example: "*The procurement primarily consists of national competitive bidding for straightforward road construction. This will be supported by the procurement of consulting services (implementation consultants).*" There is no need to list all the contract packages.)

Procurement envisaged under the project for the MEDS primarily consists of international competitive bidding for equipment for technology laboratories of independent senior secondary schools, national competitive bidding for textbooks and teaching-learning materials for senior secondary technology subject teachers and students. Procurement of equipment will be supported by equipment specialists engaged on an individual basis. In addition, there will be national and international consultants engaged on an individual basis.

Goods and services shall be procured centrally, with the support of the PIU, by the MEDS which will establish bid evaluation/consultant selection committees. The PIU will be supported by a project implementation start-up specialist in initial stages of project implementation.

### General Procurement Environment Assessment

Risk Assessment:

Provide the overall risk rating, as well as the risk rating for each criterion.

The general procurement environment risk rating is "**Average**".

**A. LEGAL AND REGULATORY FRAMEWORK**

The Public Procurement Law of Mongolia enacted on 01 February 2006, provides the policies and procedures governing the procurement of goods, works and consulting services carried out by various government agencies. This law, however, mandates implementation in conjunction with other laws such as the Constitution of Mongolia, the Civil Code, and other legislative acts issued in conformity with this law. This law, besides not being a standalone piece of legislation, also lacks implementing rules and regulations (IRR) that provide details to support its execution. Although the law provides for an open procurement as the default method for tendering, the prescribed methods are limited. The application of 10% margin of preference for goods of national origin and 7.5% for civil works and services for local firms may discourage participation of foreign bidders who do not have joint-venture business partnership arrangements with local companies or suppliers. The current threshold contract value for civil contracts has been increased substantially from MNT1,000,000,001 (US$606,061) to MNT10,000,000,001 (US$6,060,606) but under the law, the procuring agency still has the prerogative to allow nor not to allow foreign contractors from participating in the bidding for civil works contracts even if the estimated contract value is more than this threshold amount. The phrase "may not include" in Section 9.2 of the law is vague which can lead to misinterpretation and the phrase "shall not include" should have been used to make it mandatory for all qualified suppliers to be allowed to participate in the bid if the estimated contract amount is more than the current threshold value. The overall rating for Mongolia's legal and regulatory framework is "**Average**".

**B. INSTITUTIONL FRAMEWORK**

The Procurement Policy and Coordination Department at the Ministry of Finance (MOF) oversees public procurement but it lacks the necessary regulatory powers to fully supervise public procurement. Its main tasks are only to provide policies and administration of public procurement. The 3-day training program on public procurement conducted by the MOF is too short for participants to be fully trained on all aspects of the procurement process including familiarization and understanding of the provisions of the Procurement Law of Mongolia, including the whole tendering process itself. Upgrading programs for improving the capacity of public procurement staff are also not being conducted and an accreditation system to professionalize procurement expertise is also not in place. Annual planning for public procurement, however, is well organized and Procurement Plans of various government agencies for the financial year have to be first approved by the Parliament and corresponding budgets allotted. This substantially

minimizes potential problems that are encountered in funding procurement actions carried out by the agencies during the financial year. To foster transparency in public procurement, the MOF maintains a website "e-procurement.mn" where all information on public procurement can be accessed. The risk associated with the procurement institutional framework was found out to be "Low".

**C. PROCUREMENT MARKET AND OPERATIONS**

Although the mechanisms for encouraging dialogue and partnerships between the government and the private sector are not covered in the Procurement Law, the Procurement Policy and Coordination Department (PPCD) of MOF also provides contractors with professional methodology, necessary rules and instructions, and keep control over private entities' activities and the enforcement of related laws, regulations and rules. PPCD's effectiveness, however, in achieving its goal to build the capacity of the private sector to participate effectively in public procurement is still weak and needs improvements. A number of private professional/employers' associations notably the Mongolian Road Association is well organized and its members are recipients of most government civil works and road construction and rehabilitation contracts. For settling disputes or complaints, the Procurement Law prescribes three procedures but these are all within the control of the government agencies and the courts. The risk associated with procurement market and operations is considered to be "Average".

**D. INTEGRITY OF THE PROCUREMENT SYSTEM**

There is no systematic procurement process audit being conducted. It is only limited to financial audits. However, fraud and corruption in procurement are regarded as criminal act under the Civil Law and those found guilty are meted with the corresponding punishment which will include imprisonment and in some cases, debarment from holding any public office. On the other hand, there is no legal/regulatory framework in which a bidder can sue the government for non-compliance of contractual obligations. The basis for debarring bidders from participating in public contracts under bids appears to be very trivial. The risk rating for the integrity of the procurement system is considered "High".

Summary of Findings:

Summarize the findings and results of the General Procurement Environment Assessment (Appendix 1), highlighting strengths and weaknesses. Discuss any aspects of the national procurement environment that impacts upon the project, such as requirements for ADB funded procurement to be supported by budgetary appropriations. Also mention any national practices that run contrary to ADB's procurement policies and, as such, will not apply to procurements funded by ADB. Of equal importance, note procurement best practices, such as wide dissemination of information through the internet, etc.

The current Public Procurement Law (2006) provides the policies and procedures governing public procurement of goods, works and consulting services in Mongolia. To foster transparency, the law has adopted good procurement practices by mandating that all public procurements should be conducted through open public bidding and by allowing all qualified bidders both national and foreign to participate in bidding for public contracts. The law stipulates that bid security will be required only if the value of the contract is more than the threshold value and for civil works, the threshold value has substantially increased to MNT10,000,000,001 (US$6,060,606) from MNT 1,000,000,001 (US$60606,061) which means that a bidder for civil works contract with estimated value of MNT 10,000,000,000 or less will not be required to submit bid security guarantee for its bid. In addition, the required bid security to be provided by bidders for civil works and for goods and services equivalent to 1-2% of the estimated contract value is also too low. The time stipulated in the law for opening of tenders within 1 hour after closing time is too long.

Public procurements are carried out based on an approved Procurement Plan supported by an annual budgetary appropriation. Similarly, ADB-funded procurement has to be supported by an annual budgetary appropriation from the Government. Clarifications and modifications are needed for compliance with the provisions of the Procurement Guidelines. These include:

- Bidding shall not be restricted to pre-registered firms and such registration shall not be a condition for participation in the bidding process.
- Eligible bidders (both national and foreign) shall be allowed to participate regardless of the contract value.
- A bidder declared the lowest evaluated responsive bidder shall not be required to form a joint venture or to sub-contract part of the supply of goods or works as a condition of award of the contract.
- Bidding of ICB contracts estimated at $500,000 or more for goods and related services or $1 million or more for civil works shall be advertised concurrently with the general procurement notices on ADB's website.
- Where required, bid security shall be in the form of a bank guarantee from a reputable bank and the amount should be based either on a percentage of the bid price or a fixed amount to be set by the agency but the amount should be more than 1-2% of the agency's estimated contract value.
- Bids shall be opened in public, immediately after the deadline for submission of bids and not within 1 hour after bid submission closing time
- The contract shall be awarded to the technically responsive bid that offers the lowest evaluated price.
- Bids shall not be rejected and new bids solicited without the ADB's prior concurrence.

- When the number of responsive bids is less than three (3), re-bidding shall not be carried out without the ADB's prior concurrence.
- Bidders must be nationals of member countries of ADB, and offered goods and services must be produced in and supplied from member countries of ADB.
- Firms bidding for a contract must be incorporated in an ADB member country.

## General Agency Resource Assessment

**A – ORGANIZATIONAL AND STAFF CAPACITY**

Risk Assessment

Provide the risk rating for this criterion.

Risk rating is "High"

Summary of Findings:

(Describe in general terms the human and physical resources that will be available to the EA/IA for project implementation, noting shortfalls in these resources. Highlight the strengths and weaknesses, including any best practice.)

The Procurement Unit is under the Finance and Investment Department of MEDS. It has considerable experience in procuring workshop and office equipment, tools, computers, furniture and instructional materials, including procuring consulting services. MEDS has been involved in implementing various foreign funded projects through bilateral arrangements like those financed by JICA, GTZ, KOIKA, CIDA, etc., including ADB funded projects. It has extensive experience in tendering both for public procurement and externally funded projects using NCB methods.

One (1) Head of Procurement Unit and Two(2) Procurement Officers designated to handle procurement for MEDS also perform other tasks other than procurement including providing Secretarial work for the various bid evaluation committees. The three(3) Officers of the Procurement Unit are holders of A3 Procurement Certificate issued by MOF.

The Procurement Unit at MEDS is adequately staffed just enough for the current workload on procurement. Given the number of procurement work for upgrading independent senior secondary schools, it will be desirable to appoint additional staff whose tasks will be fully devoted to handling procurement for the project. Procuring goods and civil works will be key components of the project and most of the procurement for equipment will be through ICB and civil works through NCB. If the Procurement Unit staffs are not familiar yet with ADB's Procurement Guidelines and the Guidelines on the Use of Consultants, then appropriate training should be provided to develop their capacity to carry out both international and national competitive bidding procedures. Similar training will likewise apply to the members of the bid evaluation committees to be organized for the project that will manage the whole bidding process, particularly on bid document preparation, bid evaluation and preparing the bid evaluation report.

## Information Management

Risk Assessment:

Provide the risk rating for this criterion.

Risk rating is "Low"

Summary of Findings:

(As a minimum, ADB requires that the signed original contract and the evaluation report should be retained for at least two years after project completion. In addition to these two documents, a copy of the original invitation document, winning bid or proposal, and contract administration papers should also be available for inspection. Highlight the strengths and weaknesses, including any best practice.)

For all public procurements, the original copy of bid documents, invitation for tender, records of the bidding process, bid evaluation reports, communications related to the bidding process, original contracts, winning bids or proposals, and contract administration papers are compiled, coded and stored securely in hard copies for each bid. Copies of these documents are not generally circulated for public use but are kept indefinitely for audit purposes and for police

investigation work. Only the Procurement Officers have direct access to these documents.

While it is best practice to keep in a secured place all procurement documents pertaining to a certain bid for a longer time or indefinitely, the restrictions imposed on public access to these documents need to be reviewed at least on a case-to-case basis to foster transparency in procurement.

## Procurement Practices

***Procurement of Goods and Works***

Risk Assessment:

Provide the risk rating for this criterion.

Risk rating is "**Low**"

Summary of Findings:

If there is no procurement of this type envisaged state "not applicable". Otherwise, discuss the practices, processes and any concern, in light of the proposed procurement. Highlight the strengths and weaknesses, including any best practice.

MEDS's practical experiences gained in procuring goods and civil works for externally funded projects through NCB procedures are expected to substantially impact on reducing the risks associated with difficulties involved in the preparation of various equipment lists and specifications, civil works plans, technical drawings and BOQ for preparing bidding documents, tendering, bid evaluation, delivery and installation of equipment, including implementation of civil works contracts.

Although bid evaluation committees are responsible for preparing, reviewing and approving evaluation reports and recommending for contract award, in actual practice, it is the Secretariat of the bid evaluation committee (in this case it is the Procurement Unit) that prepares the draft of the evaluation report which is then presented to the concerned bid evaluation committee for review and approval. Due to the inherent difficulty encountered in tendering and in preparing bid evaluation report to meet new ADB requirements, the staff undertaking bid evaluation may be given advance training on the revised ADB's Procurement Guidelines and tendering procedures including the preparation of bid evaluation reports. During project implementation, PIU should be supplemented with consultants who will provide assistance on the preparation of equipment list, specifications and packaging, preparing civil works plans and BOQs , bidding process, bid evaluation, site management and monitoring of civil works contracts, including delivery, installation and commissioning of equipment and training of teachers on the use and routine maintenance of training equipment. Senior secondary specialists (technology subjects should be organized to assist the bid evaluation committees and the PIU on technical matters associated with the bidding for equipment and civil works, including monitoring of the upgrading programs for independent senior secondary schools.

*Consulting Services*

Risk Assessment:

Provide the risk rating for this criterion.

Risk rating is " **Low**"

Summary of Findings:

(If there is no procurement of this type envisaged state "not applicable". Otherwise, give appropriate attention to consulting services assignments as they frequently fall on a project's critical path – such as design or implementation support. The complexity of the type of services and the institutional capacity to select and manage the types of services being procured should be borne in mind when assessing this element. For example, standard auditing services will require far less skills and knowledge to evaluate and manage than services relating to strategic reform. Highlight the strengths and weaknesses, including any best practice.)

MEDS had adequate experience on procuring consulting services using public funds and procuring consulting services for implementing externally funded projects, including ADB funded projects. The Procurement Law provides general guidelines for procuring consulting services. Some of the guidelines in this law, however, are not compatible

with ADB's Guidelines on the Use of Consultants. For example, under Chapter 4: Procurement of Consulting Services of the Procurement Law, firms that are invited to submit bids for consulting services are only those firms which were selected from the Government's list of pre-registered firms. ADB's default method is that bidding shall not be restricted to pre-registered firms and such registration shall not be a condition for participation in the bidding process.

During implementation of the project, one of the activities that the PIU should give priority consideration should be on procuring consulting services for fielding specialists to assist in project implementation. This is particularly necessary to avoid potential problems encountered during project start-up activities and for implementing subsequent core activities for achieving project targets and outputs.

## Effectiveness

Risk Assessment:

Provide the risk rating for this criterion.

Risk assessment rating for effectiveness is "Low".

Summary of Findings:

(Describe in general terms the institutional arrangements and practices that will either contribute or hamper the overall effectiveness of the EA/IA's procurement transactions and contracts. Highlight the strengths and weaknesses, including any best practice.)

Contractual performance is fully monitored and reported for all contracts, including contractual payment obligations.. The Procurement Law provides for complaint and dispute resolution mechanism but the system operates within the Government's system itself and the courts. However, the first two stages of complain resolution mechanisms are non-judicial in nature. There is no complaint or dispute resolution mechanism outside of the Government system, for example, through an independent body similar to the ICC International Court of Arbitration which is not stipulated in the law.

## Accountability Measures

Risk Assessment:

Provide the risk rating for this criterion.

The risk rating for accountability measures is "Low".

Summary of Findings:

(The borrower and EA/IA process control and oversight mechanisms do not impact directly on ADB's procurement policies (and are often dictated by the borrower's financial accountability laws). Care must be exercised when commenting on this aspect, remembering that the EA/IA and borrower must adhere to its own systems of control and oversight – ADB's "no objection" process will normally be irrelevant in terms of defining a Government employees' liabilities under national laws. However a burdensome, overly complicated or opaque system may lead to delays in implementation. Process choke points should be identified with a view to agreeing on performance standards that can be built into the planning and implementation of the project. Highlight the strengths and weaknesses, including any best practice.)

The Procurement Law of Mongolia requires those involved in public procurement to observe proper ethics and to avoid any potential conflict of interest in the performance of their procurement tasks. Anybody found to have breached the procedures prescribed in the Procurement Law can be considered to have committed a criminal offense or can be fined varying amount of penalties as defined in the law.

The critical role of the bid evaluation committees in the tendering process need not be overemphasized. The level of competence and integrity of the bid evaluation committees are important factors to be considered in evaluating their performance. It is, therefore, very necessary that when organizing the various bid evaluation committees, their terms of reference, qualification and experience of members relevant to procurement, including specific rules to be observed and followed during the tendering process are prepared, well defined and approved by the competent authorities. The rules should include criminal or administrative sanctions to be imposed on members who will breach the rules, most if not all of them might already be covered by existing statutes. As most if not all of the members of the bid evaluation committees and the Procurement Staff of the PIU may not be familiar with the revised ADB's Procurement Guidelines

and the tendering process, it will be highly desirable that they are provided the necessary training or orientation on these topics during the early stage of project implementation.

**Summary Assessment**

MEDS has practical experience in implementing externally funded projects, including ADB funded projects. It has practical experience in procuring goods, works and consulting services using public funds and funds from externally funded projects. Support of implementation consultants may still be needed. The PIU staff to be assigned to handle procurement for the project should be trained on the revised ADB's Procurement Guidelines, ADB's Guidelines on the Use of Consultants and the whole tendering process to familiarize them on the new procedures to follow for implementing procurement for ADB funded projects. Procurement staff for PIU should be appointed on a full-time basis. Given the long process involved in the preparation of detailed list and specifications of equipment, tools and furniture; civil works plans and BOQ; and preparation of tender documents, it is strongly recommended that activities for preparing equipment packages for independent senior secondary schools should be given priority consideration during the early stage of project implementation so that equipment to be purchased is immediately identified for launching the tendering process for goods for the project.

**Specific Recommendations, Project Implementation**

| **Risks** | **Recommended Action** | **Responsibility and comment** |
|---|---|---|
| *Describe the risks, such as inadequate facilities, inadequate or unacceptable national procurement practice, etc.* | *Detail the proposed solution, such as recruitment of additional staff, the non-applicability of a national practice, etc.* | *Detail the organization responsible for undertaking the action and thefunding source (if applicable), and state whether the action carries any conditionality.* |
| • Three (3) Procurement Officers are also assigned other tasks and cannot fully devote time for procurement. Lack of staff for undertaking activities related to project procurement will lead to delays in procurement.<br>• Delays in the preparation of equipment packagesfor independent senior secondary schools will also lead to delays in procurement. | • Recruit procurement staff for PIU preferably with experience in implementing procurement for ADB funded projects.<br>• | • MEDS<br>• |
| **Capacity Constraint** | **Recommended Action** | **Responsibility and comment** |
| *Describe any capacity constraint.* | *Propose the appropriate capacity building measure needed by the EA/IA staff.* | *Indicate when the capacity building measure should be undertaken.* |
| • Non-familiarity with the revised guidelines and procedures for preparation of Bidding Documents for Goods, Civil Works, RFPs, bid evaluation, preparation of bid evaluation reports and evaluation of proposals for consulting services<br>• ICB & NCB Procedures for procuring goods and civil works | • Training of PIU staffs and bid evaluation committees on the revised and applicable procurement regulations and ADB Guidelines<br>• EA to be trained on revised procedures for ICB & NCB for goods and civil works<br>• EA to be trained on revised | • MEDS, ADB<br>• Compliance needed to avoid procurement delays and misprocurement |

| | | |
|---|---|---|
| • QCBS Procedures for procuring consulting services | procedures for QCBS for consulting services | |
| • Improve capacity to prepare detailed list and technical specifications of technology laboratory; preparation of bidding documents for goods ; preparation of bid evaluation reports; preparation of terms of reference, request for proposals – to minimize implementation delays | • Brief EA/IA staff on revised consulting services and procurement guidelines during fact-finding mission<br>• Engage specialists to assist with training, procurement planning (upgrade of procurement plan) in support of EA/IA | • Fact-finding mission |

| **General Recommendations, EA/IA** | | |
|---|---|---|
| **Risks/Capacity Constraint** | **Recommended Action** | **Responsibility and comment** |
| • Budget appropriation to finance ADB-funded procurement is not approved and released on time by the Government | • EA/IA to ensure budget appropriations are approved and released on time | • MEDS to prepare budget appropriation proposals on time for submission to the concerned authorities for approval |
| • Procurement Plan for the project approved by the Government does not match the realities that are actually happening in the field during project implementation. | • Procurement Plan should be regularly reviewed to ensure it reflects changes in implementing procurement actions | • MEDS |
| • Unnecessary interference of higher authorities in project procurement | • Bid evaluation/consultant selection committees should be autonomous and free from external interference which should be stipulated in their TOR. | • MEDS should organize bid evaluation/consultant selection committees |
| | • Each bid evaluation/consultant selection committee should have at least 1 member drawn from Professional Associations to provide oversight for all procurement actions. | • MEDS |

| **General Recommendations, Procurement Environment** | | |
|---|---|---|
| **Risk/Capacity Constraint** | **Recommended Action** | **Responsibility and Comment** |
| • Lack of professionally trained and experienced procurement personnel will continue to hamper Government's capacity to efficiently and successfully implement procurement | • Establish a licensure system of examination to be supported by a program, course or an elective subject on procurement at the university level of education for engineering, law or economics | • Licensure Board to be established (if not existing yet) to be regulated or supervised by a Professional Regulation Commission or similar body, the board to be composed of members from professional associations. Currently, professional licensing system in Mongolia is still fragmented, limited to a few number of professions and is being done at the ministry level. |

## General Procurement Environment Assessment

| Risk Ratings | Extremely High | High | Average | Low |
|---|---|---|---|---|

## I. Specific Assessment and Ratings

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| **A. LEGAL AND REGULATORY FRAMEWORK** | | | |
| 1. Is there a procurement law?<br>*Is there a single law governing procurement that is consistent with internationally accepted principles and practices; or is procurement governed through various laws, decrees etc.?* | Yes | The Public Procurement Law of Mongolia is not a standalone piece of legislation on procurement but is implemented in conjunction with other laws such as the Constitution of Mongolia, the Civil Code, and other legislative acts issued in conformity with the law itself. | High |
| 2. Does the procurement law have implementing regulations?<br>*Does the procurement law have implementing rules and regulations that support it by providing the details that are not normally found in a law? Are these clear, comprehensive and consolidated as a set of regulations that are available in a single and accessible place? Are these regularly updated?* | | There are no specific rules and regulations established for implementing the Public Procurement Law. For example the law does not specify how work variations, whether less or more than that specified in the bill of quantities indicated in the work contract, should be dealt with during project implementation. And this is a common problem encountered in civil works contracts.<br><br>Whereas before when the threshold value for works was MNT1,000,000,001 US$606,061) and MNT100,000,001 (US$60,606) for goods and services, bidders were not required to submit bid security for tenders below these threshold values. But now the threshold value for civil works had increased substantially to MNT10,000,000,001 (US$6,060,606), but the law still does not require bidders to submit bid security for tenders with estimated contract value less than this threshold amount. Procuring agency also has the option to exclude foreign bidders from participating in tenders for civil works contracts estimated as falling below this new threshold value. | High |
| 3. Are the procurement law and regulations clear and concise?<br>*If there is a single law that is easy to follow, then the risk is "low". If the law is complex and difficult to follow, then the risk is "average". If there is no single law, then the risk is "extremely high" or "high".* | | Although the Procurement Law is quite clear and concise, but this law has to be implemented in conjunction with other laws and other legislative acts. This makes the implementation of the Procurement Law more complex and difficult to follow. | Average |
| 4. What does the procurement law/regulation cover?<br>*If there is a single law, the risk will be "low" if it covers drafting and use of standard bidding documents, evaluation, contracting through to the management of contracts, including payment, warranty and defects liability periods. The less the procurement process is covered the higher the risk. If there is no single law, then the risk is "extremely high"* | | The Procurement Law is to be implemented in conjunction with other laws and other legislative acts. It does not provide specific guidelines or procedures for preparing bidding documents and the bidding documents to be used for different types and methods of procurement are also not included in the law. Most of the bidding documents in use are adaptation from those being used for implementing foreign funded projects such as ADB's. The evaluation procedures are very general, and aspects such as management of contracts, warranty and | High |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| *or "high".* | | defects liability periods are not covered. The law describes how the "two-stage" open tendering process should be applied and this is similar to the "two-stage, two-envelope" tendering procedure prescribed in ADB's Procurement Guidelines which can be best applied for highly technical, very complex and large projects. It does not cover the "single-stage, two-envelope" tendering procedure which can also be used as an alternative tendering process for not so complex and relatively smaller projects. | |
| 5. Does the procurement law/regulation cover the procurement of consulting services?<br>*If there is a single procurement law that also covers consulting services, then the risk is "low". If consulting services are not covered, or there is no law, then the risk is "extremely high" or "high".* | | The Procurement Law also covers general guidelines on procurement of consulting services. | Low |
| 6. Does the procurement law/regulation differentiate between processes for goods, works and consulting services?<br>*If there is a single law that deals separately with consulting services, then the risk is "low". If there is a single law that provides some differentiation, but the processes are similar, then the risk is "average". If there is no single law, or it applies the same processes to consulting services as for goods and works, then the risk is "extremely high" or "high".* | Yes | The Procurement Law prescribes a different process for procuring consulting services. There are three evaluation methods prescribed for selecting consultants: (i) qualification method for selecting an individual consultant, (ii) quality evaluation method, or (iii) combined evaluation method for selecting a consulting firm. | Low |
| 7. Does the law/regulation require the advertisement of all procurement opportunities?<br>*A "low" risk may be indicated if advertisement is required for all procurements above $25,000. An "average" risk may be indicated if advertisement is required only for procurements above $100,000. A "high" risk may be indicated if advertisement is required for all procurements above a threshold that is higher than $100,000. An "extremely high" risk should be indicated if no advertisement is required.* | Yes | The Procurement Law requires all procurement opportunities to be advertised regardless of the estimated contract value. However, the procuring agency has the option not to include foreign bidders if the estimated total value to be procured is more than MNT10,000,000,001 (US$ 6,060,061) for civil works and MNT100,000,001 (US$60,606) for goods and services.<br><br>For example Section 9.2 of the Law states that "*The procuring entity may not exclude foreign tenderers in tenders for works with cost estimates of more than MNT 10,000,000.001 and goods and/or services with cost estimates of more than MNT 100,000.001*."<br><br>The phrase "*may not exclude*" should be changed to "*shall not exclude*" to make Section 9.2 mandatory allowing qualified foreign bidders to participate in the bid if estimated contract price is above the prescribed threshold values. | Low |
| 8. Are contract awards advertised?<br>*The same thresholds as stated at A7 should be applied.* | | The Government of Mongolia maintains a website called "e-procurement.mn" where all announcements regarding tender notices/advertisements, tender results, and | Average |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| | | procurement plans can be found. Tender results or contract awards indicating name of the winning bidder, however, are not directly advertised but bidders have to log their entity name, tender name, bid location, and bid ID in order to access the information on the outcome of the bidding. Result of tenders or contract awards are not normally advertised in national newspapers. However, this website appears to be not properly managed and maintained as several requests and queries sent to this website have not been answered to date. | |
| 9. Are there restrictions on goods, works and services on the basis of origin?<br>*If there is no limitation, restriction and/or preference scheme, then the risk is "low". If there are restrictions or a national preference scheme, then the risk is "average". If procurement is solely limited to those of national origin, then the risk is "extremely high" or "high".* | No | No, but the Procurement Law allows a procuring entity to provide for a margin of preference of 10% for locally produced goods and 7.5% for civil works if 50% of the total value of works is implemented by a local entity owned by a Mongolian citizen, or by a foreign legal entity registered in Mongolia of which 50% equity is owned by a Mongolian citizen and/or legal entity. The margin of preference is quite substantial which might restrict or discourage local or foreign bidders that will supply goods sourced from outside Mongolia from participating in the invitation for bids. | Average |
| 10. Does the procurement law or relevant legislation and regulation provide acceptable provisions for the participation of state-owned enterprises (SOEs)?<br>*If an exception is given to SOEs that are legally and financially autonomous and are not dependent agencies of the purchaser/employer, then the risk is "low". Otherwise, the risk is "extremely high" or "high".* | Yes | Yes, the Procurement Law prohibits legal entities with whole or partial state ownership from participating in the bidding for goods, works or services. | Low |
| 11. Are there restrictions on the nationality of bidders and consulting firms to be invited?<br>*If there is no limitation, restriction and/or preference scheme, then the risk is "low". If there are nationality restrictions or a national preference scheme, then the risk is "average". If procurement is solely limited to national firms and individuals, then the risk is "extremely high" or "high".* | No | There is no provision in the Procurement Law that restricts the participation of bidders or consulting firms based on their nationalities. | Low |
| 12. Are foreign bidders and consultants forced to submit offers through or with local partners?<br>*If this is never required, then the risk is "low". If this is required under certain circumstances, then the risk is "average". If this is always required, then the risk is "extremely high" or "high".* | No | Procurement Law does not require foreign bidders and consultants to submit bids or offers through a local partner. This matter is left to the bidder to decide whether to have a local partner or not. | Low |
| 13. Is there a domestic preference scheme?<br>*If there is no scheme, then the risk* | Yes | Ten percent (10%) is prescribed as margin of preference for goods to be supplied of Mongolian origin and 7.5% for civil works provided that at | Average |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| *is "low". If it is applied in limited circumstances, then the risk is "average". If a domestic preference scheme is applied across the board, then the risk is "extremely high" or "high".* | | least 50% of the works will be executed by a citizen or legal entity of Mongolia or by a foreign investment legal entity registered in Mongolia who has at least 50% equity owned by a Mongolian citizen and/or legal entity. | |
| 14. Is there a national standard mandated for the use for quality control purposes?<br>*If there are no mandated national standards or if these have direct and accessible international equivalents, then the risk is "low". If there are mandated national standards that have no international equivalents, then the risk is "high".* | No | The Procurement Law does not prescribe any national standard for quality control to be followed when tendering works, goods, or services. | High |
| 15. Are any agencies or parts of public expenditure exempt from the procurement law/regulation?<br>*If yes, such as defense equipment, then the risk may range from "average" to "extremely high, depending on the extent of the exemption. For example, if an exemption is outrightly granted to medicines, text books or other similar commodities, then the risk is "extremely high".* | Yes | The Procurement Law states that<br><br>"3.3. The Law does not apply to procurement of special purpose equipment and facilities, works, services, and weapons by law included in the state secret and pertaining to national security provision." and<br><br>"3.4. The Law does not apply to procurement of works and services related to maintenance of national roads, executed by the state owned legal entity pursuant to its powers by law." | High |
| 16. Is the default method for procurement open competition?<br>*If yes, then the risk is "low". If no, or if it is not clearly established, then the risk may be "extremely high" or "high".* | Yes | Open competition is the default method used for all public procurements for goods and works. However, for procuring consulting services, only firms which are selected from pre-registered list of firms are invited to submit their bid proposals based on the RFP issued by the procuring agency. | Average |
| 17. Is open competition easily avoided?<br>*If avoidance requires the approval of an oversight agency, then the risk is "low". If open competition can be avoided by senior management decision, then the risk is "average". If the procurement law/regulation allows the avoidance of open competition above a certain national threshold on the basis of circumstances that are not in response to natural disasters, i.e. simple urgency, then the risk is "extremely high" or "high".* | | In Section 9.2 of the Procurement Law states that:<br><br>"The procuring entity may not exclude foreign tenderers in tenders for works with cost estimates of more than MNT 10,000,000.001 and goods and/or services with cost estimates of more than MNT 100,000.001."<br><br>The phrase "may not exclude foreign tenderers" can be interpreted to mean that this requirement is not mandatory or compulsory and, therefore, can be avoided and the procuring agency can decide not to include foreign tenderers. For the phrase to become mandatory or compulsory, it should read "shall not exclude foreign tenderers". | Average |
| 18. Does the procurement law/regulation require pre-qualification?<br>*If it is only for complex or high value contracts, then the risk is "low". If no pre-qualification is allowed, then the risk is "average". If it applies to all contracts, then the risk is "high".* | Yes | Pre-qualification is generally applied regardless of the threshold value. | Average |
| 19. Does the procurement law/regulation | No | Pre-registration of bidders is not required for | Average |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| require the pre-registration of bidders?<br>*If no pre-registration is required, then the risk is "low". If it is only required for special types of goods, such as medicines, then the risk is "average". If yes, then the risk is "extremely high" or "high".* | | procuring goods and works. Pre-registration is required for procuring consulting services. | |
| 20. Does the procurement law/regulation mandate the use of standard documents?<br>*If it does and there are documents for goods, works and consultants services, then the risk is "low". If it is required just for only two of the three procurement types, then the risk is "average". If it is required for only one of the procurement types, or it is required but no documents have yet been issued, then the risk is "high". If standard documents are not required, then the risk is "extremely high".* | Yes | The law prescribes use of templates for tender documents, contract templates, etc. but these tender documents are mostly adapted from those used for implementing foreign funded projects like ADB's. The tender document contains instructions for tenderers, criteria and methods for selecting qualified tenders, contract terms and conditions offered by the procuring entity, technical specifications, designs, templates of tender documents, and terms of reference in case of consulting service. | Low |
| 21. Have these standard documents been approved for use on ADB projects?<br>*If yes, then the risk is "low". If some, but not all, then the risk is "average". If no, then the risk is "extremely high" or "high".* | No | The standard bidding documents used for ADB projects are the ones prescribed by ADB. | Average |
| 22. Is there a national procurement manual or guide?<br>*If an omnibus procurement manual or guide exists, then the risk is "low". If a manual exists, but it is out of date or is not widely used/distributed, then the risk is "average". If there is no manual, then the risk is "extremely high" or "high".* | No | There is a national procurement manual but the contents appear to be adaptations from the guides prescribed in the procurement manual for foreign funded projects such as ADB's. | Average |
| **B. INSTITUTIONAL FRAMEWORK** | | | |
| 23. Which body oversees public procurement?<br>*If there is a regulatory body at an adequate level in government, and financing is secured by the legal/regulatory framework, then the risk is "low". If the body is at an adequate level, but financing is subject to administrative decisions and can be changed easily, then the risk is "average". If the level of the body is too low or financing is inadequate for proper discharge of its responsibilities, then the risk is "high". If there is no body, or the body is too low with no independence to perform its obligations, then the risk is* | | At present, the Procurement Policy and Coordination Department at the Ministry of Finance oversees public procurement but it has no regulatory powers. Its main tasks are only to provide policies and administration of public procurement. | Average |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| *"extremely high".* | | | |
| 24. What powers does the oversight body have?<br>*The rating may range from "low" to extremely high", depending on whether the body exercises all, some, a few or none of the following responsibilities: providing advice to contracting entities, drafting amendments to the legal/regulatory framework, monitoring public procurement, providing procurement information, managing statistical databases, reporting on procurement to other parts of government, developing/supporting the implementation of initiatives for improvements to the public procurement system, and providing implementation tools and documents to support capacity development.* | | The functions of this Procurement Policy and Coordination Department are as follows:<br><br>Supporting our country's economic development through:<br>- raising the system of procurement of goods, works, and services with the capital of state- or local properties to international standard;<br>- ensuring efficiency, productivity, openness and accountability in all levels of public capital spending;<br>- eliminating possibilities of corruption; and<br>- supporting domestic manufacturers and service providers | High |
| 25. Is there a nationwide procurement training plan?<br>*If procurement trainings are regularly implemented nationwide and needs are regularly assessed, then the risk is "low". If there is an existing program, but it is insufficient to meet national needs, then the risk is "high". If there is no formal training program, then the risk is "extremely high". Consider also the existence of a helpdesk.* | Yes | The Ministry of Finance conducts 3-day procurement training for government personnel involved in public procurement in collaboration with the National University of Mongolia. But the duration of the program is too short for participants to be fully trained on all aspects of the procurement process including familiarization and understanding of the provisions of the Procurement Law of Mongolia. Training for simulating the whole tendering process itself will take more time for participants to understand.<br><br>There is also no regular follow-up training conducted to upgrade the capacity of previous participants on procurement nor an assessment to determine further needs. Some NGOs and foreign funding agencies do conduct some training on procurement but these training programs are not coordinated and evaluated. | Average |
| 26. Is there a procurement accreditation or professionalization program?<br>*If there is an externally recognized program, then the risk is "low". If it is a government sponsored program, then the risk is "average". If there is no accreditation or professionalization program, then the risk is "high".* | None | There is no accreditation system or program in place for professionalizing procurement competencies or expertise. | High |
| 27. Are major projects identified within agencies' appropriations or budgets?<br>*If yes, then the risk is "low". If no, but a system is in place for the ring-fencing of project funds, then the risk is average. If neither condition exists, then the risk is "high".* | Yes | All proposed projects, minor or major, including other procurements planned to be carried out by a particular government agency during a certain financial year are consolidated and are presented in the form of a Procurement Plan. This procurement plan is submitted to the Parliament for approval and funding. The approved funds for implementing the Procurement Plan becomes part of the agencies' budget appropriation for a particular financial year. | Low |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| 28. Is the procurement cycle tied to an annual budgeting cycle, *i.e.* can procurement activity only commence once a budget is approved?<br>*If yes, and a medium-term expenditure framework is in place, then the risk is "low". If an activity may start up to, but excluding contract award, then the risk is "average". If the procurement cycle is not tied to an annual budget, then the risk is "extremely high" or "high".* | Yes | It is tied to an annual budgeting cycle and no procurement can be carried out by an agency without the Procurement Plan and the corresponding budget which are first approved by the Parliament. | Low |
| 29. Once an appropriation or budget is approved, will funds be placed with the agency or can the agency draw them down at will?<br>*If yes, then the risk is "low". If not, such as when additional bureaucratic controls are imposed (such as a cash release system), then the risk is "extremely high" or "high".* | No | Once budget is approved to implement agency's Procurement Plan for the particular financial year, the Ministry of Finance will then deposit these funds with the state bank of Mongolia in the name of the agency. To draw these funds from the State Bank to pay for agency's contractual obligations, the agency still has to obtain two separate "no-objection" letters, one to be issued by the Minister of the agency and the other by the Minister of Finance. This means, the agency cannot draw down the funds directly at its level. | Average |
| 30. Is there a nationwide system for collecting and disseminating procurement information, including tender invitations, requests for proposals, and contract award information?<br>*If there is an integrated information system that provides up-to-date information and is easily accessible at no or minimum cost, then the risk is "low". If there is such an integrated information system that covers majority of contracts, but access is limited, then the risk is "average". If there is a system, but it only provides information on some of the contracts and is not easily accessible, then the risk is "high". If there is no procurement information system, except for some individual agency systems, then the risk is "extremely high".* | Yes | The Procurement Policy and Coordination Department of the Ministry of Finance maintains a website called "e-procurement.mn" where all information on public procurement, procurements being carried out by foreign funded projects can be accessed, including tender notices, tender results, and procurement plans. | Low |
| 31. When an agency is implementing a project using funds from the national budget, are there general experiences/reports of funding delays that significantly hamper procurement?<br>*If no, then the risk is low. If yes, then the risk is "extremely high" or "high".* | No | The Procurement Plan and the corresponding budget to implement it are both approved by the Parliament. Any procurement to be carried out by the agency during a particular financial year that is reflected in the procurement plan should not suffer funding delays as funds are already appropriated to finance the planned procurement. However, there were instances where delays in the disbursement of the funds do happen particularly during the processing of the invoice submitted by the contractors/bidders mainly due to problems in documentation, misunderstanding in carrying out work variations and deliverables. | Low |
| 32. Is consolidated historical | Yes | All procurement data and records are maintained | Low |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| procurement data available to the public?<br>*If yes, then the risk is "low". If the data is too much or too little, then the risk is "average". If none, then the risk is "extremely high" or "high".* | | archived at the procuring agency level and can only be accessed for audit work purposes and police investigation work. | |
| 33. Does the law/regulation require the collection of nationwide statistics on procurement?<br>*If yes and statistics are actually collected, then the risk is "low". If yes, but data is not collected or used, then the risk is "average". If there is no requirement, then the risk is "extremely high" or "high".* | No | The Procurement Law does not require collection of nationwide statistics on procurement. This is also not the responsibility of the Procurement Policy and Coordination Department at the Ministry of Finance. | High |
| **C. PROCUREMENT MARKET AND OPERATIONS** | | | |
| 34. Do formal mechanisms exist to encourage dialogue and partnerships between the government and the private sector, and are these well established in the procurement law/regulation?<br>*If such mechanisms exist, such as programs to build the capacity of private companies and small businesses to participate in public procurement, and these are effective, then the risk is "low". If such mechanisms exist, but there is no proof of its effectiveness, then the risk is "average". If no such mechanisms exist, then the risk is "extremely high" or "high".* | Yes | Mechanisms to encourage dialogue and partnerships between the government and the private sector are not covered in the Procurement Law. However, the Procurement Policy and Coordination Department (PPCD) of MoF that deals with all the activities related to policies and administration of public procurement also provides contractors with professional methodology, necessary rules and instructions, and keep control over entities' activities and the enforcement of related laws, regulations and rules. One of the goals of this department is to support manufacturers and service providers on matters relating to public procurement. However, PPCD's effectiveness in achieving its goal to build the capacity of the private sector to participate effectively in public procurement still needs improvements. | Average |
| 35. Are private sector institutions well organized and able to facilitate access to the market?<br>*If the private sector is competitive, well organized and able to participate in open competition, then the risk is "low". If there is a reasonably well functioning private sector, but competition for large contracts is concentrated in a relatively small number of firms, then the risk is "average". If the private sector is relatively weak and/or competition is limited owing to monopolistic or oligopolistic features in important segments of the market, then the risk is "high". If the private sector is not well organized and lacks capacity and access to information for participation in the public procurement market, then the risk is "extremely high".* | Yes | The private employers are well organized particularly the road construction sector led by the Mongolian Road Association. Many members of this association have been awarded contracts for road and bridge construction/rehabilitation projects considering this is a priority program of the government in recent years. However, due to their resources, facilities and expertise, large contractors normally have the advantage over small contractors when bidding for large government contracts. | Average |
| 36. Is there an alternative disputes resolution process independent of | No | There is no separate arbitration law. There is also no provision in the Procurement Law that provides for an alternative process or avenue for | High |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| the government and courts?<br>*If there is an arbitration law with an independent process, then the risk is "low". If there is no arbitration law, but the standard contracts use ICC or similar dispute resolution provisions, then the risk is "average". If alternative dispute resolution is not practiced, or if arbitration is through the courts or can be overturned by the courts, then the risk is "extremely high" or "high".* | | resolving disputes such as through the ICC International Court of Arbitration. Although the procurement law prescribes the procedures for settling complaints or disputes, but the mechanisms are within the control of the government agencies and the courts. | |
| **D. INTEGRITY OF THE PROCUREMENT SYSTEM** | | | |
| 37. Are there systematic procurement process audits?<br>*If yes, then the risk is "low". If only financial audits are conducted, then the risk is "average". If no systematic audits are conducted, then the risk is "extremely high" or "high".* | No | There is no systematic procurement process audit. Only financial audits are conducted. | Average |
| 38. Does the procurement law/regulation contain provisions for dealing with misconduct, such as fraud and corruption? A cross reference to an anti-corruption law will suffice.<br>*If yes, then the risk is "low". If no, then the risk is "extremely high" or "high".* | Yes | Section 57.1 of the Procurement Law states that "*If a breach of the procedures contained in this law does not constitute a criminal offense, the court or authorized state professional inspector shall impose administrative penalties".* | Low |
| 39. Is fraud and corruption in procurement regarded as a criminal act, whereby the penalty includes imprisonment?<br>*If yes, then the risk is "low". If no, then the risk is "extremely high" or "high".* | Yes | Fraud and corruption in procurement are regarded as criminal act under the Criminal Law and those found guilty are meted with the corresponding punishment which will include imprisonment and in some cases, debarment from holding any public office. | Low |
| 40. Have there been prosecutions for fraud and corruption?<br>*If there have been successful prosecutions for fraud and corruption, then the risk is "low". If prosecutions seem to focus solely on low grade/junior staff, then the risk is "average". If there is no evidence of any prosecution, then the risk is "extremely high" or "high".* | No | There is no report on prosecutions for fraud and corruption. | High |
| 41. Does the legal/regulatory framework allow for sovereign immunity to agencies for claims against them?<br>*If plaintiffs can sue the government for contractual non-performance, then the risk is "low". If they cannot, then the risk is "extremely high" or "high".* | Yes | There is no legal/regulatory framework in which a bidder can sue the government for non-compliance of contractual obligations. This matter is also not stipulated in the Procurement Law. | High |
| 42. Do the regulations allow for the debarment of firms and individuals?<br>*If there is a debarment process that* | Yes | But the basis for debarment specified in the Procurement Law appears to be very trivial. | High |

| Question | Yes/No | Narrative Explanation | Risk |
|---|---|---|---|
| *is transparent and equitable, and undertaken by an independent oversight agency, then the risk is "low". If there is a process and it is administered by a single agency, such as the Ministry of Finance, then the risk is "average". If it is administered by the procuring agency, then the risk is "high". If there is no debarment mechanism, then the risk is "extremely high".* | | The procuring agency can decide on prohibiting a certain bidder from participating in a contract under bid if the bidder had already reached the prescribed maximum participation or qualification thresholds within the same year. | |

## II. General Ratings

| Criterion | Risk |
|---|---|
| **A. Legal and Regulatory Framework** | Average |
| **B. Institutional Framework** | Low |
| **C. Procurement Market and Operations** | Average |
| **D. Integrity of the Procurement System** | High |
| **OVERALL RISK RATING** | **Average** |

**SIMPLIFIED ENVIRONMENTAL ASSESSMENT AND MANAGEMENT FRAMEWORK**

# Environmental Assessment Report

Simplified Environmental Assessment and Review Framework (S-EARF)
May 2014

# Mongolia: Skills for Employment Project

Prepared by the Ministry of Labor of Mongolia, for the Asian Development Bank (ADB).

## CURRENCY EQUIVALENTS
(as of 27 March 2014)

| | | |
|---|---|---|
| Currency unit | – | Mongolian Tughrik (MNT) |
| MNT1.00 | = | $0.00056 |
| $1.00 | = | MNT1,770 |

## ABBREVIATIONS

| | |
|---|---|
| ACC | Assessment and certification centers |
| ADB | Asian Development Bank |
| ASI | Agency for Specialized Inspection |
| EARF | Environmental Assessment and Review Framework |
| CBT&A | Competency-based training and assessment |
| EC | Evaluation Committee |
| EHS | Environment, Health and Safety |
| EIA | Environmental Impact Assessment |
| EMP | Environmental Management Plan |
| DEIA | Detailed Environmental Impact Assessment |
| HoB | Heat only Boiler |
| GASI | General Agency for Specialized Inspection |
| GoM | Government of Mongolia |
| LIC | Loan Implementation Consultant Services |
| LIC-CF | Consulting firm for TVET facilities upgrading of the LIC |
| MEGD | Ministry of Environment and Green Development |
| MNT | Mongolian Tughrik |
| MEDS | Ministry of Education and Science |
| MOL | Ministry of Labor |
| PCB | Polychlorinated biphenyl |
| PAH | Polycyclic aromatic hydrocarbon |
| PIU | Project Implementing Unit |
| PPTA | Project Preparatory Technical Assistance |
| QIP | Quality Improvement Plan |
| RMC | Regional Methodology Center |
| SPS | Safeguard Policy Statement |
| TVET | Technical and Vocational Education and Training |
| VOC | Volatile Organic Compound |

## NOTES

In this report, "$" refers to US dollars.

# I. Introduction

1. **The Project.** The project will improve employability of graduates from technical and vocational education and training (TVET) programs and courses in three priority sectors of the economy in Mongolia, namely, agriculture, construction, and road and transportation. Responsiveness of TVET system to the labor market demand in the three priority sectors will be enhanced through (i) development of industry-driven TVET system in the three priority sectors; (ii) upgrading of selected TVET providers to implement competency-based training and assessment (CBT&A); (iii) establishment of training systems for TVET teachers and managers; (iv) support for career guidance and technology-specialized schools in secondary education; and (v) establishment of effective project management system.

2. The impact of the project will be improved employability of graduates from TVET programs and courses in the three priority sectors (agriculture, construction, and road and transportation). The outcome of the project will be enhanced responsiveness to the labor market demand in the three priority sectors.

3. The project will have five outputs, including: (1) industry-driven TVET system established in the three priority sectors; (2) selected TVET providers upgraded to implement CBT&A in the three priority sectors; (3) training systems for TVET managers and teachers established in the three priority sectors; (4) career guidance and technology-specialized schools supported in secondary education; and (5) Establishment of Effective Project Management System.

4. Under Output 2, the project will support the upgrading of selected TVET providers to implement CBT&A for key occupations in the three priority sectors. Based on self-assessment and quality improvement plans (QIPs), selected TVET providers[38] will be upgraded to deliver competency-based training programs and courses for the key occupations through minor civil works and provision of up-to-date equipment and tools. Output 2 will be the main project activity involving minor civil works with potential environment, health and safety implications. In addition, under Output 1, the project will assist in establishing three assessment and certification centers (ACCs) for the priority sectors by providing equipment, and refurbishing the existing facilities through minor civil works, as well as training and accrediting directors, assessors, and test developers of the assessment and certification centers, and developing cost recovery mechanisms for the centers.

5. **Environment safeguards classification by the Asian Development Bank (ADB).** According to the requirement of ADB's Safeguard Policy Statement (2009), the Project is categorized as "C" for environment since it is likely to have minimal or no adverse environmental impacts. Most project outputs and activities will not impact the environment, while Outputs 1 and 2, which aim at enhancing the quality of training, might have some minimal impacts. Activities under these Outputs include the upgrading of facilities and equipment in approximately 20 eligible TVET providers offering programs and courses for the key occupations and 3 assessment and certification centers in the priority sectors. An environment assessment is not required for category C projects, but environmental implications of the project have been reviewed.

[38] MOL has established a list of 25 pre-selected TVET providers who would offer TVET programs and courses using CBT&A developed in collaboration with industry/professional associations and employers for 15 key occupations in the three priority sectors.

6. **Mongolian safeguards requirements.** The Law on Environmental Impact Assessment (2012) requires environment impact screening (General EIA) and/or detailed environmental impact assessment (DEIA) for new buildings or restoration with extension construction on a significant scale and exploitation of a significant amount of natural resources. The project will be limited to minor civil works in existing facilities in existing TVET providers. The following was confirmed during the project preparatory technical assistance (PPTA):

(i) the proposed activities under Outputs 1 and 2 do not require an environmental impact screening (General EIA) by the Ministry of Environment and Green Development (MEGD) or local environmental protection authorities as long as they comply with the eligibility criteria defined in Table 2 of this simplified environmental assessment and review framework (S-EARF);
(ii) no EIA or environmental permit is required for proposed rehabilitation works; but
(iii) all interventions must comply with the Mongolian laws, regulations and standards including those related to environment, health and safety (see list in Appendix A).

7. **Purpose of the S-EARF.**[39] The S-EARF has been prepared to define the procedure to be followed by the Ministry of Labor (MOL) which will implement Outputs 1, 2, 3 and 5, the Project Implementation Unit (PIU), the Regional Methodology Centers (RMCs), assessment and certification centers (ACCs), selected TVET providers, the consulting firm for TVET facilities upgrading (1 design engineer, 2 civil engineers and 1 environment specialist) under loan implementation consultant services (LIC-CF), and the contractors for the avoidance or mitigation of adverse environmental effects that may arise out of repair and refurbishment works of facilities in relation to Outputs 1 and 2 of the Project, from the eligibility assessment and selection of ACCs and TVET providers by the MOL, to the rehabilitation of facilities by contractors. The S-EARF includes a generic environment management plan (generic EMP) which defines all environment impacts and issues related to planning and implementation of repair and refurbishment works, as well as the mitigation and protection measures, monitoring requirements, and institutional responsibilities to ensure proper environmental management throughout project implementation. The objective of the S-EARF is to ensure that all people and institutions involved in the selection of TVET providers, the preparation of rehabilitation plans, and the implementation of these plans, are aware of the need for good practices to environment management procedures.

8. This S-EARF follows Government of Mongolia (GoM)'s regulations relevant to this Project, as well as ADB's Safeguards Policy Statement (2009). The S-EARF will be included as a separate annex in bidding and contract documents. The MOL, assisted by the PIU and the LIC-CF will be responsible for ensuring contractors' compliance with the S-EARF and its generic EMP, and reporting. Contractor for construction will be made aware of and commit to its obligation on environmental protection (through the development of site-specific EMPs), and know that the cost for implementation of the measures defined their site-specific EMP is part of the construction cost.

9. **Table 1** describes the institutions involved in the project, and their role in executing the S-EARF.

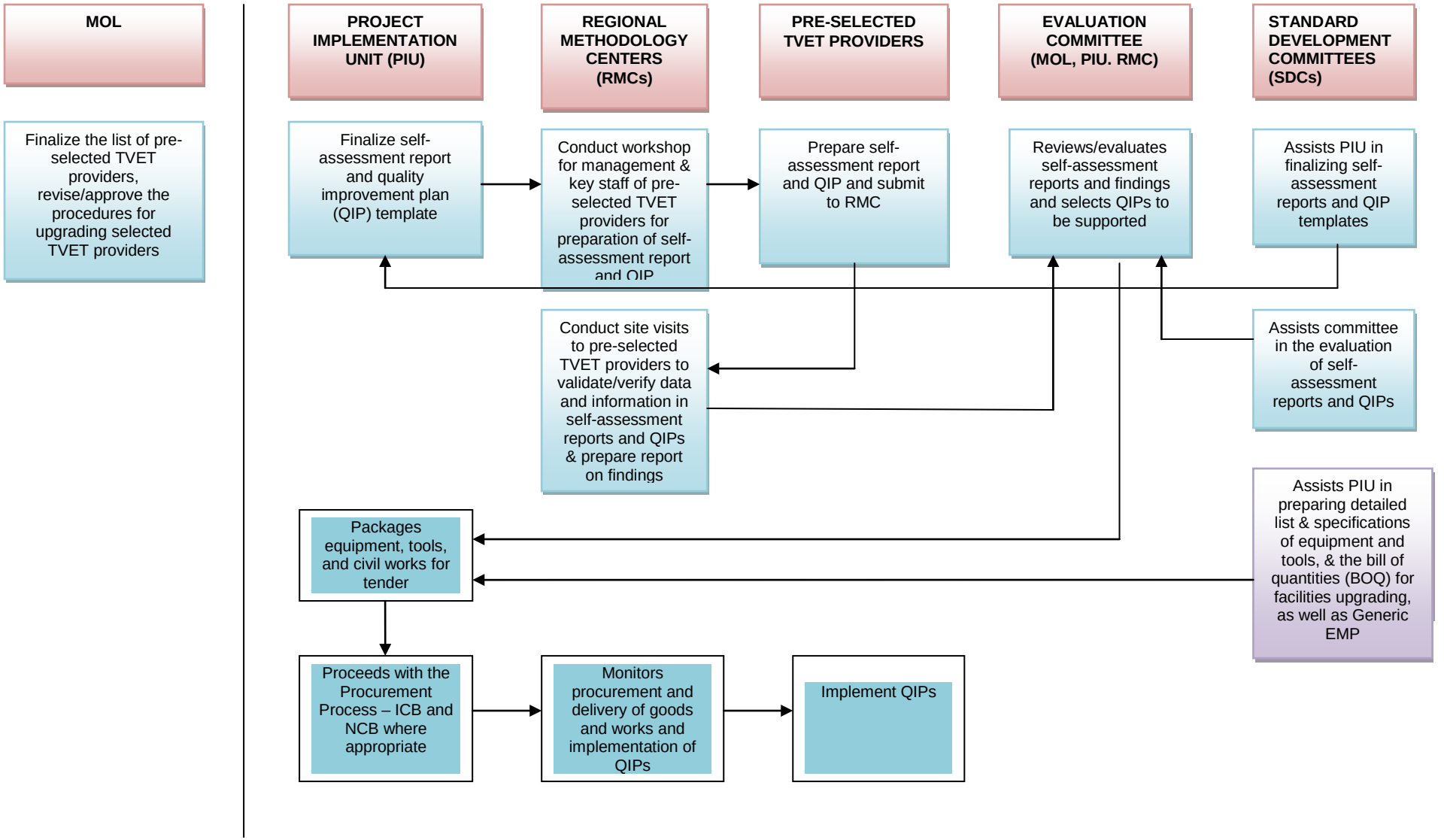
[39] This S-EARF and its generic EMP are disclosed as appendix to the project administration manual (PAM) on www.adb.org.

**Table 1: S-EARF implementation arrangements**

| | |
|---|---|
| **Executing Agency (EA)** | • The Ministry of Labor (MOL) will be the EA of the project, and implement Outputs 1, 2, 3 and 5. |
| **Project Implementing Unit (PIU)** | • The PIU will manage day-to-day activities, including coordination and supervision of the S-EARF.<br>• The PIU will be staffed with a project manager; a project coordinator responsible for Output 4; a procurement specialist; an accountant/financial management specialist; a CBT&A specialist; a training specialist; an M&E specialist; an education specialist (senior secondary technology subject); an education specialist (career guidance); a project assistant; and a driver. The PIU will assume the overall responsibility for construction supervision on behalf of the MOL and will be assisted by the consulting firm for TVET facilities upgrading under loan implementation consultant services (LIC) in coordinating the S-EARF implementation. |
| **Standard Development Committees (SDCs)** | • The PIU, supported by the consulting firm for CBT&A development under loan implementation consultant services, will assist in the establishment of SDCs composed of expert workers in key occupations selected through professional and industry associations (formed under Output1) which will provide support for the Evaluation Committee (EC) in the following:<br>(i) reviewing self-assessment reports of pre-selected TVET providers including the current inventory of tools, equipment and the condition of training facilities;<br>(ii) reviewing the proposed list of tools, equipment and upgrading of facilities proposed by pre-selected TVET providers in the quality improvement plans (QIPs);<br>(iii) assisting the PIU prepare the detailed list, description and specification of equipment and tools to be procured under the project; and<br>(iv) assisting the PIU prepare the bill of quantities and specifications (including contractor's obligation to develop site-specific EMP) for upgrading TVET facilities. |
| **Evaluation Committee (EC)** | • The MOL will establish an Evaluation Committee (EC) composed of representatives from the MOL, PIU, and RMC. The EC will be responsible for reviewing and approving self-assessment reports and QIPs prepared by pre-selected TVET providers.<br>• The EC will prepare a list of selected TVET providers with their approved QIPs. |
| **TVET providers (including institutions to be accredited as assessment and certification centers)** | • The pre-selected TVET providers will be responsible for developing and implementing, once selected, the Quality Improvement Plans (QIP), and supervising contractors during minor civil works.<br>• Each selected TVET provider will appoint one technical team member to supervise contractors. |
| **Regional Methodology Centers (RMCs)** | • Self-assessment reports and QIPs developed and submitted by TVET providers will be validated and verified by one of the 5 RMCs, together with the PIU, SDCs, and LIC-CF, through site visits, before these are submitted to the EC for approval. |
| **Consulting firm for TVET facilities upgrading under loan implementation consultant services (LIC-CF)** | • 1 expert in civil engineering and architecture, 2 civil engineers and 1 environment specialist will be engaged through a consulting firm for TVET facilities upgrading under loan implementation consultant services. The LIC-CF will coordinate implementation of the S-EARF. They will, amongst others:<br>(i) be responsible for preparing design drawings, ensuring compliance of design with MEDS and MOL (2013) "Common Requirements for Establishing Vocational Educational Organizations and Starting and Renewing of Professional Training Facilities", and other relevant building codes for education facilities;<br>(ii) review and clear, on behalf of the PIU, Site-EMPs prepared by civil works contractors;<br>(iii) conduct site visits to each TVET provider with civil works at least twice;<br>(iv) assist the TVET providers and contractors in conducting consultation with relevant stakeholders;<br>• (v) prepare S-EARF implementation progress report as input to semi-annual project progress reports. |
| **Civil Work Contractors** | • Civil work contractors will have main environmental management responsibility. They will ensure that:<br>(i) their bids respond to environmental management requirements of this S-EARF; |

| | |
|---|---|
| | (ii) a contractor site- EMP is developed based on the generic EMP (Annex C); and<br>(iii) a qualified person is assigned to coordinate the site-EMP implementation. |
| **External environment, health and safety supervision agencies** | • *Aimag* ASI inspectors responsible for environment, health and safety will inspect project interventions in participating TVET providers at city and *aimag* levels.<br>• Given the low-risk and low-impact rating of civil works inspections will be conducted as needed. |

## Figure 1: Flowchart for selecting TVET providers



## II. S-EARF implementation process

10. The S-EARF defines the following **main environment assessment and management steps**, which are integral to the TVET provider upgrading process under Output 2 (see also **Figure 1**):

(i) **Step 1:** Safeguard screening during preparation of Quality Improvement Plans (QIP) including (1.1) assessment of eligibility of QIP; and (1.2) screening of potential impacts;

(ii) **Step 2**: Pre-construction activities, including (2.1) preparation of technical drawings by LIC-CF (under supervision of the PIU, and with support of SDCs); (2.2) preparation of contractor site-EMPs; and (2.3) confirmation of project readiness by RMC;

(iii) **Step 3**: Construction phase activities, including (3.1) implementation of site-EMP by civil works contractor (contractor obligations); (3.2) site inspections (RMC and TVET provider obligations); (3.3) supervision and reporting (PIU obligations, supported by the LIC-CF); (3.4) construction completion confirmation (PIU obligation, supported by the LIC-CF).

11. These steps including sub-steps are described in the following sections.

### STEP 1: SAFEGUARD SCREENING DURING PREPARATION OF QIP

**Step 1.1: Assessing eligibility of pre-selected TVET providers** *[TVET providers, RMCs, EC, SDCs]*

12. **Table 2** defines environment related criteria affecting eligibility of pre-selected TVET providers. TVET providers will confirm in their QIPs that the proposed activities comply with these criteria, which will be verified and validated by the RMCs, together with the PIU, SDCs and the LIC-CF, through site visits.[40] Finally, the Evaluation Committee (EC), with the support of the PIU and the LIC-CE, will approve the QIPs. The ADB mission will review the minutes of the EC and the list of selected TVET providers, and endorse the list and the QIPs.

**Table 2: Eligibility criteria for civil works and equipment under Output 2**

| | |
|---|---|
| **(1) Eligible QIPs** | ((i) Rehabilitation of existing classrooms, laboratories, or workshops to be used for programs and short courses for key occupations in the three priority sectors;<br><br>(ii) Rehabilitation of basic services including water supply, sanitation and personal hygiene facilities (toilets, showers) facilities including separate toilet for women with connection to sanitation and solid waste disposal systems basic water and sanitation and provision of access for disabled students. |
| **(2) Non-eligible QIPs** | (i) Construction of new buildings, workshop or dormitories; or expansion of existing building (total floor area);<br><br>(ii) Construction works that may involve involuntary resettlement, land acquisition, and impact on legally protected or environmentally sensitive areas;<br><br>(iii) Construction works that may encroach on historical and/or cultural areas;<br><br>(iv) Construction works requiring excavation, disposal of fill and/or spoil materials;<br><br>(v) TVET providers located in areas prone to floods, landslides, and other natural hazards;<br><br>(vi) Activities requiring exposure to hazardous waste (e.g. removal of asbestos |

[40] An eligibility criteria checklist aligned with these criteria will be included in the QIP template (to be filled out by the TVET provider and confirmed by the RMCs) and the QIP evaluation form (to be filled out by the EC).

| | |
|---|---|
| | or asbestos containing material, PCB, PAH; contaminated soil);<br><br>(vii) Any activity that may be subject to General EIA and Detailed EIA under MON Law of Environmental Impact Assessment (2012); and<br><br>(viii) Facilities and proposals not complying with quality criteria, size and dimension of TVET training and accommodation facilities as defined in the ministerial order "Common Requirements for Establishing Vocational Educational Organizations and Starting and Renewing of Professional Training Facilities (MEDS and MOL, 2013).<br><br>(ix) Any activity included in the list of ADB prohibited investment activities (ADB Safeguard Policy Statement 2009, Appendix 5). |

13. **Heating:** Most of TVET providers are connected to *aimag* central heating systems and some of them have their own heating system (heat only boilers, HoB). Both systems are permitted by the GoM. However, UB and some of *aimags* have recently begun to experience high levels of air pollution, mainly caused by coal burning. Therefore, especially where rehabilitation of heating is included in the QIPs, the proposals shall satisfy the relevant national standards on air pollution which are listed in Annex A.

**Step 1.2: Screening of environmental impacts, Generic EMP** *[ADB, PPTA Consultant, Executing Agency]*

14. At project pre-reconnaissance stage and during preparation of this S-EARF, screening has been carried out to identify possible environmental, health and safety issues. If QIPs comply with the eligibility criteria defined during Step 1.1 (**Table 2**), anticipated impacts that will arise from minor civil works will be minimal and localized. The major negative environmental impacts are associated with increased level of noise and dust due to the usage of vehicles and building mechanization (**Table 3**). Some construction debris will be generated during rehabilitation works. Risks to occupational and community health and safety from construction activities are also considered potentially relevant. Construction activities will be accommodated within existing premises avoiding land acquisition and/or resettlement. There will be no temporary or permanent loss of land or other assets. During the operation phase, no significant environmental impacts and risks are anticipated. Minor concerns include noise from the air-conditioners and ventilation facilities, practice training wastes, municipal solid waste and domestic sewage.

**Table 3: Screening of Environmental Impacts**

| Project Phase | Assessment Item | Potential for Impact |
|---|---|---|
| Construction | Wastewater | Domestic sewage from workers;<br>Washing wastewater; |
| | Air | Vehicles and exhaust gas from mechanical facilities |
| | Noise | Noise from vehicles, concrete mixer; vibrator and electric saw; hoist and lifter |
| | Solid waste | Municipal and construction wastes |
| | Health and safety | Construction site safety; occupational health and safety; safety of students and staff during construction activities. |
| Operation | Wastewater | Domestic sewage from buildings. |
| | Air | Cooking oil fumes. |
| | Noise | Noise from ventilation facilities; mechanical training equipment. |
| | Solid waste | Municipal waste and waste from mechanical practice. |
| | Health and safety | Fire and earthquake safety; indoor air quality and light; waste management; water supply. |

15. A generic environmental management plan (Generic EMP) has been prepared to mitigate the potential negative impacts and health and safety risks during construction

(**Annex C**). The Generic EMP includes basic requirements for implementation and supervision of works. The Generic EMP requires civil works contractors to plan for the construction projects, including issues such as work scheduling, consultation with and notification to affected students and staff of TVET providers and nearby communities. The Generic EMP also defines prohibited activities, good environmental and housekeeping practices, occupational health and safety and community health and safety requirements, Personal Protective Equipment (PPE) requirements, and reporting and communication requirements. The Generic EMP will be included in the bidding documents and attached to each civil works contract. The contractors are required to follow these general requirements and develop site specific plans (contractor site-EMP) for implementing these measures during construction.

## STEP 2: PRE-CONSTRUCTION ACTIVITIES

**Step 2.1: Preparation of bidding documents, evaluation of bids** *[PIU, SDCs, LIC-CF]*

16. Civil works and equipment will be procured in accordance with ADB's Procurement Guideline (2010, as amended from time to time). The PIU, with support of the LIC-CF, will incorporate this S-EARF including the clauses defined in **Annex B** and the generic EMP (**Annex C**) as specifications into the respective bidding documents. The consulting firm for TVET facilities upgrading under loan implementation consultant services (LIC-CF) will assist the PIU and the bid evaluation committee in the bid evaluation process and assess compliance with the specifications (to be documented in bid evaluation report).

**Step 2.2: Preparation of contractor site-EMPs** *[Contractor]*

17. After contract award but before construction commencement, each civil works contractor will develop a contractor site-EMP based on additional site investigations, consultation with TVET provider staff and students and nearby residents. Information to be included into the site-EMP is defined in **Appendix C**. In addition, if new environmental issues are identified, corresponding measures should be defined in the site-EMP. The contractor shall also assign a qualified person to coordinate the site-EMP implementation. No construction shall be commenced without cleared site-EMP by the PIU (through the LIC-CF, see Step 2.3 below).

**Step 2.3: Confirmation of project readiness** *[RMC, MOL, PIU, LIC-CF]*

18. After contract award but before construction commencement, the RMC and the MOL in charge of monitoring the implementation of a QIP, with support of the LIC-CF, shall confirm the following to the PIU:

(i) The TVET provider has appointed a technical staff member for day-to-day supervision of civil works activities;
(ii) The contractor has developed a site-EMP complying with the generic EMP (Annex C) and responding to contract clauses and specifications (Annex B);
(iii) The LIC-CF has cleared the site-EMP;
(iv) The contractor has assigned a qualified person to coordinate site-EMP implementation, and has disclosed civil works and site-EMP related information in and around the construction site.

19. The LIC-CF will have close cooperation with the contractors to ensure that all S-EARF requirements are properly reflected and adequately budgeted. The LIC-CF will be directly supervised by the PIU Manager and should have regular communication with RMC, MOL and *aimag* ASIs.

## STEP 3: CONSTRUCTION PHASE ACTIVITIES

### Step 3.1: Implementation of the site-EMP *[Contractor]*

20. During construction, the contractor has overall responsibility for the site-EMP implementation. The contractor will cover the costs for mitigation and protection measures based on the design. The contractor will establish a hotline to receive public inquiries, comments, and suggestions, and consult and communicate with TVET provider staff and students as well as local people. Each contractor shall submit to the PIU, through the relevant RMC and TVET provider, monthly progress reports which shall include a section on the site-EMP implementation.

### Step 3.2: Site inspections, public consultation *[RMC, MOL, LIC-CF, TVET provider]*

21. During minor civil works, RMC and MOL, supported by the LIC-CF and together with the TVET provider technical staff, will conduct regular site inspections to oversee the contractor's compliance with the approved site-EMP. Inspections shall be conducted on a bi-monthly basis during civil works, and follow the site inspection checklist developed for that purpose (**Annex D**). Public consultation during construction will mainly rely on informal interviews with TVET provider staff and students as well as nearby residents during site inspections by the LIC-CF. The completed inspection checklists will be submitted to the PIU on a quarterly basis for verification and confirmation. In case of violations, the PIU shall report it to ASI. The checklists will be incorporated into quarterly reports and the annual progress reports to ADB, which will be disclosed on the project website.

### Step 3.3: Supervision, construction completion confirmation, reporting to ADB *[PIU, LIC-CF, ASI]*

22. **Supervision and reporting by PIU (through LIC-CF).** The LIC-CF, on behalf of the MOL, and with the support of the PIU, will assume the main S-EARF implementation responsibility. The LIC-CF will do the following:

(i) conduct at least two site visits to each TVET provider where civil works are being carried out (at the beginning of civil works, and at completion stage);
(ii) synthesize status of civil works and S-EARF implementation in the quarterly progress report to ADB (including compliance of contractors with obligations, RMC, MOL and TVET providers' inspection activities and findings, problems encountered during construction and operation, and the relevant corrective actions undertaken); and
(iii) assist RMCs, MOL, TVET providers and contractors in conducting consultation with relevant stakeholders as required, informing them of imminent construction works, updating them on the latest project development activities.

23. **Completion audits.** At the end of the rehabilitation works, it will be necessary to confirm the regularity and safety of each building, workshop, and equipment unit or system. The completion audits will be conducted by the LIC-CF, with involvement of government committee including environment protection agencies and ASI inspectors. The LIC-CF will compile, on behalf of the MOL, an S-EARF implementation completion report, no later than 3 months after completion of all civil works related to the project.

## Environmental Laws, Environmental Quality and Health and Safety Standards Relevant to the QIP Implementation

| Name of Law | Year | Description |
|---|---|---|
| Law on Subsoil | 1988 | Regulates relations concerning the use & protection of subsoil in the interests of present and future generations. |
| Law on Land | 1994 (2012) | Regulates the possession & use of land by a citizen, entity & organization, & other related issues. Articles 42/43 provide guide on removing possessed land & granting of compensation relative to removing. |
| Law on Environmental Protection | 1995 (2012) | Regulates "relations between the state, citizens, economic entities and organizations in order to guarantee the human right to live in a healthy and safe environment, have ecologically balanced social and economic development, and for the protection of the environment for present and future generations, the proper use of natural resources and the restoration of available resources". Its Article 7 requires the conduct of natural resource assessment and environmental impact assessment to preserve the natural state of the environment, and Article 10, the conduct of environmental monitoring on the state and changes of the environment. |
| Law on Air | (2012) | Regulates the protection of the atmosphere to provide environmental balance & for the sake of present & future generations. Allows government to set standard limits to emissions from all sources. Provides for the regular monitoring of air pollution, hazardous impacts & changes in small air components such as ozone and hydrogen. |
| Law on Natural Plants | (2012) | Regulates the protection, proper use, & restoration of natural plants other than forest & cultivated plants. |
| Law on Water | (2012) | Regulates relations pertaining to the effective use, protection & restoration of water resources. Specifies regular monitoring of the levels of water resources, quality & pollution. Provides safeguards against water pollution. |
| Law on Plant Protection | 1996 (2007) | Regulates the inhibition, protection, inspection of pasturelands & plants. |
| Law on Environmental Impact Assessment | 1998 (2012) | Regulates "relations concerning protection of the environment, prevention of ecological imbalance, the use of natural resources, assessment of the environmental impact and decision-making on the start of a project". It sets out the general requirements and procedures for project screening and conduct of environmental assessment and review. |
| Law on Sanitation | 1998 | Governs relationships concerning maintenance of sanitary conditions, defining the general requirements for sanitation in order to ensure the right of an individual to healthy & safe working & living conditions, ensuring normal sanitary conditions, & defining the rights & duties of individuals, economic entities & organizations with this respect. |
| Law on Protection of Cultural Heritage | 2001 | Regulates the collection, registration, research, classification, evaluation, preservation, protection, promotion, restoration, possession and usage of cultural heritage including tangible and intangible heritage. |
| Law on Wastes | 2012 | Governs the collection, transportation, storage, & depositing in landfills of household & industrial waste, & re-using waste as a source of raw materials to eliminate hazardous impacts of household and industrial waste on public health & the environment. Undertakings that generate significant amount of wastes must dispose of the wastes in designated landfills that meet prescribed standards. |
| Law on Disaster Protection | 2003 | Regulates matters relating to the principles & full powers of |

| Name of Law | Year | Description |
|---|---|---|
| | (2012) | disaster protection organizations & agencies, their organization & activities, as well as the rights & duties of the State, local authorities, enterprises, entities & individuals in relation to disaster protection. |
| Law on fauna | 2012 | Regulates matters related protection of animals, growth and development, breeding, rational use of its resources. |
| Law on Buildings | 2008 | Regulates all the construction phases from design to completion of construction. It also regulates civil works. |
| The Joint Ministerial Order # A/136, A271 MEDS and MOL | 2013 | Common Requirements for Establishing Vocational Educational Organizations and Starting and Renewing New Professional Trainings |
| Ministerial order # 196 Ministry of Infrastructure | 1999 | The Design Authors Supervision during Construction works(БНбД 11.04.99) |

(a) Accession (e) Entry into force (r) Ratification
Source: Mongolia: Ulaanbaatar Urban Services and Ger Areas Development Investment Program (MFF), ADB, 2013

| | |
|---|---|
| **Air Quality** | |
| MNS 4585:2007 | National air quality standards and parameters, applies to urban areas |
| **Noise** | |
| MNS 0012-1-009:1985 | Standard for noise level in residential areas and civil construction |
| **Water Quality** (surface & groundwater) | |
| MNS 3342:1982 | General requirements for protection groundwater from pollution/contamination |
| MNS 0899:1992 | Requirements/rules for selecting water supply source & hygienic requirements |
| MNS 4586:1998 | Indicator of water environment quality and general requirements |
| MNS 6148:2010 | Permissible level for ground water polluting substances. |
| **Drinking Water Quality** | |
| MNS 900:2005 | Hygienic requirements and quality control for drinking water |
| **Wastewater** | |
| MNS 4943:2000 | Effluent/wastewater standard. |
| **Occupational Health/Safety** | |
| MNS 12.1.06:1988 | General requirements for safety against extreme high noise |
| MNS 4990:2000 | Hygienic requirements in workplace environment |
| **Dormitory** | |
| MNS 5869 - 2008 | Dormitory service. General Requirement |
| MNS 5682 - 2006 | Road and access for vehicles, pedestrian and disabled people |
| **Fire safety** | |
| MNS 0640 : 1989 | Fire safety requirement |
| **Construction work** | |
| 91.040 | The comprehensive package of the standards related to construction |
| 91.140.99 | The package of the standards that regulates inside construction and civil works for all buildings |
| 91.140.60 | The package regulates water supply system |
| 91.140.80 | The package regulates all the sewage water removal system |
| MNS 3838 : 1985 | Construction design developing and fire safety |
| **Heating** | |
| MNS 3238 : 2001 | Design for heating system |
| MNS 3240 : 2003 | Heating and air conditioning system design |
| MNS 5041 : 2001 MNS 5043 : 2001 | Technical requirements for Heat only Boilers |
| MNS 5457 : 2005 | Permissible level of pollutants in emission from heating and *ger*[a] chimneys and testing method |

[a] National dwelling: A *ger* is a portable, bent dwelling structure traditionally used by nomads in the steppes of Central Asia

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## Environmental Safeguard Clauses for Civil Works Contracts

1. The general environment, health and safety obligations of the Contractor within this Contract, without prejudice to other official provisions in force, include the following:

- The Contractor shall ensure that the construction and decommissioning of project facilities comply with (a) all applicable laws and regulations of Mongolia relating to environment, health and safety; (b) the Environmental Safeguards stipulated in ADB's Safeguards Policy Statement (2009); and (c) all measures and requirements set forth in the S-EARF and its Generic EMP.
- The Contractor shall establish a telephone hotline staffed at all times during working hours. Contact details shall be prominently displayed at the sites. The Contractor shall disseminate in a timely manner information on the construction progress, including anticipated activities that might cause safety risk. The contractor shall respond to any complaints within 1 week. If no progress, the contractor shall discuss with the PIU the complaint and resolve the issue to the satisfaction of the complainant within 2 weeks.
- The Contractor shall secure, where necessary, appropriate permits and licenses before undertaking the works.
- The Contractor shall assign sufficient qualified staff to manage site-EMP implementation, and ensure adequate financial resources are available to implement the site-EMP throughout the construction period.
- The Contractor shall provide equal pay for equal work, regardless of gender or ethnicity; provide those they employ with a written contract; provide the timely payment of wages; use local unskilled labor, as applicable, comply with core labor standards and the applicable labor laws and regulations, including stipulations related to employment, e.g. health, safety, welfare and the workers' rights, and anti-trafficking laws; and not employ child labor. The Contractor shall maintain records of labor employment, including the name, ethnicity, age, gender, domicile, working time, and the payment of wages.
- The Contractor shall take necessary precautions to avoid interruptions to water supply, wastewater collection, heating and other utility services during the civil works.
- The Contractor shall prepare a construction site-EMP based on the measures defined in the S-EARF and its Generic EMP (**Annex C**).
- The Contractor shall take appropriate sanctions against personnel violating the applicable specifications and provisions on environment, health and safety.
- The Contractor shall document, and systematically report to the TVET provider and the PIU, of each incident or accident, damage or degradation caused to the environment, workers or residents or their assets, in the course of the works.
- The Contractor shall provide all relevant information about the S-EARF and its Generic EMP, as well as the Site-EMP to subcontractor/s and be responsible for their actions.
- The Contractor shall provide the TVET provider and the PIU with a written notice of any unanticipated environmental, health and safety risks or impacts that arise during implementation of the contract that were not considered in the S-EARF and the Generic EMP.

## Generic Environmental Management Plan (Generic EMP)

1. This Generic EMP is developed for Skills for Employment Project, Outputs 1 and 2. It defines basic requirements for implementation and supervision of minor civil works, and shall form part of all contracts for minor civil works. The Generic EMP defines all potential impacts of Outputs 1 and 2 and the mitigation and protection measures with the objective of avoiding or reducing these impacts to acceptable levels. The Generic EMP seeks to ensure continuously improving environmental protection activities during preconstruction, construction and operation of facilities with a strong focus on the construction phase.

2. The Generic EMP requires civil works contractors to plan for the construction projects, including issues such as work scheduling, consultation with and notification to affected students and staff of TVET providers and nearby communities. The Generic EMP also defines prohibited activities, good environmental and housekeeping practices, occupational health and safety and community health and safety requirements, and communication requirements

3. The Generic EMP will be included in the bidding documents and attached to each civil works contract. The contractors are expected to follow these general requirements and develop site specific plans (contractor site-EMP) for implementing these measures during construction. The contractors will be made aware of their obligations to comply with the Generic EMP, and to budget EMP implementation costs in their bids.

**Table EMP-1: Potential Environment, Health and Safety Issues, and Management Measures**

| Potential Impacts and/or Issues | Location | Mitigation measures | Implementation Agency | Superv. Agency | Monitoring Indicators |
|---|---|---|---|---|---|
| **A. Pre-construction Phase** | | | | | |
| Institutional strengthening | *Not applicable* | • EA to establish PIU;<br>• EA to hire a consulting firm for TVET facilities upgrading under loan implementation consultant services (LIC-CF) including civil engineers with construction supervision and environment management expertise.<br>• LIC-CF to conduct basic training for EA, PIU, RMCs on S-EARF and generic EMP implementation. | EA, PIU, RMCs | ADB | Project readiness assessment by EA, RMC with support of LIC-CF |
| Facility Design complying with relevant national standards, including health and safety, green and energy-efficient building codes and specifications. | All buildings | • Design buildings in compliance with relevant design standards and codes for energy-efficient, safe buildings, including but not limited to: MNS 3838: 2008 and Construction standard package # 91.040.<br>• Use low or no VOC-emitting materials (including paints, coatings, adhesives, carpet and furniture's) to ensure high indoor air quality.<br>• All materials should have appropriate permissions on quality and safety (certificate of conformity). Water-based nontoxic, no allergenic paint for drywall or plaster surfaces is preferable to latex or oil-based | Expert in civil engineering and architecture (LIC-CF) | LIC-CF, PIU | Approved detailed designs, approved QIPs |

| Potential Impacts and/or Issues | Location | Mitigation measures | Implementation Agency | Superv. Agency | Monitoring Indicators |
|---|---|---|---|---|---|
| | | paints.<br>• Ensure that the building envelopes (external walls) are built to a good quality standard, using high quality insulating materials. | | | |
| Bidding documents and contractors qualifications | *Not applicable* | • Include S-EARF and its Annexes in bidding documents.<br>• Ensure that civil works contracts are responsive to Generic EMP provisions and mitigation and monitoring measures are adequately budgeted. | PIU, LIC-CF | EA, ADB | Bidding documents, bids, civil works contracts |
| Site-specific EMP | *Not applicable* | • The Contractor shall develop a site-specific EMP, responding to all clauses and requirements of this Generic EMP.<br>• The Contractor shall assign a qualified staff to be responsible for coordinating site-EMP implementation, including workplace safety.<br>• The Contractor shall ensure adequate resources are available to implement the site-EMP throughout the construction period. | Contractor | LIC-CF, PIU | Site-specific EMPs cleared by LIC-CF |
| Permits and licenses | *Not applicable* | • The Contractor has the duty to secure, where necessary, appropriate permits and licenses before undertaking the works.<br>• The Contractor must comply with all prevailing legislation at the time of construction, including any requirements under health and safety. | Contractor | LIC-CF, *aimag* ASI inspector | - |
| Information disclosure, hotline for grievance redress | *Construction sites* | • The Contractor shall establish a telephone hotline staffed at all times during working hours. Contact details shall be prominently displayed at the sites.<br>• The Contractor shall disseminate in timely manner information on the construction progress, including anticipated activities that might cause safety risk.<br>• The Contractor shall inform PIU, LIC-CF, TVET provider, RMCs, EA and ADB in case of formal complaints. In case of no resolution within 3 weeks of the complaint, the PIU will call a multistakeholder meeting to resolve the issue. ADB will be consulted. | Contractor | PIU, LIC-CF, TVET provider, RMCs, EA | Progress report (PIU, LIC-CF) |
| **B. Construction Phase** | | | | | |
| Prohibited activities | All construction sites | The following activities are specifically prohibited:<br><br>• Cutting or removal of trees for any reason outside the approved construction area; | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress report (PIU, LIC-CF) |

| Potential Impacts and/or Issues | Location | Mitigation measures | Implementation Agency | Superv. Agency | Monitoring Indicators |
|---|---|---|---|---|---|
| | | • Spillage of potential pollutants, such as petroleum products; burning of wastes and/or removal of vegetation outside the project area;<br>• Indiscriminate disposal of rubbish or construction wastes or rubble;<br>• Disturbance to anything with architectural or historical value;<br>• Use of alcohol by workers during working hours;. | | | |
| Toxic and hazardous wastes, products | All construction sites | • Prior to renovation, search existing facilities for chemicals and any other substances such as asbestos or asbestos containing materials (ACM);<br>• If toxic solid waste is found during construction, construction activities should be suspended and the *aimag* ASI inspector consulted to define appropriate actions;<br>• Store chemicals/hazardous products and waste on impermeable surfaces in secure, covered areas; Provide spill cleanup measures and equipment at each construction site. | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress report (PIU, LIC-CF) |
| Air pollution control | All construction sites | • HoBs shall satisfy the relevant national standards on general technical requirements air pollution emissions. | Contractor | LIC-CF | Inspection report of LIC-CF |
| Wastewater | All construction sites | • Discharge construction wastewater and domestic wastewater to sewer systems (if possible), or provide on-site treatment facilities to ensure compliance with effluent discharge standard. | Contractor | LIC-CF | Inspection report of LIC-CF |
| Construction and domestic wastes generated on construction sites | All construction sites | • All valuable materials (doors, windows, sanitary fixtures, etc) should be carefully dismantled and transported to an assigned storage area. Valuable materials should be recycled within the project or sold;<br>• Provide appropriate waste storage containers for worker's construction and hazardous wastes;<br>• Install confined storage points of solid wastes away from sensitive receptors, regularly haul to an approved disposal facility;<br>• Use licensed contractors to remove wastes from the construction sites;<br>• Prohibit burning of waste. | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress report (PIU, LIC-CF) |
| Noise from construction activities | All construction sites, nearby residential | • Maintain equipment and machinery in good working order;<br>• Undertake regular equipment maintenance, ensure compliance | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress |

| Potential Impacts and/or Issues | Location | Mitigation measures | Implementation Agency | Superv. Agency | Monitoring Indicators |
|---|---|---|---|---|---|
| | areas | with relevant standard;<br>• Operate between 6am-10pm only and reach an agreement with TVET provider and nearby residents regarding the timing of works, to avoid any unnecessary disturbances;<br>• Install temporary anti-noise barriers to shield school buildings where needed; and<br>• Seek suggestions from TVET providers and potentially affected sensitive receptors to reduce noise annoyance. | | | report (PIU, LIC-CF) |
| Dust generated during construction, air emissions from construction vehicles and machinery | All construction sites, including nearby residential areas | • Regularly (at least once a day) spray water on construction sites where fugitive dust is generated;<br>• Store harmful materials in appropriate places and covering to minimize emission;<br>• Cover trucks with tarps or other suitable cover to avoid spilling;<br>• Regularly consult with TVET provider administration, students as well as nearby residents to identify concerns, and implement additional measures as necessary. | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress report (PIU, LIC-CF) |
| Vegetation, re-vegetation of disturbed areas; greening of sites | All TVET providers | • Properly re-vegetate disturbed areas after completion of civil works. | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress report (PIU, LIC-CF) |
| Occupational Health and Safety | All construction sites | • Provide safe supply of clean water and an adequate number of latrines and other sanitary arrangements at the site and work areas;<br>• Provide clean area to rest and eat for workers, away from potential exposure to hazardous substances;<br>• Provide garbage receptacles at construction site;<br>• Provide personal protection equipment (PPE) for workers in accordance with relevant health and safety regulations;<br>• Develop an emergency response plan to take actions on accidents and emergencies;<br>• Document and report occupational accidents, diseases, and incidents;<br>• Emergency contact numbers for local fire, medical and police services shall be kept at prominent place. | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress report (PIU, LIC-CF), Number of incidents and complaints |
| Community Health and Safety | All construction sites, plus nearby | • Assess potential disruption to services and identify risks before starting construction; If temporary disruption is unavoidable, develop | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress |

| Potential Impacts and/or Issues | Location | Mitigation measures | Implementation Agency | Superv. Agency | Monitoring Indicators |
|---|---|---|---|---|---|
| | residential areas | a plan to minimize the disruption and communicate the dates and duration in advance to all affected people, in conjunction with the TVET provider administration;<br>• Place clear signs at construction sites in view of students and staff as well as the public, warning people of potential dangers such as moving vehicles, hazardous materials, etc, and raising awareness on safety issues;<br>• Ensure that all construction sites will be made secure, discouraging access through appropriate fencing whenever appropriate;<br>• Noisy or vibration generating activities should be strictly confined to the daytime. | | | report (PIU, LIC-CF), Number of incidents and complaints |
| Temporary Traffic Management | All construction sites | • Prepare traffic and access plan within and around TVET provider during construction, as needed. | Contractor | TVET providers, LIC-CF, *aimag* ASI | Inspection checklists (LIC-CF), Progress report (PIU, LIC-CF), Number of incidents and complaints |
| **C. Operation Phase** | | | | | |
| Wastewater management | TVET providers with civil works | • Ensure connection of rehabilitated buildings to on-site pretreatment facilities and to municipal sewer system. | TVET providers | LIC-CF, *aimag* ASI | No evidence of illicit wastewater discharge on-site during completion audit |
| Solid waste management | TVET providers with civil works | • Provide adequate solid waste collection facilities in all buildings;<br>• Promote segregation of waste through provision of separate collection bins for paper, biodegradable waste, metallic waste, and other wastes;<br>• Reach agreement with waste collection service provider(s) for different types of waste;<br>• Regularly clean and disinfect waste collection facilities. | TVET providers | LIC-CF, *aimag* ASI | No evidence of illicit waste dumping during completion audit |
| Indoor health and safety | TVET provider classrooms, workshops | • Ensure compliance with relevant health and safety regulations pertaining to ventilation, indoor air quality, lighting, noise, fire escape, etc. | TVET providers | EA, PIU, LIC-CF, *aimag* ASI | Completion audit report |

## Table EMP-2: Recommended Personal Protective Equipment According to Workplace Hazards

| Objective | Workplace Hazard | PPE |
|---|---|---|
| Eye and Face Protection | Flying particles, Molten metal, Liquid chemicals, gases, vapor. | Safety glasses with side-shields, protective shades, etc. |
| Head Protection | Falling objects, inadequate height clearance, and overhead power cords | Plastic helmets with top and side impact protection. |
| Hearing Protection | Noise | Hearing protectors (ear plugs or ear muffs) |
| Foot Protection | Falling or rolling objects, pointed objects, corrosive or hot liquids | Safety shoes and boots for protection against moving & falling objects, liquids and chemicals. |
| Hand Protection | Hazardous materials, cuts or lacerations, vibrations, extreme temperatures | Gloves made of rubber or synthetic materials (Neoprene), leather, steel, insulating materials, etc. |
| Respiratory Protection | Dust, fogs, fumes, mists, gases, smokes, vapors | Facemasks with appropriate filters for dust removal and air purification (chemicals, mists, vapor and gases. |
| Body/leg Protection | Extreme temperatures, hazardous materials, cutting and laceration. | Insulating clothing, body suits, aprons, etc of appropriate materials. |

# Environmental Site Inspection Checklist

## Skills for Employment Project

*Note: This form is designed for use by LIC-CF during site inspections and may not be exhaustive. Modifications and additions may be necessary to suit individual projects and to address specific environmental issues and mitigation measures.*

Name of TVET provider: _____

Location: _____
Inspection Date: _____
Inspection Time: _____
Inspector(s): _____

| Inspection Item | Yes | No | N.A. | Remarks (i.e. problem observed, possible cause of nonconformity and/or proposed corrective/ preventative actions) |
|---|---|---|---|---|
| 1. Has contractor appointed a construction supervisor and is the supervisor on-site? | | | | |
| 2. Is information pertaining to construction disclosed at construction site (including construction period, contractor information, etc)? | | | | |
| 3. Are chemicals/hazardous products and waste stored on impermeable surfaces in secure, covered areas? | | | | |
| 4. Is there evidence of oil spillage? | | | | |
| 5. Are chemicals stored and labeled properly? | | | | |
| 6. Is construction equipment well maintained? (any black smoke observed) | | | | |
| 7. Is there evidence of excessive dust generation? | | | | |
| 8. Are there enclosures around the main dust-generating activities? | | | | |
| 9. Does contractor regularly consult with TVET provider, students as well as nearby residents to identify concerns? | | | | |
| 10. Is there evidence of excessive noise? If yes, describe location and equipment. | | | | |
| 11. Any noise mitigation measures adopted (e.g. use noise barrier / enclosure)? | | | | |
| 12. Is construction wastewater and domestic wastewater discharged to sewer systems (if possible), or are on-site treatment facilities (septic tank) provided? | | | | |
| 13. Is there any wastewater discharged to soil or surface water? | | | | |
| 14. Is the site kept clean and tidy? (e.g. litter free, good housekeeping) | | | | |
| 15. Are separated labeled containers/ areas provided for facilitating recycling and waste segregation? | | | | |
| 16. Are construction wastes / recyclable | | | | |

| Inspection Item | Yes | No | N.A. | Remarks (i.e. problem observed, possible cause of nonconformity and/or proposed corrective/ preventative actions) |
|---|---|---|---|---|
| wastes and general refuse removed off site regularly? | | | | |
| 17. Have hazardous wastes been identified (such as asbestos, PCBs)? | | | | |
| 18. Is safe supply of clean water and an adequate number of latrines provided for workers? | | | | |
| 19. Is personal protection equipment (PPE) provided for workers? | | | | |
| 20. Are clear information and warning signs placed at construction sites in view of the students and staff as well as the public? | | | | |
| 21. Are all construction sites made secure, discouraging access through appropriate fencing? | | | | |
| 22. Are fire extinguishers / fighting facilities properly maintained and not expired? Escape not blocked / obstructed? | | | | |
| 23. Is there any evidence of excessive destruction of existing vegetation? | | | | |
| 24. Are disturbed areas properly re-vegetate after completion of works? | | | | |
| 25. Consultation: Were any complaints filed with the contractor, and have students, staff and nearby residents raised any concerns related to the performance of contractors? | | | | |
| 26. Any other problems identified or observations made? | | | | |

_____

Date, Name and Signature of LIC-CF

## METHODOLOGY AND PROCEDURES FOR DEVELOPING STANDARDS FOR KEY OCCUPATIONS

### A. Objectives

1. Competency/occupational standards for 15 key occupations in the three priority sectors (agriculture, construction, road and transportation) will be developed in collaboration with industry and professional associations and employers under the project. The purpose of developing standards is to:

(i) Define technical skills and knowledge, attitude, behavior, safety, and others that are recognized by all employers and that a worker in an occupation or skills area needs to perform well;
(ii) Design technical and vocational education and training (TVET) programs and courses that are fully responsive to the labor market demand;
(iii) Provide guidance and reference for employers on recruitment, work organization and allocation and the setting of wages;
(iv) Facilitate students and workers to improve their competency levels and progress their career; and
(v) Create logical pathways for competency/career progression in an occupation or skills area that are aligned with a national qualifications framework.

2. The standards developed under the project will be reviewed, approved and registered by the concerned sector sub-councils in the three priority sectors. The project will concurrently assist the Ministry of Labor (MOL) in reviewing the role of sector sub-councils on TVET in the processes and develop procedures for developing, approving and registering standards.

### B. Organizations and Processes Involved in Developing Standards

3. The development of standards for an occupation will involve the following organizations and follow six steps:

(i) **Establishment of a DACUM Panel of Experts:** The sector sub-council on TVET, with the support of industry/professional associations in the sector, will appoint individuals to a DACUM Panel of Experts which will develop an occupation profile chart.
(ii) **Development of an occupation profile chart:** Facilitated by DACUM facilitators (the consulting firm for competency-based training and assessment (CBT&A) development), the DACUM Panel of Experts will develop an occupation profile in a workshop; first, the general areas of competence (GAC) for the occupation (duties) will be identified and second, the tasks/competencies performed by a worker within each area of competence will be defined. The duties and tasks will be presented graphically on an occupation profile chart along with information on (a) the behavior, attitudes and traits required of a worker to be successful in the occupation; (b) general skills and knowledge needed to perform the duties and tasks; (c) tools, equipment, and materials used in supporting the tasks, and (d) future trends that could affect this occupation and likely to cause job changes.
(iii) **Validation and publication of the occupation profile chart:** The occupation profile chart will be sent to expert workers and supervisors of workers in the occupation for their review and comments and will be revised under the guidance of the DACUM facilitators by the DACUM Panel of Experts based on suggestions

provided; the final occupation profile chart will be sent to the sector sub-council on TVET for approval; once approved, the occupation profile chart will be distributed to enterprises in the relevant sector.

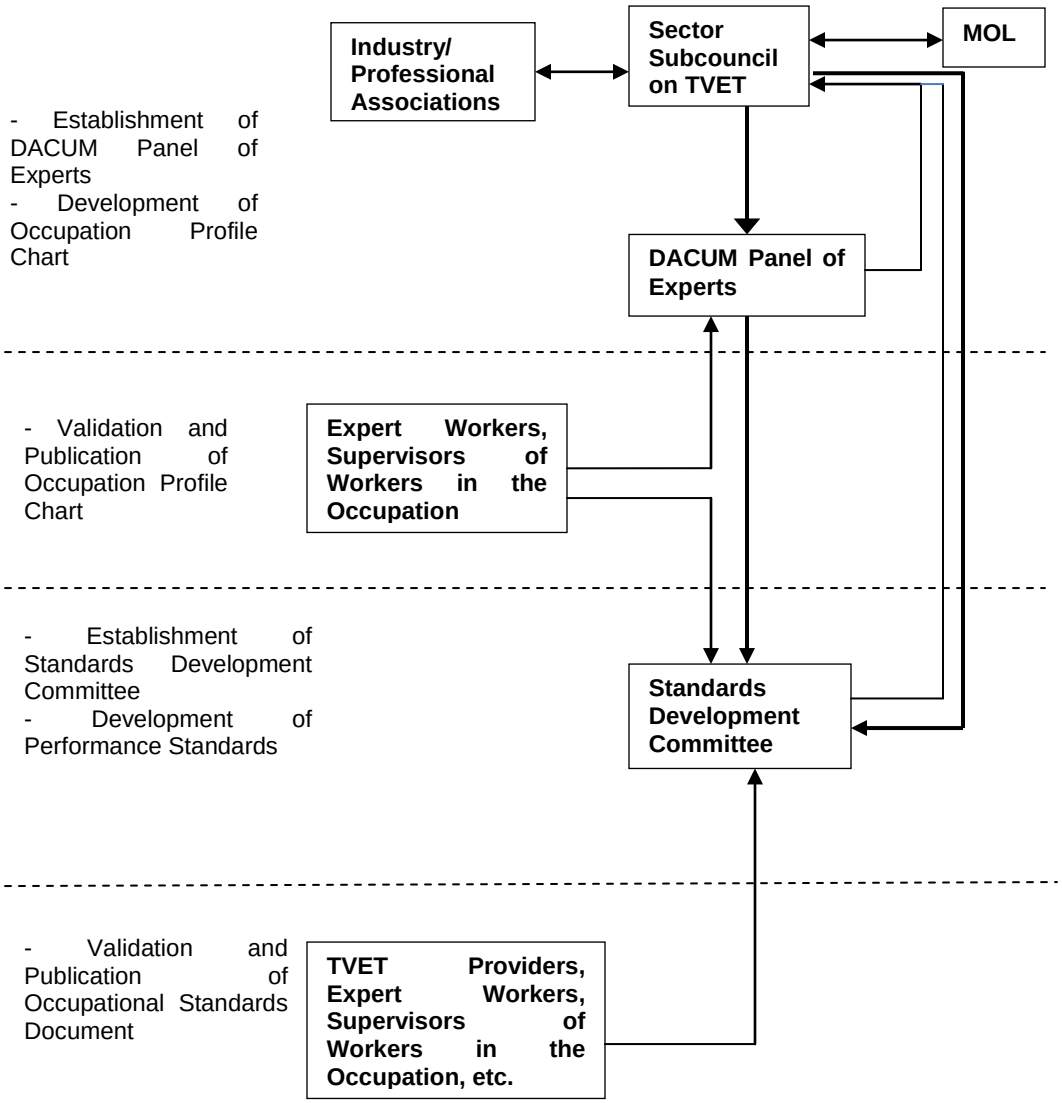
(iv) **Establishment of a Standards Development Committee (SDC):** The SDC will develop performance standards for the occupation. The sector sub-council on TVET will appoint individuals to a SDC comprising members of the DACUM Panel of Experts and supervisors of workers in the occupation.

(v) **Development of performance standards:** Under the guidance of the DACUM facilitators, the SDC will perform task analysis of the occupation in a workshop and prepare an occupational standards document containing the performance standard/criteria for each task in the occupation will be developed as well as the required knowledge, worker behaviors, tools, equipment, and materials and safety practices that are essential to task performance; the following information will be added to the occupation profile chart: (a) performance criteria/standards to be met by worker when performing the task; (b) knowledge needed to perform the task; (c) attitudes and traits needed to successfully perform the task; (d) tools, equipment, and materials necessary to perform the task; and (e) safety factors/practices that must be considered or followed in performing the task; after the workshop, the draft occupational standards document will be prepared.

(vi) **Validation and publication of the occupational standards document:** The occupational standards document will be sent to the sector sub-council on TVET, the MOL, concerned TVET providers, expert workers and supervisors of workers in the occupation and revised by the SDC based on suggestions provided under the guidance of the DACUM facilitators; the final occupational standards document will be sent to the sector sub-council for approval; once approved, the occupational standards document will be distributed to enterprises in the relevant sector, members of industry/professional associations, TVET providers, central and local labor exchange bureaus, trainees and workers in the occupation, the MOL and other appropriate government ministries.

4. The organizations and processes involved in developing standards for an occupation are shown in Figure 1. The process of developing standards will be facilitated by the consulting firm for CBT&A development and supervised by the MOL with the support of the PIU.

**Figure 1: Organizations and Processes Involved in Standards Development**




## C. Development of CBT Modules Based on Occupational Standards Document

5. The competencies identified on the occupation profile chart will be structured and articulated in an integrated training program aiming at preparing the trainee for the practice of the occupation. The systematic organization of competencies into sets of modules leading to a nationally recognized certificate makes it possible for any person to start at entry level and progress, at his/her own pace, to the most advanced level in the occupation.

6. In order to design a competency-based modular training program, a flowchart of the training sequence will be prepared. The flowchart represents the sequence in which the trainee should acquire the competencies and complete the training modules. The flowchart makes it possible to see the complete articulation of the program and ensure a certain coherence and logic in the overall training program. It will also allow trainees and TVET teachers to see the various learning pathways and the progression of the training and understand the links between

the individual modules. The modules resulting from specific competencies must be completed by the trainee as much as possible in the order presented in the flowchart starting from leaning general competencies and then progressing to learning the most advanced competencies.

7. CBT modules can be developed either for an individual task or cluster of related tasks, once performance standards have been prepared for each task/competency. The process of developing a CBT module will follow the following steps:

(i) Select one or more competencies/tasks from the occupation profile chart;
(ii) Make this competency/task the title of the training module;
(iii) By using the information in the occupational standards document for the occupation, write the learning outcome of the module, followed by glossary, pre-requisite modules and knowledge and abilities, performance criteria, learning activities, competency check/assessment, and guidelines/tips for the instructor.

8. Each CBT module will be consisted of the following main components in Table 1.

**Table 1: Module Structure**

| **Occupation/Trade** | **State the name of the occupation/trade or skill area** |
|---|---|
| Area of Competence | State area of competence that the task or competency is associated with. |
| Learning Outcome | State the desired learning outcome or learning outcomes for this training module. Each learning outcome is based on one specific task or competency from the validated occupation profile chart for the occupation. |
| Glossary | Provide a glossary (definitions of technical terms mentioned in the module) |
| Pre-requisite Modules and Knowledge & Abilities | Specify if there are any training modules that must be completed prior to taking this training module. Also, describe any pre-requisite knowledge and abilities that the trainee should possess in order to achieve the learning outcome of the module. |
| Performance Criteria | Write the performance criteria specified in the occupational standards document for the task or competency. The performance criteria specify the level or standard of performance that must be demonstrated by the worker to prove that he/she is competent. |
| Learning Activities | Describe the learning activities that the trainee must complete to help achieve the learning outcome. Describe practice exercises to be completed as well as activities for learning the theory and include a self-check exercise with model answers. |
| Competency Check/Assessment | Provide information to the trainee on how he/she will be assessed. Describe the type of skills performance test that will be given to the trainee to determine if the person can demonstrate the competency or perform the task to meet the performance criteria set by industry. Mention if a knowledge test will also be administered to the trainee. |
| Guidelines/Suggestions for Instructor | Provide suggestions and teaching tips to the instructor on how to facilitate and support the learning of each trainee. |

9. Table 2 presents a list of competency-based training modules developed under projects funded by the government and development partners.

**Table 2: Competency-based Training Modules Developed in Mongolia**

| Sector | Curriculum | Organization |
|---|---|---|
| 1. Agriculture | Food Production Equipment Technician (equipment repair) | MCA |
| | Agricultural Equipment Technician | MCA |
| | Intensified Livestock Production Farmer | MCA |
| | Vegetables farmer | MCA |
| | Common works in the agricultural sector | MCA |
| | Fruit, Vegetable and Related Preserver | SDC |
| | Farm Manager/Farmer | NLRC |
| | Greenhouse | NLRC |
| | Animal Husbandry/Care of Animals | NLRC |
| | Re-Forestation Worker | NLRC |
| 2. Construction | Heavy Equipment Handling (Road Construction Machinery Operators and Hydraulic Excavators) | AVET |
| | Welding | AVET |
| | Electrician | AVET |
| | Plumbing | AVET |
| | Air Conditioning Systems and heating and refrigerating equipment technician (HVAC/R) | MCA |
| | Air conditioning systems installer and repair technician | MCA |
| | Common works within the construction sector | MCA |
| | Construction Carpenter | MCA |
| | Construction Electrician | MCA |
| | Construction Materials Production Equipment Operator and Repairman | MCA |
| | Construction Sanitary Plumber (sanitary within the construction sector) | MCA |
| | Construction Plumber (water within the construction sector) | MCA |
| | Construction Welder | MCA |
| | Elevator, Lift, and Escalators utilization, calibrator repairman | MCA |
| | Ironworker (steel fixing) | MCA |
| | Joinery Works within the construction sector | MCA |
| | Road Construction Machinery Operator | MCA |
| | Wall Finisher (plasterboard) | MCA |
| | Wall Finisher (plastering) | MCA |
| | Dry Construction | GTZ |
| | Modern Electrical, Sanitary, and Heating Installation including renewables energies (solar collectors) and alternative sanitary systems (ECOSAN, black and grey water recycling, membrane technology) | GTZ |
| | Thermal insulation composite system | GTZ |
| | Natural Stone Pavement | GTZ |
| | Draftsman/woman | GTZ |
| | Stove Construction | GTZ |
| | Concrete Worker | SDC |
| | Wooden Framed Construction-Carpenters | NLRC |
| 3. Transport | Mechanics | AVET |
| | Automotive Mechatronics | MCA |
| 4. Energy | Substation Service Electrician | MCA |
| 5. Industry | Lathe and Milling operator | MCA |

| | | |
|---|---|---|
| 6. IT | Network Worker | MCA |
| | Web Designer | MCA |
| | Computer Service Worker | MCA |
| 7. Mining | Drilling oil and gas technician | MCA |
| | Heavy equipment and machinery operator | MCA |
| | Heavy Equipment technician/repairman | MCA |
| | Mining Site Rehabilitation Technician | MCA |
| | Vehicle Operator | MCA |
| | Haul Truck Operator–Open Pit | ETAS |
| | Dozer Operator–Open Pit | ETAS |
| | Grader Operator–Open Pit | ETAS |
| | Loader Operator–Open Pit | ETAS |
| | Labourer–Open Pit | ETAS |
| | Heavy Machinery Operator–Open Pit | ETAS |
| | Excavator Operator–Open Pit | ETAS |
| | Open Pit Assistant | ETAS |
| | Haul Truck Operator–Underground | ETAS |
| | Dozer Operator–Underground | ETAS |
| | Dispatch Control Operator | ETAS |
| | General Worker in Resources Industry/General Site Worker | ETAS |
| | Blaster Assistant | ETAS |
| | Blaster | ETAS |
| | Drill Operator | ETAS |
| | Maintenance Control Operator | ETAS |
| | Drill Assistant | ETAS |
| | Mechatronics Technician | ETAS |
| | Central Services Welder | ETAS |
| | Field Servicemen | ETAS |
| 8. Mining & Infrastructure | Blasting hole drilling technician | MCA |
| | Bulldozer, Excavator, and other mobile plant equipment Operator | MCA |
| | Drilling technician and drilling machine operator-general drilling | MCA |
| | Service Plant and Equipment Mechanic | MCA |
| 9. Services | Hairdresser | NLRC |

AVET = Agency for Vocational Education and Training, ETAS = Australian training company funded by Oyu Tolgoi, MCA = MCA-Mongolia TVET Project, NLRC = National Learning Resource Center, SDC = Swiss Agency for Development and Cooperation.

## CRITERIA AND PROCEDURES FOR INSTITUTIONS TO BE ACCREDITED AS ASSESSMENT AND CERTIFICATION CENTERS

### A. Background

1. The Mongolia's technical and vocational education and training (TVET) system currently lacks an essential element of an industry-driven TVET system – a national assessment and certification institution that has the authority to test the competency level of a student or worker against standards set by employers and issue a national certificate in some occupation or skills area that would be recognized and accepted by all employers in the country. As a consequence, the quality and meaning of vocational certificates granted by different TVET providers significantly vary among themselves and employers have difficulties in assessing the value of the certificate and the actual competencies of the job applicant. At the same time, there may be thousands of skilled workers who have no formal qualifications and no opportunities to demonstrate their competencies. Since pay levels are not tied to competency/certification levels, skilled workers may not be motivated to improve their skills. Against this background, the project will support the establishment of assessment and certification centers in the three priority sectors (agriculture, construction, and road and transportation) by upgrading testing equipment and facilities, accrediting the centers, training and accrediting directors, assessors and test developers, developing certification guidelines and policies for the key occupations, and assisting in developing cost recovery mechanisms for the centers' sustainable operations.

### B. Functions of Assessment and Certification Centers

2. The assessment and certification centers will be the authorized institutions to assess the competencies of a student or worker who wishes to be certified in some occupation or skills area. The objective of the assessment/testing process is to determine whether an individual can perform to the standards expected in the workforce as expressed in the endorsed occupational standards for a given occupation. The results of the testing will indicate the competency level of the applicant. If the applicant successfully demonstrates competencies in meeting the criteria of the standards set by the industry, the outcome is the awarding of a "national certificate" to the individual at the appropriate competency level in a specific occupation. If the applicant does not successfully pass the certification examinations, he/she needs to acquire more theoretical knowledge and know-how skills and/or more practical skills through a combination of additional training courses and on-the-job experience. The applicant will therefore be advised to develop his/her knowledge and skills and competencies before re-applying for the certification examinations.

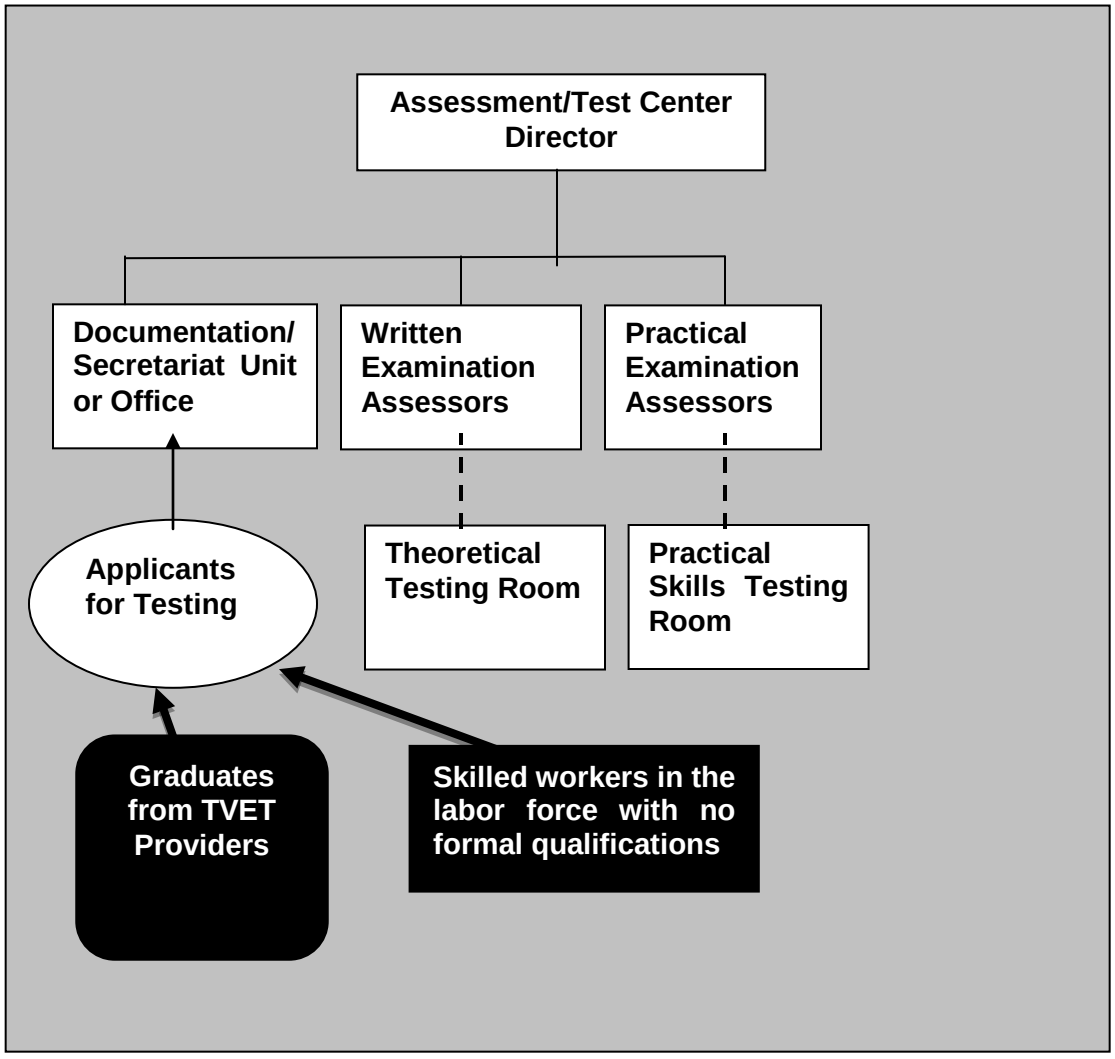
3. **Types of examinations.** The assessment and certification centers will be authorized to conduct two types of examinations:

(i) A written examination to measure certain aspects of occupational competence such as factual/theoretical knowledge and underpinning knowledge required for successful task/job performance; and

(ii) A practical skills performance test to measure the competencies of the applicant to perform certain jobs or tasks to required standards by using tools, materials, machines, and equipment characteristic of the occupation for which the test is designed.

## C. Organizational Structure of Assessment and Certification Centers

4. The assessment and certification centers will be organized as shown below and will report to the Ministry of Labor (MOL).




5. The assessment and certification centers will be staffed by the following personnel: (i) center director; (ii) assessors; and (iii) secretaries/administrators. Indicative responsibilities of the personnel are as follows:

**Center Director**

- Guide and oversee administration of all testing activities
- Order test materials and supplies
- Maintain the Test Site Security Policy
- Distribute and collect test instruments
- Select and train Written and Practical Examination Assessors
- Select appropriate number of participants for tests
- Approve the test site rooms
- Score the answer sheets

- Report the examination results to Ministry of Labor
- Maintain records of testing sessions
- Maintain data base of examination results
- Destroy used test instruments

**Assessors**

For conducting practical skills examinations

- Prepare the room for practical skills testing
- Check that materials for each practical job are ready for the examination
- Prepare a plan for assigning participants to work stations
- Conduct the practical skills testing in accordance with established procedures and policies
- Complete the "Performance Checklist" for each candidate during the testing session
- After testing, check that the machines and equipment are in the same condition as before the testing session
- Collect the used test booklets and complete the performance report on each candidate
- Submit the performance reports and used test booklets to Test Center Director
- Meet with Center Director as required to report problems or difficulties administering the practical examination

For conducting theory examinations

- Check that the test room, test booklets, and answer sheets are ready for the written examination
- Orient the candidates to the testing procedures
- Follow the instructions for administering the written examinations
- After testing, collect all test booklets and answer sheets and verify that all answer sheets have been completed correctly
- Return answer sheets and all test booklets to the Test Center Director
- Report any problems or irregularities or breaches of security to the Center Director

**Secretary/ Administrator**

- Receive and process applications from individuals wishing to take the national certification examinations at the Center
- Collect the required fee from the applicant
- Verify that the information on the candidate's application form is correct
- Notify the applicant that he/she has been accepted to take the examinations and of the date and time of the examination
- Receive applications for Prior Learning Assessment
- Collect the fee for processing the Prior Learning Assessment application
- Submit the Prior Learning Assessment applications to the Center Director
- Assist the Center Director with administrative duties such as scoring the answer sheets, preparing test booklets for the

examination sessions, and storing examination records and results.

6. The center personnel will be trained and accredited in accordance with the guidelines to be developed under the project after the institution is awarded an accreditation certificate.

**D. Criteria for Institutions to be Accredited as Assessment and Certification Centers**

7. An assessment and certification center will be established in each of the three priority sectors. The assessment and certification center may be located in a TVET provider, industry and professional association, or institution which has adequate equipment and space and is accredited by fulfilling the following criteria:

(i) Is legally established with full legal status, its own seal and independent bank account;
(ii) (if the Center is part of a TVET provider) Has been granted a license by the Ministry of Labor;
(iii) Has 10-20 experienced teachers who are qualified to become authorized assessors in specific occupations or can mobilize at least 10 individuals who could be trained and authorized as assessors in specific occupations such as master crafts persons, expert workers, or engineers and technicians from local enterprises;
(iv) Is able to provide a facility/workshop of sufficient area for conducting the practical examinations and has adequate tools, consumables, materials, and equipment in the workshop for implementing the practical skills testing of candidates; the area of the practical skills testing room should be at least 20 m2 and allow approximately 2.0 – 2.5 m2 per examinee and adequately lighted and be equipped with fans and/or AC;
(v) Has a suitable storage area for securing and locating the materials, tools, and equipment needed for the practical skills testing;
(vi) Is equipped with sufficient fire-fighting equipment and tools, which can be easily seen, acquired, and used in cases of emergencies;
(vii) Has a suitable theoretical testing room for conducting written examinations; the room can accommodate at least 15 examinees in one sitting and should be adequately lighted and be equipped with fans and/or AC;
(viii) Has a suitable person who meets all the criteria to become an Authorized Assessment and Certification Center Director;
(ix) Is located in a suitable and accessible place in the country where many people wish to receive the assessment and certification services; and
(x) Has an established management system to support and sustain the implementation/operation of an assessment and certification center.

**E. Procedures for Accrediting Institutions as Assessment and Certification Centers**

8. The prospective institution will submit the following requirements to the Project Implementation Unit (PIU) and the MOL which will assess the submitted documents and verify the authenticity/quality of the documents:

(i) Letter of intent specifying interest in being an accredited assessment and certification center;
(ii) Registration certificates or legal documents as an establishment in Mongolia;

(iii) Description of enterprise or organization/institution and the main activities and objectives of the institution;
(iv) List of TVET programs and courses (occupations) offered by the institution or list of enterprise activities that employ individuals in specific occupations;
(v) List of technical personnel with their qualifications;
(vi) List of administrative personnel with their qualifications; and
(vii) Organizational structure.

9. If the assessment is favorable, the institution will be informed of the decision and the PIU, the consulting firm for TVET facilities upgrading under loan implementation consultant services, the Standards Development Committees (formed under Output 1) and the MOL will visit the site for a preliminary inspection at some arranged date by using a checklist of requirements (Annex 1). If the site meets the basic requirements to an acceptable degree as verified during the preliminary inspection, the institution will be asked to prepare a quality improvement plan (QIP) which will focus on key quality elements of the assessment and certification centers in the priority sectors including: (i) setting of performance targets and indicators, and key strategies; (ii) upgrading needed to achieve the targets including training facilities, equipment and tools, and training and accreditation of the center personnel; and (iii) implementation schedule.

10. Upgrading that can be proposed in the QIP supported under the project will be limited to:

(i) Rehabilitation of existing classrooms, laboratories, or workshops to be used for TVET courses for key occupations in the three priority sectors;
(ii) Rehabilitation of basic water and sanitation facilities including separate toilet for women and provision of access for disabled students; and
(iii) Equipment and tools for laboratories and workshops for TVET courses for key occupations.

11. The Evaluation Committee composed of the MOL, the PIU and the Regional Methodological Centers, will review, with the support of the Standards Development Committees (SDCs), QIPs prepared by the institutions together with the checklist filled out during the preliminary inspections. The Evaluation Committee will approve their QIPs.

12. Immediately after the approval of QIPs by the Evaluation Committee, the PIU, assisted by the Standards Development Committees (SDCs), the equipment specialists, and the consulting firm for TVET facilities upgrading, will prepare bidding documents, including lists and technical specifications of equipment, tools and minor civil works to be procured.

13. Once the upgrading work has completed, the PIU and the MOL will arrange for a Technical Team to visit the site and conduct a formal test site evaluation.[41] The Technical Team conducts an evaluation of the site to determine if the site qualifies to be an assessment and certification center. If the site does not meet specific criteria, it has an opportunity to further make the necessary changes to its physical plant or structure and apply to be re-evaluated. If the site subsequently meets all of the criteria for accreditation, it will be awarded an accreditation certification. In order for a Test Center to qualify for Accreditation, in must have passed all the criteria set out in the Checklist (Annex 1).

[41] A test site accreditation fee may apply.

**Checklist for Evaluating the Applying Assessment and Certification Center**

| No. | Criteria for Accreditation | **Rating**<br>**A = Acceptable** (met the criterion**)**<br>**NA = Not Acceptable** (did not meet the requirements/criteria) |
|---|---|---|
| A | Location and Area | |
| 1 | The Assessment and Certification Center is accessible to public transportation and visibly identifiable from its side of the road | |
| 2 | The Center is located in an area of the country where there are many people in the workplace who wish to be tested for national certification | |
| | | |
| B | Lighting, Ventilation, and Power | |
| 1 | The theoretical and practical testing rooms are lighted at an average of 30-40 foot-candle (320-430 Lux) with minimal tolerance dark spots | |
| 2 | The rooms should be air conditioned but in the absence of air conditioning, all rooms must have suitable fans with windows for natural ventilation and air circulation | |
| 3 | There is adequate electrical power and enough power outlets to operate the practical testing room/shop | |
| | | |
| C | Practical Testing Room/Shop | |
| 1 | There is a suitable storeroom for storing and safekeeping the required tools and instruments | |
| 2 | There are separate storage areas or racks for keeping dangerous materials such as LPG, gas cylinders, and flammable or hazardous materials | |
| 3 | The practical room/workshop has an area of at least 20 $m^2$ and is capable of accommodating at least 5 examinees/batch at a ratio of 2.0 $m^2$/examinee. | |
| 4 | A clean washroom is available for use by the examinees and is located in a convenient part of the building. | |
| | | |
| D | Theoretical Testing Room | |
| 1 | The testing room is closed off from all other activity and is quiet and devoid of distracting movement. | |
| 2 | The room has ample lighting, adequate heating or cooling, comfortable seating and ample workspace on the table/desk for each participant to lay out the testing materials. | |
| 3 | There is sufficient space so that participants can be seated at least one meter apart from each other. This will encourage the participants to focus on the test and discourage cheating or talking. | |
| 4 | The testing room is big enough to accommodate at least 15 participants at the same time (room for 20 would be most | |

| No. | Criteria for Accreditation | **Rating**<br>**A = Acceptable** (met the criterion**)**<br>**NA = Not Acceptable** (did not meet the requirements/criteria) |
|---|---|---|
| | desirable) | |
| 5 | There is a table and chair for the Assessor | |
| | | |
| E | Room Furniture | |
| 1 | There is an adequate number of tables for the examinees to write the theoretical test | |
| 2 | There is an adequate number of work benches in the practical testing room/workshop for the candidates to perform the required tasks | |
| | | |
| F | Safety Provisions | |
| 1 | A medicine cabinet with first aid kit and other medical items used for first aid treatment is available | |
| 2 | Lay-out of the work stations in the practical test room is planned in such a way that all participant activities are clearly visible to the assessor | |
| 3 | Open floor spaces are maintained at entrances and exits | |
| 4 | Workstations, tool panels, and equipment are grouped so that related activities are carried out with minimal time and movement | |
| 5 | Functional fire extinguishers are located in conspicuous and highly accessible locations | |
| 6 | Placement of equipment considers the sequence of the test operations. They are also placed in a manner to allow ease of cleaning around the base. | |
| 7 | Alternate personnel exit is provided to afford maximum escape in the case of an emergency | |
| 8 | Panic buttons are installed and located in strategic locations, which would immediately shut off all power except the lighting fixtures in the event of an emergency. | |
| | | |
| G | Testing Equipment, Tools, Supplies, and Materials | |
| 1 | The Test Center has an adequate supply of tools, consumables, materials, and equipment for implementing the practical skills testing of the candidates in its accredited skills area or occupational areas and as prescribed in the test instruments. | |
| | | |
| H | Legal Status | |
| 1 | The center is legally established with full legal status and has its own seal and independent bank account | |
| 2 | The organization or institution has been granted “Accredited Status” by the MOL. | |
| | | |

| No. | Criteria for Accreditation | **Rating**<br>**A = Acceptable** (met the criterion**)**<br>**NA = Not Acceptable** (did not meet the requirements/criteria) |
|---|---|---|
| I | Personnel and Management Capacity | |
| 1 | The center has 10-20 staff members (such as experienced teachers/instructors) who are qualified to become certified assessors in specific occupations or can mobilize at least 10 individuals from the community who could be trained and certified as Assessors in specific occupations such as master crafts persons, expert workers, company supervisors, engineers/technicians from local enterprises | |
| 2 | The center has a suitable person who meets all the criteria to become an Accredited Center Director | |
| 3 | The Center has an established management system to support and sustain the implementation/operation of an “Assessment and Certification Center”. | |
| | | |

## PROCEDURES FOR SELECTING TVET PROVIDERS AND LIST OF PRE-SELECTED TVET PROVIDERS

### A. Objectives

1. About 20 technical and vocational education and training (TVET) providers will be upgraded with up-to-date equipment and tools and rehabilitation/refurbishment of training facilities to deliver competency-based training (CBT) programs and courses for 15 key occupations in the three priority sectors. TVET providers will be selected from the list of pre-selected TVET providers established by the Ministry of Labor (MOL) (Annex 2) based on self-assessment reports and quality improvement plans (QIPs) prepared by the pre-selected TVET providers. With upgraded training equipment and facilities, the selected TVET providers will:

(i) Offer CBT programs and courses for 1-3 key occupations in the priority sectors;
(ii) Ensure that at least one cohort of students completed CBT programs and three cohorts of students completed CBT courses under the project;
(iii) Encourage students who completed CBT programs and courses to take exams at assessment and certification centers to get their skills certified;
(iv) Conduct regular self-assessments and implement QIP to continuously improve quality of CBT programs and courses for key occupations;
(v) Ensure that management staff completed training programs in industry-driven TVET management at the Academy of Management;
(vi) Ensure that TVET teachers received training in CBT materials development;
(vii) Prepare technical/vocational skills teacher training plan and implement the plan to ensure that TVET teachers in key occupations completed technical/vocational skills training programs at accredited training institutions;
(viii) Provide in collaboration with industry/professional associations and employers industry placement for TVET teachers in key occupations;
(ix) Provide in collaboration with industry/professional associations and employers internship placement for students enrolled in CBT programs and courses for key occupations;
(x) Provide career information and guidance for students by ensuring that teachers received training in career guidance;
(xi) Conduct graduate tracer studies and employer satisfaction surveys to adjust CBT programs and courses for key occupations to the changing demand in the labor market; and
(xii) Ensure that female management staff, TVET teachers and students participate in the activities supported under the project.

### B. Selection Procedures

2. The TVET providers on the list of pre-selected TVET providers established by the MOL must:

(i) Participate in workshops for preparation of self-assessment report and quality improvement plan (QIP) organized by the project implementation unit (PIU) and the MOL;
(ii) Prepare and submit self-assessment report and QIP to the PIU for review;
(iii) Accept visits conducted by the PIU, Regional Methodological Centers, Standards Development Committees (SDCs), the consulting firm for TVET facilities upgrading, and the MOL to verify self-assessment report and QIP;
(iv) Revise and finalize self-assessment report and QIP for final evaluation; and
(v) (Once selected) agree by signing QIP on the proposed upgrading of training equipment and facilities and the responsibilities stated in Section A.

3. The QIP will focus on key quality elements of CBT programs and courses for key occupations in the priority sectors including: (i) setting of enrollment targets, performance indicators, and key strategies; (ii) upgrading needed to achieve the targets including training facilities, equipment, tools and training of TVET teachers; and (iii) implementation schedule. The QIP will be signed by the head of the provider and endorsed by its Board.

4. Upgrading that can be proposed in the QIP supported under the project will be limited to:

(i) Rehabilitation of existing classrooms, laboratories, or workshops to be used for TVET courses for key occupations in the three priority sectors;
(ii) Rehabilitation of basic water and sanitation facilities including separate toilet for women and provision of access for disabled students; and
(iii) Equipment and tools for laboratories and workshops for TVET courses for key occupations.

5. During and after site visits conducted by the PIU, Regional Methodological Centers, Standards Development Committees and the MOL, revisions would be suggested to the proposed upgrading. The pre-selected TVET providers must consult with the PIU and the Regional Methodological Centers and finalize the QIP by reflecting the suggested revisions.

**C. Preparation for the Selection**

6. The Standards Development Committees (SDCs) composed of expert workers in key occupations identified through industry and professional associations (see Appendix 4 of PAM) and assisted by the consulting firm for CBT&A development will prepare guidelines for preparing and evaluating self-assessment report and QIP and finalize self-assessment report and QIP templates (draft templates are found in Annex 1) and QIP evaluation form by using occupational standards and other standards developed for key occupations.

7. Once the guidelines and templates for self-assessment reports and QIPs have been finalized, the PIU, in collaboration with the Regional Methodological Centers, the SDCs and the consulting firm for CBT&A development, will conduct one-day workshops to familiarize the management and key staff of all the pre-selected TVET providers with the guidelines for preparing self-assessment report and QIP and the templates.

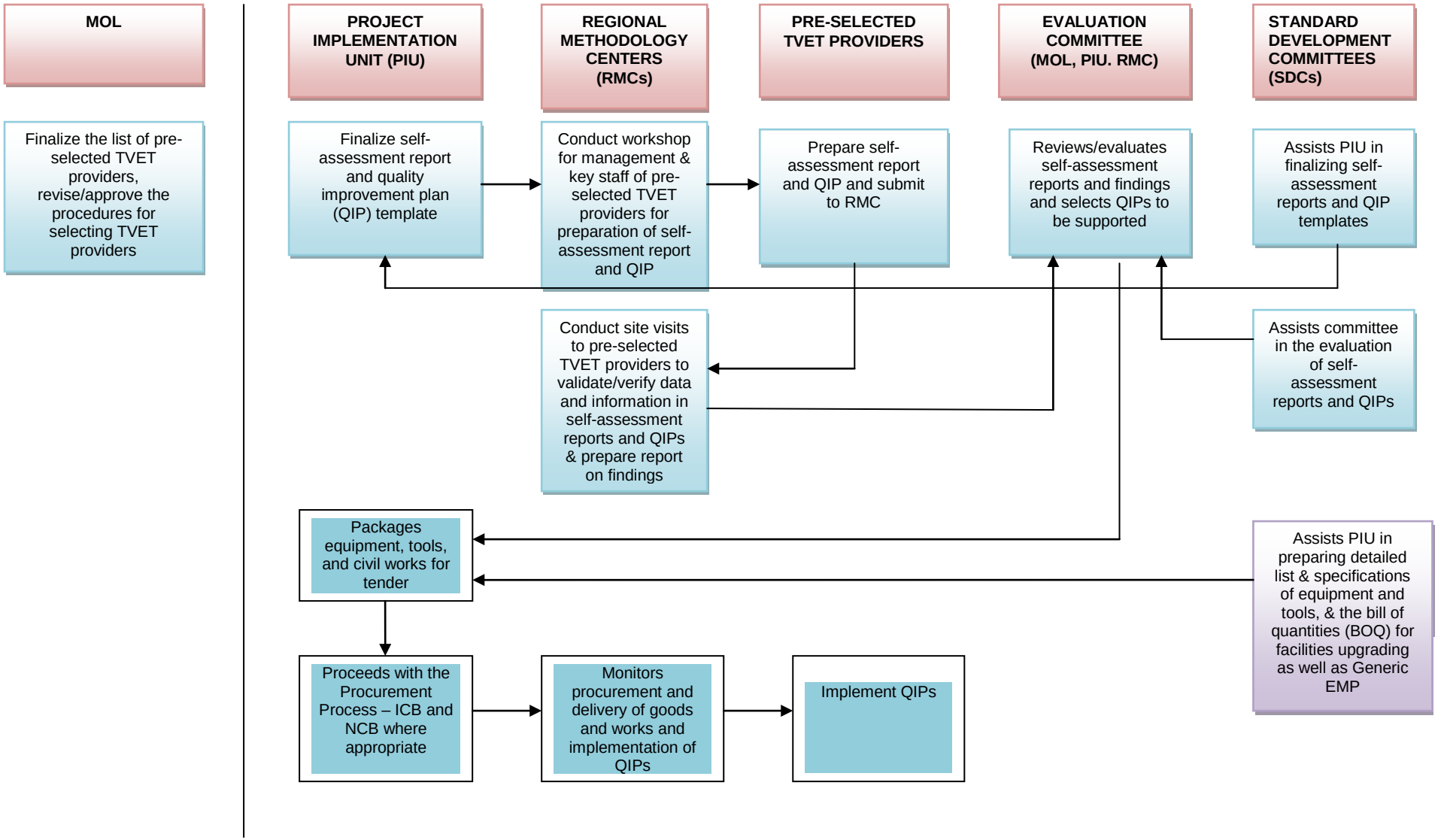
**D. Self-Assessment Reports and Quality Improvement Plans (QIPs) Review and Evaluation Process**

8. The Evaluation Committee composed of the MOL, the PIU and the Regional Methodological Centers, will review, with the support of the Standards Development Committees (SDCs), self-assessment reports and QIPs prepared by the pre-selected TVET providers, including current inventories of tools, equipment and the condition of training facilities and proposed lists of tools, equipment and upgrading of facilities. After the desk review, visits to the pre-selected TVET providers will be conducted to verity the self-assessment reports and the QIPs and suggest some revisions to them. Based on the finalized self-assessment reports and the QIPs submitted by the pre-selected TVET providers, the Evaluation Committee will select 20 TVET providers and approve their QIPs.

**E. Preparation of Procurement Packages**

9. Immediately after the approval of QIPs by the Evaluation Committee, the PIU, assisted by the Standards Development Committees (SDCs), the equipment specialists, and the consulting firm for TVET facilities upgrading, will prepare bidding documents, including lists and technical specifications of equipment, tools and minor civil works to be procured.

## Figure 1: FLOWCHART FOR UPRGADING SELECTED TVET PROVIDERS



MINISTRY OF LABOR

**SKILLS FOR EMPLOYMENT PROJECT**

# DRAFT TEMPLATE FOR QUALITY IMPROVEMENT PLAN

Submitted by:

_____
(Name of Pre-Selected TVET Provider)

_____, _____
(Month), (Year)

# CONTENTS

## I. PROFILE OF THE TVET PROVIDER

1. Provide a summary profile of your institution as provided in Table 1.

**Table 1: Summary Profile**

| | |
|---|---|
| **Name of TVET provider :** | |
| **Region (Aimag):** | |
| **Type of location:** | ☐ Urban ☐ Rural |
| **Type of ownership:** | ☐ Public ☐ Private |
| **Certificate/Diploma programs offered and total enrollment:** | • Number. of programs: _____<br>• Total enrollment (last school year): _____ |
| **Short courses offered and total enrollment:** | • Number. of courses: _____<br>• Total enrollment (last school year): _____ |
| **List of programs already supported by other foreign assisted projects:** | •<br>•<br>• |
| **Number of personnel:** | • Teaching: _____<br>• Administrative: _____<br>• Support: _____ |
| **Dormitory available?** | ☐ Yes ☐ No<br>• If yes, capacity? _____ beds |
| **Advisory Board:** | • No. of members ------<br>• Active? ☐ Yes ☐ No<br>• No. of meetings last year: ____ |
| **No. of industry partners, if any:** | • _____ enterprises |
| **List of programs for assistance under the Skills for Employment Project:** | •<br>•<br>•<br>• |

## II. ENROLLMENT, PERFORMANCE INDICATORS, AND STRATEGIES

### A. Enrollment Targets

2. With inputs from the results of the SWOT analysis, set the enrollment targets for the proposed programs comparing the enrollment “with assistance” vs. “without assistance” given in Table 2. If the program is in demand and the capacity is fully utilized but the quality may be lacking, the enrollment targets could be the same. Such comparison is intended to determine whether the assistance is expected to have an incremental impact on enrollment.

**Table 2: Enrollment Targets for the Proposed Programs: "With" and "Without" Assistance**

| Ref. | Program | Actual (Current AY) | With Assistance | | | Without Assistance | | |
|---|---|---|---|---|---|---|---|---|
| | | | Year 1 | Year 2 | Year 3 | Year 1 | Year 2 | Year 3 |
| **A** | **Certificate** | | | | | | | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| . | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| **B** | **Diploma** | | | | | | | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| . | | | | | | | | |
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| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| **C** | **Short Courses** | | | | | | | |
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | | | | | | | |
| . | | | | | | | | |
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| | | | | | | | | |
| . | | | | | | | | |
| | **Total** | | | | | | | |

## III. UPGRADING REQUIREMENTS

3. Determine the resources needed in order to achieve the targets set for the proposed programs including: (i) civil works; and (ii) equipment, tools and furniture.

### A. Training Facilities

4. The eligible civil works involved only rehabilitation, expansion of existing space, additional area for classroom or workshop, repair of heating and water supply facilities, toilets, and access for the disabled. Major civil works such as new buildings are not allowed. Indicate the proposed civil works as shown in Table 3.

## Table 3: Facilities Upgrading for the Proposed Programs

| Ref. | Program / Type of Facilities | Existing | | Proposed Upgrading of Facilities | | | |
|---|---|---|---|---|---|---|---|
| | | Number | Area (sq. m.) | Type of Improvement* | Number | Area (sq. m.) | Cost Estimates (Togrog) |
| **A** | **Program 1** | | | | | | |
| 1 | Classroom | | | | | | |
| 2 | Laboratory | | | | | | |
| 3 | Workshop | | | | | | |
| 4 | Heating System | | | | | | |
| 5 | Water Supply | | | | | | |
| 6 | Toilets | | | | | | |
| | Others | | | | | | |
| **B** | **Program 2** | | | | | | |
| 1 | Classroom | | | | | | |
| 2 | Laboratory | | | | | | |
| 3 | Workshop | | | | | | |
| 4 | Heating System | | | | | | |
| 5 | Water Supply | | | | | | |
| 6 | Toilets | | | | | | |
| | Others | | | | | | |
| **C** | **Program __** | | | | | | |
| 1 | | | | | | | |
| 2 | | | | | | | |
| 3 | | | | | | | |
| 4 | | | | | | | |
| | **Total** | | | | | | |

*Could be rehabilitation, expansion using existing space, or additional room using existing space or combination.

Note:

(a) The following works are eligible: (i) Rehabilitation or expansion of space, classrooms, and workshops to be used for the selected programs; (ii) Rehabilitation of dormitories to ensure safe and reasonable comfortable living environment for students targeted by the selected programs; (iii) Rehabilitation of basic services including water supply, sanitation and personal hygiene facilities (toilets, showers) with access for the disabled, and with connection to sanitation and solid waste disposal systems.

(b) The following works are not eligible: (i) Construction of new buildings, workshop or dormitories; or expansion of existing building (total floor area); (iii) Construction works that involve involuntary resettlement, land acquisition, and impact on legally protected areas; (ii) Construction works requiring significant excavation, disposal of fill and/or spoil materials; (iii) TVET providers located in areas prone to floods, landslides, and other natural hazards; (iv) Works requiring exposure to hazardous waste (e.g. removal of asbestos or asbestos containing material, PCB, PAH; contaminated soil); (v) any activity that may be subject to General EIA and Detailed EIA under MON Law of Environmental Impact Assessment (2012); and (vi) Facilities and proposals not complying with quality criteria, size and dimension of TVET training and accommodation facilities as defined in the ministerial order “Common Requirements for Establishing Vocational Educational Organizations and Starting and Renewing of Professional Training Facilities (MEDS and MOL, 2013).

## B. Training Equipment and Tools

### a. Inventory of Current/Existing Equipment & Tools

5. Provide an inventory of existing equipment currently used for the proposed program(s) and indicate current condition and estimated cost if they are still repairable using Table 4 below. Please use separate sheet, if necessary.

**Table 4: Inventory of Current/Existing Equipment & Tools**

| Ref. | Description of Current/Existing Equipment & Tools Used for the Program | Quantity | Current Condition of Existing Equipment | | | |
|---|---|---|---|---|---|---|
| | | | Good Condition | For Disposal | For Repair | Repair Cost (Togrog) |
| **A** | **Program 1** | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| **B** | **Program 2** | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| **C** | **Program __** | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | **Total (Togrog)** | | | | | |

**b. Proposed New Equipment and Tools**

6. Prepare the proposed list of new equipment and tools, including detailed description and specifications, needed to conduct practical training for the program using Table 5 below. Please use separate sheet for each program.

**Table 5: Proposed List of New Equipment and Tools (Please prepare for each program)**

| LIST & DETAILED DESCRIPTION & SPECIFICATIONS | Qty | Unit Cost (US$) | Total Cost (US$) |
|---|---|---|---|
| Name of Program: _____ | | | |
| I – Proposed List of Equipment | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| II – Proposed List of Hand Tools/Measuring Tools/Hand Power Tools | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| III – Proposed List of Workshop Furniture | | | |
| | | | |
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| | | | |

## C. Staffing

7. Specify the additional number and type of staff required, if any, for the proposed programs as indicated in Table 6. Provide a list of specific positions of the additional staff and their respective assignment in a separate sheet.

**Table 6: Proposed Additional Staff for the Proposed Programs**

| Ref. | Staff Category | Year 0 (Actual) | Year 1 | Year 2 | Year 3 |
|---|---|---|---|---|---|
| **A** | **Regular** (Full-time) | | | | |
| 1 | Management | | | | |
| 2 | Teaching | | | | |
| 3 | Support | | | | |
| **B** | **Contractual (Part-time)** | | | | |
| 1 | Teaching (Lecturers) | | | | |
| 2 | Non-teaching | | | | |

**RECOMMENDATION**

We respectfully submit herewith for your consideration and approval the proposed Quality Improvement Plan of [*Name of TVET Provider*] for (*name of program/s*) for assistance under the Skills for Employment Project. This has been a product of the collaboration between the management and staff and the Board and we commit to do our best to ensure its successful implementation.

**Board:** **TVET Provider:**

_____ _____

Chairman Director

## List of 25 Pre-selected TVET Providers

| No. | Name of TVET Provider | Location | Programs/Courses Offered (Economic Sector) | Student Enrollments | | | Number of Vocational Subject Teachers, Academic Year 2013-2014 |
|---|---|---|---|---|---|---|---|
| | | | | 2011 | 2012 | 2013 | |
| **Ulaanbaatar city** | | | | | | | |
| 1. | Construction Polytechnic College | Ulaanbaatar city | Construction | 1957 | 1833 | 1966 | 48 |
| **Western Region** | | | | | | | |
| 2. | VTPC in Bayankhongor | Bayankhongor aimag | Construction; Agriculture | 1722 | 1681 | 1370 | 37 |
| 3. | VTPC in Zavkhan | Zavkhan aimag, Tosontsengel soum | Construction; Agriculture | n.d. | n.d. | n.d. | 10 |
| 4. | VTPC in Zavkhan (RMC) | Zavkhan aimag | Construction; Agriculture | 875 | 914 | 696 | 22 |
| 5. | Khovd Development Polytechnic College | Khovd aimag | Construction; Agriculture | 486 | 1499 | 1415 | 40 |
| 6. | VTPC in Bayan-Ulgii | Bayan-Ulgii aimag | Construction; Agriculture; Road and Transportation | 1219 | 1218 | 963 | 42 |
| 7. | Polytechnic College in Uvs | Uvs aimag | Construction; Agriculture; Road and Transportation | 1758 | 1515 | 1350 | 43 |
| **Khangai Region** | | | | | | | |
| 8. | VTPC in Bulgan | Bulgan aimag | Construction | 554 | 527 | 487 | 24 |
| 9. | Agriculture VTPC in Bulgan | Bulgan aimag | Agriculture | n.d. | 100 | 190 | 8 |
| 10. | VTPC in Khuvsgul | Khuvsgul aimag | Construction; Agriculture; Road and Transportation | 1084 | 929 | 885 | 26 |
| 11. | VTPC in Ovorkhangai | Ovorkhangai aimag | Construction; Agriculture; Road and Transportation | 1493 | 1487 | 1184 | 27 |
| 12. | VTPC in Orkhon (RMC) | Orkhon aimag | Construction; Agriculture | 1110 | 1027 | 765 | 11 |
| 13. | Agriculture VTPC in Orkhon | Orkhon aimag | Construction; Agriculture | 307 | 440 | 601 | 13 |
| 14. | VTPC in Arkhangai | Arkhangai aimag | Construction; Agriculture; Road and Transportation | 822 | 764 | 750 | 29 |
| **Central Region** | | | | | | | |
| 15. | VTPC in Tuv aimag | Tuv aimag, Bayanchandmani soum | Construction; Agriculture; Road and Transportation | n.d. | 448 | 376 | 29 |
| 16. | VTPC in Selenge | Selenge aimag, Zuunkharaa soum | Construction; Agriculture | 470 | 557 | 382 | 18 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17. | VTPC in Selenge | Selenge aimag, Shaamar soum | Agriculture | 213 | 326 | 321 | 12 |
| 18. | VTPC in Darkhan-Uul | Darkhan-Uul aimag | Construction; Agriculture | 1633 | 1229 | 961 | 29 |
| 19. | VTPC in Tuv aimag | Tuv aimag | Construction; Road and Transportation | 660 | 557 | 406 | 16 |
| **Eastern Region** | | | | | | | |
| 20. | VTPC in Dornod | Dornod aimag | Construction; Road and Transportation | 622 | 493 | 471 | 19 |
| 21. | VTPC in Khentii | Khentii aimag | Construction; Agriculture; Road and Transportation | 966 | 832 | 803 | 27 |
| 22. | VTPC in Khentii aimag | Khentii aimag, Bor-Ondor soum | Construction; Road and Transportation | 345 | 333 | 298 | 7 |
| 23. | VTPC in Sukhbaatar | Sukhbaatar aimag | Construction; Agriculture | 645 | 593 | 501 | 11 |
| **Gobi Region** | | | | | | | |
| 24. | VTPC in Dornogovi | Dornogovi aimag | Construction; Road and Transportation | 847 | 743 | 685 | 20 |
| 25. | VTPC in Nalaikh | Ulaanbaatar, Nalaikh District | Construction; Road and Transportation | 1100 | 1066 | 1039 | 26 |

RMC = Regional Methodology Center, VTPC = Vocational Training Production Center.

Source: Ministry of Labor.

## STRATEGY FOR ESTABLISHING A TRAINING SYSTEM FOR TVET MANAGERS

### A. Background

1. With some exceptions, technical and vocational education and training (TVET) providers in Mongolia are supply-driven in general, lacking capacity to respond to the demand of industry and employers. Insufficient employer engagement in designing and delivering TVET programs and courses, inadequate professional development and performance management of TVET teachers, and lack of strategic planning and management are a few of the capacity constraints faced by many TVET providers. Strengthening leadership and management capacity of TVET providers, therefore, should be integral to the support for enhancing responsiveness of TVET system to the labor market demand.

2. Currently, there is no system for training managers of TVET providers. The TVET Law does not specify management experience and training as required qualifications for managers of TVET providers. Although training has been provided for some TVET managers with the support of development partners since the late 2000s, it has yet to be institutionalized. Against this background, the project will assist the Academy of Management in designing and delivering training programs for TVET managers in industry-driven TVET management.

### B. Development of Training Modules and Materials

3. New training modules and materials on industry-driven TVET management will be developed for the Academy of Management in collaboration with the Ministry of Labor (MOL), industry and professional associations, employers, and TVET providers. Training modules and materials that will be developed will be on, but not limited to:

(i) Creating partnerships with industry;
(ii) Developing joint TVET provider-industry programs;
(iii) Identifying and implementing income generating projects/programs;
(iv) Marketing TVET services; and
(v) Performance management/leadership.

4. Based on training needs assessment of TVET managers, the consulting firm for TVET management and technical and vocational skills training will draft training modules and materials on the areas above. The draft training modules and materials will be reviewed in workshops, and further revised and validated by the Academy of Management, the MOL, representatives of industry/professional associations, employers and TVET providers.

### C. Training of Master Trainers at the Academy of Management

5. A training program consisting of the above training modules will be delivered by the Academy of Management possibly as a regular diploma/certificate program. A training plan for master trainers at the Academy of Management will be developed in consultation with the Academy of Management and reviewed in the workshops for reviewing the training modules and materials. Master trainers at the Academy of Management will be trained and coached in the course of delivering the training program for TVET managers by the consulting firm and other relevant resource persons.

### D. Development of Self-assessment Tools and Handbook for TVET Managers

6. In addition to the training program at the Academy of Management, self-assessment tools, guidelines for self-assessment including peer-review techniques for assessing the

performance of the institution and staff will be developed for TVET managers in collaboration with TVET providers, industry/professional associations and employers. A handbook for TVET managers covering the following areas will also be prepared:

(i) Industry engagement and partnership management;
(ii) Income generating strategies;
(iii) Financial management;
(iv) Staff training and management, including planning of technical and vocational skills training for TVET teachers;
(v) Marketing of TVET programs and courses;
(vi) Quality control, including self-assessment and quality improvement plan (QIP);
(vii) Tracer studies and employer satisfaction surveys; and
(viii) Career guidance for students.

## STRATEGY FOR ESTABLISHING A TECHNICAL/VOCATIOAL SKILLS TRAINING SYSTEM FOR TVET TEACHERS

### A. Background

1. The Mongolia's TVET law (2009) specifies that the TVET teacher must have (i) a bachelor's or higher degree; (ii) proper experience in production work; (iii) a high vocational degree; and (iv) a teaching license. However, these qualifications requirements have not been consistently enforced, partly due to lack of details, for instance, the number of years of industry experience and the kind of degrees that are considered as vocational which remain yet to be defined.

2. In SY2012/13, there were 2,236 full-time teachers, of which 1,468 (65.7%) teach technical and vocational subjects, and 768 (34.3%) teach general education subjects. Of the technical and vocational subject teachers, 663 (45.2%) obtained qualifications in production technology, while 512 (34.9%) attained qualifications in physical culture and sports. 791 (53.9%) held a bachelor degree in education. 1,358 (92.5%) technical/vocational subject teachers had no or less than four years of industry experience in the subjects they teach. In addition, 494 (33.7%) were under 30 years old.

3. Although a number of training activities have been conducted for TVET teachers since the late 2000s with the support of development partners, none has been institutionalized. There is currently no institution which offers pre-service education or in-service training in TVET pedagogy and technical and vocational skills. Most TVET teachers receive a 4-year pre-service teacher education in the Mongolian State University of Education and other pre-service teacher education institutions for general education teachers. After completing a 4-year pre-service teacher education, graduates have to carry out supervised practice teaching for 1 year in order to obtain a teaching license. No system exists, however, to ensure that all TVET teachers have acquired technical and vocational skills training and industry experience required by the TVET law.

### B. Objectives

4. Against this background, the project will support the establishment of an industry-based technical and vocational skills training system for TVET teachers in the key occupations of the three priority sectors (agriculture, construction, and road and transportation). The industry-based technical and vocational skills training system will be consisted of:

(i) Training programs for master technical and vocational skills trainers in the key occupations;
(ii) Institution-based, short-term technical and vocational skills training courses for TVET teachers in the key occupations;
(iii) Workplace exposure for TVET teachers in the key occupations through industry placement under the guidance of industry supervisors/mentors;
(iv) A short-term training course for industry supervisors/mentors in the key occupations;
(v) Technical and vocational skills training plan for TVET teachers in the key occupations prepared by each TVET provider;
(vi) Assessment and certification of TVET teachers in the key occupations;
(vii) TVET teacher qualifications framework which incorporates (iii), (iv) and (vi); and
(viii) Sector and subsector human resources development plans.

5. In collaboration with the sector sub-councils on TVET, industry and professional associations, in particular, the Standards Development Committees (SDCs) formed under component 1, employers, the institutions that host assessment and certification centers, TVET providers, and the Ministry of Labor (MOL), and facilitated by the consulting firm for TVET management and technical/vocational skills training, the above elements of the industry-based technical and vocational skills training system will be developed and implemented in the priority sectors under the project.

**C. Development and Delivery of Training Programs for Master Trainers**

6. The development and delivery of training programs for technical and vocational skills master trainers in the key occupations will involve the following steps:

(i) **Development of procedures and criteria for identifying and selecting technical and vocational skills master trainers in the key occupations:** The master trainers will be qualified and experienced TVET teachers of the institutions which will offer short-term technical and vocational skills training courses for TVET teachers (i.e., accredited assessment and certification centers) and expert workers and supervisors of workers in the key occupations in the industry who will be hired by the institutions. The procedures and criteria for identifying and selecting master trainers will be drafted by the consulting firm and reviewed by the SDCs, employers, the institutions that will offer short-term technical and vocational skills training courses, and the MOL. The final procedures and criteria as well as the selected master trainers in the key occupations will be endorsed by the sector sub-councils on TVET.

(ii) **Assessment of training needs of selected master trainers and TVET teachers in the key occupations:** With the occupational standards documents for the key occupations as a reference, training needs of selected master trainers and TVET teachers in the key occupations will be assessed by the consulting firm in collaboration with the SDCs, employers and TVET providers. The assessments will also include needs for training in IT, technical English, O&M of equipment and machinery, technical and vocational skills training pedagogy and assessment methods.

(iii) **Preparation of an overall structure of the training programs for master trainers:** Based on the training needs assessments and the occupational standards documents, the consulting firm will prepare an overall structure of the training programs for master trainers which will be reviewed by the SDCs, employers and TVET providers.

(iv) **Preparation of training modules and materials for the training programs for master trainers:** In accordance with the overall structure of the training programs, the consulting firm will prepare training modules and materials for the training programs for master trainers in the key occupations which will be reviewed by the SDCs, employers, and TVET providers. The training modules and materials will cover the competencies/tasks specified in the occupational standards documents but also IT, technical English, O&M of equipment and machinery, technical and vocational skills training pedagogy and assessment methods.

(v) **Training and coaching of master trainers.** The consulting firm, in collaboration with resource persons, will deliver the ‘train-the-trainer’ programs for master trainers in the key occupations. They will also coach mater trainers in the course of delivering short-term technical and vocational skills training courses for TVET teachers in the key occupations.

## D. Development and Delivery of Institution-based Short-term Courses for TVET Teachers

7. The institution-based short-term technical and vocational skills training courses for TVET teachers in the key occupations will be delivered by the institutions that will host assessment and certification centers in the priority sectors. Master trainers of and outside the institutions will be identified, selected and trained through the 'train-the-trainer' programs. Training modules and materials for the short-term training courses will be developed by the master trainers under the guidance of the consulting firm, based on the training needs assessments, the occupational standards documents for the key occupations, and training modules and materials for the 'train-the-trainer' programs.

## E. Development of Technical and Vocational Skills Training Plans for TVET Teachers

8. TVET providers selected under component 2 will develop technical and vocational skills training plans for TVET teachers in the key occupations of their institutions as part of the exercise to prepare their quality improvement plans. The technical and vocational skills training plan for TVET teachers will specify which TVET teacher will be trained in what (a key occupation) and how (institution-based short-term training courses, and workplace exposure through industry placement) and certified by when. Workshops for TVET providers on the preparation of technical and vocational skills teacher training plans will be organized by the project implementation unit (PIU) in collaboration with the Regional Methodology Centers. Guidelines on the development of technical and vocational skills training plans for TVET teachers will be prepared by the consulting firm and reviewed by the SDCs, Regional Methodology Centers, the PIU, and the MOL. The final guidelines will be included in the handbook for TVET managers.

## F. Workplace Exposure for TVET Teachers through Industry Placement

9. TVET teachers in the key occupations will be provided the opportunity for workplace exposure through industry placement along with student interns (supported under component 2) under the guidance of industry supervisors/mentors. In order to institutionalize workplace exposure for TVET teachers through industry placement, coupled with student internships, the following will be developed by the consulting firm in collaboration with the SDCs, employers, TVET providers and the MOL:

(i) Guidelines for industry placement for TVET teachers and internship for students in the key occupations, including remuneration and insurance for TVET teachers, student interns and industry supervisors/mentors; and
(ii) Methods and procedures for collecting and providing information on places for industry placement for TVET teachers and internship for students in the key occupations.

## G. Development and Delivery of Short-term Training Course for Industry Supervisor/Mentors

10. Workplace exposures for TVET teachers and internship for students will be guided by industry supervisors/mentors in the key occupations. Industry supervisors/mentors will be selected and trained to provide structured workplace training for TVET teachers and students. The selection and training of industry supervisors/mentors in the key occupations will be carried out in the following steps:

(i) **Development of procedures and criteria for identifying and selecting industry supervisors/mentors for TVET teachers and interns:** Industry

supervisors/mentors will be identified through industry and professional associations and employers in the priority sectors. The consulting firm will draft procedures and criteria for identifying and selecting industry supervisors/mentors in the key occupations in collaboration with industry and professional associations and employers. The final procedures and criteria as well as the selected industry supervisors/mentors in the key occupations will be endorsed by the sector sub-councils on TVET.

(ii) **Training needs assessment of industry supervisors/mentors:** Training needs of selected industry supervisors/mentors in the key occupations will be assessed by the consulting firm in collaboration with industry and professional associations, employers and TVET providers based on training modules and materials for technical and vocational skills training courses and TVET pedagogy requirements.

(iii) **Preparation of training modules and materials for short-term training course for industry supervisors/mentors:** Based on the training needs assessment, the consulting firm will prepare training modules and materials for the short-term training course for industry supervisors/mentors in the key occupations which will be reviewed by industry and professional associations, employers, TVET providers and the MOL.

(iv) **Training of industry supervisors/mentors:** Industry and professional associations endorsed by the sector sub-councils on TVET will deliver the short-term training course for industry supervisors/mentors in the key occupations in collaboration with the institutions which will offer short-term technical and vocational skills training courses for TVET teachers.

## H. Assessment and Certification of TVET Teachers

11. TVET providers selected under component 2 will encourage TVET teachers to take exams and obtain a national certificate at the assessment and certification center. Technical and vocational skills training plans for TVET teachers prepared by the selected TVET providers will specify assessment and certification targets for TVET teachers in the key occupations.

## I. Review of TVET Teacher Qualifications Framework

12. The MOL has developed a TVET teacher qualifications framework which remains yet to be revised and implemented. The consulting firm will assist the MOL in reviewing the framework in the light of the industry-based technical and vocational training system established under the project and developing a strategy to implement the revised framework in accordance with incentive mechanisms for TVET teacher training and retention proposed under the project.

## J. Development of Sector and Subsector Human Resources Development Plans

13. In the medium term, the sector and/or the sub-sector will need a human resources development plan which defines the number of workers, TVET teachers, technical and vocational skills master trainers, industry supervisors/mentors to be trained. Human resources development plans for the key occupations and/or the sub-sector will be developed through workshops facilitated by the consulting firm in which industry and professional associations, employers, TVET providers, the MOL and other relevant ministries and stakeholders will participate.

# CONCEPT OF INDEPENDENT SENIOR SECONDARY SCHOOLS THAT OFFER OCCUPATION-ORIENTED TECHNOLOGY ELECTIVE COURSES

## A. Background

1. As of May 2014 the Ministry of Education and Science (MEDS) is preparing a concept paper which details different models for senior secondary education. Senior secondary education is a key stage of preparation for pursuing higher learning at tertiary level or entering the labor market. One of the biggest concerns for senior secondary and tertiary education is the low employment rates for graduates. Against this background, the MEDS plans to reform senior secondary education by diversifying it.

2. One of the models being considered by the MEDS is that of independent senior secondary schools which will offer occupation-oriented specialized elective courses (technology, art and sports, science, etc.). The model will be compatible with a credit transfer system being developed by the MEDS between tertiary education institutions and senior secondary schools. The credit transfer system is likely to be extended to technical and vocational education and training (TVET) providers and will be aligned with a national qualifications framework that is under preparation by the MEDS and Ministry of Labor (MOL).

3. The MEDS requested that the project shall support the implementation of independent senior secondary schools which will offer occupation-oriented technology elective courses.

## B. Occupation-oriented Technology Elective Courses

4. Technology elective courses being considered by the MEDS include:

(i) agricultural technology,
(ii) construction technology,
(iii) mechanical technology;
(iv) electrical technology, and
(v) others.

5. These elective courses will be designed for students at three different levels: (i) advanced (compatible with the entry-level course at tertiary education institution); (ii) intermediate (compatible with the senior education curriculum standards); and (iii) basic (compatible with the entry-level course at senior secondary school, for students who are not specialized in technology).

6. Students who wish to pursue studies at independent senior secondary schools will need to pass an entrance exam.

## C. Location of Independent Senior Secondary Schools

7. The MEDS will select one existing senior secondary school per *aimag* and per district to establish 30 independent senior secondary schools. The schools which currently have primary and junior secondary classes will separate them from senior secondary classes.

## D. Project Interventions

8. The project will support the following to implement the model of independent senior secondary schools with occupation-oriented technology specialized courses:

(i) Development of guidelines for independent senior secondary schools which will cover quality assurance mechanisms, entrance exam/evaluation/assessment methods and tools, and institutional arrangements for establishing a credit transfer system with tertiary education institutions and TVET providers;
(ii) Development of a plan for training/recruiting technology teachers;
(iii) Development of a training plan for school principals;
(iv) Development of a training plan for assessors;
(v) Development and printing of curriculum, textbooks, and teaching-learning materials for technology elective courses (agricultural technology, construction technology, mechanical technology, and electrical technology);
(vi) Training of technology teachers in curriculum for elective courses, including use and maintenance of equipment and tools;
(vii) Training of school principals in guidelines for independent senior secondary schools which will cover quality assurance mechanisms, entrance exam/evaluation/assessment methods and tools, and institutional arrangements for establishing a credit transfer system with tertiary education institutions and TVET providers;
(viii) Training of assessors in quality assurance mechanisms; and
(ix) Provision of equipment and tools for technology laboratories.

9. The above activities will be carried out by the MEDS in collaboration with the Institute of Education, the National Evaluation Center, pre-service teacher education institutions, the Teacher Development Palace, higher education institutions and other relevant stakeholders as well as the MOL and TVET providers. The activities will be guided by international and national consultants engaged on an individual basis, including senior secondary education specialists and technology subject specialists.

## BACKGROUND ANALYSIS FOR IDENTIFYING KEY OCCUPATIONS IN THE PRIORITY SECTORS

### A. Introduction

1. In 2013 the Ministry of Labor (MOL) indicated that the sectors of the economy on which the project would focus are agriculture, construction, and road and transportation. According to this broad direction, the following activities were conducted to identify key occupations in the three sectors: (i) consultations with the ministries in charge of the sectors, namely, the Ministry of Industry and Agriculture, the Ministry of Construction and Urban Development, and the Ministry of Road and Transportation; (ii) questionnaire and face-to-face interviews with employers in the three sectors; (iii) consultations with industry and professional associations in the sectors, including the Mongolian Builders' Association, the Construction Development Center, the Mongolian Road Association, and the Mongolian National Cooperatives Association; and (iv) review of the barometer survey (2013) conducted by the Labor Research Institute. In what follows, the main findings of the above activities are discussed.

### B. GDP Growth and Share of Employment by Sector

2. Mongolia's economy has grown rapidly with a twofold increase in gross domestic product (GDP) per capita over the decade from 2001 to 2012. The rate of GDP growth has fallen recently, however, due to a marked drop in foreign direct investment and weaknesses in the mineral export market. The GDP growth in 2013 was 11.7%, down from 12.4% in 2012. A further drop is projected in 2014. Nevertheless, medium-term macroeconomic prospects are optimistic, with double-digit growth expected from 2015 onwards, given Mongolia's potential to exploit its natural resources.

3. The driving force behind the rapid economic growth has been the mining sector. Although the economy has become more diversified in recent years with the mining sector's share of GDP in decline, the mining was still the largest contributor to GDP in 2012. The sectors, including mining, which have boosted their shares of GDP, however, have not contributed much to employment creation, as shown in Table 1.

**Table 1: Share of Gross Domestic Product and Employment by Sector 2001–2012**

| Sector | | 2001 | 2006 | 2011 | 2012 |
|---|---|---|---|---|---|
| Agriculture, forestry, and fishing | Share of GDP (%) | 24.9 | 19.5 | 12.3 | 14.8 |
| | Share of Employment (%) | 48.3 | 41.6 | 33 | 35 |
| Mining and quarrying | Share of GDP (%) | 9 | 30 | 21 | 18.6 |
| | Share of Employment (%) | 2.4 | 2.6 | 4.3 | 4.4 |
| Manufacturing | Share of GDP (%) | 8.1 | 5.5 | 6 | 6.2 |
| | Share of Employment (%) | 6.7 | 6.05 | 6.3 | 6.1 |
| Construction | Share of GDP (%) | 2 | 2.1 | 1.6 | 1.6 |
| | Share of Employment (%) | 2.5 | 3.5 | 5 | 5.6 |
| Whole sale and retail trade; repair of motor vehicles and motorcycles | Share of GDP (%) | 26.7 | 14.1 | 9.2 | 9.3 |
| | Share of Employment (%) | 10.8 | 12.9 | 14.7 | 12.4 |
| Transportation and storage | Share of GDP (%) | 13 | 9.9 | 7.1 | 6.5 |
| | Share of Employment (%) | 4.2 | 7.7 | 7.3 | 5.3 |
| Real estate activities | Share of GDP (%) | 1 | 6.8 | 6.9 | 6.3 |
| | Share of Employment (%) | 0.8 | 1.8 | 0 | 0.1 |
| Public administration and defense; compulsory social security | Share of GDP (%) | 4.3 | 3.2 | 3.3 | 4.3 |
| | Share of Employment (%) | 4.9 | 5.7 | 5.4 | 6 |
| Education | Share of GDP (%) | 4.5 | 3.3 | 4 | 4.7 |
| | Share of Employment (%) | 6.6 | 6.7 | 8.2 | 8.2 |

GDP = gross domestic product.
Sources: National Statistical Office, Statistical Yearbooks 2000–2012; and Labor Force Surveys 2000–2012.

4. Likewise, although real wages have increased in all sectors, the sectors which have made a huge leap are not the ones that have enlarged employment opportunities. Specifically, the sectors that have made a huge leap in terms of real wage increase between 2000 and 2012 were financial intermediation, and mining and quarrying whose average wages have almost quadrupled. However, their share of employment was only about 6% in 2012[42].

5. As of 2012, the agriculture sector employs the largest number of economically active population, accounting for 35%, while its share of GDP is ranked second (14.8%) after the mining and quarrying sector (18.6%) which employs 4.4% of economically active population (ranked eighth). The agricultural sector is followed by the whole sale and retail trade (12.4%), education (8.2%) and manufacturing (6.1%) sectors in terms of employment share. There has been a steady rise in employment in the construction sector, with its share reaches 5.6% (ranked 6th), although its growth of GDP share has been stagnant (1.6% in 2011 and 2012). The transportation and storage sector is ranked 7th in terms of employment share (5.3%), whereas its share of GDP is ranked 4th (6.5%) after the mining and quarrying, agriculture, and whole sail and retail trade sectors.

6. In sum, the three sectors (agriculture, construction, and road and transportation) on which the project will focus employ 45.9% of economically active population and their shares of GDP amount to 22.9% as of 2012.

## C. Agriculture Sector

7. Although employment in the agriculture sector has been steadily in decline, some of its subsectors have the potential for employment growth. The agriculture sector can be subdivided into the following subsectors: (i) the animal husbandry subsector whose employment share within the agriculture sector was 78.2% in 2012; (ii) the crop production sector whose share was 9.4%; and (iii) various agricultural raw materials processing sectors. The crop production sector and processing sectors, in particular, have the potential for employment growth, due to favorable government policies and programs and a strong demand for skilled workers.

8. **Government policies and programs.** The National Program for Food Security (2009-2016) outlines priorities in the sector as follows. “Agriculture and food industry shall be developed into a modern agriculture and industrial complex through raising their capacity to compete in the market, strengthening their ability to meet risks; the needs of population in flour, meat, milk, potato and other vegetables will be met fully by domestic production, and measures will be taken to ensure their sufficient supply, improve quality and health security.” Supported by this policy, some business entities have introduced modern technology in the production of crops and vegetables and the processing of flour, meat and milk. A demand for skills in modern technology for these subsectors, therefore, is expected to be strong. Moreover, many family-owned small-sized business entities have not been meeting food safety standards. There is a need, thus, for food sanitation specialists.

9. **Wool, cashmere, and leather processing subsectors.** Interviews with employers in the subsectors reveal that they have been facing acute shortage of skilled workers such as electricians, electrical engineers, and equipment maintenance, as skilled workers prefer to seek jobs in sectors like mining and construction which pay higher salaries. Employers in the wool

[42] *Average Wages Surveys, 2000-2012*, *Labor Force Surveys, 2000-2012*, National Statistical Office of Mongolia.

and leather processing subsectors stated that they are considering bringing skilled workers from abroad.

10. **Mongolian National Cooperatives Association.** The membership of the Association primarily includes herders and family-owned small sized business entities. The Association indicated needs for skills in the following areas: (i) mechanics for farm equipment; (ii) handicraft and souvenir production; (iii) production of pickled vegetables; (iv) construction, maintenance and operation of greenhouses; (v) grading of wool; (vi) pasteurization of milk; (vii) improvement of farm products to international standards for export and branding.

## D. Construction Sector

11. The construction is one of the growing sectors in terms of employment. According to data of the Labor Exchange Central Office, the construction sector has the largest number of vacancies (29.3% in the first quarter of 2013, an increase by 18.7% in the same period of 2012) of all sectors nationwide. The strong demand for workers in construction has been derived from an increase in public and private investments in the sector.

12. **Public investments in the construction sector.** The Government of Mongolia approved large scale projects in the construction sector including the g*er* areas housing project, the international airport construction project, the Zamiin Uud infrastructure development project, and the *soum* town projects. In addition, the majority of local governments listed in their 2013 budget documents, projects like school building and sport complexes construction, renovation of local government buildings, construction of new housing and apartment complexes, and potable water supply and sewage systems. These projects create an urgent demand for skilled workers in the sector such as reinforcing iron and re-bar workers, welders, electricians, plumbers, plasterers, carpenters, etc.

13. **Construction materials subsector.** The Government of Mongolia has been promoting domestic production of construction materials for import substitution. As a result, some construction companies have been expanding business to the production of construction materials such as lightweight, magnum and composite concrete, and metal structure. Interviews with employers in the subsector suggest that there is a shortage of skilled workers, including metal and construction structure production plan equipment operators and maintenance workers, construction materials science engineers, construction materials production plan technicians, and metal structure production engineers.

14. **Construction Development Center.** Specialists of the Construction Development Centers further identified the following occupations which are in high demand: air conditioning equipment maintenance workers, elevator, lift and escalators mechanic, window frame and glass installers, etc. They also indicated a need for occupational health and safety engineers and specialists in the construction sector.

15. Although there is a strong demand for skilled workers in the construction sector, the stability of employment remains a major concern. All the employers interviewed in the sector responded that they hire a significant proportion of workers on a temporary contract basis, given the short construction period (between April and November). In this context, the employers preferred to hire foreign workers who are willing to work on a seasonal basis and are more disciplined than Mongolian workers.

## E. Road and Transportation Sector

16. Although the share of employment in the road and transportation sector has been declining in recent years, the demand for skilled workers is expected to increase due to substantial public investments in the sector. Major subsectors include the road construction subsector, the auto transportation subsector, and the railway subsector.

17. **Public investments in the road construction subsector.** The Government of Mongolia approved the street project aiming to build asphalt roads to connect several *aimag* centers to Ulaanbaatar. A total of 5,576km asphalt roads are to be constructed. The project will be expanded to cover other *aimag* centers in 2014 and 2015. In addition, there are other road construction projects approved by local governments. Interviews with employers in the subsector indicated that the following occupations are in high demand: heavy equipment operators, excavator operators, mobile equipment operators, field laboratory workers, geodetic and land surveying engineers, mechanical engineers, etc. This subsector is seasonal in nature and unpredictable given that most employers depend on bidding. The employers, therefore, preferred to hire workers on a temporary contract basis.

18. **Auto transportation subsector.** This subsector is characterized by the existence of several large public bus companies and many individual truck contractors. Two of public bus companies responded in interviews that there have been losing skilled workers to the mining sector, including auto mechanics, automobile electricians and heavy equipment maintenance workers. Members of individual truck contractor cooperatives, on the other hand, suggested that they would need training in occupational health and safety, and communication skills.

19. **Public investments in the railway subsector.** A strong demand for skilled workers is expected in the railway sector due to the major railway construction project approved by the Government of Mongolia. A total of 5,600km railways are to be built. The feasibility study conducted by McKinzey & Company concluded that approximately 1,800 jobs will be created for the first construction works, including engineers, technicians, administrative and skilled workers. On the other hand, the Ministry of Road and Transportation estimated that 1,527 skilled workers and professionals will be required in six operational units in 2013 and 2014 such as locomotive depot, locomotive and wagon inspection depot, railway operation, signaling, communication and power energy, train control center, and wagon depot. Furthermore, an interview with the Mongolian Railway Company revealed that the following occupations are in demand: railcar mechanics, locomotive depot mechanics, rolling stock technicians, rail track repair and maintenance technicians.

## F. Soft Skills Demanded by Employers

20. Questionnaires and interviews with employers suggested that in addition to hard skills specific to the sectors, employers value soft skills of their employees such as discipline, sense of responsibility, commitment, and positive attitude. Employers in the construction sector cited lack of soft skills among Mongolian workers as one of major reasons that they prefer to hire foreign workers.

## G. 30 Key Occupations in the Three Sectors

21. Table 2 presents 30 key occupations in the three sectors identified by multiple sources.

**Table 2: 30 Key Occupations Identified in the Three Priority Sectors**

| # | Key Occupations Selected for Proposed Project | Other Sectors where Graduates Can Find Jobs | | | | |
|---|---|---|---|---|---|---|
| | | Building Construc-tion | Road Constr uct-ion | Railway Sub-Sector | Crop Production Sub-Sector | Auto Road Transport Sub-Sector |
| **AGRICULTURE SECTOR** | | | | | | |
| **A.** ***Leather Sub-Sector*** | | | | | | |
| 1. | Leather Products Designer | | | | | |
| **B.** ***Animal Husbandry Sub-Sector*** | | | | | | |
| 2. | Animal Hides Laboratory Technician | | | | | |
| 3. | Veterinary Technician | | | | | |
| **C.** ***Crop Production Sub-Sector*** | | | | | | |
| 4. | Agricultural Technician | | | | | |
| 5. | Farm Equipment and Machinery Operator & Maintenance Mechanic | | | | | ✓ |
| 6. | Greenhouse Technician | | | | | |
| **CONSTRUCTION SECTOR** | | | | | | |
| **A.** ***Building Construction Sub-Sector*** | | | | | | |
| 7. | HVAC/R Systems Installer and Repair Mechanic | | | | | |
| 8. | Construction Mason and Tile & Marble Setter | | | | | |
| 9. | Concrete Worker | | ✓ | | | |
| 10. | Crane Operator | | | | | |
| 11. | Form Carpenter | | | | | |
| 12. | Finishing Carpenter | | | | | |
| 13. | Reinforcing Iron and Re-Bar Worker | | ✓ | | | |
| 14. | Construction Electrician | | | ✓ | ✓ | ✓ |
| 15. | Elevator, Lift, and Escalators Mechanic | | | | | |
| 16. | Window Frame and Glass Installer | | | | | |
| 17. | Construction Plumber | | | | | |
| 18. | Plasterer and Interior Finisher | | | | | |
| 19. | Construction Welder | | | ✓ | ✓ | ✓ |
| **B.** ***Construction Materials Plant Centers*** | | | | | | |
| 20. | Electro-Mechanical Construction Materials Plant Technician | | | | | |
| **ROAD AND TRANSPORTATION SECTOR** | | | | | | |
| **A.** ***Road Construction Sub-Sector*** | | | | | | |
| 21. | Heavy Equipment Operator | | | ✓ | | |
| 22. | Heavy Equipment Mechanic | | | ✓ | ✓ | ✓ |
| 23. | Construction Laboratory Technician | | | | | |
| 24. | Geodetic and Land Surveying Technician | | | | | |
| **B.** ***Auto Transportation Sub-Sector*** | | | | | | |
| 25. | Auto Mechanic | | | | ✓ | |
| 26. | Auto Body Repairman | | | | | |
| **C.** ***Railway Sub-Sector*** | | | | | | |
| 27. | Railcar Mechanic | | | | | |
| 28. | Locomotive Depot Mechanic | | | | | |
| 29. | Rolling Stock Electrician | | | | | |
| 30. | Rail Track Repair and Maintenance Technician | | | | | |

22. Based on Table 1 and taking into account its own priorities, the MOL selected 15 key occupations (Annex 1).

## Indicative List of 15 Key Occupations in the Three Priority Sectors

### A. Objectives

1. This is an indicative list of 15 key occupations identified in the three priority sectors (agriculture, construction, and road and transportation). The list was developed based on the background analysis and taking into account the priorities of the Ministry of Labor (MOL). The key occupation is the one in which more workers are required for the development of the concerned industry. For the key occupations, the project will support the following:

(i) Development of occupational standards and other related standards;
(ii) Development of competency-based training modules and materials;
(iii) Training of curriculum development specialists and TVET teachers in the development of competency-based training modules and materials;
(iv) Development of assessment methods and tools, and assessment and certification guidelines for the key occupations;
(v) Training and accreditation of assessors and test developers;
(vi) Provision of testing equipment for practical skills testing for assessment and certification centers to test the competency level of applicants;
(vii) Upgrading of training equipment and facilities for selected TVET providers to implement competency-based training programs and courses;
(viii) Development and delivery of 'train-the-trainer' programs for master technical/vocational skills trainers;
(ix) Development and delivery of institution-based short-term technical and vocational skills training courses for TVET teachers;
(x) Development and implementation of guidelines for industry placement of TVET teachers and student internship;
(xi) Development and delivery of a short-term training course for industry supervisors/mentors;
(xii) Industry placement of TVET teachers and student internship; and
(xiii) Development of human resources development plans.

2. Once the loan becomes effective, the list will be reviewed and revised further, if necessary, in the light of the then labor market situation, in collaboration with industry and professional associations, employers, and TVET providers.

### B. 15 Key Occupations in the Priority Sectors

3. The following have been identified as key occupations in **the agriculture sector**:

A. Animal Husbandry Sub-sector
(i) Veterinary technician;

B. Crop Production Sub-sector
(ii) Greenhouse technician;
(iii) Farmer, agriculture and vegetable;
(iv) Farmer and animal husbandry;
(v) Gardening;
(vi) Wool and cashmere products;

4. The following have been identified as key occupations in **the construction sector**:

C. Building Construction Sub-Sector
   (i) HVAC/R systems installer and repair mechanic;
   (ii) Crane operator;
   (iii) Elevator, lift, and escalators mechanic;
   (iv) Window frame and glass installer;
   (v) Plasterer and interior finisher;

5. The following have been identified as key occupations in **the road and transportation sector**:

D. Road Construction Sub-Sector
   (i) Heavy equipment operator (also in the railway sub-sector);
   (ii) Construction laboratory technician;
   (iii) Road and construction workers; and

E. Auto Road Transportation Sub-Sector
   (i) Auto body repairman.