PROGRAM MONITORING AND EVALUATION SYSTEM ASSESSMENT

A.   Description of the Monitoring and Evaluation System

1.   The Skills Sector Development Program (SSDP) of the Government of Sri Lanka aims to improve access, quality, and relevance of the country's technical and vocational education and training (TVET) system to produce market-demanded human resources. The SSDP is the first medium-term sector development program in Sri Lanka and includes key government initiatives for 2014–2020. The SSDP has defined a set of targets in its program results framework to monitor sector performance. The Ministry of Skills Development and Vocational Training (MSDVT)[1] is the executing agency, and the Skills Sector Development Division (SSDD) under MSDVT is responsible for overall performance monitoring of the program, in close coordination with nine implementing agencies. The Skills Sector Enhancement Program funded by the Asian Development Bank (ADB) and the World Bank-funded Skills Development Project support the SSDP through results-based lending and disbursement-linked indicators (DLIs) selected from among the SSDP targets.

2.   At appraisal of the SSDP, the monitoring and evaluation (M&E) system assessment concluded that the system is fragmented and inconsistent across different TVET institutions and therefore needs to be consolidated. While the Tertiary and Vocational Education Commission (TVEC) had established a centralized management information system (MIS) to manage national vocational qualification (NVQ) certificates for quality assurance across different institutions, other training providers developed their own MIS, varying from paper-based to a computerized system. The Department of Technical Education and Training (DTET), University of Vocational Technology (UNIVOTEC), and Vocational Training Authority (VTA) had both employee and student data management systems. The National Apprentice and Industrial Training Authority had an information system to manage only student data, while the National Youth Service Council had only an employee data management system. Ceylon-German Technical Training Institute (CGTTI) and Ocean University of Sri Lanka (OUSL) did not have any such information management system. No institution collected systematic information on labor market outcomes of TVET graduates and labor market demand for skills. Even within an agency, multiple, unconnected information databases existed. Key data were defined differently, making it difficult to aggregate them for sector performance reporting. Although DTET and UNIVOTEC had an information system, it was developed by outsourced contractors, which would prove costly in the long run because the agencies needed to shoulder a monthly rent for the server, and additional modifications incurred further costs.

3.   In 2014, MSDVT adopted a comprehensive M&E framework to monitor and evaluate inputs, activities, outputs, outcomes, and impacts of the SSDP.[2] As per the M&E framework, MSDVT and implementing agencies are building an institutional mechanism and system for data collection, analysis, and dissemination, as summarized in this assessment.

4.   **Institutional arrangements for M&E system**. The SSDD was established to strengthen the sector program implementation and monitoring capacity, considering that several institutions are involved in the comprehensive sector program. The SSDD is led by an additional secretary-level officer who directly reports to the secretary of MSDVT. The additional secretary (Skills Sector Development) serves as a program director. A program manager has the responsibility

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[1] The Ministry of Youth Affairs and Skills Development became MSDVT in 2015.
[2] Government of Sri Lanka, Ministry of Youth Affairs and Skills Development. 2014. *Skills Sector Development Program Monitoring and Evaluation Framework*. Colombo.

of monitoring and evaluating SSDP functions. The SSDD has more than 30 staff and its activities include (i) coordinating SSDP activities between MSDVT and implementing agencies; (ii) supporting innovations such as industry sector skills councils; and (iii) preparing, publishing, and disseminating periodic progress review reports on SSDP targets, including DLIs, annual performance reports, as well as other reports required by MSDVT and development partners.

5.   A high-level interministerial committee and a steering committee monitor and evaluate progress in impact and outcome targets of the SSDP. The interministerial committee includes the secretaries of several related ministries (finance, education, agriculture, irrigation and water resources, industries and commerce, construction, engineering services, housing and common amenities, foreign employment promotion and welfare, environment), the chairman of TVEC, and some private sector representatives. The Department of National Planning coordinates this committee. It was expected to hold quarterly meetings and publish annual national progress reports from 2015 to monitor the impact of the SSDP, but since the SSDP's approval, the interministerial committee has met only once a year. The steering committee is chaired by the secretary of MSDVT and coordinates program activities to monitor progress toward DLIs. This committee was also to hold quarterly meetings and publish annual progress reports from 2014. The SSDD is responsible for output-specific progress monitoring, and implementing agencies monitor their inputs. Currently, the secretary of MSDVT chairs monthly progress monitoring meetings and periodic project steering committee meetings to discuss key issues and provide guidance.

6.   In addition, the annual and midterm reviews of the development partners provide opportunities to jointly assess the implementation performance against SSDP targets and DLIs, and to identify corrective actions for issues. The annual review, conducted jointly with ADB and the World Bank, assesses and verifies the achievement of DLIs, which form the basis for disbursements, and monitors progress in program action plan implementation, including M&E actions. The midterm review was conducted jointly by MSDVT, ADB, and the World Bank in April 2017 to assess progress in SSDP implementation. ADB also commissioned third-party reviews, such as annual fiduciary reviews and a tracer study under ADB technical assistance, to provide additional assurance on system performance and feedback to the system for further improvement.[3]

7.   **Management information system development**. The SSDD has been developing an online integrated MIS to address the previous challenges.[4] It is doing so through an in-house team, not an outsourced company, because the system requirements cannot be defined upfront since the needs for SSDP M&E are evolving. The SSDD recruited one senior system analyst and a team of software developers who are responsible for developing an integrated MIS across different public training institutions. The team's functions include (i) development of software to facilitate center operations, manage training information, and support planning and decision for management; (ii) identification of hardware to facilitate the operations; (iii) network and communication for operations; (iv) maintenance, backup, and recovery system; and (v) user training. The hardware required to roll out the integrated MIS, such as computers, printers, scanners, and fingerprint readers, has already been procured for the Western Province, as well as DTET, under the first-phase rollout, and procurement was initiated for other provinces under the second-phase rollout.

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[3] ADB. 2014. *Technical Assistance to Sri Lanka for Human Capital Development Capacity and Implementation Support*. Manila.
[4] Given the lack of institutional capacity at TVEC, the SSDD was given the mandate to develop the central MIS and support institutions to come under it.

8.   The core of the new MIS is the training center management system, which aims at automating a center's training administration and resource management. It allows decentralized data entry at the place where student contact occurs, and at the same time satisfies central data requirements for aggregation and analysis to support M&E and planning. The center management data is entered in real time by the officer who engages in a given transaction. For instance, applicant details are put into the system by center officers and approved by the head of the center. On-the-job training placement data will be entered by instructors, and exam results are entered by the assessors. Fingerprint machines will be used to record attendance. While information requirements differ across training institutions, required information fields and information flows are standardized to the extent possible, especially for student data collected from applications, registrations, training, exams and assessments, on-the-job training, certifications, and employment status. The standardization and real-time data entry are expected to provide timely, efficient, and accurate reporting for M&E.

9.   The decentralized data entry is aggregated and integrated into the new MIS through several modules. For center management, the modules of student management and course management have already been developed and used in practice, except for CGTTI, OUSL, and UNIVOTEC. CGTTI and OUSL lack the human resources to manage the MIS, while UNIVOTEC has developed its own MIS. The SSDD is supporting CGTTI and OUSL to adopt the MIS while developing a data warehouse function to collate data from other MISs to present consolidated reports. The rest of the agencies are also going through the transition of phasing out their old system as students whose information is in the old system are graduating.

10.   The development of other modules (student performance, industrial placement and job placement, examination, graduation management, certificate printing, facility and resource management, human resource or employee management and graduate tracking) is still in progress, and all center management modules are expected to be completed by August 2018. Currently, the graduate tracking module is under preparation, and VTA, DTET, and National Apprentice and Industrial Training Authority have piloted student tracking in different ways. For instance, instructors follow up on graduates at VTA, whereas DTET aims to have graduates themselves enter their employment status through its website. The preparation of organization- and center-specific reports is now possible, but aggregated reports at MSDVT and TVEC for planning and decision support require more time, and are expected to be completed by early 2019.

11.   ADB and the World Bank provide support to strengthen M&E systems, including the MIS. The World Bank-funded Skills Development Project has several DLIs to encourage timely availability of reliable institutional and agency-specific data, and periodic analysis of courses, centers, and teacher performance. This includes development plans to strengthen M&E capacity, and incentives to gradually expand M&E and capacity development for training providers. In the absence of an integrated MIS with a graduate tracking system for employment outcome verification in 2016, ADB provided technical assistance for a tracer study to obtain employment rates of TVET graduates.[5]

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[5] It engaged the Center for Poverty Analysis in Sri Lanka to carry out a tracer study that involved the analysis of telephone interviews with 2,000 randomly selected TVET graduates from October 2014 to September 2015, focus group discussions, and life stories of a few selected graduates to provide assurance of DLI verification as well as insights and feedback on the TVET system's performance.

B.   Assessment of the Monitoring and Evaluation System

12.   The SSDP M&E system was improved in the current program period (2014–2016) and should be further improved for the additional financing. Better M&E practices and the new MIS are important contributions of the ADB program to a stronger Sri Lankan TVET system beyond the program period. The SSDD prepares periodic review reports and clarifies the program status. The secretary of MSDVT chairs monthly meetings to monitor the progress, and multiple subcommittee meetings are held to manage the specific issues and challenges. In addition to the extensive efforts in monitoring progress within the government, ADB and the World Bank conducted joint review missions at least twice a year and intensively reviewed and discussed the agenda with the management of MSDVT and implementing agencies as well as other government agencies. However, only a limited number of meetings are being held by the high-level interministerial committee. The monitoring of SSDP outcome and impact may need further attention when solutions across different ministries need to be discussed.

13.   The integrated MIS is a significant improvement from the previous fragmented system, and its development was delayed because of staff turnover. Learning from experience, the integrated MIS is being developed in-house at the SSDD, rather than being outsourced to an external firm, to flexibly accommodate the needs of the training providers at low cost. The new system aims to achieve centralized management and avoid repetitive data entry for student administration, thus reducing the burden on the various centers. Some of the modules (e.g., student application) have been used in practice by a majority of the implementing agencies, and center-specific reports can also be produced under the integrated MIS.

14.   The integrated MIS can monitor outcome and some output DLIs. While a detailed operational procedure to collect data at training center level needs to be clarified, the integrated MIS has a graduate tracking module to monitor the outcome, which is the employment rate of graduates within 6 months of graduation. It can generate TVET enrollment data output (1c and 3a) and on-the-job placement (2e). Monitoring teacher performances, such as teacher vacancy ratio (1d) and instructors with industry exposure training (2d), are also available in the integrated MIS. The SSDD will continue monitoring other qualitative and numerical targets, such as budget-related targets.

15.   To ensure sustainability of the MIS, further efforts should be made. While the system functionalities meet the program requirements, the system is inherently weak and cannot deal with several users working simultaneously because of the limited capacity of the in-house development team. System documentation, data integrity, quality assurance, and disaster recovery plan are also areas of concern. Proper documentation on the software architecture and other aspects of the MIS is not available, so if staff changes occur or when system maintenance is outsourced, it would be difficult for new staff or the contractor to understand the system. The data integrity and database structures need to be further strengthened to ensure data quality. While training is provided to the implementing agencies to understand how to use the new MIS, there is ample scope for making the system more user-friendly, such as eliminating typos and clarifying the required field. The system is cloud-based, and while a backup procedure is established, it requires a disaster recovery plan.

16.   The data validation process at the various training providers is also limited. While online and real-time data entry at center level offers many advantages, it must be accurate and comprehensive to provide reliable, timely, and adequate information on results. In the absence of the integrated MIS in 2014 and 2015, the ADB-funded tracer study compiled a database from seven training institutions using a previous database system, and found significant deficiencies

in database management capacity. To obtain a reliable dataset of 2,000 graduates, the tracer study team had to call more than 6,000 graduates listed in the institutions' databases because often basic contact information was missing or incorrect, and many people had not even been TVET students in the specific period. While an integrated MIS can provide a technical solution to these issues, e.g., by setting required fields, a systematic data validation mechanism at the training center is indispensable to ensure reliable collection of data.

17.   The analytical capacity needs to be further strengthened to make the best use of data. Once the full range of MIS modules is in place, a rich database can be analyzed to inform decision making. For instance, center-specific data are available under the system but they need to be analyzed to understand the strengths and weaknesses of a particular center. TVEC, as a regulatory body, is expected to take a leading role in this, and its staff's capacity for research and analysis needs to be strengthened.

C.   Managing Risks and Improving Capacity

18.   The M&E system was improved during the ADB program period in terms of institutional arrangements and tools. To further improve the system and ensure sustainable operation, MSDVT and the implementing agencies should focus on the following areas:

19.   **Improvement of system and completion of analytical and decision support tools**. As a first step, MSDVT should complete the new MIS development, and roll it out to produce data. At the same time, attention must be given to an institutional mechanism that will ensure data integrity. Planning disaster recovery, personal information security, and links between new and old systems will also strengthen the reliability of M&E. To use the data for decision making, it is important to have management guidance on key performance indicators and their definitions. These include, but are not limited to, student enrollment rate, dropout rate, completion rate, job placement rate, and time taken to complete assessments and issue certificates, which can be presented in a user-friendly way to support evidence-based decision making. Currently, one senior system analyst and several trainee software developers are working on developing the in-house system, but trainee software developers are paid on a daily basis, which makes it difficult to have strong long-term commitment and a sense of responsibility. The team also requires experienced system engineers who can provide guidance and support to expedite the process.

20.   **Employment outcome monitoring**. Graduates' employability is the ultimate performance indicator for TVET, and the MIS should be able to monitor it in a sustainable and credible way. While student information (e.g., enrollment, dropout, completion) is relatively easy to collect, collecting graduate information is more challenging. TVEC should develop a standardized operating procedure for the graduate tracking system by clarifying the responsibility of data entry and work flow as a regulatory body. TVEC's analytical capacity should also be strengthened. Strengthening the MIS team's technical capacity is included in the program action plan, and ADB may provide technical assistance. The capacity of TVEC's research division should be enhanced by increasing cadre positions for analytical work and its dissemination. This is included in the program action plan's technical actions. Deployment of the MIS, especially the graduate tracking module for employment rate monitoring, required for verification of DLI 1, is included in DLI 8.[6] These measures will help MSDVT in completing the key functions of the integrated MIS by 2020.

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[6] The graduate tracking module is the last step in the student tracking system within the MIS. Completion of the graduate tracking module means that the student tracking system is fully deployed.